Educational Linguistics

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Classroom-based Conversation Analytic Research

Theoretical and Applied Perspectives on Pedagogy

Educational Linguistics

Volume 46

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ISSN 1572-0292 ISSN 2215-1656 (electronic)
Educational Linguistics
ISBN 978-3-030-52192-9 ISBN 978-3-030-52193-6 (eBook)
https://doi.org/10.1007/978-3-030-52193-6

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The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

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Introduction: CA-SLA and the Diffusion of Innovations

Numa Markee, Silvia Kunitz, and Olcay Sert

Abstract Conversation Analysis (CA) is the theoretical and methodological framework that inspires the contributions to this edited volume. CA is an approach and methodology in the social sciences that is rooted in ethnomethodology (EM) and aims to describe, analyze, and understand interaction as "a basic and constitutive feature of human social life". This volume uses ethnomethodological conversation analysis (EMCA) to: (1) develop a unified, emic (or participant-relevant) account of how members do classroom interaction in various contexts; and (2) explore how second language acquisition (SLA) research that uses CA methods (CA-SLA) can potentially be used to develop new, empirically grounded pedagogical implications by and for a broad range of language teaching professionals. Most importantly, the present volume seeks to break new ground by trying to promote an ongoing exchange of ideas among the many different stakeholders in the community of language learning/teaching professionals who constitute our intended audience. It is also proposed that future interventionist CA-based research on classroom interaction would be enriched by the adoption of an ethnographic diffusion of innovations perspective on educational change; specifically, it is argued that all stakeholders need to develop a consumers' understanding of how to package insights from CA as useful resources for on-going curricular innovation.

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_1

Keywords (Interventionist) CA-SLA · Classroom interaction · Diffusion of innovations · Teacher education

1 Introduction

Conversation Analysis (CA) is the theoretical and methodological framework that inspires the contributions to this volume. CA is an approach and methodology in the social sciences that is rooted in ethnomethodology (EM) and aims to describe, analyze, and understand interaction as "a basic and constitutive feature of human social life" (Sidnell 2010, p. 1). In addition to many other disciplines within the social sciences, researchers in applied linguistics, language teaching, and language learning have used this framework to make sense of the social organization of instructed-learning settings in the last three decades. Specifically, this edited volume uses ethnomethodological conversation analysis (EMCA) to: (1) develop a unified, emic (or participant-relevant) account of how members do classroom interaction in various contexts; and (2) explore how second language acquisition (SLA) research that uses CA methods (CA-SLA) can potentially be used to develop new, empirically grounded pedagogical implications by and for a broad range of language teaching professionals. In this context, we are well aware that this agenda is an enormously complex, not to say hazardous, undertaking (see Adams and Chen 1981, who note that 75% of innovations fail). Most importantly, we have to find a way or ways of reconciling the often widely divergent needs and interests of different segments of the community of language learning/teaching professionals who constitute our intended audience.

At the simplest level of analysis, our audience includes researchers, teachers, and those involved in teacher education. In this context, as Mori (this volume) notes, communication between researchers and teachers is often strained or non-existent; she attributes this situation to a long-standing dichotomy between theory and practice that has divided—and continues to divide—the applied linguistics and language teaching communities. While this preliminary characterization of the situation is perfectly correct as far as it goes, we would argue that the borders between theory and practice are in fact quite fuzzy, and that the communication problems that exist between different stakeholders are also more nuanced and complex than they might seem at first sight. So, to return to the question of who the stakeholders in our audience are: they minimally include researchers who are primarily engaged in the production of basic research with their own independent theoretical traditions, agendas and vocabularies, but also education specialists such as curriculum/materials designers, methodologists, testing/assessment specialists, and teacher educators and trainers. These specialists are also researchers in their own right, although the kind of research they do is likely more applied than that carried out by those engaged in basic research. So, we would argue that the first potential site for miscommunication or misunderstanding among stakeholders occurs when the different kinds of researchers mentioned above attempt to engage with each other. Finally, our

audience also includes pre- and in-service teachers. While it is tempting to view teachers as practitioners who are merely recipients of different kinds of research, we should recognize that *all* language teaching professionals—including pre- and in-service teachers—profess and enact potentially quite different kinds of theories of language teaching/learning. Following Markee (1997a), teachers' theories of language teaching and learning are often more experientially based and oriented to solving practical classroom problems than the more global or abstract issues typically addressed by researchers. However, teachers' ideologies and belief systems are nonetheless profoundly theoretical in their own right and here too there is the likelihood that communication between researchers and teachers might not run smoothly.

What does CA have to say about the status of theory and these complicated matters of communication and applicability? As we will see shortly, applied CA can indeed provide some rather unique insights into these issues. However, we should first note that the application of CA methods to resolve practical problems in participants' everyday lives is a comparatively recent development in the field. More specifically, it took about 20 years for CA writers to develop the confidence to look beyond the organization of ordinary conversation and systematically investigate the characteristics of institutional talk.[1] Furthermore, it took another 19 years before the next step in this evolutionary broadening of the CA agenda—namely, the idea that CA can and should be *applied* as an explicit tool of *intervention and change in institutional talk*—was taken by Antaki (2011). Finally, this trend is even more recent in CA-SLA work. While there is a now sizable CA-SLA literature on how classroom interaction is organized (see the sub-section on CA-SLA for details) only a few studies (see Rolin-Ianziti 2010; Sert 2015 and some of the contributions to the volume edited by Salaberry and Kunitz 2019a—see in particular Huth and Betz 2019; Kunitz and Yeh 2019; Lilja and Piirainen-Marsh 2019a, and Waring 2019) have so far explicitly addressed the potential implications of their own findings for teaching and testing (see below).

Second, we also argue that we may need to go beyond the parameters of current CA research outlined above if we are to understand how CA might successfully be used as an integrative tool of systematic change and intervention in second language (SL) curriculum/materials design, methodology and testing/assessment. More specifically, citing Antaki (2011) and Maynard (2006), Mori (this volume) argues that applied, interventionist CA work on institutional talk-in-interaction needs to take into account how larger contextual factors affect talk-in-interaction. In EMCA, this issue typically focuses on how broadly or narrowly the scope of context should be understood (see Kunitz and Markee 2016 for an overview). This is indeed an important issue, but here we extend the parameters of Mori's discussion by arguing that CA researchers would do well to gain at least a consumer's understanding of the diffusion of innovations literature, which is essentially concerned with how to make

[1] We discuss the interface between ordinary conversation and institutional talk in more detail shortly.

social change, including curricular innovation, actually happen (see Waring this volume; Pekarek Doehler this volume b; and Huth this volume; these authors engage with different aspects of this literature to varying degrees). More specifically, as we slowly develop an approach to pedagogy that is based on CA research, we must also take care to develop our understanding of how to *package* this innovation in ways that are likely to improve its chances of ultimate success.

In the pages that follow, we therefore review important theoretical and methodological concepts, and provide a brief overview of basic findings in the sociological EMCA and CA-SLA literatures. We then develop a similar overview of the diffusion of innovations literature as it pertains specifically to the management of CA-based curricular innovation.

2 Ethnomethodological Conversation Analysis

As mentioned above, CA is rooted in EM, which is a radical form of microsociology that is foundationally based on: (1) Garfinkel's (1967) critique of Talcott Parson's (1937) functional approach to sociology; and (2) his empirical respecification of philosophical ideas pioneered by phenomenologists such as Husserl (1960, 1970), and Schutz (1932/1967) (see also Majlesi this volume for further in-depth discussion of these matters). Essentially, EM aims to describe how participants in interaction make sense of each other's actions. This goal is achieved with a range of different methods. For example, some exponents use broad ethnographic methods to understand the notion of context, while others (typically, EMCA researchers) rely on much narrower, *cotextual* (Halliday and Hasan 1976) or turn by turn analyses of talk. Furthermore, EM addresses a broad range of topics. These include work on cognition, institutional settings, and studies of work in the discovering sciences, to name a few.

On the other hand, the parent discipline of CA treats ordinary conversation as the "bedrock of social life" or, more technically, as the "primordial site of sociality" (Schegloff 1987a: 102). According to this perspective, ordinary conversation consists of the kind of mundane chit chat which friends and acquaintances engage in during the course of their everyday lives and is considered to be the baseline speech exchange system in talk-in-interaction (Sacks et al. 1974). The term "talk-in-interaction" was coined by Schegloff (1987b) and subsumes both ordinary conversation and institutional talk, which is viewed as a task- or context-specific adaptation of the practices of ordinary conversation (see Drew and Heritage 1992). Thus, CA research attempts to explicate the observable orderliness of all forms of talk-in-interaction by demonstrating how members orient to various practices as they engage in real time interaction. These practices specifically include turn taking, repair, sequence organization and preference organization, all of which are foundational to the social achievement of intersubjectivity.

In its endeavors, CA embraces the distinctive perspective of "ethnomethodological indifference" (see Garfinkel and Sacks 1970/1986; Psathas 1995) to a priori

theory. As Markee (2008: 405) clarifies, this means that in CA, "emic theory emerges as a by-product of empirical analysis," a position which reverses the theory-first, empirical analysis-second approach to knowledge construction that is normally adopted in etic (i.e. researcher-centric) research. This ethnomethodological respecification of theory in emic terms obviously complexifies traditional etic boundaries between theory and practice in interesting ways. But more importantly, it again reminds us that the emergence of teachers' experientially based theories of language teaching and learning is fundamentally located in their own observable teaching behaviors (see Sert this volume; Waring this volume).

Finally, a word about CA methodology is in order. Analysis is always based on audio, preferably video, recordings of naturally occurring interaction, which are then transcribed to highly granular standards. The transcription conventions first developed in the early 1970s by Gail Jefferson (see Jefferson 2004 for their most mature expression) focus on talk only and are widely accepted as the foundational point of departure for further analysis. More recently, Nevile (2015) has shown that the interest in embodiment in sociological CA has grown exponentially, as measured by the number of articles published in the journal *Research on Language and Social Interaction* (*ROLSI*) that now routinely include information about members' eye gaze, gestures and other embodied behaviors in transcripts. At the same time, however, we note that no single set of embodied transcription conventions has yet achieved the wide-spread acceptance of Jeffersonian conventions in the field (though see Mondada 2016 and Goodwin 2018 as potential contenders). In the context of CA-SLA work, we observe that similar tendencies are at work. For example, almost all the contributors to this volume include some information about embodiment in their transcripts. Furthermore, the way they transcribe embodiment also varies greatly from chapter to chapter.

While CA researchers seek to push back the frontiers of knowledge, and therefore need highly granular transcripts as part of their methodological arsenal, the issue of the granularity of transcripts takes on novel significance in the context of models of CA-based teacher education (such as those posited by Sert this volume or Waring this volume), which may require teachers-in-training to transcribe their own classroom interactions. In such context, teachers-in-training are invited to use transcripts as practical, CA-*inspired* resources for their own professional development. Given the practical purposes of transcripts in teacher education (and on the basis of our own emerging, practical experience with it), we argue that, while it might be beneficial for teachers-in-training to be able to read transcripts in the original CA literature, it is unreasonable to expect teachers-in-training to produce Jeffersonian style transcripts of their own interactions with their students, particularly at the beginning of their studies. Consequently, we anticipate that designing a viable interface between the different forms of knowledge construction in which researchers and future teachers engage will prove to be a particularly delicate, ongoing task for teacher educators who wish to incorporate insights from CA into their teacher education programs. We return to these issues when we review the diffusion of innovations literature at the end of this chapter.

2.1 CA-SLA

CA-SLA is the offspring of two historically distinct fields of inquiry: sociological CA on the one hand, and SL studies/applied linguistics on the other. More specifically, CA-SLA researchers adopt the epistemology and analytical techniques of CA to study how participants empirically *do* language learning in real time (see Kasper and Wagner 2014 for a detailed overview of the range of issues that fall under the rubric of CA-SLA research). For present purposes, we concentrate on the subset of CA-SLA work which focuses on the kind of interactions that occur in second/foreign language classrooms.

In this context, we wish to emphasize that, of course, learning does not occur *only* in classrooms. Indeed, language-learning-as-use occurs just as frequently "in the wild" (see Hutchins 1995 for the origin of this construct). Good examples of this work on language learning behaviors (Markee 2008) in the wild may be found in Gardner and Wagner (2004) and, more recently, in the companion volume to the present collection (see Hellermann et al. 2019), which outlines the current state of the art regarding how language learning behavior is organized in the less overtly institutional context of the community. In short, these two perspectives on language learning are complementary rather than competitive. That is, while they certainly provide numerous insights into the *different* kinds of affordances for learning that occur in more or less institutional forms of talk-in-interaction, they also ultimately *converge* in blurring the lines between instructed and less guided forms of language-learning-as-use. This is evidenced by work which investigates how language problems first encountered in the wild may subsequently be brought back into the classroom for further pedagogical work (see Eskildsen and Theodórsdóttir 2017; Eskildsen and Wagner 2015; Lilja and Piirainen-Marsh 2019a, b; Wagner 2015).

As we have already noted, CA accounts of language learning behavior in any setting do not amount to a new theory of SLA. However, a powerful post-cognitive critique of a priori cognitive-interactionist SLA (see, for example, Long 1996) certainly does emerge as an important by-product of this body of work. Now, at first, CA's lack of an a-priori learning theory that could predict and explain how learning processes function and why was regarded as a fundamental weakness by its cognitive-interactionist critics (see the special issues published in the *Modern Language Journal* in 1997, 2004 and 2007 to see how this kind of criticism evolved). However, by the mid 2000s, the elements of a CA rebuttal of this cognitive-interactionist counter-attack began to emerge. For example, Young and Miller (2004), Hellermann (2008), Pekarek Doehler (2010), Sahlström (2011) and Seedhouse (2010) (among others) started to reconceptualize the notion of language learning in social terms as a change in participation frameworks which becomes routinized over time. In this context, Markee's (2008) paper on language behavior tracking (LBT) was instrumental in developing an emically longitudinal methodology for tracking how participants observably incorporate new language into their emerging interactional repertoires over time. More specifically, this LBT methodology involves two components: learner object tracking (LOT) and learning process

tracking (LPT). More specifically, LOT is a technique which identifies language learning events that focus on specific objects of learning (or learnables; see Eskildsen and Majlesi 2018) during a particular time period. Meanwhile, LPT employs CA to describe how participants engage in a particular kind of language learning behavior.

This body of research has proved to be quite influential, as can be seen by the fact that most of the chapters in this book invoke this social, emically longitudinal perspective on language learning as a corner stone of the analyses that are presented in this volume. At the same time, the notion of longitudinality has itself undergone a good deal of complexification. More specifically, we can distinguish in the first instance between micro- and macro-longitudinal work; that is, between studies monitoring change (or lack thereof) over short versus long periods of time. Historically, micro-longitudinal work constitutes the older tradition (see, for example, Markee 1994, and for more recent studies, see Greer 2016; Kunitz and Skogmyr Marian 2017; and Sert 2017) but macro-longitudinal work has become equally important over the years (see, for example, Eskilden this volume; Hellermann 2008). Obviously, the distinction between these two approaches to doing CA-SLA is not absolute, as it is not always clear when micro-longitudinal work morphs into macro-longitudinal research. However, the distinction is a useful one because the methodological problems involved in maintaining a consistently emic perspective while doing macro-longitudinal work over months or years are probably more challenging than they are in micro-longitudinal work. Most obviously, in our experience, language learning related behavioral change that occurs over a few days is much easier to document emically than change that happens over a period of weeks, months or years. More specifically, demonstrating the extent to which participants *themselves* consistently and observably orient to such changes in their own behavior in the course of multiple, separate episodes of real time interaction over extended periods of time is, methodologically speaking, a very different matter from CA researchers being able to demonstrate such change from a post hoc, etic perspective. This issue is on the bleeding edge of CA-SLA methodology, and deserves much more attention in the future.

In addition, it is important to note that, in the field of EMCA, we may be witnessing the emergence of a critique of longitudinal studies (whether micro- or macro-longitudinally oriented) and of the conceptualizations of learning as positive (or positivistic) change that they embody. For example, Jakonen (2018) suggests that what he calls retrospective orientations to learning activities may offer new insights into the emic dynamics of language learning behavior. He argues that, if one can study how learners retrospectively refer to prior learning experiences (see also Can Daşkın and Hatipoğlu 2019a, b for what they call references to past learning events or RPLEs), it would then be possible to observe how "learners themselves 'do learning' by constructing change over time as opposed to being individuals to whom change merely happens" (Jakonen 2018, p. 4).

2.2 Teaching Interactional Competence

As we have already noted, it took a relatively long period of time for CA researchers to embrace the idea of applying CA findings in various contexts of institutional talk. This is all the more true for CA-SLA researchers: even those who have explored classrooms as language learning environments have typically been reluctant to discuss if and how their findings can have practical implications (and, most importantly, applications) for the teaching profession. Over the years, however, this situation has gradually changed, to the point that this entire volume is dedicated to studies that specifically engage in such discussion. The fact that we have asked all contributors to the volume to conclude their chapters with a section containing some, more direct, pedagogical implications of their own empirical work is the most obvious manifestation of this commitment. But let us backtrack a little and see how this budding interest in the pedagogical applicability of CA-SLA research came to life.

The first advocates of the importance of using CA findings for pedagogical purposes (see for example, Barraja-Rohan 1997) were concerned with the need to imbue language teaching, and more specifically the teaching of speaking skills, with empirical findings coming from research based on naturally occurring conversations in the L1. This position emerged as a reaction to model dialogues presented in textbooks (Wong 2002), which are typically produced at the service of vocabulary and grammar teaching but do not represent even close approximations of how participants in conversation interact with each other. So, the original idea consisted of adapting and applying what we know about interactional competence (IC) in the L1 to the teaching of IC in the L2. IC has been defined as the ability to produce recognizable social actions through timely and fitting contributions to the ongoing talk (see Pekarek Doehler this volume a; for an overview of different perspectives on the matter see the 2018 special issue of *Classroom Discourse*). In other words, IC has to do with participants' ability to, for example, issue, accept or decline invitations and other similar social actions that are accomplished through the purposeful use of embodied language. In order to make ourselves understood by our co-interactants, it is not only the linguistic formulation of our turns that matters; their timeliness and their position in the unfolding talk are indeed equally crucial. This approach to speaking and, more specifically, to IC is clearly informed by CA's view of language as action.

Initial attempts to translate research findings into instructional units for the teaching of L2 IC eventually led to the design of research-informed instructional materials that targeted either specific aspects of IC such as compliment sequences, request sequences, phone openings and closings, etc. (see for example Carroll 2011a, b; Huth and Taleghani Nikazm 2006; Olsher 2011a, b; Wong 2011a, b), or a combination of interactional features (see for example Barraja-Rohan 2011). With time, what looked like isolated proposals by individual researchers who happened to be involved in language teaching evolved into more systematic conceptualizations of the issues related to the implementation of CA-informed L2 IC instruction

(Betz and Huth 2014; Salaberry and Kunitz 2019b). Eventually, the interest in CA-informed language teaching broadened to include CA-informed language testing (see for example: Kley 2019; Kunitz and Yeh 2019; Walters 2007, 2009, 2013). Furthermore, what started as a call to use CA findings to train teachers (Carroll 2010; Sert 2015, 2019; Wong and Waring 2010) has evolved into more encompassing enterprises that aim to provide CA-informed professional development for language instructors in charge of teaching L2 IC in their institution (see for example the innovative professional development initiative held at the Center for Languages and Intercultural Communication at Rice University in 2013–2018 under the direction of M. Rafael Salaberry). In fact, it has become increasingly clear over time that the idea of proposing CA-informed (or at least CA-inspired) language teaching and testing is not sustainable unless language teachers (and not just CA researchers who happen to be working within a language program) are also directly involved. Such engagement is not immune to a number of difficulties. Most importantly, these include: the amount of time that is needed to train teachers, complex methodological and practical issues related to making meaningful use of CA findings, and engaging with more institutional issues that have to do with who initiates and establishes the steps in the route of curricular innovation. It is thus to the literature on the diffusion of innovation that we now turn our attention.

3 Diffusion of Innovations Research

We begin this section by grounding the discussion that follows in our previous introductory comments regarding what counts as theory for different stakeholders in CA-SLA, applied linguistics, teacher training and language pedagogy. Drawing on Edelsky (1991), Markee (1997a) distinguishes between basic "THEORIES"/"RESEARCH" on the one hand and "theories"/"research" on SL acquisition/teaching on the other. The original example given in Markee (1997a) to illustrate what a "THEORIES/RESEARCH" perspective on SLA looks like was Krashen's Monitor theory (MT). MT is clearly an example of an etic, quantitative approach to knowledge construction, which is produced in a top-down way by and for professional RESEARCHERS and whose pedagogical implications eventually trickle down to practitioners. In contrast, "theories" and "research" are typically emic constructs that are implemented by practitioner-researchers who use action research and other bottom-up approaches to knowledge construction. So, wherever we might (somewhat artificially, it seems) situate ourselves on the putative continuum of researchers and practitioners previously mentioned (see Mori this volume), the real problem faced by *all* stakeholders involved in the design, implementation and evaluation of CA-based pedagogy is how to use insights that are derived from both THEORY/RESEARCH and theory/research in a meaningful way.

As we will see shortly, achieving such a synthesis involves stakeholders actively engaging in packaging innovations in particular ways that promote rather than hinder their ultimate adoption. We believe that the literature on the diffusion of

innovations not only provides potentially valuable insights into how to achieve such a goal, but also clarifies the complexity of the larger enterprise of making curricular innovation actually work. In this context, we also note that three contributors to this volume (Waring, Huth, and Pekarek Doehler b) have independently invoked important issues that are central to this diffusion literature.

In what follows we first show how Antaki's (2011) work on interventionist CA provides a bridge to the literature on the diffusion of innovations. We then sketch out how one model of curricular innovation might be used as a consumer's guide to understanding the kinds of issues that will likely have to be addressed in the ongoing development of a CA-informed approach to pedagogy.

Antaki (2011: 9–14) notes that any attempt to engage in interventionist CA will likely run into the following problems: (1) whose perspective (for example, an institution's or a client's) is being advanced during an intervention? (2) what administrative power—if any—do outside CA consultants possess to make change actually happen? (3) what (often conflicting) interests and agendas do different stakeholders have, and how do they impact whether in the end change actually happens or not? (4) what do CA consultants need to know about the ethnographic context of an institution? and (5) why do potential adopters ultimately embrace or resist an innovation? In addition, Antaki (2011) briefly alludes to how difficult it is to plan and implement change, and correctly notes that CA consultants will have to take into account various moral, political and technical issues that may potentially have an impact on the ultimate success or failure of the innovations they design. Let us now see how these and other questions not discussed by Antaki may be subsumed and integrated into the model of curricular innovation developed by Markee (1997a, b; see also Filipi and Markee 2018).

Drawing on previous work pioneered by the language planner Robert Cooper (1982, 1989), Markee (1997a, b) proposes an ethnographic model of curricular innovation that is based on answering the following questions: *Who Adopts What, Where, When, Why and How?* Briefly, the *Who* section (which overlaps with Antaki's Problem #3) deals with what roles different stakeholders play in the diffusion process. The range of stakeholders can be surprisingly large. For example, coming from an educational perspective, Fullan (1982) suggests that gatekeepers such as school superintendents, principals, deans, and heads of department may all be involved in determining whether an innovation is actually implemented or not, and also points out that parents and students may also play a crucial role in determining what happens to an innovation. Furthermore, following Lambright and Flynn (1980), these stakeholders tend to relate to each other as potential adopters (or resisters), implementers, clients, suppliers, and entrepreneurs (or, in our terminology, change agents). Note here the parallels between these categories and the ones used by Waring (this volume) in the diffusion of innovations-related coda to her chapter. Whatever categories we use, the important thing for change agents to remember here is that potentially large numbers of people may (sometimes unexpectedly) assert that they have a stake in deciding the fate of an innovation.

The *Adopts* section (which overlaps with Antaki's Problem #5) focuses on the dynamic nature of potential adopters' decision-making processes and highlights the

fact they are frequently reversible. Thus, the take-away for change agents here is that, while potential adopters may initially have a favorable view of an innovation, they often change their minds in the longer term. Consequently, change agents must constantly be on the lookout for such vicissitudes in potential adopters' decision making.

The *What* section defines curricular innovation as "… a managed process of development whose principal products are teaching (and/or testing) materials, methodological skills, and pedagogical values that are *perceived as new* by potential adopters" (Markee 1997b: 46, emphasis added). Note here that this particular definition adopts a language program director's perspective on change, which may well be different from that of other stakeholders' (in this regard, see also Antaki's Problem #1). It also emphasizes that the newness of an innovation is a subjective matter of perception, not an objective fact. Finally, this section also subsumes the question of whether an innovation is initiated by insiders or outsiders (see also Antaki's Problem #2). Briefly, inside and outside change agents have different rights and obligations: while inside change agents typically possess the administrative power to make innovations happen, outside change agents usually act as consultants who may advise clients on how to proceed but cannot enforce adoption.

The *Where* section (which overlaps with Antaki's Problem #4) considers the context in which an innovation has to function. Following Kennedy (1988), sociocultural context is understood as an onion ring of cultural, political, administrative, educational and institutional variables that can potentially have an impact on classroom innovation, in which culture is held to be the most important variable. Note here that the scope of context as envisioned by Kennedy is broader than the kind of context that is discussed by Antaki. This insight is nicely illustrated by Huth's (this volume) discussion of the gate-keeping role played by national and international organizations such as the American Council for the Teaching of Foreign Languages or the Council of Europe in developing new assessment standards. If the grand project of developing CA-informed assessment standards is to be ultimately successful, these organizations must be explicitly recognized as potentially important stakeholders in innovations that have a national or international scope.

The *When* section focuses on how long it takes an innovation to diffuse (note that Antaki 2011 does not address this question). The key issue to understand here is that innovation is not a linear process. More specifically, the rate of innovation typically starts out slowly, accelerates dramatically once a certain threshold of adoption is reached, and then slowly levels off. This observation is probably one of the most important practical insights for any would-be change agents attempting to develop and implement CA-informed pedagogy, as all innovations typically take much longer to diffuse than originally expected. Change agents must therefore learn to cultivate patience, while also looking out for opportunities to move the innovation process forward whenever they present themselves.

The *Why* section (which overlaps with Antaki's Problem #5) is concerned with understanding the kinds of psychological profiles that different stakeholders have. People who are psychologically open to change have been shown to influence more conservative stakeholders, which is why innovation is not a linear process. Different

kinds of people need different amounts of time to adopt (or perhaps ultimately reject) change. This section is also concerned with understanding a number of different properties that all innovations possess. The most important of these is the property of relative advantage (Rogers 2003), which has to do with whether potential adopters *perceive* an innovation to be beneficial to them or not (in this context, recall from our discussion of *What*-related issues that innovation is an inherently subjective process). Thus, to return to the idea that innovations need to be *packaged* in particular ways, it is important for change agents to actively understand why the innovations they propose may or may not be attractive to potential adopters. Such a project involves constant and effective communication among all stakeholders during the innovation process.

Finally, we come to the *How* section, which is concerned with understanding the advantages and disadvantages of top-down, bottom-up and hybrid approaches to change (note that Antaki 2011 does not address these issues). For present purposes, this section is probably the most important in the *Who Adopts What …* model in that it potentially provides us with important insights into how innovations may be packaged in different ways. Examples of these different models include the top-down Research, Development and Diffusion (RD&D) model; the bottom-up Problem Solving model; and the hybrid Linkage model (see Markee 1997b for details), which pragmatically synthesizes insights from the two previous models. The RESEARCHER-led RD&D model is widespread in academia and has a number of important advantages. It typically generates high quality innovations, which also tend to diffuse quickly, at least in the short term. However, it also suffers from some important disadvantages because implementers (i.e., teachers) are typically excluded from the development phase. As a result, they often lack ownership of such innovations. In contrast, the bottom-up, teacher-researcher-led Problem Solving model actively involves implementers in participating in the development of innovations from the very start of an innovation cycle. This characteristic promotes a high sense of ownership among researcher-implementers. However, the initial quality of innovations produced through the use of this model of change is often low, although this typically improves substantially over time. Finally, the Linkage model of change (hopefully) draws on the strengths of the previous two models and has the potential to achieve a synthesis of insights that are derived from both THEORY/RESEARCH and theory/research.

In this context, the SWEAR[2] teacher education framework outlined by Waring (this volume) and Sert's complementary proposals for IMDAT[3] (see Sert 2015, 2019, this volume) are of particular interest in that they illustrate in practical ways

[2] These initials stand for the following five stages of reflection in Waring's model: (1) ***S***ituate the problem, (2) ***W***ork with a recording, (3) ***E***xpand the discussion, (4) ***A***rticulate the strategies, and (5) ***R***ecord and repeat.

[3] These initials stand for the following five stages of reflection in Sert's model: (I)ntroduction of [classroom interactional competence] to teachers, (M)icro/initial-teaching experiences, (D)ialogic reflection on video-recorded teaching practices with the help of a mentor/supervisor/trainer, (A)nother round of teaching observed by a peer and (T)eacher collaboration for peer-feedback.

how such a synthesis between CA THEORY/RESEARCH and theory/research might be achieved. More specifically, both models posit a constant back and forth between these different approaches to knowledge construction as the basis for ongoing, ethnographically-grounded reflection by teachers on how to improve the pedagogical utility of their own and their students' interactional practices during classroom talk.

This being said, it is important to acknowledge that, in its (successful) attempts to gain a seat at the SLA table over time, most CA-SLA work to date has so far invoked a THEORY/RESEARCH approach to conceptualizing how IC is achieved. Such work is very valuable and obviously needs to continue, not least because not all CA-SLA RESEARCHERS are necessarily primarily interested in the pedagogical applicability of their findings. In this context, reflecting on her own particular intellectual background and experience, Pekarek Doehler (this volume b) effectively self-identifies as a RESEARCHER. At the same time, she also acknowledges that she has no particular expertise in pedagogy. She therefore correctly suggests that "we need *a chain of experts* so as to cover the many intricacies that pave the way between research into the nitty-gritty details of L2 development on the one hand and the enormous complexity of implementing measures for teaching or testing on the other" (Pekarek Doehler this volume b: 418, emphasis added).[4] We would like to conclude this discussion by noting that Pekarek Doehler's call for collaboration between different kinds of experts has much in common with our own proposals for the necessity of a carefully packaged synthesis between THEORY/RESEARCH and theory/research as a prerequisite for successful CA-based curricular innovation. This insight underscores the interdisciplinary complexity that underlies on-going attempts to develop CA-based pedagogies. It also motivates our previous suggestion that stakeholders involved in the development of CA-based pedagogies would be well-served by gaining at least a consumer's understanding of the diffusion of innovations literature as a useful resource for understanding innovation processes. However, we also recognize that embracing such a suggestion would entail stakeholders potentially engaging in a considerable investment of time and energy in getting up to speed on this literature, and many may well conclude that it is not in their best interest to do so. Thus, only time will tell whether (and if so, the extent to which) future RESEARCH/research on CA-based pedagogy will actually embrace this recommendation.

[4] It might be assumed from this account that people who do research and people who do practice are different people. While this may be true in some cases, there is no reason why this should be necessarily so. Indeed, most of the contributors to this volume straddle these two categories of stakeholders.

4 Conclusions

In this chapter, we have provided an overview of how CA-SLA has evolved from sociological CA. Our request to contributors to include a final pedagogical applications section in their chapters represents a pragmatic attempt to develop systematic links between THEORY and application. However, looking to potential developments in the future, we have also shown how the kind of applied CA predicated by Antaki (2011) potentially interfaces with important issues in the curricular innovation literature, and how at least three contributors to this volume (Huth this volume, Pekarek Doehler this volume b, and Waring this volume) have already begun explicitly to orient to such issues in their own work.

Finally, a brief word about how this volume is organized. It concentrates on four areas of CA-SLA. These include: (1) CA research in second language classrooms; (2) Research in Content-Based Language Classrooms; (3) CA Research and Teacher Education; and (4) CA and Assessment. In addition, two concluding chapters offer closing remarks on the four substantive sections mentioned above. In order to help readers navigate their way through this book, we also provide mini introductions to these topics at the beginning of each section so that readers can get a sense of how the various contributions hang together intellectually. We also anticipate that these mini introductions will help readers choose which chapters are of most interest to them and thus choose the order in which they read them. Lastly, we hope that this volume will contribute to the development of new directions in applied CA-SLA work and to the collaboration between different stakeholders in the attempt to develop cutting edge research and pedagogical practices.

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Toward a Coherent Understanding of L2 Interactional Competence: Epistemologies of Language Learning and Teaching

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Abstract In this chapter I address what I see as the cornerstone for advancing our understanding of how results from empirical research into L2 interactional development can usefully be brought to bear on L2 education—be it curriculum design, teaching or testing—, namely an epistemologically coherent understanding of interactional competence and its development. For this purpose, I outline how current thinking about interactional competence—and more generally about L2 development—is rooted in a socio-constructivist, dialogic ontology of language, learning and competence as fundamentally situated, distributed, and emerging in and through social interaction. I discuss how this conceptualization differs from the notion of communicative competence, and argue that it stands in sharp contrast to the individualistic and cognitivist approaches to SLA that represent the epistemological backbone of L2 education in many contexts. Most centrally, I examine how existing findings from recent longitudinal studies on the development of L2 interactional competence can help us understand the challenges and the affordances of L2 classroom interaction, and I conclude with some larger implications for L2 education.

Keywords L2 interactional competence · Epistemologies of language learning · Affordances of classroom interaction

1 A (Historical) Prelude: The Demands of the Social World and the Advancement of Research

Let me start with a prelude. The importance of interactional competence (IC) for people's participating in the social world—be it in their L1 or in their L2, L3, etc.—cannot be overestimated in the twenty-first century. The emergence of a

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_2

knowledge- and service-based economy as well as the growing diversification/globalization of our economic and cultural landscapes highlight in unprecedented ways the importance of people's adaptive capacities and mastery of communicative tools (see the papers collected in Pekarek Doehler et al. 2017). IC in different languages is a central component of the wider social abilities by which people gain access to multiple institutional and social worlds, are recognized as members in the related communities of practice, learn, construct their identities, pass through processes of educational or professional selection, socialize in the workplace, and much more: IC, including in an L2, is instrumental in people's being in and moving through the social world.

Yet, it is exactly this competence that represents a central stumbling stone when it comes to teaching and testing languages around the world, across settings, methods or cultures. We know from experience how, after 6 or 8 years of L2 learning in the classroom, we (or others) can find our(them)selves helpless when it comes to engaging in spontaneous L2 interaction. One may reasonably argue that the problem lies in the very nature of the object at stake, i.e., the intricate abilities it takes to manage the situated dynamics of social interaction. Yet, one may also reasonably argue that at least part of the issue is due to the relatively limited knowledge we currently have about the nature and, in particular, the development of these abilities. Today, we look back on more than a century of research on language structure in modern linguistics, of which more than half includes research on the development of L2 grammar, linguistic forms or form-function mappings. By contrast, we have so far witnessed merely a decade of empirical research into the development of L2 IC—albeit backed up by some 50 years of research in conversation analysis (CA) concerned with "the competences that ordinary speakers use and rely on in participating in intelligible, socially organized interactions" (Heritage and Atkinson 1984, p. 1), which, however, has not been developmental in nature.

Importantly, the emergence of the notion of IC in the field of SLA cannot be reduced to highlighting one subcomponent of language learning. Rather, it is symptomatic for a shift in our very understanding of what language learning is. Throughout the past two decades, L2 learning has been increasingly understood as the development of linguistic means for engaging in the social world, as a fundamentally sociocognitive process, not enclosed inside the individual's cognition, but driven through language use, the prototypical site of which is social interaction (cf. Firth and Wagner 1997, 2007). The construct of interactional competence can therefore be seen as spearheading a new perspective on language learning in the field of SLA—a perspective that has important implications for language teaching, as evidenced in the contributions to this volume (see e.g., Eskildsen, this volume; Huth, this volume; and Walters, this volume). Though I will not go into this here, it is important to note that the construct itself has been applied to language teaching, stressing the importance of the detailed ways in which teachers interact with students in the classroom (see Walsh 2011, 2013 on the notion of Classroom Interactional Competence).

Historically, calls for a better understanding of L2 development in light of the dynamic nature of language use in interaction go back to the 1980s (e.g., Kramsch 1986) and initial conceptualizations of the notion of IC have seen the light in the 1990s (Hall 1999; He and Young 1998). Yet, it is only within the past decade (see especially Hellermann's 2008 book-length study and the papers in Hall et al. 2011), that the development of L2 IC over time has gained systematic attention in empirical SLA research (for state of the art discussions see Skogmyr Marian and Balaman 2018; Pekarek Doehler and Pochon-Berger 2015). The lesson to draw from this, despite the increasing amount of empirical findings that we have available today, is one of modesty: There is still a long way to go.

2 Understanding Interactional Competence and Its Development

2.1 Conceptual Challenges

Arguably, it is exactly in the relative recent nature of empirical research into L2 IC that lies an opportunity—but also a challenge. We know from experience that, when the picture available is not yet fully rendered, there is promising space for discussion, adaptation, and mutual influence between different vantage points, not only as to the conceptual implications of the diverse evidence they offer, but also as to the very questions they raise. When it comes to issues of L2 acquisition and L2 teaching, in order to be productive, such a dialogue needs to be grounded in a mutually compatible understanding of language, learning, and ultimately (interactional) competence.

The fact, however, is that the concept of IC and the related understandings of L2 learning are not solidly 'out there', that is, are not substantially addressed within L2 policies or curriculum design, teacher training or classroom practice. Once we leave the field of CA-SLA research, IC often remains only vaguely circumscribed or tends to be conflated with the notion of 'communicative competence' (see below). More generally, the socio-cognitive nature of L2 learning as anchored in language use in interaction is often overshadowed by the dominant focus on individual learners and their cognitive processing. There is hence an urgent need for spelling out, based on empirical research on IC and its development, a coherent understanding of the notion and of its implications.

Within current SLA research, the conceptualization of IC is grounded in a socio-constructivist understanding of cognition, competence, and learning as fundamentally situated, distributed (Lave 1988; Hutchins 1995), locally accomplished in and through social interaction (Garfinkel 1967): IC is viewed as an ability for joint contextually contingent action (see below). Such an understanding, however, fits quite uneasily with cognitivist views of language and of competence as properties of the individual, which have historically provided the theoretical backbone for

frameworks for L2 teaching at several levels of granularity. Such contrasting conceptualizations represent a central challenge for developing implications for L2 education based on results from L2 research. This is so because views of language and of learning have a structuring effect on curricula design as well as classroom practices, and therefore contribute to shaping local affordances for language development within instructional settings.

2.2 An Epistemologically Coherent and Empirically Validated Definition of the Target Object: From Communicative Competence to Interactional Competence

The notion of IC cannot be reduced to an expansion of the target object of L2 learning to include interactional abilities in addition to linguistic, pragmatic or socio-cultural ones; rather, as mentioned above, the notion of IC reflects a shift, within the field of SLA, in our very understanding of what language learning is. The prominent lines of SLA research have for long been grounded in a fundamentally monologic and individualistic language ontology, concerned with linguistic form, form-function mappings, and individual cognitive (input) processing (for earlier critiques of such a view see Markee 1994; McNamara 1997; Firth and Wagner 1997). As a consequence, contextual communicative practices and the organization of social interaction have not been a concern for mainstream SLA, and social interaction tended to be either left out of the picture, or treated as a mere setting (among others) allowing for the acquisition of linguistic forms (see e.g., the Interaction Hypothesis, Long 1996, and ensuing work).

With Hymes' (1972) conceptualization of *communicative competence*, the field of SLA saw a groundbreaking shift toward a more holistic understanding of language use, yet without embracing the dynamic nature of language use in and for social interaction. Ensuing Hymes' work, sociolinguistic abilities have been foregrounded, relating to culturally specific norms of conduct (e.g., politeness), as well as pragmatic abilities, pertaining to the realization of speech acts (e.g., requests) or to issues of discourse coherence (e.g., discourse markers). The distinctive feature of these developments—which differentiates them from current concerns with IC—is their focus on *social conventions* rather than on locally situated procedures for action. Furthermore, while research on communicative competence has substantially advanced our understanding of the spoken modality, it has largely remained attached to a monologic perspective. In Canale and Swain's (1980) and Canale's (1983) work, for instance, communicative competence has been subdivided into linguistic, sociolinguistic, strategic, and discursive competence, with a focus on the individual production of the learner, rather than on the learner's participation in social interaction and the related process of mutual adaptation. In this context, the notion of competence has furthermore tended to be conceptualized as a decontextualized cognitive property of the individual, that is, a competence that is put to use

within language practice independently from the situational context of such use and from the co-participants' actions.

Now, such an understanding strongly contrasts with more recent socio-cognitivist and socio-constructivist conceptualizations of human cognitive functioning (e.g., Hutchins 1995; Lave 1988; Rogoff 1990; Wertsch 1991) and of language learning (Firth and Wagner 1997) as profoundly contextual, i.e., contingent upon the local circumstances of use. From this perspective, competence is not an abstract property enclosed in the brain of the individual, but is situated and hence continually adapted to the local circumstantial details of its use within people's acting in the social world. As Wertsch (1991) put it: "Human mental functioning is inherently situated in social interactional, cultural, institutional and historical contexts" (p. 86). These developments have also radically put into question classical dichotomies regarding cognition—such as the distinction between individual and social processes, abstract capabilities and contextualized ones, and ultimately competence and performance (for SLA see Firth and Wagner 1997). For instance, in a study on arithmetic tasks, Lave (1988) documented 30 years ago already that participants tend to perform better in practical real-life situations (such as calculating prices on the market) than when solving tasks of the same degree of difficulty in formal tests. This provides a speaking example of how competencies (even those relating to such 'hard-core' issues as mathematics) are situated in context, and hence cannot be understood as context-independent cognitive properties or abilities of the individual.

Within the field of SLA, socio-cognitivist and socio-constructivist understandings of L2 learning have been increasingly foregrounded within the past two decades, and it is in this context that the nature and the development of L2 IC has become a central concern. In a pioneering statement, Kramsch argued already in 1986 against what she referred to as an "oversimplified view of human interaction" (p. 367) in SLA, and in the 1990s, researchers started to offer more dynamic and dialogic and contextualized conceptualizations of competence, focusing on social interaction (e.g., Hall 1999; He and Young 1998; Firth and Wagner 1997). Yet, it is only within the past decade that social interaction has started to be empirically investigated as the very object of L2 learning.

To date, the most important advancements in understanding L2 IC and its development have been provided by longitudinal (and in some cases cross-sectional) conversation analytic studies on SLA (CA-SLA; for recent discussions see Pekarek Doehler and Pochon-Berger 2015; Pekarek Doehler 2019; Skogmyr Marian and Balaman 2018). Following CA's epistemological roots in ethnomethodology, a line of research in sociology, IC has been defined in terms of *members' 'methods'* (cf. Garfinkel 1967) for organizing social interaction (Hellermann 2008; Pekarek Doehler 2010, 2019; Nguyen 2017). 'Methods' are systematic procedures (of turn-taking, opening or closing a story-telling, repairing interactional trouble, etc.) through which participants in an interaction coordinate their actions, accomplish roles and relationships, establish mutual comprehension, and maintain intersubjectivity. These procedures include verbal resources—but also prosodic and embodied resources such as gesture, posture, gaze—that contribute to situated

meaning-making and the coherent coordination of mutual actions within social encounters. As part of participants' public action in conjunction with others, these procedures are observable in the details of participants' conduct; by virtue of that fact, they are inspectable by the researcher, both for their local deployment and their development over time.

Importantly, the above conceptual grasp of IC is based on a long tradition of empirical CA research that has amply documented that 'competent' members (typically L1 speakers) have at their disposal alternative methods for getting the same interactional jobs accomplished. For instance, they may have different ways of showing disagreement (use of polarity marker of the type 'no', or more subtle turn-constructional formats such as 'yes…. but…'; Pomerantz 1984). They choose between these alternative methods according to the local circumstances of their interaction, which allows them to deploy conduct that is adapted to the situation at hand and to their precise interlocutors, i.e., conduct that is *context sensitive* and *recipient-designed* (Sacks et al. 1974). The availability of alternative methods is exactly what L2 speakers often lack, which entails limited adaptive abilities on their part (see below).

In a nutshell, then, IC consists of the ability to deploy procedures for the management of social interaction (turn-taking, opening or closing a conversation, disagreeing, initiating a story-telling, and so forth) in ways that are relevant, i.e., adapted, to the local circumstances of the interaction and to the specific others who participate therein. IC includes both the ability to understand the interactional context and the expected practices therein, and to deploy locally relevant conduct based on verbal and non-verbal resources. This understanding hence highlights the socially situated and distributed nature of IC as an ability to act conjointly with others.

2.3 An Empirically Grounded Understanding of the Developmental Trajectories of L2 Interactional Competence

CA-SLA studies on IC have investigated several of the abovementioned types of interaction-organizational procedures. The cumulative evidence stemming from investigations on such diverse objects as turn-taking, disagreeing, opening tasks and story-tellings shows that when interacting in their L2, speakers build on interactional abilities they had developed since infancy, yet they also re-calibrate, re-adapt these as part of their developing IC in the L2. Beginner L2 speakers may for instance employ only basic methods for turn-taking (such as soliciting someone by name, or raising one's voice; Cekaite 2007), for disagreeing (such as using the polarity marker 'no'; Pekarek Doehler and Pochon-Berger 2011), or for opening tasks (Hellermann 2008), but then diversify these over time in the process of becoming more efficient L2 speakers. This process of course centrally involves linguistic resources; over time, these become invested with new, specifically interactional,

functions. For instance, in Korean L2 the use of the connective *kutney* (roughly corresponding to English 'but') as a disagreement marker has been shown to emerge only over time (Kim 2009), although the form itself was available to the L2 speaker earlier on. For English L2, the expression *what do you say* has been shown to expand in use, first occurring in the sense of 'how do you say X', and later on being also used as a request for repetition (in the sense of 'what did you just say') and for eliciting co-participant's opinion (in the sense of 'what do YOU say/think') (Eskildsen 2011). And for French L2, *comment on dit*, 'how do you say', has been shown to progress in use from doing a request for translation to working additionally as a marker of cognitive search and a floor-holding device (Pekarek Doehler and Berger 2019). These findings testify to the development of an *L2 grammar-for-interaction* as an integral part of L2 IC (Pekarek Doehler 2018).

Diversification of speakers' procedures for dealing with practical interactional issues as well as expansion of the interaction-functional realm of precise grammatical resources are hence key characteristics of the developmental trajectory of L2 IC over time. And this has been documented both in classroom studies and in studies on interactions outside of the classroom. It is exactly this diversification/expansion that allows speakers to use language for the purpose of coordinating social interaction, and to adapt their conduct to the local situational constraints and to the precise others they are interacting with, i.e., to deploy conduct that is increasingly context-sensitive and recipient-designed (cf. Sacks et al. 1974). This is what makes L2 speakers increasingly 'competent' as members of the L2 community in which they act and interact.

In sum, the conceptualization of IC in terms of members' 'methods' is in line with a conception of learning and of competence as situated and mutually adaptive: Learning a language is defined as a social practice (*learning-in-action*, Firth and Wagner 2007), and IC as an ability for joint action, that is co-constructable, i.e., shaped through the participants' mutual actions, and contingent upon the details of the social interactions L2 speakers participate in (*competence-in-action*, Pekarek Doehler 2010). This means that IC is understood to emerge from members' cumulative experience of social interactions while continuously being adapted in the course of such interactions: IC is not simply brought along by individuals to new situations, but is brought about, in interaction with others, by the local circumstantial details of the social interaction.

3 Longitudinal Studies on the Development of L2 IC and Their Implications: The In-Principle Affordances of the Classroom and Beyond

The conceptual developments and empirical findings in the field of CA-SLA research as outlined above boil down to a deconstruction of the competence-performance dichotomy: Competence is understood as a competence for

interaction, and as a competence that grows out of interaction. While CA work in the field specifically focuses on practices (or: 'methods') and linguistic resources for interaction, it also fundamentally resonates with larger usage-based approaches that evidence how linguistic constructions emerge from language use (Ellis and Larsen-Freeman 2006)—and often from language use in interaction (e.g., Eskildsen 2015). As a consequence, participation in social interaction is seen as key to learning.

While research on L2 IC stresses the need for adaptation and diversification of resources, based on the conceptual apparatus of CA and an ethnomethodologically grounded understanding of IC, it also focuses on generic principles of interaction: turn-taking organization, repair organization, sequence organization (i.e., the organization of turns into 'pairs' such as question-answer), and the larger structural organization (i.e., conversational openings and closings). This is where the conceptual and epistemological foundations of current work on CA-SLA come to play a key role in view of identifying the opportunities offered by classroom interaction for IC development: As generic principles of social interaction are at work in any situation—institutional or not—they can in principle be 'practiced' in any social interaction. It is the ways that these principles are managed—i.e., the methods and resources speakers deploy for organizing interaction—that vary in context-sensitive ways. This has important implications for how we see the classroom as an opportunity space for interaction, and for the development of L2 IC.

We know from ample research on classroom interaction that the L2 classroom is a diversified interactional arena (e.g., Markee 2000; Sert 2015; Seedhouse 2004; Walsh 2006; Waring 2015; see also many of the papers collected in this volume and in Markee 2015), offering in principle a plethora of opportunities for L2 interactional development. One of the key issues for developing sound measures in view of favoring the development of L2 IC in and through classroom interaction is to tease apart what can reasonably be taught or practiced within the classroom and what cannot effectively be addressed inside the classroom, and to identify how out-of-classroom experiences can be made profitable within the classroom.

To give just a couple of examples, from our own research: There is evidence, for instance, that practices for doing L2 disagreements in classroom interaction diversify across time within the classroom, in ways that bring the L2 students closer to what we know from L1 speakers. Some years ago we conducted a cross-linguistic study on disagreements, comparing intermediate and advanced (9th and 12th grade) French L2 students in a German-speaking environment (Pekarek Doehler and Pochon-Berger 2011). While disagreements were not an explicit target of L2 instruction, debates on topical and potentially controversial issues (abortion, the military, environmental policies, etc.) provided ample opportunities for disagreeing with others, and such debates were implemented at both levels of schooling. The comparison between the two levels showed that the L2 students developed their abilities for doing disagreements through the very fact of interacting in the L2 within the classroom, and without disagreement having been the target of instruction or structured classroom practices. At lower level of proficiency students tended to uniformly do disagreements through the use of turn-initial polarity markers, such as *non* 'no', while at upper levels they diversified their practices, using for instance

disagreement prefaces within a 'yes-but' structuring of their disagreeing turns. These findings suggest that the development of 'methods' for doing disagreement and a range of other dispreferred actions (rejections of requests or invitations, for instance) may be favored by specific types of classroom interaction, such as debates. These very 'methods' may, however, also lend themselves to explicit instruction and structured practice in the classroom (Barraja-Rohan 2011; Huth and Taleghani-Nikazm 2006; Wong and Waring 2010).

The above results resonate with findings on L1 development. For instance, in a range of studies on young people's L1 IC on the transition between lower-secondary and upper secondary schooling (and the workplace), we identified a strong continuity between lower and upper secondary school regarding issues of interactional engagement and participation (see the papers in Pekarek Doehler et al. 2017): Interactional processes within the lower secondary classroom, and in particular teachers' implicit or explicit encouragements for students to act in precise ways that furthered issues such as interactional engagement, assertiveness, and local adaptation of one's conduct to ongoing activities, tended to become appropriated by students as patterns of reference guiding their conduct at upper secondary levels. It is exactly these patterns that were shown to be called for in work-related situations, such as job interviews or actual workplaces: The cooperative participatory classroom culture based on students' initiative, the diversification of turn-taking practices, and the negotiation of knowledge observed at the upper end of the school trajectory reverberates with the increased demands for interactional flexibility encountered in diverse work-related situations. This is a strong argument showing how classroom practice without overt instruction, combined of course with out-of-classroom socialization processes, profited IC development (in an L1).

The above examples—along many others (see recently Watanabe 2017 on the development of turn-taking and participation in the L2 classroom; see also Eskildsen this volume, on the development of embodied interactional resources)—stress the fact that we need to learn much more about how social interaction within the classroom favors IC development over time (see Pekarek Doehler and Fasel Lauzon 2015 for an overview of longitudinal studies of L2 classroom interaction). This is so because 'simple' L2 interaction, that is, interaction that does not specifically target a given learning object, can easily be underestimated as a mere site of putting to use what one has already acquired, yet exactly this same type of interaction can be a key site of mutual adaptation, experimentation, informal instruction (or 'informal assessment', Can Daşkın, this volume), and ultimately interactional development.

Other research results draw a less promising picture. We conducted a set of studies on au pairs who had had years of L2 instruction before immersing into a stay of several months in an L2 environment. Results showed that some aspects of their IC developed relatively late in their overall learning trajectories, but change in these occurred relatively fast once the L2 speakers were immersed in everyday L2 use: Such fast L2 development was observed for instance with practices for opening story-telling in recipient-designed ways (Pekarek Doehler and Berger 2018) or for soliciting recipient's help during word-searches (Pekarek Doehler and Berger 2019) in ways that minimize the disruptiveness of these searches, as well as with the use

of grammatical resources for the social coordination of interaction (Pekarek Doehler 2018). Results here suggest that short-term total immersion through a stay in an L2-speaking environment (even 2 or 3 months) out-weighs long-term classroom instruction with regard to selective aspects of IC. This, of course, calls for more extended research on the multiple facets of IC and how their trajectories develop selectively within precise settings.

Given the massive time-limitation for practicing interaction within the classroom, a central question is how the classroom and 'the wild' (i.e., out of classroom language experiences) can be combined to create opportunity spaces for interactional development. This issue is addressed in great detail in the papers collected in Hellermann et al. (2019), which stress the need for a reflexive relationship between the classroom and 'the wild' (Wagner 2015): They argue for integrating into school curricula language-learning experiences in out-of-school social interactions, for instance through student-exchanges (as currently practiced throughout many European countries), the assignment of out-of-classroom on-line interactional tasks (Balaman and Sert 2017) or more local integration of opportunities for naturalistic interactions (e.g., Piirainen-Marsh and Lilja 2019). On the one hand, such enterprises can capitalize on the classroom's power to transform language experience into learning, for instance when participants' self-recorded out-of-classroom experiences are brought back into the classroom for reflection and teaching purposes (see e.g., Thorne 2013 and the papers in Hellermann et al. 2019); on the other hand, this may take advantage of the complementary opportunities for learning that out-of-classroom naturalistic interactions offer compared to classroom instruction. The importance of such endeavors cannot be overestimated in light of what we know, today, about L2 IC and its development.

4 Conclusion

In a recent paper discussing the interaction between L2 speakers in the classroom and out-of-classroom L2 experiences, Wagner (2019) argues for an ethnomethodologically and sociologically grounded understanding of learning as the keystone for a new experiential pedagogy that is able to prepare L2 speakers for participation in the social world. Such an understanding focuses on the situated and contextualized nature of learning and of competence and sees language use as the driving force for learning, rather than seeing linguistic knowledge as the prerequisite for use. Yet, this understanding, while it is in line with current conceptualizations of IC as outlined above, stands in sharp contrast to cognitive-individualistic views of learning as the internalization of knowledge. It is exactly in such contrasting epistemologies of learning (or teaching) that a key challenge emerges when it comes to formulating SLA research-based implications for L2 education (see also Pekarek Doehler, this volume), and to bridging the gap between research and practice (see the contributions in Salaberry and Kunitz 2019).

5 Implications—In a Nutshell

The conceptual and empirical developments described in this paper have a range of implications for second language education, which are addressed in several contributions to this volume. Some consequences for the classroom have been mentioned above, and I have spelled out other consequences later on in this volume (Pekarek Doehler this volume). In a nutshell:

- *Integrating classroom and out-of-classroom language practices wherever possible*. In order to prepare L2 learners for their participation in real-world L2 encounters, classroom practice needs to be more consequentially completed with opportunities for out-of-classroom language experiences (see above), and these experiences should be brought back to the classroom as objects of reflection and of teaching. This means capitalizing on the learning potential of the classroom in ways that are nourished by a wider range of interactional practices than the classroom alone can offer.
- *Integrating IC and the related understanding of L2 learning into teacher training and curriculum design*. A convergent epistemology of language learning represents an indispensible basis for bridging the gap between research and practice. The socio-constructivist conceptualization of language learning that emanates from several lines of current research is in need of clarification in the field of language education, and so is the notion of IC, and how it differs from communicative competence. Furthermore, there is a parallel need to raise teachers' awareness for IC and how it can be observed in social interaction. The arenas for such endeavors are teacher training (see Pekarek Doehler this volume; Sert this volume; Waring this volume) and curriculum design (see Markee's 1997 classic work on managing curricular innovations).
- *Designing assessment models and practices that recognize the social, i.e., mutually adaptive, nature of language use in interaction* (see already McNamara 1997). We need operational criteria for assessing IC (e.g., Kley 2019; Walters this volume), practicable testing designs and situations (e.g., Huth and Betz 2019), and ultimately recognition of the fact that IC is rooted in jointly acting with others and that—consequently—the testee's acting is inevitably contingent upon the tester's acting.
- *Adapting current reference frameworks for L2 teaching*. Existing reference frameworks such as the CEFR call for a specification of the (often vague) descriptors for 'interactional competence', and for a moving away from its treatments as just one sub-component of 'speaking', adjoined in an additive manner to other components such as accuracy, fluency of coherence. Reference frameworks need to be better aligned with the current state of research which offers a more encompassing understanding of IC that highlights social interaction as the typical (and ontogenetically as well as phylogenetically primary) site of language use, and understands language, learning, and competence as fundamentally situated, emerging in and through social interaction. Such an understanding, however, stands in sharp contrast to the very epistemological foundations of

existing reference frameworks that continue to be indebted to a monologic and individualistic view of L2 learning and use (see Huth this volume).

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Part I
CA Research in L2 Classrooms

Introduction to Part I

Numa Markee, Olcay Sert, and Silvia Kunitz

Abstract In this text we summarize the chapters contained in Part I. That is, after a short introduction to the specific research area addressed by the chapters, we briefly summarize the content of: Majlesi (this volume), Eskildsen (this volume), Musk (this volume) and Kunitz (this volume).

Keywords Intersubjective objectivity · Learnables · Multimodal CA · Local ecologies · Spelling corrections · Semiotic resources · Epistemic access · Instruction-giving sequences · Minimization

As already implied in the introduction to this volume and the wealth of references cited therein, research that focuses on classroom interactional contexts has always been a staple of the Conversation Analysis for Second Language Acquisition (CA-for-SLA, or CA-SLA) enterprise. Indeed, for many learners, the classroom is actually the *only* place where they will come into contact with a language other than their own. It is therefore vital to carry out comparative research on how L2 classroom interaction works in a variety of settings if we are to gain a true understanding of how language specific linguistic resources are used to implement processes of language learning as use (see Wong and Olsher's interview with Emmanuel

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_3

Schegloff in 2000, pp. 120–121 for the origin of this perspective). It is also important to build collections of classroom interactional practices (achieved by both teachers and students) that can shed some light on the similarities and differences in the organization of instructional environments across settings. Thus, an understanding of how classroom interaction works and how such an understanding may translate into practical pedagogical applications is central to the increasingly mature field of CA-SLA. It is this line of research that is presented in this chapter, with studies focusing on L2 Swedish, L2 English and L2 Italian.

Specifically, this chapter presents studies of teacher and student practices in the L2 classroom. The first chapter by Majlesi (this volume) is a theoretical piece that examines how the intersubjective objectivity of *learnables* (see also Eskildsen and Majlesi 2018; Majlesi 2014a, b; Majlesi and Broth 2012) is socially constructed during teacher-student *interactivities* in a Swedish as a second language classroom. More specifically, Majlesi draws heavily on three distinct though closely related traditions that bear on how learning is socially achieved in such classrooms: the praxeological, ethnomethodological work pioneered by Garfinkel and Sacks (1970/1986); the dialogical research program associated with Linell (2009); and the phenomenological work of the German philosophers Husserl (1983, 1989) and his student Schutz (1932/1967). Majlesi uses multimodal CA to show how talk interfaces with embodied actions and objects in the immediate physical environment as resources for the social creation of intersubjectively achieved objective learnables in classroom talk. While this piece is clearly the most theoretically-oriented chapter in this collection, Majlesi makes a compelling case that new directions in pedagogy must be grounded in the kind of post-cognitive, interactional and multi-dimensional views of language learning as use that he develops in his contribution to this book.

In the following chapter, Eskildsen (this volume) adopts a multimodal, socially distributed, and situated perspective to study the learning of language-as-a-semiotic-resource-for-social-action. Specifically, the author focuses on how a beginning L2 speaker of English gradually becomes able to routinize the embodied, interactional and linguistic resources that are needed to accomplish a recurring classroom activity. The chapter programmatically embraces a view of learning as socially co-constructed, embedded, and embodied. In other words, L2 learning occurs in local ecologies where the learner has to make sense of the social practices that are accomplished through the use of specific semiotic resources. The pedagogical implications of this view lie in adopting a context-rich approach to teaching, so that students are exposed to the situated interactional environments in which language is used for social action.

Musk (this volume), on the other hand, relies on multimodal CA to analyze how pairs of students carry out a computer-assisted collaborative writing task in an English as a Foreign Language (EFL) class. Specifically, Musk focuses on sequences of spelling corrections and explores the situated epistemic ecology that characterizes such sequences where the typist might interact with the non-typist and the digital spell-checker. The unfolding of the spelling corrections essentially depends on the epistemic access of the typist: if the typist knows the spelling of the word s/he is writing, then s/he will get the first opportunity space for noticing an emergent

misspelling and doing the correction; if s/he does not know the spelling of the word, then opportunities for collaboration and learning arise. At the pedagogical level, Musk emphasizes the importance of raising students' awareness of the pros and cons of using spell-checkers and suggests that students should be informed about how they can profitably use such digital tools (e.g., through right-clicking for possible alternatives).

Following Markee's (2015) call for more CA work on instruction-giving sequences in classrooms, recent studies have explored how teachers orient to students' non-understanding (Somuncu and Sert 2019) and clarification requests (Kääntä and Kasper 2018) in instruction-giving sequences in EFL and content-based classrooms. Kunitz (this volume), in turn, focuses on the progressive minimization of instruction-giving sequences in a class of Italian as a foreign language. Employing the analytic tools of EMCA, the analyses unpack the interplay between instruction-giving sequences and task implementation, documenting the multimodal resources that are mobilized in a continuum from lengthy to minimal instructions. In terms of the pedagogical implications of this paper, the findings suggest that it is important to raise teachers' awareness of how they formulate instructions, since instruction giving is a crucial skill for (language) teachers.

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The Intersubjective Objectivity of Learnables

Ali Reza Majlesi

Abstract This chapter delves into the theoretical underpinnings of praxeological and dialogical research on the emergence of opportunities for learning in teacher–student interactivities. First, I introduce the emergence of objects of learning as a social phenomenon; then I argue for the intersubjective–intercorporeal understanding of those objects as emergent learnables in classroom talk in their immediate contextual and interactional environments. Two sequences of classroom activities in a Swedish as a second language classroom are presented and analyzed from a phenomenological–sociological view on intersubjectivity. The analysis highlights the significance of a dialogical and praxeological approach to the study of learning/teaching activities, and underscores that attending to intersubjectivity includes paying attention to corporeal acts in the procedure of orienting to, and showing understanding about, learnables. The chapter concludes that, in order to understand teaching/learning behaviors, a detailed analysis of participants' actions in their interactivities is necessary. More specifically, in all talk-in-interaction (and particularly in classroom talk, with which this study is specifically concerned), the objective reality of linguistic expressions – their forms, and their functions – is accomplished, situated and embodied, and is thus reflexive and indexical in nature. This may suggest that researchers abstain from the dichotomy of the subjective–objective reality of a learnable in favor of the possibility of considering the intersubjective objectivity of a learnable as what is accomplished in real time in a social activity.

Keywords Intersubjectivity · Intercorporeality · Ethnomethodological conversation analysis · Multimodal interaction · Learnables

I would like to thank the editors of the book, particularly Numa Markee for his detailed comments on this chapter and also for allowing me to use his own data to write the practical implications for the chapter. I am also indebted to Per Linell, Mathias Broth and Charlotta Plejert for their comments on the earlier version of the manuscript.

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_4

1 Introduction

This chapter is about how linguistic objects (or any other objects for that matter) are understood as learnables and are studied as social phenomena from dialogical (Linell 2009) and praxeological (Garfinkel 1967) perspectives in the context of language teaching/learning in classroom interactions. I first lay out a socio–phenomenological approach to learnables, define an overarching dialogical perspective toward social interaction, and then argue that learnables be understood as *intersubjectively* constructed social phenomena. Based on these theoretical backgrounds, I discuss some principles of an analytic method in the studies of learnables drawing also on Ethnomethodological Conversation Analysis (EM/CA) (Garfinkel and Sacks 1970/1986) and underscore what has been argued for during the past 25 years or so (see e.g. Markee 1994; Firth and Wagner 1997). By anchoring my arguments in empirical data from a Swedish-as-a-second-language classroom, I also demonstrate how learnables can be studied from an EM/CA analytic approach. Based on empirical analyses of two examples, I show that learnables are emergent objects whose objectivities are worked out in the organization of social activities as behavior or actions that are intersubjectively shared *in situ and in vivo*. My aim is thus to argue both theoretically and practically that the objectivity of anything made relevant and treated as learnables depends on how they emerge and are used in social practices. As a consequence, the chapter highlights the significance of social context and social interaction for the sense-making of learnables, and *just how* the circumstances of their occurrences are socially constructed, and *how* these circumstances build grounds for the learnables' current intelligibility and possible future usage.

1.1 The Statement of the Problem

The nature of things (or 'objects') has been a popular topic in philosophy, wherein it is treated as a metaphysical question, meaning that the question of 'what a thing is' is at the core of philosophy (Heidegger 1967, p. 3). In sociology, the issue of social objects, as sociological 'things', has long been a topic of research as well (Durkheim 1915/1976). The questions in sociology have touched upon how social engagement affects and shapes the very essence of things, and their values, and also how human beings understand them (Durkheim 1897/1951[1]; cf. Garfinkel 2007). There are also studies in cognitive anthropology (e.g. Hutchins 1995) and social anthropology (e.g. Ingold 2007) that have taken an interest in the exploration of the perceptual, cognitive, communicative and practical engagement of humans in making sense of more concrete objects and things in social activities. And within EM/

[1] Durkheim in his seminal work *Suicide* (1897/1951, p. 37) states: "Sociological method as we practice it rests wholly on the basic principle that social facts must be studied as things, that is, as realities external to the individual."

CA, there is also considerable interest in the significance of artifacts and tools in the organization of human activity and the design of human actions (e.g. Koschmann et al. 2007; Ingold 2007; Lindwall and Lymer 2008; Hindmarsh et al. 2011; Koschmann et al. 2011).

In this chapter, however, we concentrate on things that we learn or apparently orient to as learnables that are pedagogical phenomena in the shape of "*new*" forms, actions and practices. As far as learning is concerned, if we agree that learning something entails some 'changes' in our action, or showing change in our behavior (Gross 2010), which will become manifest in our orientation and the use of that "thing" in our action, there seem to be different answers to the question "what is that *thing* we learn (or orient to learn)?". From a cognitive perspective, the "thing" seems to have a double existence. One form of existence is outside of the body and mind. Its existence is "*out there*" like a concrete object, something that we *can perceive and perform*. The other form of *that* "thing" is in our mind, something that we perceive and *can potentially use in our behavior* (Anderson 1995). So, "*things*" out there may influence the human mind, human cognitive development, conceptualization, and intelligence (cf. Vygotsky 1978), and we learn them and perform them as if they exist in two different spheres. We are exposed to them first as objective realities/behavior and then we realize them in our subjective meaning/understanding through learning procedures/behaviors/practices, etc. The point of departure is from this double locus of "things", how we recognize the simultaneity of subjective meaning and objective behavior through which we practice things as learnables, show them in our behavior, teach them, learn them, etc. In other words, the learnability of things (i.e. their thingness, their objectivity) is, on the one hand, part of the particulars of that object, inherent in it, which exists out there as an objective reality. On the other hand, such a learnability is only realized as part of our everyday experience of those particulars (our subjective understanding). The question is then: "how do we orient to learnables, i.e. recognize them, understand them and also learn them subjectively as well as objectively?". To answer this question, I intend to argue, not only for the simultaneity of subjective–objective realities of learnables, but also for the non-existence of such a dual process in reality in social practices. As a solution, I argue then for the significance of studying how learnables and their sense and functions come about in real time as participants in any learning activities orient to them in practice. To this end, I make use of the concept of intersubjectivity (Schutz 1932/1967, 1975; cf. Husserl 1913/1983, 1913/1989) and argue for the intersubjective objectivity of learnables. I then draw on a dialogical approach (Bakhtin 1981, 1986; Linell 2009) to language learning situations and lay out some principles for the analysis of learnables in classroom interaction.

2 Intersubjectivity and the Emergence of Learnables

In what follows, I draw on socio-phenomenological and dialogical approaches to frame my discussion of how learnables may be perceived, understood and analyzed as social phenomena. These approaches that seemingly come from two different traditions nonetheless converge substantially and build up a common ground for a social–interactional approach to learnables.

2.1 A Socio-phenomenological Approach to Learnables

Everything is always part of something, in the middle of something, or part of a 'field' (see Merleau-Ponty 1945/1962, p. 4). So, the first exposed layer or facet of an object is its appearance against a background, noticeably different from its context, as we perceive it differently, i.e. how the object is in its surrounding, in relation to other things, arranged and contextualized as part of a larger whole with certain potentialities (on affordances, see Gibson 1979; on figure-ground, see Hanks 1990, *passim*; and Goodwin and Duranti 1992: 9).

The emergence of an object, and how it becomes a learnable, may therefore be examined in two ways: first, it is the way that it is lodged in its context, in its network of perceived (physical, social and verbal) relations. Second, it is the point of view of the users/members/participants of/in a setting toward *that* object in *that* context, i.e. how an object is seen, heard, received or responded to, and thus accounted for in a certain way (see Wittgenstein 1953/2009, p. 207 on the phenomenon of seeing something *as*).

In other words, learnables may be defined as the result of a sense–experience of participants in social activities in which they form a natural interpersonal reciprocation of experiences to apprehend what a learnable is in the presence of self, and others on that particular occasion (cf. Husserl 1989, pp. 219–222, §53; Schutz 1975, p. 50). The meanings and functions of learnables, thus, if commonly understood as what they are in a community of knowledge and practice (see Schutz 1975; see also Wenger 1998), should not be based merely on the single stream of individual consciousness. This requires some transcendental constitution which in phenomenology is considered as 'a unity of a higher order', as shared and also recognized *intersubjectively* among 'persons who are in agreement' (see Schutz 1975, p. 51; cf. Husserl 1983, pp. 363–364, § 151).

Like any other phenomena, what learnables are corresponds to how they are apprehended and agreed upon as intersubjectively determining their meanings and validity (cf. Heidegger 1967, pp. 35–36). That is, their objectivity (their common-sense meaning, their use, their understanding, i.e. their learnability) is understood only socially in a natural correspondence of things, and people in their relations as a *sine qua non* for the learnables' existence. This social relation is based on the exchange of social actions. Thus, one could say that the existence of learnables

(their emergence and development) is dependent on social activities of humans in relation to each other, and/or with and within their surrounding world (something that is dialogical in nature, see next section).

Therefore, when objects are visually, hearably and sensorially present, their presence makes no contribution to the sense–experience of the beholder, unless they are operated on, i.e. attended to, oriented to, talked about, pointed at, manipulated, etc. This means that *objects*, though potentially meaningful, would not be learnables unless they are *somehow* seen, heard and understood *as* learnables[2] and made sense of in that way for the participants in that activity (or the members of that community of practice).

This sense-making process is a social event with its own particular organization, which takes place in social situations within the physical world within our reach, that is the material world including human agency in here-and-now situations (Schutz 1973, p. 328). The sense-making is actually a process that is sequentially, temporally, tangibly, physically and socially organized by seeing, hearing, manipulating, handling, verbalizing, talking, etc. This organized way of sense-making plays a normative rather than a descriptive role, through which the object of scrutiny is understood in a particular way within the scope of a particular context. In other words, what a learnable *turns out to be* is an outcome of shared and understood ways of how it is used and understood in practice, something that is intersubjectively achieved in social situations.

2.2 A Dialogical Approach to Learnables, Converging on Sense-Making Procedures

If one attends to the reality of how humans engage with the world, one cannot ignore that this engagement is organized through the coupling of the human body, mind and the material world in our surroundings (cf. Vygotsky 1978; Varela et al. 1991; Hutchins 1995; Clark and Chalmers 1998; Linell 2009, 2014; cf. 'bodily intersubjectivity' in Husserl's terms, 1989, p. 311). It is within our intersubjective world where we bodily engage with others and in the material world that learnables are brought into being. This network of relations has order, dialogical principles, and dialectic methods. In this orderly relation with the surrounding world,

[2] This falls within the discussion of *representational modifications* of objects in Husserl's account of *perception* (Husserl 1983, pp. 90–91; cf. Duranti 2009, p. 206, who explains it as aspects of *attention* in the process of learning and socialization). Husserl (1983, p. 91) explains that the sense of anything that *appears* to us or *presented* in the world would rely on our *standpoint* and *orientation* to it because "[it] can 'appear' only in a certain 'orientation', which necessarily predelineates a system of possible new orientations each of which, in turn, corresponds to a certain 'mode of appearance' which we can express, say, givenness from such and such a 'side', and so forth." (emphasis in original).

other-orientation, context, interaction, and *semiotic mediation* are key concepts (cf. Linell 2009. pp. 13–14).

More specifically, order in the organization of the intersubjective world is actualized in the engagement of persons in and with the real world. In this engagement, the objective world is no longer the product of individualistic Cartesian meditation, but is rather the outcome of a dialogical relation between self, others and things (Husserl 1989, pp. 302–310, §63). Cognition, in this view, is no longer considered as confined to the inside of the skull of individuals, but is instead embodied (Streeck and Jordan 2009), distributed (Hutchins 1995), extended (Clark and Chalmers 1998) and situated (Lave 1988) across individuals, artifacts, and contexts (see also Eskildsen and Markee 2018; Goodwin and Salomon 2019). That is, objective reality does not correspond merely to the mental life of a psychological 'I', but rather a social 'I', belonging not only to 'me', but also to a 'community of knowledge' (Schutz 1975, p. 72) in which the reciprocal understanding of the world and its objective meaning is established, revised and co-determined over and over.

The basis for the establishment of such a community of knowledge is 'other-orientedness', a socio-dialogical relation with others. It is, in part, a natural attitude of humans to establish a sort of dialogical congruence and attuning with others (Enfield and Levinson 2006). This is noticeable even in young infants' behavior, for example, when they attend to other human beings early in their engagement with other bodies. Newly born babies seek out contact as they go through various stages e.g. a mimetic stage, resonating with what they receive from their environment, especially other humans, or the stage during which they learn how to respond to others, etc. (see Linell 2009, pp. 255–259; see also Andrén 2010).

A consequence of this engagement with others is the expectation that one will understand and respond to others' interactive co-engagement. It is within this constant dialogical relation with others, and with the world, that one understands the effects of one's own actions. One learns about other's actions, and their consequences, and therefore one can predict one's own, or other's possible next actions (Linell 2009, p. 13). Social learning and pedagogy are made possible in such a relationship.

The fact that one stands in such a dialogical relation has to do with social reality in the sense that any expressive movement and act of a person always invites a responsive act of the other. This requires entering into a social relationship in which a series of social actions may be exchanged (see Schutz 1932/1967, chapters 22–23). This is the cornerstone of social relations, and the very foundation of social interaction whereby one's action is responded to by a countermove or follow-up move by another person. This responsive action, in turn, is heard, and responded to, its understanding is verified, and treated as both a display of an understanding of the prior action, and the motivation for further response, etc. (see "Co-operative actions", Goodwin 2017; see also Linell 2009; cf. Sacks et al. 1974).

One of the obvious properties of co-operative (inter)actions is that any potential meaning of any communicative action is monitored, confirmed or rejected not only through our past sense–experience of the world, but also through mapping our knowledge onto the reality of here-and-now situations with our simultaneous and successive reactions to it. In interactions with others, we make sense of what we

perceive through responses we receive as a warrant to build our further actions simultaneously or successively. This ritual–ceremonial and substantial social phenomenon that is called social interaction (see Goffman 1963, 1981) is the locus of forming and reforming the meaning-context of any *thing-in-interactional-focus* in any social interactivity. Such a dialogical relation with the environment (with the others and with the material world) is an endless exploration of expressive acts (cf. Bakhtin 1981, p. 426, at least in theory; cf. Bakhtin's notion of the 'unfinalizability of dialogue'), processing our lived experiences and learning, inter-acting with the world, coming to terms with others, and shaping a context and a meaning for our mutual understanding in each single social activity. In Garfinkel's (1967, p. 1) terminology it is 'an endless, ongoing contingent accomplishment'. What is, thus, proffered in the realm of language to learn is co-constructed in this dialogical system.

The organization of dialogue and interaction requires a systematic exchange of acts, which are formed by semiotic resources expressing '*something'* of a sense, or meaning which can be understood by an observer, addressee or respondent. On the one hand, one already knows that expressions, with regard to their objective possibilities, carry potentialities for providing some sense (Linell 2009, p. 235). This possible common ground (Clark 1996) for meaning-making, on the other hand, does not refute that there is a degree of freedom of meaning conferment before settling the signification of any sign/act on every single occasion (cf. Bühler 1934/2011, p. 76). This helps in shaping a mutually agreed understanding.

In other words, there is no absolutely ready-made and intelligible meaning of any sign in any objective sign system for every single occasion of its use. In a language system, for instance, meaning-formation does not always happen in 'the grammatically normal stock-in-trade of' that linguistic system (Husserl 1900–1/2001, p. 64, §11). The signs can indicate some 'adequacy' for the interpretive scheme for the participants in the social interaction, if they are understood 'to have accorded with their relationship of interaction as an invokable rule of their agreement' (Garfinkel 1967, p. 30). Otherwise, misunderstandings, social disagreements or conflicts are probable, or even inevitable.

Consequently, in any new circumstances, in any new environments, as part of any social situations, mutual agreement over the sense of things and relationships should, in principle, be renewed as the recurrent reestablishment of intersubjectivity. If 'the surrounding world is, in a certain way, always in the process of becoming, constantly producing itself by means of transformations of sense' (Husserl 1989, p. 196), we find ourselves in a constant negotiation of meaning, 'ever new formations of sense along with the concomitant positings and annullings' (*ibid*).

We are, therefore, dealing with the world of meaning, which is not merely objective, but it is also subjective and occasioned (Schutz 1932/1967, p. 124). People live under the constant negotiations of these two worlds, i.e. in an intersubjective world. Even if one can predict the use of signs (things, objects, a course of action, conduct, skill, etc.) on different occasions with the ideality of 'I can do it again' (Husserl 1929/1969, p. 188, §74), the reference to that objective world of meaning is not always enough to settle the meaning of each sign-using act on any single occasion.

Interactivity (or activity of any kind) within the intersubjective world implies that we invoke the phenomenon of *order* (see order in activity, e.g. in Goffman 1967) in consideration of the objective meanings on every single social occasion. The phenomenon of order is key to an understanding of what an action *actually* means (cf. the discussion on *indexical expressions* and *reflexivity* in Garfinkel 1967; Garfinkel and Sacks 1970/1986), what a task is about, what people are really talking about, what is accomplished in an activity, etc.

Therefore, in a conversation or any exchange of semiotic expressions between people, there is a necessity to: (a) discover the subjective meaning of any action, and any sign-using act from 'within' the occasion of its use (cf. Pike 1954, chapter 2 on the meaning of an 'emic perspective'; Garfinkel 1967; Sacks 1992); (b) see how one is being understood by the recipient of that action; and (c) understand how the negotiation displays their mutual understanding, and their agreement in and through that particular social event.

Based on this point of view, learnables are also the products of the lived experience of the members of a community of knowledge and practice. They belong to the intersubjective world, and their 'objectivity' gets established under the transient circumstances of their use (cf. Garfinkel and Sacks 1970/1986). They are signs or acts not only for communicative and practical purposes, but they are *resources* to be understood *as* something new to learn, to practice, and to use on future occasions.

3 Data Analysis: Learnables from Theory to Action

As put forth in the previous sections, uncovering the particulars of learnables does not entail *a* general knowledge about such objects, but *our* knowledge of them. This knowledge is also situated (Lave 1988), distributed (Hutchins 1995), and actively extended among *us* (Clark and Chalmers 1998). They do not exist in a vacuum but contextualized in the here-and-now in various communicative activity types (see Levinson 1992, 2013; Linell 2009, p. 201) that are bound together within a network of relations in the formal organization of particular social events. That is, instead of thinking of objects of learning as prefigured, isolated and context-independent, like any other objects, they are practically understood as what they are in their web of relations and in our business of interchange i.e. interactivities (cf. Malafouris and Renfrew 2010, p. 4). Therefore, learnables need to be studied in practice where they are topicalized, objectivized and made intelligible.

To look at learnables in their natural environment entails appealing to the common ground of human sociality (see Clark 1996, p. 92; Enfield and Levinson 2006) *to fit particularities of learnables to the particularities of learners' social practices*. This means that, in order to describe the existence of learnables in our daily life, one should explore how they come to be part of our activities. We do not, therefore, look at learnables as transcendental objective phenomena (as prepared beforehand), but as a phenomenal part of our intersubjective world that is achieved as a result of our intersubjective understanding of them in our material world (Schutz 1932/1967,

p. 115; cf. Wittgenstein 1953/2009). So, learnables are what corresponds to intersubjective objectivity, as something decidedly agreed upon by participants' cooperation. This agreement occurs in social activities on every single social occasion manifested in here-and-now actions. How this agreement comes about is an outcome of how participants in an activity contribute with various means to an understanding of a thing as a learnable, whether it is a concrete or abstract thing, verbal or nonverbal object, a course of action, etc. (e.g. how a piece of dirt in soil can become a meaningful object of knowledge to a novice archeologist, in Goodwin 2003).

3.1 First Example

Let us take an example of a situation in which a person who is learning a language, observably and reportedly, and thus accountably shows lapses in her mastery of that language during the production of an utterance. In the example below (Ex. 1) in a Swedish as a second language class, after finishing a group work session, a student (Sandra) leaves her group to go back to her seat in the back row. She goes past another student (Linda) who is almost blocking her way. Even though Linda gives way to Sandra on her way past, Sandra gently taps Linda's thigh and her lower back, and laughs on her way back to her own seat (Fig. 1). This prompts Linda to make an utterance in Swedish to excuse herself for having a big backside, during which she begins a word search for an appropriate term for this body part in Swedish. Using illustrative pictures, the transcript reproduced in Excerpt 1 depicts this movement and interaction (see the appendix at the end of this book to understand the Jeffersonian transcription conventions used in these extracts, and the appendix at the end of the present chapter for the multimodal conventions that are also used here).

When Sandra is passing Linda (FG 1), she touches Linda's lower back. Linda then turns her torso, hits her lower back and comments on her own body, playfully and jokingly. The touching prompts a sequence of talk-in-interaction about 'lower back' and the trajectory of talk shows how topicalization of the lower back changes from a joking matter to a word-search issue and finally to a socially sensitive matter. This example of multimodal interaction also demonstrates the granularity of the pedagogical focus in the language learning environment as manifested in the participants' orientations to both language form and language use during the entire sequence.

Fig. 1 Linda begins a word search after Sandra's tapping on her lower back

Excerpt 1: Big Butt: Tape M, C Level

Participants: Linda (Lin), Sandra (San), Cynthia (Cyn), Ellen (Ell), Mathew (Mat), Teacher (Tea)

((Sandra taps on Linda's lower back while going past her))

FG. 1

01 Lin: A:↑ (1) tyvärr, och (.) jag har (1) jätte: (0.2) #((hits her lower back for four times))
Unfortunately, and (.) I have (1) big: (0.2)

FG. 2

02 (0.8) ((Linda, Sandra and Cynthia laugh))
03 Lin: how can I say? .hh (.) # big: (.) jätte: HH[hh
big:
((hitting her lower back, turning to Cyn and Ell))

FG. 3

04 Ell: he¿
05 (0.5)
06 Lin: I have a big butt. ((hitting her lower back again)) °butt.°

07 Ell: e : (.) °skinka°¿=
e : (.) °butt°¿=
08 Cyn: =HIHIhi rumpa¿ (0.5) ((Linda, Cynthia, Ellen and Sandra laugh together))
=HIHIhi backside¿
09 (?) stor skinka
big butt
10 Ell: e- e- [e- STORA, (.) STORA RUMPA.=
e- e- [e- BIG, (.) BIG BACKSIDE.=
11 Cyn: [°ja har (.) ja har st- HEHEHEHE
[°I have(.) I have bi-
12 Lin: =HEhehehehehe
13 Cyn: aha (0.2) stora stora rumpan HEHEHEhehehehehe
big big backside HEHEHEhehehehehehe
14 Lin: =hihihi
15 Mat: $vem har stora rumpa där?$(.) ((to Linda and Cynthia))
$ who has big backside there?$(.)
16 Tea: VEM har en stor rumpa? ((stands up))
WHO has a big backside?
17 (0.2) ((all are laughing))
18 Cyn: °vi [har stora° ( )
°we [have big° ( )
19 Tea: [läraren
[the teacher

On the whole, the talk in this excerpt seems to be made up of a few small sequences or what may be called local communicative projects (Linell 2009, p. 188) during which the topic of the talk morphs into various phenomena that are observably of interest to the participants. The intercorporeal event in which Sandra touches Linda's backside is first treated as 'laughable' (Jefferson 1979; cf. Sacks 1967/1992, p. 746) (see lines 1–2). Then the sequence gradually turns into a word search and thus into a language learning event (lines 3–8) when Linda turns back to other students (FG 2) and articulates an utterance in Swedish which is only completed by a gestural act: "unfortunately, and (.) I have (0.1) big (0.2)" and then she hits her own lower back four times (line 01). This "hybrid utterance" (Goodwin 2007) or "composite utterance" (Enfield et al. 2007; cf. Clark 1996, p. 163), which is constructed out of both verbal and gestural constituents, is at first treated by her classmates as just a laughable. However, Linda herself explicitly turns the event into a learning sequence, thus explicitly engaging in observable language learning behavior (Markee 2008). In fact, she explicitly asks in English "how can I say? .hh (.) big (.) jätte: HHhh" as she hits her own lower back again (line 03; FG 3). In her utterance, she shows what she specifically aims to highlight as a topic of inquiry by combining a verbal utterance and a gestural act, something that she simultaneously orients to as unknown or not-yet-mastered in Swedish: "I have a big butt" (line 06). This contingent focus on learning something new is also evident in the members' methods of interpretation displayed by Ellen and Cynthia, (see lines 07 and 08) who present two alternative *candidate suggestions* as possible alternatives to the word that Linda is searching for: "skinka" (line 07) and "rumpa" (line 08). By repeating the word "rumpa" in consecutive turns (see e.g. lines 08, 10, 13, 15), it seems that through the collaborative work of these participants, this last word is accepted as the correct solution to Linda's word search. The teacher's comment in line 16 further ratifies this choice.

At the same time, this extract also demonstrates how an object of inquiry can simultaneously be laminated with other work that addresses potentially delicate matters, such as which word (*rumpa* or *skinka*) is most culturally appropriate at that moment in that particular conversation (see lines 09–19). More specifically, "rumpa" (backside) ends up being treated as a laughable by the students (e.g. lines 02, 09). Thus, Linda's language learning behavior morphs into an extended joking episode (see, for example, Ellen saying "a BIG (.) BIG BACKSIDE" in line 10, Cynthia's repetition of this word in line 13, and the ensuing laughter by other students).

The pragmatic sensitivity of the use of the word "rumpa" is even more apparent in Mathew's question (line 15), which is then followed by the teacher's reaction (lines 16 and 19). More specifically, Mathew turns to Linda and Cynthia and asks, "who has big backside" (line 15). Remarkably, the teacher then repeats the question in line 16, and when she receives Cynthia's response in line 18, she replies in overlap to her own question by saying "the teacher" (line 19) (meaning that she, the teacher, has a big backside). By refocusing the conversation on her own body, the teacher's reply artfully functions as a face-saving move on Linda's behalf which defuses a potentially sensitive moment. Finally, observe also that when Mathew (line 15) asks "who has big backside", the utterance lacks an indefinite article,

something that gets corrected when the teacher recycles, the same utterance (cf. *recycling with différance*, Anward 2004): “who has a big backside” (line 16) (cf. embedded correction, Jefferson 1987).

The example above, demonstrates, first, how a commonplace event of getting past someone affords the possibility for the participants to turn the event into a learning opportunity as well as other social actions. Second, and more importantly for us in this chapter, this example shows how the organization of a social activity accounts for what may be oriented to as a learnable. And it also shows how an orientation to learning a new lexical item, and the consequences of this language learning behavior, are all anchored in that activity. That is, the event beginning with Sandra touching Linda’s lower back becomes a display of a lapse in Linda’s lexical repertoire, and gradually morphs into the participants treating the use of the word first as a laughable object, and then as a sensitive social object considered as a potentially negative comment (observe again how the teacher manages the sensitivity of the question “who has big backside” posed by Matthew in line 15). So, each sequential progression in the activity builds a new context for the use of the word “rumpa”, out of which a new sense and function of the word also emerges. The emergent nature of meaning, and the use of the word, is a witness to the contextual sensitivity of its interpretation (its indexicality and reflexivity, see Garfinkel 1967).

This process of emerging understanding of a linguistic item also shows the multidimensionality of its use, not only as a linguistic object, but also as a social and cultural object. That is, what comes to be oriented to as a “learnable” in the unfolding interaction affords simultaneous changes in subjective understanding and objective behavior, which is reflected in the accountability of the participants’ practical actions. It points to the granularity of learnables whose various parts can be highlighted as salient as part of an interactional activity. For instance, different aspects of a lexical form, its denotative meaning, connotation, pragmatic use, grammatical use, etc. may be constructed, recognized, oriented to and understood in a particular way during its use in a particular activity. Learnables not only seem to emerge and flourish owing to the activity and their practice within that activity, their sense and function are also accounted for by the same practices. Through these social practices, which often occur in the co-presence of others, the sense and function of things are recognized, understood and practiced. So, the dual distinction of subjective and objective sense, and function of things may be replaced by their intersubjective understanding within our intercorporeal world (see Csordas 2008; cf. Merleau-Ponty 1945/1962), that is, our interactivities with others.

3.2 Second Example

As argued above, the sense and function of learnables are settled in the situated activity where they are used (taught and learned). Considering linguistic items as part of the stock-in-trade of a sign system or communicative acts, I have tried so far to show that they are ‘constituted into a synthesis of meaning-context’ (Schutz

1932/1967, p. 131) which is shaped and reshaped on every occasion of their use. They are agreed upon and mutually understood as such by the participants in social activities (see also Garfinkel 1967, p. 9; Garfinkel and Sacks 1970/1986) – this can be witnessed, too, in the following example where 'the synthesis of the meaning-context' is actually formed during a spate of student–teacher talk (see also Kääntä this volume, on explanation/definition sequences).

We have also established so far that learnables have no prefigured existence, but they are what they are made of in a learning activity. Learnables are constantly changing in the process of becoming something for the learners, for the participants in learning activities (see "members' perspective", in Garfinkel 1967, *passim*). So, what needs to be attended to is how is this transformation done, what are the methods of the participants in those activities which are intrinsically dialogical for an object to be salient in situ, marked as something to be learned?

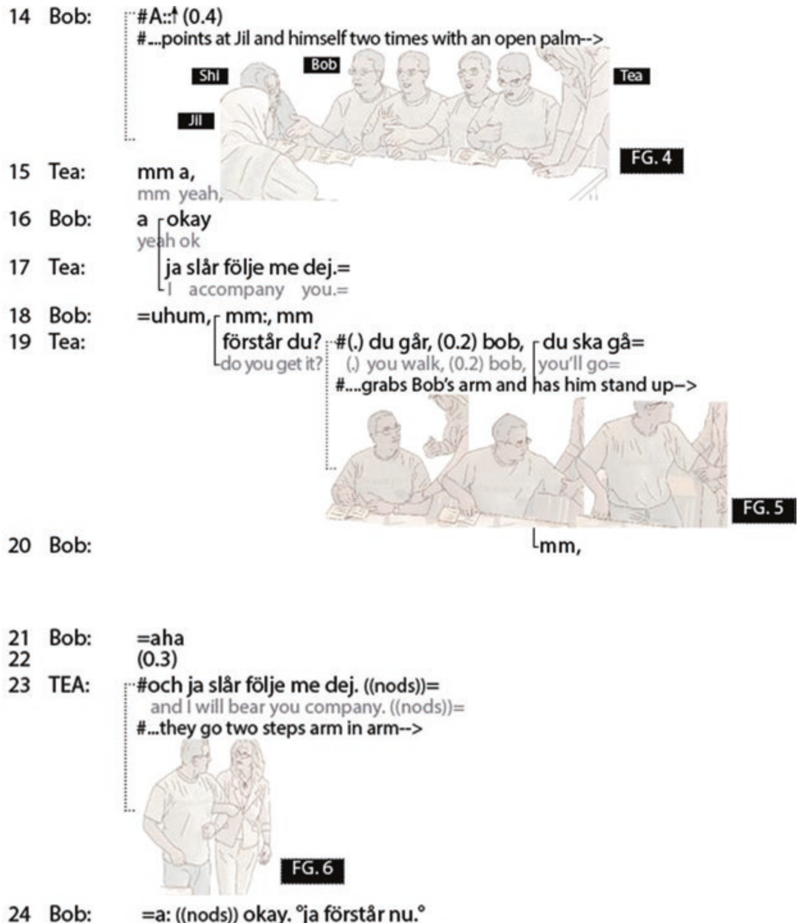
The second example is also from a Swedish language learning classroom in which a group of students are given a task to read, a story entitled '*slå följe*' (accompany), an expression unknown to them. When the students show that they do not know the expression, the teacher asks a student to stand up, and she inter-corporeally shows her students what the Swedish expression means, as shown in Excerpt 2:

Excerpt 2: To Accompany: M, D–Level (Simplified)
Participants: Bob (Robert), Tea (Teacher), Shi (Shima), and Jil (Jila)

01 Tea: den heter slå följe,
this is called accompany,

((9 lines omitted))

11 Bob: =va betyder slå [följe?
=what does acco [mpany mean?
12 Tea: [s:- slå följe betyder att <ja (.) följer me (.) dej.>
[a:- accompany means that <I (.) go along with (.) you.>
13 Shi: °va betyde (x x)?°
°what does (x x) mean?°



The excerpt begins where the teacher introduces the story by its title (line 01): "this is called '*slå följe*" [En: accompany]". When the teacher tells the students what their task is regarding the story (these lines were omitted), one of the students, Bob, asks the teacher what "*slå följe"* means (line 11). The unfolding sequence of actions demonstrates that in response to the student's question about *slå följe* ('accompany', line 11), the teacher provides the students with a synonymous verb, *att följa* ('to follow/go'), explaining that *att slå följe* means to go along *with* somebody where she distinctly produces each word and stresses the particle 'with' (*att följa* <u>*me*</u> *någon* – line 12). However, the uptake (line 14) and the student's articulation of A::↑affiliated with a nonverbal exhibition of a candidate construal (FG 4) is not treated by the teacher as an adequate exhibition of understanding the expression. The teacher then asks the student to stand up (line 19, FG 5), she holds his arm, and they walk arm in

arm a few steps until the student nods and says that he understands the expression then-and-there (lines 23 and 24, FG 6).

With this example, I intend to demonstrate that what is problematized as something learnable, and what is accomplished as a learnable, are the productions of interactivities. This ‘minimal communicative interaction’ (Linell 2009, p. 183) is an instructing/learning project, which contains something remediable, improvable, and also learnable for the students. The production of learnables is, thus, closely intertwined with social activities. This is an inter-corporeal intersubjective accomplishment, i.e. it emerges in bodily intersubjective interaction. The accomplishment of each action in the activity is materialized through a series of co-produced actions. The comment on what *slå följe* means is made by the teacher in response to the expectancy of the pedagogical context (cf. Garfinkel 1967, p. 36–7) through embodied actions. The teacher’s concession to the need for further explanation is that she uses her own body to show the function of that expression. he engages her body, and ties it to the body of a student, to show what the expression could mean in real life (realization of knowledge through an embodied experience).

What is understood as the meaning of a learnable is, thus, specified in actions in the here-and-now situation, within the spatio-temporal reality of an interactivity. That is, the understanding of learnables is in relation to, and interdependent of, ongoing actions, which are themselves embedded in the sequential organization of a larger activity (cf. Levinson 2013). It is within this frame of the exchange of actions that the situated meaning of a learnable becomes decided, completed, and possibly agreed upon (for instance, not everybody who speaks Swedish may understand this action in the same way, or would depict this similarly as shown in the example above). That is why, any possible equivocalities become *situationally definite* regarding the *ad hoc considerations* for the recognition of the relevance of the action in a particular context (see Garfinkel 1967. p 21–22). In this way, the determination of what an object, action, material, etc., is, its sense and function, seen and understood as a learnable, is an accomplished objectivity in the activity at hand.

4 Discussion

Based on the arguments put forth above, the local contingencies and accomplishments of learnables in interactivities in language learning classrooms entail looking at endogenous action formations (see Goodwin 2013; cf. Levinson 2013), and the procedures in and through which the phenomenon of order in the activity of learning leads to the emergence of learnables. These interactivities are the bases for achieving the intersubjective objectivity of learnables.

Interactional activities as the locus of the organization of order for learnables are sociological phenomena in their own right (cf. Goffman 1963, p. 1981). Attending to social actions, both verbal and nonverbal, with all the aforementioned properties, is constitutive of social interactivities. The current chapter suggests that the basic tenet of an investigation about learnables is to probe the ‘howness’ of their

accomplishment, with regard to both verbal and nonverbal conduct. The focus, I suggest, should be on the bodily intersubjectivity of social activities, on the members' methods (see Garfinkel 1967), as to the emergence of learnables, and how the particular aspects of learnables (due to its multidimensionality and granularity), become salient in interaction through embodied actions. In other words, in language learning/teaching interactivities, the question is how the participants mutually accomplish an action in and through which a learnable emerges as an 'event-in-the-conversation' over the course of embodied activities (Garfinkel 1967, p. 40), highlighted as salient in the concrete actions to be perceived (seen and heard) as the product of order, and *as an object of knowledge*, in the sequential organization of events.

A qualitative study requires close observation of, and attention to, the details of an unfolding activity in a real, natural setting. By natural, it is meant that the researcher does not determine or lead an activity, manipulate the participants' behavior, change the course of events or environment, or does not set up the setting as it is done in laboratory studies. By natural, it is meant that the events are ordinary events, belonging to everyday experience (Heidegger 1967, p. 38), mundane, and occasioned (Sacks 1984a, p. 22). The researcher does not alter, modify, or control the trajectory of events, but lets it happen as it proceeds ordinarily in its actual context (Heritage 1987). The data gathered from everyday experiences may be called real data or naturally occurring data (cf. what Sacks 1984b, calls naturally occurring conversation).

The observation which is made under this condition is also specific. It is not only the observation of a researcher from outside, as it is usually done in conventional field studies, but rather exploring 'the normative features of the social system seen *from within*" (Garfinkel 1967, p. 90). That is to say, that what is at issue here is the rationale of the underlying pattern of that system whose rationality consists in members' actions, as units of that system (Pike 1954, p. 8), which are purposively appropriated on the occasions of their use. This is sometimes called an 'emic' analysis of a social system (Pike 1954, chapter 2), which starts out from the system's internal organization, from the members' perspective (Garfinkel and Sacks 1970/1986, p. 162) on their own methods of sociological inquiry.

In this method, there is no prior moral claim on members' views or values. This method is *indifferent* to the external interpretive positions of the adequacy of members' methods, and it avoids any prejudgments on their part (Garfinkel and Sacks 1970/1986, p. 166). Following this procedural method, one avoids overgeneralizing the common occurrence of practices as a tutorial for all similar events. Instead, the analyst focuses on what Garfinkel (2002, p. 99, footnote) calls "the *haecceity* of the phenomenon of order". With regard to learnables, this haecceity is achieved as the procedural accomplishment of the '*bodily intersubjective objectivity*' of the learnables, which is the 'just this' in here-and-now reality of learnables (cf. Heidegger 1967, p. 17).

Instead of any overgeneralization or speculation, what is offered may be a qualified generalization of the rationale of the events in terms of the property of actions, practices of mutual understanding, and a working consensus over the reality of

learnables in interaction. This requires uncovering the phenomenon of order in using learnables in practice and explicating the '*howness'* of the 'lived phenomenal properties' (Garfinkel 2002, p. 98; cf. Husserl 1989) to understand how learnables are understood as particular forms, practices, or communicative acts in various situations.

Therefore, this chapter suggests an action-based multimodal qualitative research on learnables from a pragmatic approach using empirical data from naturally occurring social events: an Ethnomethodological Multimodal/Multisensorial Conversation Analytic (EM/CA) approach to learnables.

5 Conclusion

The co-construction of bodily intersubjectivity in the social world supports the view that sociality and interactivities are primary, and language and learning are subordinate to our social activities. Language learning is not only concomitant with social activities, but a result of them. As bodily intersubjectivity, and its objective reality, are situated and local, learning is also situated, and contextualized in social practices (see also Macbeth 1996). So, learnables are accomplished through *doing* things (Lave 1988) and doing things with *others* (cf. Vygotsky 1978), in particular (inter)activities. This *doing of things* is not just using the material world, but operating on it, acting on it, building on it, etc. In other words, the bodily intersubjective world, where people live in one another's social embodied co-presence within a material world, is a spatio-temporal reality where human actions are formed, accomplished and used in our daily business of interchange. These actions, and their accomplishments, are the transformation zones of knowledge (see Goodwin 2013). Social co-operative actions and interactivities are, thus, the primordial sites for learning, and indeed for the accomplishment of the intersubjective objectivity of learnables.

Therefore, teachers' and students' accounts of learnables are reflected in their socially accountable actions and practices. That is, learnables are made observable and recognizable – and reflexively understood – in members' actions and practices. Teachers and students attend to this 'reflexivity' to 'fit' their practices to a particular occasion's practical purposes (see Wittgenstein 1953/2009, p. 59), and to produce and accomplish something as a learnable. Thus, by talking about an objective reality of learnables, we are talking about an accomplished reality, or an accomplished objectivity of them, achieved in an intercorporeal, intersubjective relation, with regard to multimodal/multisensorial human actions.

6 Theoretical Implications of Considering "Intersubjective Objectivity of Learnables": The Issue of Context and Saliency in Practice

Human interaction is based on co-operation and co-operative actions (Goodwin 2017). The co-operative actions and the exchange of those actions in human social life are the arenas for pedagogy, including language teaching and learning. Learning as well as teaching are based on both employing and building common grounds for human sociality, morality and cooperation through which knowledge of any kind is organized, performed, and exchanged among people. Language learning is not an exception. As I have a dialogical and a praxeological (action-based) view toward pedagogy, the first step is to assert that teaching and learning is taken to be a social, concrete (empirically observable) procedure accomplished through multimodal/multisensorial actions (through embodiment and the use of artifacts), and not just a mental, abstract (already existing) process. This means that teaching and learning are best observed in social situations and specifically in activities that are accomplished through interaction (interactivities) in which co-operation is the key concept and practice. On this view, teachers and learners would be charged with reinventing the present account of learning as a procedure in concrete activities in which they usually engage. The second step is to dissect what learning consists of, and also, what language consists in. Accepting the concept of learning as a social procedure, i.e. as an observable and describable phenomenon (Mondada and Pekarek Doehler 2004), one can think of its various components in social activities, e.g. orienting to something as a learnable, topicalizing and discussing it, correcting or improving the way that is defined, used or analyzed in a lesson, and even testing how students show their knowledge of it, could all be part of the social procedure of teaching and learning and, by extension, teacher education/training. Within the same approach, language is not considered something only abstract – a system of signs in mind – but a concrete observable verbal production that can be taught and learned (Markee 1994). Linguistic items are objects whose objectivity does not just lie in books or the heads of individual users but accomplished within the interpersonal arenas for social actions. It is within social actions where linguistic items can be oriented to and operated on as pedagogical foci or objects of knowledge. The operation may involve composing and decomposing the objects, or correcting and improving how they are produced, or even manipulating, demonstrating, and parsing them, and also using in various contexts, etc. This approach to teaching and learning raises two significant aspects in practice that are going to be discussed and highlighted: context and saliency.

It seems to me that one needs to think of 'context' in (language) learning event as an arena for co-operation where a pedagogical focus is foregrounded. In other words, one can think of a frame (Goffman 1974) which involves a focal event (here e.g. focusing on learnables) and also its background that is a field of actions that embed the focal event (e.g. unfolding interaction) (see Goodwin and Duranti 1992, p. 4). The context, therefore, consists of social and spatial environments including

language and interaction and also people involved in interactional spaces (ibid: 6–9). A pedagogical focus is always understood in relation to its ground (see figure-ground in Hanks 1990). So, focusing on learnables without considering the circumstances in which they are foregrounded ignores the reality of the context and the ground which was built surrounding the learnable. These surrounding environments (formats, actions, and practices) play significant roles in understanding a pedagogical focus in terms of meaning, forms and functions.

Concerning pedagogical contexts, they are perhaps considered to be built by shaping an appropriate surrounding in order for a pedagogical focus to be attended to. Such a context, like any other context, involves both the verbal chain of events, that is what in talk comes before and after the focal item (e.g. a lexical item), and also how nonverbal resources are used in practice to highlight the focal item as a pedagogical focus. For example, a chain of events is not a one-sided action built exclusively by teachers. In a dialogical and praxeological approach to contexts, various components are considered to be involved in the constructs of contexts that affect the chain of events. These components inform and interact with each other: speakers (e.g. teachers), hearers (e.g. students), objects (e.g. books, words in books, pen and paper, etc.), third parties (e.g. overhearers, audience, etc. – e.g. other students who are not directly involved in the talk), the configuration of physical settings (e.g. classroom), etc. These components in the interactional framework can also be categorized in two ensembles of participants and various resources that are at participants' disposal. Participants use available resources to make a frame in which the focus of pedagogy is made intelligible, tangible and useable.

Judgement for the appropriateness of context for learning is not just the matter of objective recommendation for every teaching and learning situation. It is the matter of 'here-and-now' reality for which the best judges are teachers and students themselves in *that* situation, at *that* time. They can together show in their activities how they can accomplish building together a context for learning. What I would like to draw attention to is the significance of 'togetherness' in an interactional procedure where the ensemble of resources forms contexts of teaching and learning. It is within the context (i.e. the ensemble of resources where the pedagogical focus is embedded) that the pedagogical focus finds its saliency.

By saliency, I mean how resources (verbal and nonverbal) are used to draw attention to a pedagogical focus as a conspicuous phenomenon in a given context. The teachers or students may use various strategies e.g. mobilizing their body or writing an item on a whiteboard or a paper, etc. while they are also talking about that item to make that item highlighted – visible and hearable as important e.g. for teaching and learning. Using artifacts, such as an overhead or showing things by projecting them on a screen, pointing to them, gesturing them into significance with members' hands, making annotations or marking them to be more visible, and also stressing their significance in verbal productions, etc. are all techniques that are often used by many teachers to foreground an item as a focus (e.g. to become explainable, correctable, improvable, etc.).

In order to make something salient, it seems to me that alongside other resources (talk and prosody or using artifacts), attention should be paid to the body which

plays such a crucial role in human interaction. Using the body in teaching is a known practice to many teachers. Both students and teachers use their bodies as resources in pedagogical activities. From manipulating objects to gesturing a form into existence or depicting an action and so on, teachers and students use their own bodies to highlight a pedagogical focus (see the examples in this chapter). It is within interpersonal and intercorporeal relations that the pedagogical focus – the object of knowledge – finds its sense and meaning. The objectivity of what a thing is is based on how it is oriented to, how it is highlighted and how it is made relevant and treated (perhaps also negotiated) by participants in the interaction. It is within this "installation of knowledge and competence" (Macbeth 2000, p. 24) that an object becomes salient, seen and considered as something learnable.

With the discussion of context and saliency in pedagogy, it is also high time to stress the significance of what may be called an embodied, interactive, and multimodal pedagogy. From a dialogical and a praxeological point of view, the design of human action is inherently embodied, interactive, multimodal and also multisensorial. By multimodality, I mean simply that we use an ensemble of various resources to build actions, and by multisensoriality, I mean we use our senses to perceive an object/thing (here, as a learnable). This may have consequences for designing lessons, practices for teaching and even testing. Even if, we cannot (and it is far from my research purposes) to come up with a model of teaching or learning that works in every occasion for pedagogical activities, without any doubt, the critical views toward the social-actionable details of how classroom interactions or pedagogical activities are designed can increase our knowledge for the improvement of the quality of pedagogy. The practitioners (teachers and other actors in teaching and learning) are encouraged to pay attention to the local field of instruction and how the context of teaching and learning is shaped interactively, and by various resources and multimodal/multisensorial actions and practices: the practices by which a pedagogical focus, an object of knowledge, is marked, made tangible, visible, intelligible and thus perceived as salient for the practical purpose of teaching/learning. It is where the power of instruction lies, and it is where perhaps learning occurs.

7 Practical Implications for Pedagogy and Teacher Education: Multimodality in the Design of Pedagogical Activities

In the previous sections of this chapter, I have shown how: (a) learnables are situated, emergent, and, particularly in classroom environments, interactionally made relevant and accomplished through the intersubjective achievement of understanding; and (b) the context of the emergence of learnables in pedagogical activities is multimodal. That is, the intersubjective objectivity of learnables comes from hands-on practices in which teachers and students use available communicative resources such as talk, the body (gestures, etc.), or material artifacts (pen, paper, whiteboard,

etc.) to engage with learnables. In other words, even if the goal of teaching is to have each student individually develop their knowledge, how that knowledge is constructed is due to the context of the pedagogical activity, and how individual students achieve that knowledge in a social and multimodal nature of learning/teaching activities.

To help the reader through the analytical process of identifying how a learnable emerges and how participants in a language learning classroom orient to a linguistic object through co-constructed language learning behavior, I will first briefly walk the reader through a third empirical example (Excerpt 3) which updates original analyses previously published by Markee (1994, 2007). The example is from an English as a second language classroom (ESL) and is taken from a group activity in which the students read an article on the greenhouse effect in order to do a subsequent whole class presentation on this topic. The analytical focus here is on one group consisting of three students called L9, L10 and L11. And second, I will show how this highly technical analysis written by and for researchers can be reverse-engineered so that teachers-in-training (or indeed any readers who do not have a background in CA) can inductively discover how to do a CA analysis themselves by answering a set of guiding questions that are developed by the researcher.

Excerpt 3: Coral (Original: Excerpt 5: Group Work Phase, Markee 1994: 104; Markee 2007: 359)
Participants: L9, L10, L11

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01  ((L10 is reading her article to herself))
02  L10:   coral. what is corals
03         (4)
04  L9:    #hh do you know the under the sea, under the sea,
           #...L10 raises up her head; mutual gaze between L9 and L10->
           [L10] [L9] [L11]                                    FG. 7
05  L10:   un-
06  L9:    there's uh:: (0.2) [how do we call it
07  L10:                      [have uh some coral
08  L9:    ah yeah (0.2) coral sometimes (0.2)
09  L10:   de- eh (.) includ/e/s (0.2) uh (.) includes some uh: something uh-
10         (1)
11  L10:   [that corals, is means uh: (0.4) s somethings #at the bottom of#
                                                         #...downward beats with her pen#
12  L9:    [(x x x x x)
13  L10:   [the sea
14  L9:    [#yeah,#                                                  FG. 8
           #...nods emphatically#
```

15 L9: at the bottom of the sea,
16 L10: ok uh:m (0.4) also is a food for (0.2) is a food for fish uh and uh
17 (0.4)
18 L9: food?
19 (0.3)
20 L10: foo-
21 L9: no it is not a food #it is like a stone you know?#
#she holds her hands up & apart as if she holds an object#
22 L10: #oh i see i see #i see i see i see i know i know #.hh i see # (.) uh whi-
#.....claps-------#,,, #lifts head #...shows a shape
FG. 9
23 L10: (0.6) a kind of a white #stone [h very beautiful#
of a box in the air---------- #....raises her right hand and beats in the air FG.10 #
24 L9: # [yeah yeah #very big
#L9 nods twice --------#
FG. 10

25 L9: yeah [sometimes very beautiful
26 L10: [i see i see i ok
27 L10 oh i [see
28 L9: [and sometimes when the ship moves [#ship tries (x x x x x)
29 [oh i see i see
#points to the text in front of L11->
30 (0.6)
31 L10: the chinese is uh *shānhú*
32 (0.9)
33 L11: #huh?
#L10 turns to L11-->
34 L10: *shānhú*
35 (0.6)
36 L9: what
37 (0.3)
38 L10: c[orals
39 L11: [corals
40 L9: #corals oh okay#
#....L9, L10 & L11, each looks down to her own reading material#
41 L10: yeah

Right from the beginning of the sequence, as the students are reading their assigned text, L10 displays the fact that she does not understand what the word "coral" means. The question (line 02) emerges as L10 is still looking down and reading the text (line 01). Even though the question may be posed as directed to herself (since L10 is not directing her gaze toward anybody as she asks the question [see line 01], her action might also be understood as an instance of private speech), the out loud articulation of the question provides an interactional space for others to respond to it. L9 raises her head and begins to have a dyadic conversation with L10 (line 04; FG 7) by providing a reference to where in the world coral can be found

("under the sea", line 04). This is the beginning of an extended sequence in which the word is explained by describing its referent in reality.

Following the first clue given by L9 ("do you know the under the sea, under the sea" (line 04), L10 repeats the fact that that coral "is something at the bottom of the sea" while also making several downward beats with her pen as if to underline this fact through this embodied action (lines 11 and 13; FG 8). L9 emphatically then agrees with L10 (line 14). More specifically, note how L9 nods vigorously in line 14 and then partially repeats L10's utterance: "at the bottom of the sea," in line 15.

In line 16, L10 begins her turn with the word "ok", which shows that she now understands where corals may be found. She then adds the additional information that coral is also "a food for fish" (line 16). However, this new information is rejected by L9 (line 21) who uses a second position repair to suggest instead that coral is a stony substance ("it is like a stone you know?" (line 21). This last piece of information serves as the crucial catalyst that triggers a breakthrough moment of understanding for L10. Let us now unpack the variety of oral and embodied resources that L10 uses to demonstrate to L9 (and therefore also to us as analysts of this talk) that she now really does understand this word. More specifically, L10 begins her turn in line 22 with the change of state token "oh" (see Heritage 1984). In addition, she excitedly repeats the phrases "I see" six times in a row and "I know" two times, all of which constitute very strong spoken claims of understanding. This on-going verbal evidence of emerging understanding is complemented by L10's embodied action of self-congratulatory clapping (see FG 9), which is immediately followed by L10 making the box-like hand shape gesture shown in FG 10. These embodied actions co-occur with her comment about the beauty of coral in line 23, and L9's comment about the size of coral in line 24. Moreover, L10's comment on the beauty of coral is followed by L9's recycling of the idea saying that coral is very beautiful (line 25). In other words, all of these different, independent pieces of evidence serve to build a compellingly fine grained, convergent, and above all multimodal case that L10 has indeed correctly understood the meaning of the word "coral." In addition, the emphatic nature of these various pieces of evidence suggest that L10 is very confident that she now understands the meaning of this word.

Note, that further converging multimodal evidence that L10 has indeed understood what the word "coral" means is to be found in the remaining lines of the transcript. More specifically, as L10 and L9 overlap each other in lines 27 and 28, L10 points to the text in front of L11 and correctly translates the word "coral" into Chinese in line 31. This example of multimodal translanguaging is carefully recipient designed in that, like L10, L11 is also a native speaker of Chinese (whereas, as we will relevantly see shortly, L9 is not). This translation method simultaneously achieves two different actions. First, it actively involves L11 in the conversation. In this context, note that, until this point, L11 has not been involved in L10 and L9's dyadic talk. Second, it shows that L10 is now so confident that she really does understand what the English word "coral" means that she is willing to teach L11 what this word means in Chinese. However, this information is subject to repair: in line 33, L11 says "huh," thus indicating that she does not understand what L10 is doing. In line 34, L10 therefore repeats the information that "coral" means "shānhú"

in Chinese. However, this exchange in Chinese seemingly excludes L9 from this conversation, as is shown by the fact that, after a trouble relevant pause of 0.6 seconds in line 35, L9 says "what" in line 36. After another pause of 0.3 seconds in line 37, this repair initiator prompts L10 and L11 to translate the word "shānhú" back into English for L9's benefit, and this information ultimately leads to the multimodally constructed conclusion of this sequence in lines 38, 39 and 40. Thus, the task of understanding what "coral" means is finally achieved as a joint, publicly observable and co-constructed agreement by all three participants that they indeed are all on the same page.

Let us now finally see how this complex analysis might be made accessible to non-CA experts through a pedagogically-grounded process of reverse engineering which encourages teachers-in-training and others to discover these facts for themselves. What follows is an outline of a handout that might be given to students working as individuals, in pairs or in small groups. It is assumed that participants have been exposed to CA phenomena such as turn-taking and repair and have at least a basic understanding of such practices. So-called ideal model answers are provided for instructors. While not every single detail that is identified in these model answers may emerge from the participants' initial collaborative analyses, the answers they give provide the basis for a detailed, instructor-led debriefing in the final task on the handout.

Analyzing the "coral" transcript

Task 1 (Time allocated for this individual activity: 10–15 min)

Individually, listen to and watch the original video of three students (L10, L9 and to some extent L11) which shows how these user/learners attempt to figure out what the word "coral" means. Feel free to listen to/read these data several times.

Task 2 (Time allocated for this individual activity: 5–10 min)

In pairs or small groups, try to collectively work out what the answers to the following questions might be:

Q1 (Time allocated for this individual activity: 5–10 min): Look at lines 1–15 of the transcript and analyze how the phrase "under the sea" emerges turn by turn in the talk of both speakers. More specifically, how does the use of this phrase enable L10 to display (to L9 and herself and, by extension, to the analyst) her emerging understanding of what this word means? Use specific line numbers to support your argument.

(Ideal model answers: The phrase "under the sea" first occurs in L9's turn in line 04; it is then recycled in partial or complete form by L10 in lines 07, 11 and 13 and by L9 in line 15. These repetitions enable L10 to establish the specific environment in which corals are typically found.)

Q2 (Time allocated for this individual activity: 5–10 min): Now look at lines 16–29: First, what two actions is L10 performing during her turn in line 16? Second, what kind of repair occurs in lines 18–21? And finally, what does this repair enable L10 to do in lines 22–29?

(Ideal model answers: In line 16, L10 brings the preceding talk to a tentative close by saying “ok” and then adds the new information that coral is a food for fish. In lines 18–21, L9 disagrees with her and provides the alternative formulation that coral is a kind of stone. This new information provided by L9 is achieved as a second position repair, which prompts L10 to make a series of different claims about what coral is in lines 22–29.)

Q3 (Time allocated for this individual activity: 15–20 min): In lines 22–29, L10 observably displays her new understanding of what the leanable “coral” means by using both verbal and embodied actions to do learning. Make a list of L10’s verbal actions that are found in this stretch of talk and show empirically how her talk is simultaneously choreographed with embodied gestures. Use specific line numbers to support your argument.

(Ideal model answers: L10 makes a series of claims of understanding that take the verbal form of “I see” (see lines 22, 26 and 29) or “I know” (see line 22). In line 22, the first “I see” is immediately preceded by the change of state token “oh”, which strongly suggests that L9’s prior information in line 21 is new to L10 (notice also that she again uses this change of state token with the phrase “I see” in line 29). It is also important to note that, if it turned out in L9’s next turn in lines 24 and 25 that L10 was in fact wrong in line 22, the vehement nature of these repetitions would likely make L10 lose face. So, the observable strength of these assertions strongly suggests that L10 is very confident that she now knows what the learnable coral means. These verbal claims of understanding are complemented by a number of embodied actions. For example, L10 claps her hands in an observably self-congratulatory fashion as she says “oh I see I see” in line 22. Next, L10 raises her hand as she says the word “stone” in line 23 as if to emphasize the fact that her assertion that coral is “a kind of white stone h very beautiful” is new information that she is contributing to the on-going talk. These independent embodied actions all serve to underscore the simultaneous verbal evidence that L10 is really confident that she now knows what the word “coral” means.)

Q4 (Time allocated for this individual activity: 5–10 min): In lines 30–42, L10 engages in further, qualitatively different, actions that help us confirm the emerging analysis that L10 has actually learned this word, at least in the short term. What are these actions, and what verbal and embodied resources does L10 use to achieve these actions? Use specific line numbers to support your argument.

(Ideal model answers: In lines 29–41, L10 uses a translation method in lines 31 and 34 to inform her fellow Mandarin speaker L11 that “coral” means “shānhú” in Chinese (which is a correct translation). More specifically, notice that L10 is now so confident that she understands this word that she is willing to bring this word to the attention of L11 in line 29 by showing L11 where this word physically occurs in the text they have been reading and then do a first phase of oral translation in to Chinese in line 31. This leads L9 (who does not speak Chinese) to question in line 36 what L10 and L11 have been saying in lines 31–34; in lines 38–39, L10 and L11 then

translate the word "shānhú" in quasi-unison back into English for L9's benefit, which leads to the closure of the sequence in lines 40 and 41.)

Task 3 (Time allocated for this individual activity: 20–30 min): The instructor leads this debriefing activity in plenum, with a view to confirming or disconfirming participants' preliminary analyses during the pair/small group phase.

Conventions for Transcribing Embodied Conduct

hashtag: the position of an image within a turn at talk
dotted square bracket: aligning the position of an image with its nonverbal description and a turn at talk

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Doing the Daily Routine: Development of L2 Embodied Interactional Resources Through a Recurring Classroom Activity

Søren W. Eskildsen

Abstract This chapter focuses on the intricate relationship between situated embodied actions, social classroom practices, and second language (L2) learning as an important emerging issue in CA perspectives on classroom discourse and interaction. I investigate how a series of classroom activities becomes established as a recurring routine and how a beginning L2 speaker, Carlos, develops interactional competence in and through that routine. The data show that as Carlos is engaging in the teacher-led work to establish a daily routine consisting of name card distribution, taking attendance, and writing "yesterday's, today's, and tomorrow's dates" on the whiteboard, he is employing and routinizing a range of embodied, interactional, and linguistic resources needed to volunteer, write, account, as well as elicit volunteers and index an upcoming activity in the L2. The study not only substantiates L2 learning as a usage-based process, anchored in meaningful interaction, but suggests that the semiotic resource known as "language" is a residual of social sense-making practices.

Keywords Embodied conduct · Interactional competence · Usage-based learning · ESL · Volunteering

1 Introduction

Dating back to ground-breaking work in the 1990s (Markee 1994; Firth and Wagner 1997), the field of second language acquisition (SLA) research has witnessed an outcrop of theories and models that converge on the concept of language as a tool for social action and hold its learning to be fundamentally rooted in people's social and interactional realities (Douglas Fir Group 2016; Eskildsen and Cadierno 2015; Firth and Wagner 2007; MacWhinney 2015; Pekarek Doehler and Pochon-Berger

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_5

2015). Moreover, with the pervasive use of video-data, SLA researchers are becoming increasingly aware in that language and language learning are fundamentally embodied (Eskildsen and Wagner 2013, 2015, 2018; Hellermann et al. 2019; Kunitz 2018; Lilja and Piirainen-Marsh 2019b; Majlesi 2018; Markee 2008; Markee and Kunitz 2013; McCafferty and Stam 2008; Mori and Hayashi 2006; Seyffidinipur and Gullberg 2014; Streeck et al. 2011; Thorne and Hellermann 2015).

Speaheading this social, interactional and embodied turn of the field of SLA, a conversation-analytic branch of SLA (CA-SLA) has emerged from being an outsider's perspective to taking center-stage in the field (Eskildsen and Markee 2018). CA-SLA takes a participant-relevant perspective to investigate learning in terms of socially visible and co-constructed processes and practices (Eskildsen 2018a; Eskildsen and Majlesi 2018; Firth and Wagner 2007; Lilja 2014; Markee and Kasper 2004; Pekarek Doehler 2010; Sahlström 2011; Theodórsdóttir 2018) and seeks out and traces L2 development in terms of interactional competence, that is methods to accomplish social actions (Brouwer and Wagner 2004; Eskildsen 2011, 2017, 2018c; Hall 1995; Hall et al. 2011; Pekarek Doehler and (Pochon)-Berger 2015, 2018). In a recent study of second language (L2) learning and interaction, Eskildsen and Markee (2018) showed through meticulous analyses of participants' visible orientations (i.e., their constant displays of their current ecologically mediated thinking through verbal and bodily actions) how teaching, explaining, understanding, and learning are accomplished in ways that are embodied and fundamentally co-constructed and which cannot be reduced to any one constituent turn-at-talk. People do not just speak one-on-one; they weave the fabric of intersubjectivity together as they act and react through talking, enacting, pointing, nodding, gaze-shifting etc. These actions, which play into language teaching and learning, are achieved in ways that ultimately rest on contingencies in the local ecology (cognition is embedded), bodily actions (cognition is embodied), and fundamentally collaborative practices that cannot be attributed to any one individual mind (cognition is socially shared and extended). The present study continues this line of research as it reveals that Carlos, a beginning L2 speaker, is learning, or routinizing, a range of specific semiotic resources as he participates in the construction of the classroom activity as a routine and in the local accomplishment of its constituent components.

2 Classroom Interaction

Since Sinclair and Coulthard (1975) identified a specific recurring interactional pattern consisting of teacher-initiation, learner-response, and teacher-feedback (the IRF-sequence), research on classroom interaction has become extremely varied, as attested by the magnitude of the recent handbook of classroom discourse and interaction (Markee 2015). Qualitative researchers have argued that the IRF-sequence is not particularly conducive to learning (Hall and Walsh 2002; van Lier 2000; Waring 2008) because it limits the possible actions of the L2 learner. Classroom research drawing on conversation analysis (CA) has shown that the format itself is

empirically dubious because it does not capture the dynamics of classroom interaction, especially with respect to the action carried out by the teacher in the third turn (Lee 2007), and because classroom discourse extends far beyond the IRF-sequence; classroom language learning does not only happen in teacher-student dyads, but in all kinds of exchanges in the classroom; that is, student-student interactions, interactions between multiple students, student-material interactions etc. (e.g., Eskildsen 2017; Hellermann 2008; Hellermann and Cole 2009; Koole 2007; Kunitz 2018; Kunitz and Skogmyr Marian 2017; Markee and Kunitz 2013; Mondada and Pekarek-Doehler 2004; Olsher 2003; Lilja and Piirainen-Marsh 2019a; Seedhouse 2004; Sert 2015). This chapter focuses on a recurring, teacher-led activity in one classroom. In that activity, the teacher predominantly addresses the students collectively, but the students do not necessarily orient to the activity in the same way as will be shown in the analyses.

3 L2 Interactional Competence

The research reported here is in lineage with CA research on L2 interactional competence (See the detailed discussion of interactional competence in Pekarek Doehler this volume). This research has been concerned with exploring L2 speakers' interactional competence, that is methods of accomplishing specific actions, such as repair, turn openings and closings, story-telling, dispreferred responses, and how those methods change over time (e.g., Barraja-Rohan 2015; Brouwer and Wagner 2004; Hall et al. 2011; Pekarek Doehler 2018; Pekarek Doehler and (Pochon-) Berger 2015, 2018). In a recent special issue of *Classroom Discourse* (Sert et al. 2018), the notion of interactional competence was scrutinized (Eskildsen 2018b; Hall 2018; Hellermann 2018), investigated empirically (Hellermann 2018; Pekarek Doehler 2018) and discussed with respect to pedagogical implications (Waring 2018). Hall (2018) argued for a terminological change and an adoption of the notion of interactional repertoires in research dealing with what people are actually learning (relatedly, see Markee 2019). Her argument, developed further in a book-length publication (Hall 2019), is that interactional competence is part of the human condition and therefore, as a concept, is inapt for capturing the dynamics of L2 learning. However, interactional competence as a term used in L2 studies has been defined as something inherently dynamic, changing, and in constant calibration in response to ecological changes. This research redefines the term competence itself, it could be argued. In the present chapter, I have used the terms – interactional competence and interactional repertoires – interchangeably because competence, along these lines, *is* the interactional repertoires that sustain it. My own research, coming as I do from a background in usage-based linguistics, has taken a more traditional standpoint on competence as its point of departure, namely individualistic aspects of the development of a linguistic inventory put to use for communicative purposes. It has, however, evolved into what Pekarek Doehler (2018) described as an "interactional usage-based approach", as it has become increasingly clear, through empirical

investigations of L2 learning over time, that what people are learning is more aptly captured in terms of "language as a semiotic resource for social action" (Eskildsen 2018b, c, 2020; Eskildsen and Cadierno 2015; Eskildsen and Kasper 2019; Eskildsen and Markee 2018). That is, people experience linguistically packaged ways of accomplishing specific social actions and reuse these for the same and related purposes over time, which then forms the backbone of their emergent, constantly calibrated interactional competence.

Conversation analytic work on gesture and other embodied behavior, for example gaze (e.g. Sert 2019), handling of objects, and uses of technology (see Musk this volume, for an example of how CA may be used to understand how corrections are achieved in computer-mediated collaborative writing) in L2 learning and interaction has also been very prolific over the last decade. This research has shown that embodied behavior is an integral part of L2 interactional competence. When people perform social actions, such as completing turns-at-talk, doing word searches, establishing recipiency, displaying willingness to participate, opening and closing sequences, requesting, instructing, explaining, noticing, planning, focusing on form, accounting and displaying ongoing understanding, they do so in ways that are fundamentally embodied and not restricted to the modality of 'talk' (e.g., Belhiah 2013; Burch 2014; Eskildsen and Markee 2018; Eskildsen and Wagner 2013, 2015, 2018; Evnitskaya and Berger 2017; Greer 2019; Hall and Looney 2019; Hayashi 2003; Kasper and Burch 2016; Kunitz 2018; Lilja 2014; Lilja and Piirainen-Marsh 2019b; Markee and Kunitz 2013; Mori and Hasegawa 2009; Mori and Hayashi 2006; Mortensen 2011, 2016; Olsher 2004; Seo 2011; Seo and Koshik 2012; Markee and Kunitz 2013; Sert 2015). In the present study, I bring research on L2 interactional competence and embodied actions in L2 talk together to trace changes in Carlos' embodied and verbal resources for social action in a recurring activity in an American English-as-a-second-language (ESL) classroom.

4 Data and Analysis

The data source for the present study is the Multimedia Adult English Learner Corpus (MAELC). Constructed as a collaboration between Portland State University (PSU) and Portland Community College (PCC), it consists of more than 3600 h of audio-visual recordings of ESL classroom interaction. The classrooms in which the recordings were made were equipped with video cameras, and students were given wireless microphones on a rotational basis; the teacher also wore a microphone. There were six ceiling-mounted cameras in each classroom, two of which were controlled by operators and followed the two microphone-assigned students (Reder 2005; Reder et al. 2003). Classroom activities include grammar tasks, reading and writing tasks, speaking and listening exercises, and they are a balanced mix of dyadic pair work, group work, teacher-fronted activities, and so-called *free movement tasks* where students move around the classroom and do spoken tasks with each other (Hellermann 2008). The students and teachers in the MAELC database all signed consent forms, agreeing to the data and images from the data being used

for research purposes, and the research based on the data was approved by PSU's Human Subjects Research Review Committee.

The particular data used here are centered on Carlos (pseudonym), an adult Mexican Spanish-speaking learner of English. Carlos had been in the United States for 21 months prior to joining this ESL program, and he progressed successfully through the four levels, from beginner (SPL 0–2) to high intermediate (SPL 4–6; Reder 2005), assigned to the classes by Portland Community College (PCC). Carlos has been a focal student in many of my prior publications (e.g., Eskildsen 2012, 2015, 2017, 2018c; Eskildsen and Wagner 2015, 2018; Eskildsen et al. 2015), and he was originally chosen because he attended PCC from 2001–2005 (although not consistently; see Eskildsen 2017), which enables long-term investigations of his L2 learning. Moreover, he is a highly active student who often engages in encounters with the teacher and his fellow students and takes an active role in the organization of the classroom activities. This is also evident in some of the teacher's comments in the data used here. Carlos lived in Oregon at the time of recording and I know from classroom talk that he had different jobs at different points in time and that he had been trained as an appliance repair man in Mexico. In addition, I expect him to have interacted with locals in his daily life outside of the classroom, but unfortunately, I do not have access to those interactions. The data used here, therefore, are exclusively classroom data.

The analyses focus on the establishment of a "daily routine" in the classroom consisting of three components: (1) handing out name tags; (2) taking attendance; and (3) writing the dates of today, yesterday, and tomorrow on the whiteboard. It is a routine in which the entire class participate, but the focus of the analysis is on Carlos and his changing participation in the routine over time. The data used here span 8 months beginning from Carlos' first day in class. Table 1 presents an overview of the chronology of the extracts and their respective points of interest.

The first extract comes from the first day of the term and, in fact, the first day of recording in the classroom. Prior to the extract the students have been taking attendance; i.e., checking their names on a poster (picture 1). When the last student, Gabriel, has checked his name, the teacher turns to face the class, asking what day it is (lines 1–3).

Table 1 Overview of extracts

Extract number	Date	Point of interest
1	Sep. 27, 2001	The daily routine before it is established.
2	Oct. 1, 2001	Establishing the daily routine.
3a	Oct. 4, 2001	Explaining the daily routine.
3b	Oct. 4, 2001	"I can write".
4	Oct. 8, 2001	Routine as accountable competence.
5a	Oct. 11, 2001	"I can write" – "I go check".
5b	Oct. 11, 2001	"The next is…".
6	Oct. 15, 2001	Carlos running the routine: "who wan write"?
7	Oct. 22, 2001	"I write yesterday".
8	May 17, 2002	"I can write".

Extract 1: Sep 27, 2001. The Daily Routine Before It Is Established

Picture 1

```
01 TEA:  a:nd *what day is today
              *The teacher turns to face the class
02       (1.5)
03 TEA:  what day is today
04 ALE:  ⌈(what day is today)
05 ROS:  ⌊toors⌈day toors#da::y
06 PP:         ⌊toorsday #toorsday
                         #TEA points and looks towards whiteboard
07 TEA:  *can someone go and ¤eh write it on the board?
         *begins moving toward the whiteboard
                             ¤begins uncapping whiteboard marker
08       (1.5)
09 TEA:  who's going to go and #write it on the board
                               #points at whiteboard (pic 2)
```

Picture 2

```
10 CAR:  gets up, walks to the board
11 TEA:  carlos again huh oh gosh carlos (.) carlos does
12       ⌈↑e:verythi:ng↓.
13 PP :  ⌊laughter
```

```
14 TEA:  he does e:verything. okay (.) *okay carlos here you go.
                                        *gives Carlos marker (pic 3)
```

Picture 3

```
15       (1.0)
16 TEA:  *please write the date.
         *turns back to Carlos and walks away (pics 4 + 5)
```

Picture 4

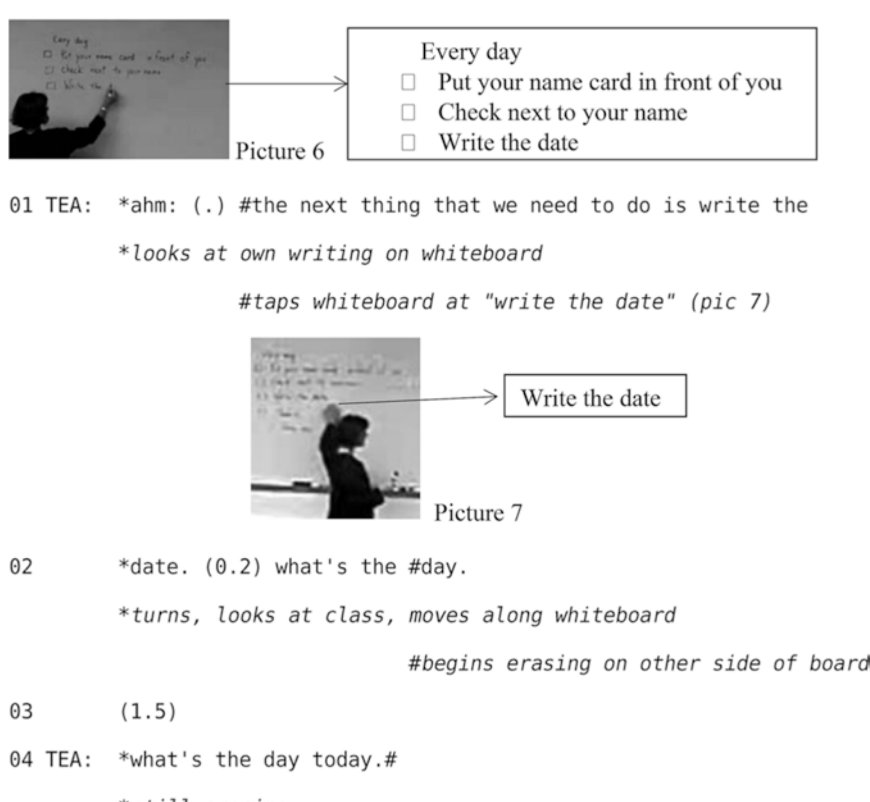
Picture 5

Her question results in the class responding in a non-orchestrated choir (lines 4–6). Although multiple students are speaking at the same time, we can discern some approximations of the word "Thursday", pronounced as "toorsday" (i.e., with /t/ instead of /θ/ and (roughly) with /ʊə/ instead of /ɜː/). The teacher's next move is to ask for a volunteer to write "it" on the board. She begins orienting physically to the board as well as to the act of writing on the board as she moves towards the board uncapping a whiteboard marker (line 7). Following a pause (line 8), she reformulates her request (line 9), now standing by the board (line 9, picture 2). Carlos answers the teacher's request through embodied behavior as he simply gets up and walks to the board (line 10) (see also Majlesi this volume; Kunitz this volume, in which the analytic interest is how students' moving around the classroom has an impact on participants' verbal behaviors). The teacher's comment in response is a remark on Carlos' participation in classroom activities that is treated by the class as a laughable (lines 11–13). Carlos' action, however, is successful; the teacher recognizes it as volunteering as she gives him the marker and asks him to write the date (lines 14–16).

Carlos, however, writes the question *what is today?* instead of the date (not shown). So he has demonstrably understood that it was time to volunteer to carry out an act of writing on the board, but he has not understood the teacher's instruction concerning what to write. I note that the teacher's request for a volunteer to write on the board was deeply embodied in addition to the verbal request for someone to write; she oriented physically to the whiteboard, she uncapped the marker, she pointed to the whiteboard with the marker. As such, her embodied conduct elaborated and enhanced those parts of her request, whereas her instruction to write the date was done more vaguely, initially through deictic "it" and subsequently with her back to her recipient (line 16, pictures 4 and 5). Carlos' understanding of the teacher's actions seems crucially dependent on her bodily conduct.

In this first extract, for all practical purposes, the writing of today's date on the whiteboard could not be considered more than a singular activity that took place there and then. Carlos' participation, while relevant and central to the achievement of the activity as a collaborative enterprise, was purely non-verbal. However, in the following class, 4 days later, the teacher visibly begins constructing this activity as part of a daily routine (Extract 2). Just prior to the extract, the teacher has written the components of the daily routine on the whiteboard under the header "every day" (picture 6). In the picture she is writing "write the date" as the third component, and in the ensuing talk she uses the inscription as reference as she is indexing the activity of writing the date as part of a daily routine, i.e., "the next thing we need to do" (line 1) (the first ones being the students placing their name cards in front of them on their desks and taking attendance, points 1 and 2 on the teacher's list). Sequentially, the next lines have a format that is very similar to the one found 3 days prior; the teacher asks what day it is, twice in slightly difffering ways, and the students respond (lines 2–6).

Extract 2: Oct 1, 2001. Establishing the Daily Routine



01 TEA: *ahm: (.) #the next thing that we need to do is write the
*looks at own writing on whiteboard
#taps whiteboard at "write the date" (pic 7)

02 *date. (0.2) what's the #day.
*turns, looks at class, moves along whiteboard
#begins erasing on other side of board

03 (1.5)

04 TEA: *what's the day today.#
*still erasing
#turns to face class again

```
05 ROS:  *Monday
06 CAR:  *Carlos raises his hand (pic 8)
```

Picture 8

```
07 TEA:  Monday?
08 CAR:  *Monday heh
          *nods
09 TEA:  Monday? who ⌈wants to write Monday on the board.
10 ROS:              ⌊mon-
11 KAT:  gets up (pic 9)
```

Picture 9

```
12 CAR:  raises #hand
                #KAT walks past CAR on CAR's right side
13 TEA:  Monday?
14 CAR:  I *can-=
            *looks right as KAT has just passed by
15 TEA:  =oh katharina is coming. ah no carlos but you're doing
16       everything carlos you're doing e:verything carlos is doing
17       everything.
```

Following a confirmation check sequence (lines 7–8), the teacher specifically asks for a volunteer to write the date for Monday on the board (line 9). In the light of this action and the teacher's indexing the upcoming task as "the next thing we need to do" (line 1), we can infer that her actions so far have concerned eliciting volunteers. The confirmation check ("Monday?") in line 7 is not the teacher displaying uncertainty as to what day it is; rather, it is an unsuccesful attempt at getting students to recognize that a volunteer is needed. This does not happen, though, until the teacher specifically asks for a volunteer (line 9) which results in overlapping responses from two students, Katarina and Carlos; Katarina gets up and begins walking towards the board, and Carlos raises his hand (lines 11–12). The way the class is configured and the envorinmentally occasioned behavior of the participants influence what happens next: Carlos is sitting in front of Katarina so he cannot see that she has volunteered and is already on her way to the board (lines 11–12). The teacher is also currently focusing away from Katarina (she is struggling to uncap a whiteboard marker). This lack of orientation to the students' actions may explain her one-word repetition in line 13, which is probably another attempt at eliciting student participation; she has not noticed, at this point, that Katarina is already responding.

Carlos then verbally expresses his agency to volunteer (line 14). This can be heard as a response to the teacher's turn at line 13 as well as an upgrade of his embodied volunteering at line 12. The teacher's next action deals with the responses from both Katarina and Carlos. The turn-initial change-of-state token (Heritage 1984) suggests that she only now sees that Katarina has volunteered, and she then goes on to reject Carlos' volunteering (lines 14–16). She also designs her rejection, a dispreferred response, in a mitigated fashion (preceeded by *ah*) and she ultimately accounts for it as well by recourse – again – to Carlos' participation in the classroom activities. Following this (not shown), another student volunteers to write on the board, which the teacher acknowledges.

Looking at the language used in the first two extracts, I note, for reasons that will become clear, that the teacher uses "can" and "want" to elicit volunteers: "can someone go and write…" (Extract 1) and "who wants to write…" (Extract 2). I also note that the students are allowed to participate in the volunteering without using verbal language. They raise their hands or simply walk to the whiteboard. Carlos' "I can", the only instance of verbal language production in the volunteering on the part of the students, sits sequentially after his first display of willingness to volunteer (he raised his hand) and is employed because the teacher has not reacted to his embodied volunteering. Carlos' "I can", then, is an upgrade

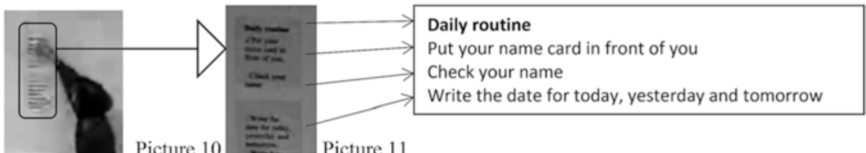
of the embodied volunteering and is oriented to by the teacher as requiring response; she accounts for not nominating him as he declares his willingness to participate.

Another 3 days later, the teacher begins referring to this series of activities as the daily routine (Extract 3a). Prior to this interaction (not shown due to space considerations), she has already referred to the activity as “the daily routine” and asked the students “what do we do” and “what’s the first thing we do”. Getting no response, she begins explaining (Extract 3a, line 1) by recourse to the components of “the daily routine”, now printed on a transparency film and hung on the whiteboard (pictures 10–11).

Extract 3a: Oct 4, 2001. Explaining the Daily Routine

01 TEA: *okay so daily routin:e. remember <daily is every day .hh=

points to list (pic 10)



Picture 10 Picture 11

02 =routine is what you do every day> okay so you come in put

03 your name card in front of you (.) everybody? yes?

04 PP : yes

Her explanation is delivered in slow speech (“daily is every day, routine is something you do every day”, lines 1–2), following which she begins summarizing the list-so-far as she asks the students if they have done the first activity, to which the (obvious) answer is yes (line 4). Next she moves on to the second point, taking attendance, which the students do, and the teacher ticks it off on her list (not shown). She then gets to the third point of the daily routine, namely to write the dates for today, yesterday and tomorrow. Having reminded the students that this is the next step, she leaves the whiteboard and walks to the other side of the room to another whiteboard, uttering “okay the date for today” (Extract 3b, line 1). This results in a range of responses from various students (lines 2–11) during which the teacher writes a capital T on the whiteboard (line 3).

Extract 3b: Oct 4, 2001. "I can write"

```
01 TEA:  okay the date (0.8) for today
02 SHU:  for today. toda:y=
03 KE?:  =#tuesday
          #TEA writes "T" on the whiteboard
04 LI?:  to⌈day-
05 CAR:    ⌊to⌈day?#=
                   #TEA stops writing, turns around
06 SHU:       ⌊tu- tuesday?
07       (0.4)
08 SHU:  tuesday?
09 ROS:  #today is ⌈tuesday
         #TEA begins walking across room in front of class waving
          Whiteboard marker (pic 12)
```

Picture 12

```
10 AL?:           ⌊tod⌈ay=
11 SHU: =october
12 CAR:                ⌊*I can #write
                        *raises hand
                               #gets up
13 MA?:  oh (.) todehh
14 MAR:  mh↑m
```

```
15 CAR:  #I can write*
         #TEA stops walking at whiteboard, turns around
                      *CAR extends r. hand twd. TEA
16       (1.4)
17 TEA:  .hh you always write Carl*os.
                                   *gives Carlos the marker
```

Although the students co-produce a factually correct response ("today is Tuesday", lines 3–10), the teacher does not seem to acknowledge it. Instead, her next action, purely embodied, is to walk across the room in front of the students, waving the whiteboard marker and gazing away from the students (picture 12). Carlos then responds by raising his hand and volunteering verbally (line 12). The teacher moves toward another whiteboard, still waving the marker, and finally she turns around to face the class (line 15). By then Carlos has gone to the whiteboard. He repeats his intent to volunteer (line 15) which the teacher now acknowledges (she gives him the marker, line 17), making a similar kind of comment as in the previous examples. It is through Carlos' response here and the teacher's acknowledgment of it that we know that the teacher's actions, verbal and embodied, were aimed at eliciting volunteers and that Carlos has understood that somebody was expected to volunteer.

If we compare the sequential unfolding of Extracts 3a and 3b with the sequence identified in the first two extracts, there has been a change in that the teacher's elicitation of volunteers is purely embodied, but all the same actions recur. The build-up to the recurring action sequence is much more elaborate this time, as the teacher explicitly constructs and conveys the components of the routine as a scaffold to get to the writing of the dates. I also note that Carlos' use of "I can write" becomes relevant only in this particular sequence, when his own embodied volunteering goes unnoticed by the teacher, and before the teacher has selected another student or acknowledged another student's volunteering. Carlos' use of "I can write" is therefore occasioned in a way that presupposes an understanding of the social practice he is participating in and, through his participation, co-constructing: to do what he does he needs to understand that volunteering to write is relevant and that "I can write" can be used to express such volunteering – and in turn his actions become essential in the sequential co-construction of the activity in the sense that his volunteering, when endorsed by the teacher, is the action that reveals her first action as an attempt to elicit student volunteers.

In the next class 4 days later, the teacher explicitly holds the students accountable for knowing what the routine is (Extract 4, line 1). In the omitted lines she comments on her microphone before she asks the students what the routine is, while finding the transparency film and sticking it to the whiteboard (lines 2–3).

Extract 4: Oct 8, 2001. Routine as Accountable Competence

```
01 TEA:  you know what the routine is (.) what do we have to do.
--Lines omitted--
02 TEA:  *ah:: (1.2) #what's the routine.
         *bends down
                       #takes out transparency film from under the OHP
03 TEA:  *what is the routin::e.
         *hangs the transparency film on whiteboard
```

No response is immediately forthcoming from the students, but slowly they begin doing the stepwise routine as presented on the transparency film with no further instructions from the teacher. The students now seem to recognize the sequence of activities in the routine and to be able to carry it out.

Another three days later, on Oct 11, the teacher again takes the transparency film from under the overhead projector and sticks it to the whiteboard. She then gives the name cards to a student who begins passing them around without any instruction. The teacher then draws attention to the next activity in the routine by pointing to the transparency film and, preceded by musical onomatopoeia delivered in a sing-song fashion, asking "what's this?" (Extract 5a, line 1). One student responds "check" and Carlos expresses agreement, it seems (lines 2–3). Next, what Carlos says sounds like "I gonna check" (line 4), but he remains seated and makes no indication that he is about to actually go and check his name. The teacher hears Carlos' words, as testified by her repetition, perhaps a recast (line 5), but she is not orienting to his action as volunteering: her next action is to nominate Rosario to check the names (line 7), but she declines (omitted lines).

Extract 5a: Oct. 11, 2001. "I can write" – "I go check".

```
01 TEA:  next* (1.3) £dididididididi:::⌈h£ what's ⌈this
             *points to transparency film on whiteboard
02 OLE:                              ⌊check
03 CAR:                                         ⌊yeah (.)
04       I *(gonna) check my:-
           *points and looks twd name board
05 TEA:  (did-) i'm gonna check (.) a:h check check check (1.3) *here.
                                                                *takes pen
06       (3.8)
07 TEA:  *can you check?
         *holds up pen, establishes mutual gaze with Rosario
--lines omitted--
08 TEA:  *is it because it's raining? it's raining? ⌈it's why=
09 CAR:  *gets up
10 CAR:                                             ⌊I can- I=
11 TEA:  =everybody's going- ugh it's raining
12 CAR:  =*can write (in the:)
--lines omitted--
13 TEA:  hands Carlos pen
```

Picture 13

14 CAR: *reaches for pen, then retracts*

15 CAR: (well) *the: the name?#

**points to name board (pic 14)*

#points down (pic 15)

Picture 14

Picture 15

16 TEA: *well

**turns around, looks to whiteboard / transparency film*

17 CAR: *or the:⌈:

**points to whiteboard / transparency film (pic 16)*

Picture 16

18 TEA: ⌊okay what do you think. which one.

```
19 CAR:  e:h

20 TEA:  which is one is next.

21 CAR:  *the next?

         *moves closer to list, TEA looks at list

22 TEA:  uhuh

23 CAR:  *it's:# (1.2) may:be: #everybody no check the name.

         *looks more closely at list (pic 17)

               #looks twd name board (pic 18)

                               #looks and points at list (pics 19-20)
```

Picture 17 Picture 18 Picture 19 Picture 20

```
24 TEA: okay ⌈thank you *carlos you're so good. thank you

25 CAR:      ⌊only: I go* check

                        *TEA hands pen to CAR

COM: Carlos then checks students' names on the attendance board
```

The teacher then asks the students, somewhat playfully, what is wrong and continues by suggesting that everybody is tired because of the rain (lines 8–11). Meanwhile, Carlos gets up (line 9). In his following turn he volunteers verbally (lines 10–12) to write, using “I can write”. Following some general classroom talk (omitted lines), the teacher hands Carlos a pen (picture 13). Carlos, however, does not immediately accept the pen (line 14). Instead he points to the name board (picture 14) and, while pointing downwards (picture 15), he says “the name?” (line 15), with rising intonation, which the teacher understands as a question. She responds with a “well” (line 16), indicating a dispreferred response, and shifts gaze to the whiteboard (line 16), which becomes the focus of shared attention between her and

Carlos. Carlos then begins formulating an alternative while orienting to the routine on the board (line 17, picture 16) in response to which the teacher asks what he thinks (line 18). Her increment, *which one*, indicates her alignment with Carlos' formulation of having alternative options, while making it clear that the options are also limited to the confines of the activities of the daily routine. Carlos hesitates (line 19), and the teacher's next action, an elaboration, *which one is next* (line 20), prompts a confirmation check from Carlos (*the next?*, line 21) and a confirmation from the teacher (*uhuh*, line 22). Focusing on the list, the teacher and Carlos ultimately agree that name checking is next and Carlos carries out the task (lines 23–25, pictures 17–20).

I note that Carlos changes his language as his task changes. It starts with him volunteering to write as part of the routine of writing the dates on the whiteboard, but his course of action does not seem to be aligned with that of the teacher. The first sign of this is when he declines her offer to take the pen (line 14). Here he seems to become aware that the teacher does not want him to write anything, but to take attendance as he says "the name?" with rising intonation. Carlos' gestures at this moment are interesting; his pointing to the name board elaborates his understanding of what the teacher is trying to get him to do, but the downward pointing is not straightforwardly interpretable. He could be pointing to the pen that the teacher is holding because this pen is different from the whitebord markers in the classroom and cannot be used to write on the boards. When the teacher and Carlos orient to the order of activities on the list of components of the routine, he shows verbally that he is no longer going to "write" but "check names" instead because the other students have not yet checked their names, only he himself has. His turn "only I go check" is either a comment to this state of affairs and thus a display of his understanding of why it is necessary to check people's names, or it could be an expression of accepting the teacher's nomination to check students' names on the attendance board.

In other words, "I can write" is for Carlos a routine to volunteer to do writing, no more and no less, at least as far as the present data are concerned. When he is not volunteering, other linguistic resources become relevant. What started out as an act of volunteering to write on the whiteboard becomes a negotation with the teacher on what to do; referring to the order of activities and using language associated with the task at hand, Carlos shows the teacher that he understands that taking attendance is the next thing to be done. "Check names" may be an obvious phrase associated with the daily routine, but as will be shown next, Carlos seems to be learning other linguistic resources in this recurring environment.

About 10 min later the teacher moves on to the next item on the list. That this is what she is doing is apparent from the students' responses (Rosario and Carlos, lines 7–9). Until that point she has only indicated that they are not done yet, pointed to the list and knocked on the board (lines 1–3).

Extract 5b: Oct. 11, 2001. "the next is…"

01 TEA: *we're still here

points to list of routines

02 (1.1)

03 TEA: *knocks three times on whiteboard*

04 (2.2)

05 CAR: hm?

06 (1.8)

07 ROS: oh*

begins raising arm

08 CAR: the #next is:

#ROS looks twd CAR, abandons gesture

09 ROS: *to⌈day's tuesda::y?

shifts gaze, mutual gaze with TEA

10 CAR: ⌊((x)day:)

11 TEA: *ka:y?

takes a step twd ROS, begins to take cap off pen, mutual gaze with ROS

12 CAR: *gets up, establishes mutual smiling gaze with ROS*

13 TEA: *turns gaze twd CAR*

COM: CAR walks toward teacher. TEA stands straight with pen in front of her. CAR gets pen from TEA and begins writing.

12 CAR: *gets up, establishes mutual smiling gaze with ROS*

13 TEA: *turns gaze twd CAR*

COM: CAR walks toward teacher. TEA stands straight with pen in front of her. CAR gets pen from TEA and begins writing.

Together, Rosario, Carlos, and the teacher establish that the next thing is today's date (lines 7–11), following which the teacher begins uncapping a board marker. Note in particular the co-construction accomplished by Carlos and Rosario in lines 8–9 ("the next is today's Tuesday"). This line shows that they have moved closer to an understanding of the activity as a daily routine based on a pre-specified order of components. Participating in the accomplishment of routine thus becomes a resource for Carlos' learning of "the next" in the sequential ordering of things; the two uses in Extracts 5a and 5b are the first occurrences in his data and they happen in this recurring environment in which the teacher has used it repeatedly on previous occasions.

The rest of the sequence is exclusively embodied; the teacher seems to be on her way to select Rosario (line 11), but Carlos volunteers by getting up, en route exchanging a smiling gaze with Rosario (line 12) which indicates that they are somehow sharing this moment, and the teacher accepts his volunteering by shifting her gaze toward him (line 13) and preparing to hand him the marker. Finally he takes the pen and begins writing.

Another 4 days later, on October 15, Carlos and Rosario are already doing the routine when the recording begins (Extract 6). They are standing by the whiteboard (picture 21), having written the dates for today and tomorrow, when Carlos asks for a new volunteer to write yesterday's date. He knows the routine very well by now, it seems, and there is a possibility that he has picked up the question format from the teacher's use of similar formats in the previous "daily routine" executions.

Extract 6: Oct. 15, 2001. Carlos Running the Routine: "who wan write"?

Picture 21

```
01 CAR:  who: wan: write the::
02       (2.1)
03 TEA:  the:⌈:
04 CAR:      ⌊the day:: the: yesterday.
```

One week later, on October 22, Rosario and Alejandro are volunteering to write on the whiteboard. The teacher assigns "today" to Alejandro and asks Rosario whether she wants to do yesterday or tomorrow (lines 1–3, Extract 7). Rosario answers by attempting to suggest what day tomorrow is, in response to which the

teacher makes an embodied claim of no knowledge (lines 5–6). Meanwhile, Carlos gets up and approaches the whiteboard and the teacher uttering the word *yesterday* while raising his hand (lines 4–7). This is a response to the teacher's question (lines 1–3), but the teacher is "doing being literal" as she orients to it as a continuation of Rosario's turn at line 5. This prompts Carlos to account for his actions – he wants to write yesterday (line 9), which the teacher acknowledges (lines 10–11). Rosario eventually gets up to write tomorrow's date (not shown).

Extract 7: Oct. 22, 2001. "I write yesterday"

```
01 TEA:  *okay #a:::h (.) yesterday? (.) you wanna do yesterday?
         *hands pen to Alejandro w. r. hand (pic 22)
              #points at ROS w. l. hand (pic 22)
```

Picture 22

```
02       (0.9)
03 TEA:  or tomor*row.
04 CAR:         *gets up
05 ROS:  n:- tomorrow is
06 TEA:  gestures "I don't know" – arms to the sides, palms up
07 CAR:  *yesterday.
         *walking toward board, raises r. hand
08 TEA:  tomorrow is yesterday? ⌈no. to- what?
09 CAR:                         ⌊no. (.) i- I *write wres:- ⌈yesterday⌉
                                             *gestures "writing"
10 TEA:                                                      ⌊okay⌋
11       okay alright okay
```

The interesting thing in this extract is Carlos' on-going calibration of his interactional repertoire. He is not saying "I can write", which he has been using in the daily routine to display willingness to volunteer, because that is not what he is doing here. Instead, he is expressing disagreement with the teacher ("no") and accounting for his behavior ("I write yesterday"). The data have shown, among other things, how the linguistic expression "I can write" has become a routine for Carlos for carrying out a particular action in a specific, recurring sequential environment. The data do not only provide positive evidence for this through the examples in which Carlos is using "I can write", they also show that Carlos is using other linguistic resources for other, related purposes ("I go check"; "no, I write yesterday"), and that he seems to be picking up other linguistic resources for social action en route ("the next"; "who wan write").

The learning of "I can write" can still be traced 6 months later[1] (Extract 8). In this extract the teacher is calling upon two students to volunteer (line 1). However, she is also orienting to the pen in her hand (*here's one*, line 1) while looking for a second one (line 3). Carlos, in line 4, then responds to both the question about the whereabouts of the pen (*I don't know*) and to the teacher's call for two volunteers (*I can write*). Meanwhile another student, Gabriel, who has begun walking toward the teacher, is selected and although Carlos still shows interest in volunteering (not shown), the teacher selects another student who does not volunteer as often as Carlos.

Extract 8: May 17, 2002. "I can write"

```
01 TEA:  I need ↑two students? (.) #here's o::ne?

                                   #holds pen in l. hand

02       (1.5)

03 TEA:  where's the other one.*

                               *looks around

04 CAR:  gets up, walks twd teacher

05 CAR:  I #don't know (.) but I can *write. (.) write.

           #Gabriel gets up, walks twd teacher

                                     *reaches twd teacher
```

[1]Adapted from Eskildsen (2009) and revised to conform with Jeffersonian transcription conventions (Jefferson 2004).

5 Conclusions

Viewing sense-making, understanding, and learning as fundamentally social processes that take place as observable phenomena in real-time interaction, I have investigated how a beginning L2 speaker, Carlos, expresses his willingness to volunteer in a recurring activity in an ESL classroom. His participation requires knowledge of classroom practices as well as the ability to put particular semiotic resources to use in order to participate in the communication surrounding the writing activities, not to mention the L2 capacities to do the writing. The data have shown that, as Carlos is engaging in the recurring classroom routine, he is learning the embodied, interactional, and linguistic resources needed to volunteer, write, account, designate next activity, elicit volunteers as well as index a relevant upcoming action in the L2.

The study has not only substantiated L2 learning as a fundamentally usage-based process, anchored in meaningful interaction, but suggests that the semiotic resource known as "language" is a residual of social sense-making practices. This, of course, is quite a statement and it warrants qualification. In the paper where Extract 8 was originally used, I traced Carlos' use of *can*-constructions. The data revealed that "I can write" was the primordial expression from which other *can*-uses emerged and that it was used exclusively in situations where Carlos volunteers to write on the communal board. Even though the database has been expanded since then (cf. Eskildsen 2012, 2015), this finding still holds with the refinement that, in the extracts shown here, Carlos' first *can*-use was the interrupted "I can-" (Extract 2). Here, however, I am more interested in the close relationship between the expression "I can write" and the action that it accomplishes which is to express volunteering that has not yet been noticed by the teacher. In the examples shown, the teacher accepts embodied displays of volunteering and Carlos only uses "I can write" when that embodied volunteering has not been publicly acknowledged by the teacher.

This, on the other hand, has implications for linguistic theory (Eskildsen and Kasper 2019). *Can* is a modal verb that is often associated with the meanings 'know how to', 'be able to' or something that denotes a possibility, but these definitions all fall short here. Instead, meaning is inherently indexical, that is fundamentally context-dependent (Sealey and Carter 2004); "I can write" is situated in a practice from which the expression derives its meaning of volunteering. Isolating *can* from the expression and the practice yields an impoverished and therefore misleading description of its semantics. Linguistic patterns are "routinized ways to implement actions" (Thompson and Couper-Kuhlen 2005) and therefore a comprehensive account of linguistic meaning needs to consider the relationship between linguistic expressions and the actions they help speakers accomplish (Eskildsen 2020, Eskildsen and Kasper 2019).

Moreover, the data have shown how the teacher has constructed a daily routine – and taught it to the students – out of the practices of handing out name cards, taking attendance, and writing today's, yesterday's and tomorrow's dates

on the whiteboard. The students have gradually shown their recognition of the practices as a routine and learned to carry it out. In the remaining classroom sessions during that term, the students (predominantly without Carlos as volunteer) did the routine when prompted by the teacher's instructions, verbal and embodied. The practice and its learning are socially co-constructed, deeply embedded and embodied, as noted, and Carlos' verbal learning concerned not only "I can write", which becomes established as a recurring multiword expression with a recurring function (Eskildsen 2009). There is in fact evidence to suggest that Carlos is learning phrases associated with the routine ("check names") but he also seems to be learning to use the phrase "the next" to designate upcoming activities in a sequence of events; the instances of that phrase shown here are the first two in Carlos' data and the first one is a repeat of the teacher's prior turn which underlines the locally contextualized nature of language learning. Over the following months Carlos diversifies his uses of this epxression to also denote the next entity in a series of things.

"Who wan write" is also a phrase that Carlos seems to be picking up in and through the interactions he engages in as a part of this daily routine. It is fair to suggest that his participation in this routine in which the teacher has been using the phrase "who wants to write" has helped him routinize this expression. This, in turn, seems to evolve into the phrase "I wanna write" in Carlos' learning trajectory. Finally, the data have indicated that Carlos is calibrating, or fine-tuning, his interactional repertoire as his participation in the daily routine changes over time. This is evident in his use of "I write yesterday" in a place where one might have expected him to use "I can write" as a make-do solution. He does not, however, which shows that he has different resources for accomplishing different social actions. "I write yesterday" was used to account for his prior behavior, not to display volunteering.

It has been argued along the way that the data confirm the embedded, embodied and socially constructed nature of language, cognition, and learning. Sense-making and any learning that may rest on it hinge on the local ecology (whiteboard, list of routines, name board, name tags) and people's positioning in and physical stances towards this ecology. Moreover, the collaborative actions accomplished are crucially dependent on both verbal and bodily actions (pointing, gazes, movements). The embeddedness of the activities in the material ecology and the embodied nature of the interactions are *visible* facts, not *hearable* facts. Arguably, audiorecordings of these interactions would be impossible to make sense of for an analyst because the gestures, movements, deixis and referencing to objects would be imcomprehensible (see Majlesi and Markee 2018 and Markee 2019 for an overview of matters related to transcription). Clearly, this points to the necessity of using videodata. We only understand the participants' actions because we have access to their full, situated ecology. By implication we can only fully understand (classroom) language learning if we understand the ecology in which the language-carrying actions are accomplished.

Epistemologically, the data used here have shown that sense-making and interactional competence are both embodied. Of course, spoken language is a crucial component in a developing L2 interactional competence, but it rests on an understanding of sense-making practices and procedures that are embodied, embedded and socially shared. Carlos' interactional competence in development therefore presupposes an understanding of the social practice in which he is engaging (Wagner 2015). As he is learning to volunteer at appropriate moments in the classroom, he is also becoming an increasingly competent member in that classroom. It is interesting to note that different students orient to unfolding activities and tasks in a classroom in different ways (e.g., Hellermann 2008); here, this is seen in the predominant visible participation in the activity by Rosario, Carlos (and Alejandro) while most other students are more passive. Their learning trajectories in terms of a developing interactional competence will, by implication, look very different – but that is of course a matter that goes beyond the present investigation.

6 Pedagogical implications

The pedagogical implication is that L2 teaching should be primarily concerned with making semiotic resources for social action readily available for students to notice and appropriate. Putting an interactional repertoire to good and proper use is to know what to do *how* and *when* and to be able to package it semiotically in such a way so that it can be readily made sense of by others. Experienced language users routinely accomplish social actions in ways, and by use of linguistic resources, that are recognizable to co-participants, and the central problem of L2 learning then comes to concern how people learn to do something they have never done before at the relevant points in time and in a way that is recognizable to their co-participants.

As I point out in Eskildsen (2018b), the key to answering this question from the perspective of the L2 user lies in observing, eavesdropping, overhearing, noticing and appropriating, the doing of which presupposes an ability to monitor other people's actions and turn-constructions in interaction, which is grounded in an understanding of social practices (Wagner 2015). Language learning is locally contextualized, a matter of biographical discovery, and embedded and driven by actions accomplished through language. The pedagogical implications of this are immense but as Waring (2018) notes, interactional practices are teachable objects (see also Barraja-Rohan 2011; Betz and Huth 2014; Kunitz and Yeh 2019), so the answer from the teacher's perspective is to carry out context-rich teaching and make interactional environments available to the L2 users that entice them to attend to the details of accomplishing social actions, e.g., agreeing and disagreeing, story-telling and responding to such, repairing, requesting, giving dispreferred responses, and

opening, closing and shifting topics (Pekarek Doehler and Pochon-Berger 2015). These are all teachable objects in that they are practices and social actions that can be accomplished through particular methods, including semiotic resources. A key to L2 learning, and therefore L2 teaching, is that the correlation between particular semiotic resources and particular social actions is observable and noticeable. The task of the teacher, then, is to make such correlations observable and noticeable and practicable in real-life situations. Language and its learning are rooted in understandings of social practices and accomplishment of social action. Language teaching should be, too.

Conventions for Transcribing Embodied Conduct

PP:*/#/%/#	Mark beginning of embodied conduct in the talk.
*/#/%/#*Word*	Description of corresponding embodied conduct on the next line.
COM: word…	Transcriber's comment on next actions that are not transcribed.

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“How Do You Spell That?”: Doing Spelling in Computer-Assisted Collaborative Writing

Nigel Musk

Abstract Using video recordings of a collaborative writing task carried out on a shared computer in an English as a foreign language class, this chapter explores the *epistemic ecology* of correcting spellings, where knowledge of spelling is unevenly distributed, i.e. the knowledge available to the typist, the other student (the non-typist) and the spell-checker. Three possible assumptions are addressed: (1) that the inbuilt spell-checker offers help in spelling; (2) that two “writers” both contribute to ensuring that spellings are correct; (3) that the potentially uneven distribution of knowledge about spelling between the current typist, the non-typist and the spell-checker does provide for *epistemic progression* (i.e. knowledge gains) and thus learning opportunities when genuine spelling problems arise. The findings mainly corroborate these assumptions, but they also uncover a number of issues that affect and sometimes confound the potential for correction and learning. For example, a common problem in an otherwise non-English medium setting is that the language tools are wrongly configured (or they are not switched on). Moreover, the timing of the correction process typically gives the typist the first “opportunity space” to correct, followed by the spell-checker and lastly the non-typist. There is also evidence from this study that not all students are familiar with how the language tools (including the spell-checker) work and what help can be had. This suggests the need to teach the basic functions and initiate awareness-raising activities about the potential gains, issues and pitfalls of both the spell-checker and collaboration.

Keywords Spelling corrections · Spell-checker · Epistemics · Collaborative writing · Conversation analysis

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_6

1 Introduction

In line with a shift towards a Communicative Language Teaching framework within foreign and second language teaching since the 1970s, collaborative writing has been on the ascendancy in the English language classroom (Wigglesworth and Storch 2012). At the same time, writing is increasingly being done digitally, potentially with the help of language tools in ubiquitous word-processing software. Both these changes necessitate a closer examination of their impact on different aspects of writing practices, such as doing spellings. This chapter will therefore examine how students assemble, mobilise and co-construct knowledge about spelling to make corrections. They achieve this within the *epistemic ecology* of computer-assisted collaborative writing (cf. Musk and Čekaitė 2017), where such knowledge is unevenly distributed among different epistemic resources, i.e. those available to the typist, the other student (the non-typist) and the spell-checker (see also Evnitskaya this volume; Lee this volume regarding epistemics. Also see Lee this volume, for work on epistemics in the context of topic shifting in classroom talk).

This chapter therefore examines three possible assumptions: (1) that the spell-checker in Word and PowerPoint does offer help in spelling, i.e. that the spell-checker flags (only) faulty spellings, that writers then heed flagged misspellings and that writers make use of other spell-checking functions (such as right-clicking to get spelling suggestions); (2) that two "writers" do have a wider knowledge of spelling than one and that they therefore both contribute to ensuring that spellings are correct, not least because they have joint stakes in the final written product; (3) that the potentially uneven distribution of knowledge about spelling between the current typist, the non-typist and the spell-checker does provide for *epistemic progression* (i.e. knowledge gains; cf. Balaman and Sert 2017; Gardner 2007) and learning opportunities when genuine spelling problems arise. In the case of assumption (3), what are the preconditions for epistemic progression? If the current typist cannot spell correctly, how do the spell-checker and non-typist contribute? What insights can be gained by examining the patterns that emerge in this epistemic ecology? Here the selected examples illustrate some correction trajectories or sequences where the spell-checker and the non-typist contribute or fail to contribute to the epistemic progression of correcting misspellings.

This study uses multimodal conversation analysis (CA) with recourse to recent classroom-based conversation analytic work in *epistemics* (e.g. Balaman and Sert 2017; Musk and Čekaitė 2017), in order to analyse the exchange and management of knowledge as well as the potential for learning. CA offers robust evidence-based insights into the relationship between writing processes and the final written product. Detailed sequential analysis enables the tracking of *epistemic progression*, whereby knowledge can be *co-constructed* through different semiotic resources that are laminated or combined to solve spelling problems (cf. Goodwin 2013). Moreover, since the data is from a *bona fide* foreign language classroom, CA offers

a high degree of *ecological validity*, which allows a degree of generalisability to similar classroom settings (Wegener and Blankenship 2007).

The findings of this study draw on a collection of both *simplex* spelling corrections, whereby the spellings are corrected at first attempt, and *chained* corrections, whereby more than one correction attempt is needed (Musk 2016). The collection of 439 spelling corrections in all come from approximately 13 h of video recordings of a collaborative computer-assisted writing project in English at a Swedish upper secondary school. For the present purposes the collection of spelling corrections has been re-examined to ascertain what help is offered by the inbuilt spell-checker in Word and PowerPoint and how students responded to these affordances. Furthermore, the collaboration between the typist and the non-typist in correcting misspellings was scrutinised across the collection along with the affordances of the spell-checker and collaboration for learning.

1.1 Studies of Spelling Correction with a Spell-Checker

Many of the studies to date that examine spelling correction in a digital environment have focused on the role of the spell-checker in correcting misspellings. Besides limiting the object of study to a *dyadic* ecology involving only a single student and a computer, the correctness of the final written *product* has been in focus (e.g. Bestgen and Granger, 2011; Dagneaux et al. 1998; Hovermale 2011; Rimrott and Heift 2005, 2008). Generally, these studies have examined the efficacy of the spell-checker for different categories of errors, though the conclusions are often based on its *potential* to correct misspellings rather than how students actually make use of it. In contrast, recent studies have focused on the *process* of correcting spelling errors in the *triadic* ecology of collaborative digital writing involving two students and a computer (Čekaitė 2009; Gardner and Levy 2010; Musk 2016).

Čekaitė (2009), for example, analyses collaborative sequences where students respond to the underlinings in Word, preferring to pinpoint and correct the flagged misspellings themselves rather than right-clicking on an underlined word to reveal the spell-checker's alternative suggestions. Thus, she concludes that the spell-checker serves more as an "under-specified" diagnostic tool, which afforded students opportunities for solving problems of spelling themselves and thereby occasioned potential spaces for learning (ibid., p. 319). Musk (2016), on the other hand, examines a large collection of spelling corrections (in the same data set as used in this chapter) and categorises them on the basis of how the spellings are detected and corrected (or not), and where the computer software is only part of the "material ecology of correction" (Čekaitė 2009: 323). More marginally, Gardner and Levy (2010) include examples of spelling corrections in their analyses of the coordination of talk and non-verbal action in the collaborative production of a webpage.

1.2 Repair and Correction

According to conversation analytic tradition, repair is generally understood as a social mechanism "dealing with problems or troubles in speaking, hearing, and understanding the talk in conversation" (Schegloff 2000: 207). In contrast, "the term 'correction' is commonly understood to refer to the replacement of an 'error' or 'mistake' by what is 'correct'" (Schegloff et al. 1977: 363). For the purposes of the present study, the term *correction* has been adopted since the replacement of spelling errors is the participants' main concern. Nevertheless, the structural organisation of correction has much in common with repair as it was described in Schegloff et al.'s (1977) seminal paper on the preference for self-repair, where they make a compelling case for the emic distinction between *self* (the speaker of the trouble source) and *other* (any party besides the speaker of the trouble source) on the basis of the participation framework (who does what), the placement of the repair initiation (i.e. at what point someone signals that there is a problem), the initiator technique employed (what means are used to signal the problem) and the course of trajectory that the repair takes (i.e. how it plays out over time) (pp. 365–9).

Drawing heavily on the seminal work of Schegloff et al. (1977), repair/correction has also been investigated within different classroom settings (e.g. McHoul 1990), including second or foreign language settings (e.g. Hellermann 2009; Jung 1999; Kasper 1985; Seedhouse 2004).

1.3 Collaboration and Scaffolding

Goodwin (2013) highlights two features of an *epistemic ecology*: firstly, that actions are regularly and characteristically transformed through human co-operation and secondly that these transformative actions co-construct knowledge from multiple resources. We shall return to how we laminate or combine epistemic resources in the next section, but here we focus on the first feature.

The benefits of collaboration have frequently been analysed and discussed in terms of *scaffolding*, whereby individuals can together carry out a task or achieve a goal which would go beyond the unassisted efforts of any one participant. Cazden (1979) appropriated the term from the original informal learning context (Wood et al. 1976: 90) and applied it to classroom settings and Donato (1994) extended the term to "collective scaffolding" between peers in a language learning context. Since then, many researchers have shown the potential of collaborative activities for scaffolding L2 learning processes in different writing contexts often with recourse to socio-cultural theory (e.g. Hanjani and Li 2014; Jeon-Ellis et al. 2005; Storch 2005; Wigglesworth and Storch 2012) or adopting a multimodal micro-analytic approach (e.g. Musk and Čekaitė 2017; Nishino and Atkinson 2015). Process-oriented studies on spelling correction (Čekaitė 2009; Musk 2016) also include the role of collaboration in their analyses and categorisations (though not always with explicit reference to scaffolding).

1.4 Epistemics

Central to making corrections and collaboration is the accessing, management and production of knowledge *in situ*, which has become a growing area of research in conversation-analytic work under the term *epistemics* (e.g. Heritage 2012, 2013; Stivers et al. 2011; see also a critical examination of epistemics in the special issue of *Discourse Studies* 2016, 18:5). Work on epistemics has also been extended to the language classroom where knowledge and learning are of paramount concern (e.g. Balaman and Sert 2017; Jakonen 2014; Kääntä 2014; Musk and Čekaitė 2017; Rusk, et al. 2017). For example, Musk and Čekaitė (2017) trace how pupils collaboratively doing written project work make use of the local *epistemic ecology* (cf. Goodwin 2013; Melander 2012), that is, how they scaffold knowledge from different available semiotic resources to solve emergent language problems. The current study also shares features of Balaman and Sert's (2017) study in that what is displayed on the computer screen plays a role in the *co-construction of knowledge* and thereby the participants' *epistemic progression* (cf. Gardner 2007), that is, reducing knowledge asymmetries between different parties. Moreover, in the current study the analyses draw on two dimensions of epistemics in interaction put forward by Stivers' et al. (2011: 6): *epistemic access* (defined as participants' states of knowing/not knowing) and *epistemic primacy* (defined as participants' relative right and claim to knowledge).

2 Data and Methodology

The data on which this study is based constitute approximately 13 h of video recordings of a collaborative computer-assisted writing project on famous Americans collected by Honti, Rizvanovic, Wigardt from English as a foreign language classrooms in 2012. The video recordings were made using two video cameras per pair of students, one focused on the computer screen to capture the writing process and one positioned at the side to gain a bird's eye view of each pair's individual and joint actions. The participants were four pairs of year 10 students (17 year olds) from two classes of one Swedish upper secondary school (*gymnasium*). Before participating in the study, the students gave their signed informed consent in accordance with the ethical guidelines laid down by the Swedish Research Council (Vetenskapsrådet 2002). To ensure the participants' anonymity, pseudonyms have been used and any images used have been duly blurred.

The current study adopts a multimodal CA approach. Being an inductive and data-driven approach, CA shies away from *a priori* theorising (cf. Heritage 2008) (compare and contrast this approach with the more ethnomethodogical/phenomenological approach to the role of theory adopted in Majlesi this volume). Instead a conversation analyst aspires to adopt an emic or participant-relevant perspective as far as is possible with a view to uncovering the orderliness of how people accomplish, maintain and repair mutual understanding while going about the business at

hand. Moreover, CA sets great store by observing the sequentiality of actions, whereby each action (and turn at talk) displays responsive and projective aspects that regularly respond to previous actions and set up expectations for ensuing actions (Linell 2009: 181). Indeed, one of CA's key analytic tools is tracking how participants themselves display in their next turn or next action their interpretation of one another's talk/actions (next-turn/next-action proof procedure – Broth and Mondada 2013; Hutchby and Wooffitt 2008: 13). This is also one key way in which CA tries to approach an emic perspective (Seedhouse 2004: 8–9).

Drawing on established conversation analytic praxis, the video recordings were originally mined to create a collection of spelling corrections. These had already been categorised in a previous study, primarily on the basis of the participation framework and the nature of the correction trajectory (Musk 2016). For the purposes of the current chapter, examples have been selected to show how the spell-checker and collaboration between the typist and non-typist facilitated correction, as well as one contrasting case where neither the spell-checker nor collaboration facilitate correction and no epistemic progression ensues.

Before we continue, a word is needed about what constitutes a correction, that is, what is *treated* as an error. In keeping with a CA perspective, what is deemed as incorrect is determined by the participants and the spell-checker. Hence a correction is a sequence where a misspelling is changed, whether or not the outcome is normatively correct. In fact, from a normative perspective only 5% of all 'corrected' objects were incorrectly spelt. Otherwise, what counts as a misspelling has been interpreted broadly to include: either the wrong (number of) letters or the letters being in the wrong order, faulty word segmentation (e.g. popculture vs pop culture) and faulty capitalisation. These are all types of errors that are flagged by the spell-checker with a red underlining. Troubles that are demonstrably treated as grammatical or lexical errors (with grammatical reasoning or discussions of word substitution) have been excluded.

Detailed transcriptions have been made following the system devised by Musk (2016) for the analysis of computer-assisted collaborative writing. This extends the transcription conventions established primarily for talk by Jefferson (2004). In order to incorporate details from typing and other actions involving the computer as well as talk, the transcript lines separate these two main modes, which are prefaced with different icons (💻 and 🗣, respectively). The transcripts have also been supplemented with screenshots to highlight important actions. The line numbering follows talk or pauses in talk wherever possible, but simultaneous non-verbal actions are shown in the unnumbered line(s) immediately below each numbered one. Wherever feasible (mostly in longer lines of talk), embodied actions (especially the letters typed) are aligned with talk in the line above. The main features of these transcriptions are illustrated in Fig. 1, but a key to the transcription conventions that augment those used in the rest of this volume can be found at the end of the chapter.

Following each excerpt, there is a summary of the occurring spelling corrections using mainly the same notation as in Fig. 1, but for clarity these conventions are repeated in Table 1 together with two departures from this notation.

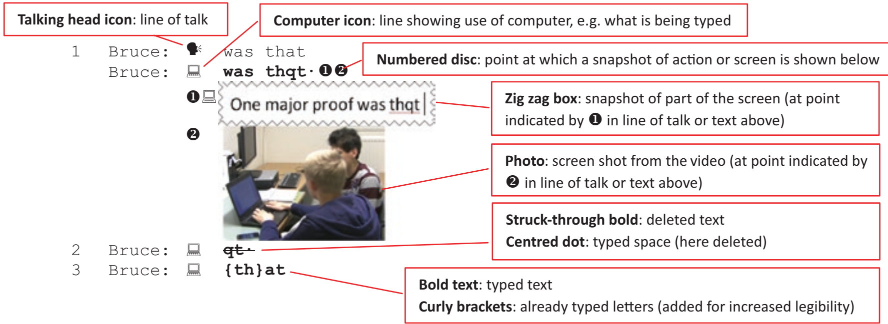


Fig. 1 Main transcription symbols and features

Table 1 Key to the correction summaries following each transcription

thinf > thinf	A 'more than' sign (>) separates different 'moves' in the correction process (in chronological order from left to right).
pepo	Typed letters/characters are marked in bold.
pe~~po~~	Characters with a line through are deleted letters/characters.
people	Underlined characters are the newly typed ones.
the·y	A centred dot (·) indicates a space.

3 Analysis

The data yielded a collection of 439 spelling corrections in all, which were carried out on 299 words. Of these, 204 were chained (multiple) spelling corrections involving 86 words. The initial categorisation was made according to the three-part structure of spelling corrections (Musk 2016), resembling the three-part structure identified in Schegloff et al. (1977):

1. the (retroactive) emergence of a trouble source or "correctable"
2. correction initiation (by self, other or the computer)
3. correction outcome (by self, other or the computer)

The main difference between Musk (2016) and Schegloff et al. (1977) is the potentially triadic (as opposed to dyadic) participation framework of collaborative digital writing, whereby the computer can also play an (albeit limited) agentive role.

The outcome in part 3 almost invariably involves making a correction, but occasionally no correction is actually made (see Excerpt 5 below). The following correction types were identified in the data on the basis of primarily the participation framework and the nature of the correction trajectory:[1]

[1] These exclude categories where no actual correction was made in part 3.

- Self-initiated self-corrections (SISCs)
- Other-initiated self-corrections (OISCs)
- Computer-initiated self-corrections (CISCs)
- Computer-initiated computer-corrections (CICCs)
- Other-initiated other-corrections (OIOCs)
- Computer-initiated other-corrections (CIOCs)

The frequency of each permutation is shown in Fig. 2. The superimposed rectangle shows the correction types that are in focus in this chapter, i.e. those facilitated by the non-typist and/or the spell-checker.

Since this chapter focuses primarily on the impact of the spell-checker and the non-typist on the epistemic ecology of spelling corrections, the most frequent correction type (SISCs) will be given short shrift in the analyses. Indeed, since the typist is able to correct these him/herself, there is less scope for epistemic progression and potential learning. Hence, the following subsections illustrate firstly how the spell-checker facilitates the correction of misspellings, secondly how correction is facilitated through collaboration (involving the agency of the non-typist) and finally where the local epistemic ecology does not provide the affordances to correct the misspelling. Moreover, the first two subsections provide contrasting examples showing how the spell-checker or the non-typist contributes to the spelling correction where the typist probably does not lack epistemic access to the correct spelling vis-à-vis where the typist lacks epistemic access, i.e. cannot spell the

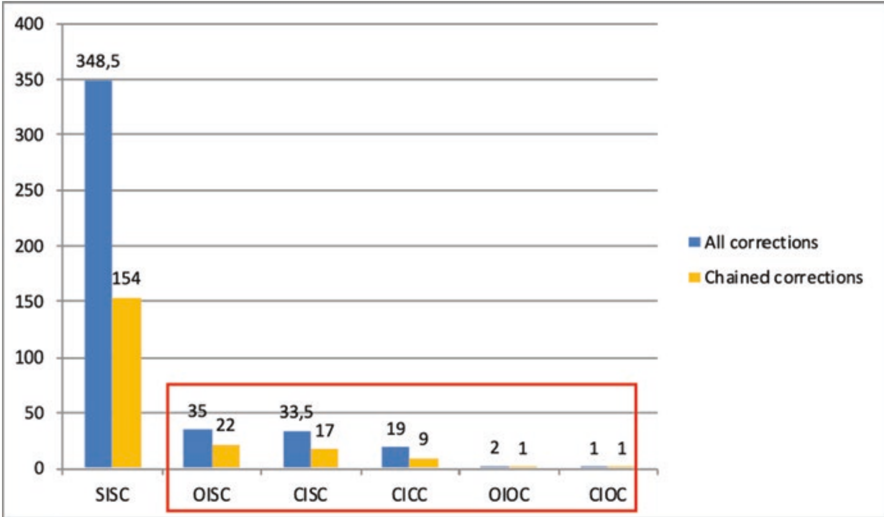


Fig. 2 The distribution of the different correction types for all spelling corrections as well as 'chained' corrections. Sometimes correction may be occasioned by more than one initiator (the typist, the other student or the spell-checker). In such cases it is often analytically impossible to determine which initiator is most salient. Therefore, each such correction is divided, say, into CISC = 0.5 + OISC = 0.5 so that the overall number of corrections tallies

word correctly by him/herself. In the latter case, there is therefore scope for learning.

The introductory text in each section draws on an analysis of the whole collection of spelling corrections (cf. Musk 2016). Therefore, not all the features described may be illustrated by the selected examples, though the excerpts have been selected to illustrate the variation found in the data, including all the different correction types listed above.

3.1 Correction Facilitated by the Spell-Checker

There are two main preconditions for the spell-checker to work appropriately: firstly, the language tools have to be switched on and set to the right language, and secondly the spacebar has to be pressed after typing a word. The latter means that the typist has not already detected and corrected the misspelling (SISC). On the other hand, usually the other student does not initiate correction before the spell-checker does, unless s/he is involved in dictating the text (and is therefore carefully tracking the emergence of the typed text on the screen).

There are three types of help that the spell-checker offers. (1) A misspelt item is underlined, usually in red for spellings (e.g. Excerpt 1). Čekaitė (2009: 326) notes that this function can be used as a diagnostic tool to test alternative spellings by trial and error to see whether the red underlining disappears. Although this approach is very rare in the current data set, this is akin to what Anna does in Excerpt 2, line 30. (2) Right-clicking on an underlined item displays a menu with alternative spellings (e.g. Excerpt 2, lines 13 and 38). This is rare in that it occurs only seven times in the data and by only two of the eight students (Musk 2016: 46). Moreover, in this data set right-clicking also tends to be used when the student lacks epistemic access (cf. Excerpt 2). Otherwise the overwhelming tendency is for the typist to delete back to before the faulty letter and retype the word. These first two options mostly lead to self-corrections in the third and final part of the correction trajectory, that is, they entail the agency of the typist to resolve the trouble source. (3) Computer-initiated computer corrections (CICCs), on the other hand, involve the (albeit limited) agency of the spell-checker, insofar as the initiation and correction steps are conflated on pressing the spacebar after typing a word, leading to an automatic correction (not illustrated here for reasons of space). CICCs are activated particularly in cases of faulty capitalisation (e.g. two capitals in a row ***THe** or no capital after a full stop) and "frequent unambiguously misspelt words with an edit distance of one character" (e.g. **teh** > **the**) (Musk 2016: 48).

Excerpt 1 illustrates scenario (1) described above: a computer-initiated self-correction (CISC). The typo in line 1 arises through omission, the **<v >** in **divorced** being missed out.

Excerpt 1: "Diorced"
Participants: Adam & Adolf

1 Adam: **diorced·❶** ((red underlining appears))
❶ another woman he wasn't married to her. Then he got another son 1965, Eric. After 30 years they diorced|
2 Adam: ts.
Adam: **{diorc}~~ed·~~**
3 (0.5)
Adam: **{di}~~orc~~**
4 Adolf: diorced
Adam: **{d}~~i~~**
5 (.)
6 Adam: °(*a'*)°*så ja hatar de här* °*a' så?*°
(y')know I hate this y'know
Adam: **{d}i v**
7 (0.7)
8 Adolf: di*vorced*
Adam: **{div}or**
9 (1.7)
Adam: **{divor}ce❷df**
❷
((*retypes very heavily*))
10 Adolf: divorced
Adam: **{divorced}~~f~~**
11 Adam: .hh ☺ahuhuhuh☺ ((*turns head away*)) ☺.hhh divorcedif☺

Correction summary:

1. CISC **diorced·** > **di~~orced·~~** > **di<u>vorcedf</u>** C underlines, S deletes + retypes (typo, omission)

2. SI(OI)SC **divorcedf** > **divorced~~f~~** S deletes (typo, two keys)

When Adam notices the red underlining (line 1), he tuts (suggesting it was an annoying slip, line 2) and then proceeds to delete back to (and slightly beyond) where the <**v** > should have been and then retypes the word (lines 2–9). While Adam is deleting the word, Adolf pronounces the word as Adam had originally spelt it (line 4), which is otherwise one method of other-initiating correction. Adam's upgrading of his annoyance in line 6 is also enacted by his heavy retyping in line 9, which also occasions yet another typo, this time pressing two keys at once (<**d** > and < **f**>), which results in chaining (multiple correction). Even though Adolf also corrects the original spelling orally in line 8 by pronouncing the word correctly this time, Adam has already typed the missing <**v** > indicating that he has epistemic access to the correct spelling. Adolf's second utterance of the correct pronunciation in line 10 could potentially be seen as a correction initiation, but since Adam is looking carefully at the screen while he is typing in an exaggerated fashion, this probably means that Adolf's initiation is superfluous, not least since he has already typed the end of the word correctly in line 1. Moreover, Adam mirrors Adolf's previous pronunciation of a misspelling in line 11, except this time it is infused with chuckling – further evidence that he is aware of his heavy-handed typing having caused a further typo.

Excerpt 2 illustrates the spell-checker's help of both type (1) and (2), but here Anna displays a lack of epistemic access to the correct spelling of *Scissorhands*. The excerpt begins with Anna and Sara brainstorming films directed by Tim Burton. While Anna is focused on typing *Edward Scissorhands*, Sara is primarily preoccupied by a competing project, viz. discussing an idea about how to present their report orally by rattling off a long list of Burton's films.

Excerpt 2: "Siccorhands"

Participants: Anna (A) & Sara (S)

1 A: edward ↑[scissorhands. (.) um=
((A looking at S))
2 S: [cha-
3 S: =yeah ok- yeah. (.) ❶that's w- like ↑yeah an' we have,
((A returns gaze to laptop))
Edward·
4 ❶
5 (0.2)
6 A: um: (0.9) °>(sis-) how d'you spell that.°<=
A: **S i c**
7 S: =>w'll maybe we should jus' like< when we do the presentation,
((leans back & redirects gaze from screen))
A: **c o r h a n d**
8 S: [from >maybe we should jus' like¿<
9 A: [(uh)
A: **s** ↵ ❷((red underlining appears))
❷ • Edward Siccorhands
•
10 (0.4)
11 S: y'know almost like rabb-le,(.) 'cause then (amaze).
((rolls hands round each other))
12 A: **{Siccor}·{hands}**
13 (0.4)❸
A: ❸ Tim Burton
Sicker
Succour
Sector
Soccor
Score
((right-clicks to show suggestions but makes no selection))
14 A: .hh un[r a v]el you- what you what'you mean.=
15 S: [(i- c-)]
16 S: =no rabble like.
((suggestions menu closes))
17 (0.2)

```
18   A:     rap¿=
            ((S flicks lt hand & flicks up her ponytail with rt hand))
     A:     {Sic}e{or}
19   S:     =>I dunno if that’s even an english word but<,
                                    ((A looks at S))
     A:     {Si}e{or}
20          (0.3)
21   S:     now it is °okay° [I’ve-] I’ve in☺vented it☺.
            ((points with finger towards laptop))
22   A:                      [mhhh ]
23          (0.3)
24   S      so if do like, (0.2) [his name (0.3) e:- >edward scissorhands<
                                                ((rolls hands))
25   A:                          [ruh-
26   S:     (.) [>charlie ‘n’ the chocolate factory< duh-la-la-la? (.)
27   A:         [ra-
28   S:     c’se [then, (.) >I think that< uh, (0.3) really: shows that
29   A:          [(a:)
                  (yeah)
30   S:     ’e’s done [a  lot  i-  ] a lot of diff- u:h like❹ ’cause?
     A:     ((turns back to laptop))                    {Si}ss{or}
        ❹   • Edward Sissor hands
31   A:                [yes yes yes?]
32          (0.7)
33   S:     ’cause we don’t want to miss out on some,
34          (0.2)
35   A:     °°(c’[me on)]°°
            ((right-clicks to show spelling suggestions))
36   S:          [ real]y::
37          (0.2)
38   A:     .hhha:❺:?
     A:  ❺
            Scissor
            Scissors
            Sesser
            ((selects “Scissor” from spelling suggestions))
     A:     Scissor❻
        ❻   • Edward Scissor hands
39   A:     that’s how you spell this?
40          (.)
41   S:     yeah >that’s how you spell< ↑sci↓ssors¿
42          (0.2)
43   A:     >I have no- I-❼ I’ve had °no idea how you spell it°
     A:          {Scissor}-{hands}
        ❼   • Edward Scissorhands
```

Correction summary:

1. SI/CISC **Siccorhands** > **Siccor·hands** S requests help + C underlines + S divides word
2. CISC **Siccor·** > **Sieeor·** > **Sissor·** C underlines + S right-clicks + S deletes + S retypes
3. CISC **Sissor·** > **Scissor·** C underlines + S right-clicks & selects from menu
4. SISC **Scissor·hands** > **Scissor-hands** S initiates & deletes

In line 3 (❶) Anna, who is typing, returns her attention to the laptop to type a list of Burton films. She types "**Edward**" swiftly, but she hesitates when she proceeds to type "**Siccorhands**", evident in the hesitation marker "um:", the slowed pace in typing as well as her quietly spoken request for spelling help or self-directed comment (line 6). These three factors signal that Anna lacks epistemic access to the correct spelling and that this is a genuine spelling problem. There is, however, no uptake by Sara of Anna's potential help request; instead Sara adjusts her posture and looks away from the screen while launching her suggestion for their final oral presentation from line 7 onwards. In the meantime, Anna completes her first spelling attempt, "**Siccorhands**", pressing the return key, whereby a red underlining appears signalling the misspelling (lines 7 and 9). While Sara continues with her suggestion (line 11), Anna first divides the word, "**Siccor·hands**" (line 12), and the red underlining remains under the first word in the compound. Her next action suggests that the division may have been a strategy to deal with "**Siccor**" separately, since she then right-clicks on this word to reveal the spell-checker's menu of spelling suggestions (line 13). However, she rejects all of the suggestions (line 13 ❸). Indeed, the spell-checker fails to produce a correct spelling since the edit distance is too great (three letters are incorrect).

Anna's progress in correcting the misspelling now begins to slow down, as she gets drawn into Sara's parallel project, not least because Anna does not understand "rabble" in Sara's suggestion (line 11), and thus makes repeated other-repairs and other-initiations of repair (lines 14, 18, 25, 27), whilst only deleting the two medial "**cc**"s in the misspelt word (lines 18–19). When Sara manages to explain what she means by "rabble" and mutual understanding is achieved, signalled by Anna's feedback in lines 29 and 31, Anna returns her gaze and attention to the laptop and types two "**ss**"s to replace the medial "**cc**"s, now producing the spelling "**Sissor**" (line 30 ❹). However, the red underlining remains (❹), initiating yet another correction cycle. Yet again, Anna tries right-clicking, whilst perhaps softly voicing words of (mock) encouragement to the spell-checker (line 35). This time, Anna issues an epistemic "change of state" token (cf. Heritage 1984) on an inbreath (line 38), indicating that she has now found the correct spelling, which she proceeds to select from the menu (❺). The epistemic progress of this correction trajectory, facilitated with the spell-checker's help, is explicitly expressed in line 39: "th<u>a</u>t's how you sp<u>e</u>ll this?". Sara now redirects her attention to Anna's spelling correction and although she has previously offered no help (being preoccupied with her own project), her turn in line 41 suggests that Sara has had epistemic access all along, which occasions Anna to admit that she did not (line 43). At the same time, Anna now deletes the space in "**Scissor·hands**", even though there is no red underlining, which strongly suggests that dividing the word in the first place was a strategy for solving her lack of epistemic access to the spelling of "scissor".

Summarising the role of the spell-checker in facilitating epistemic progression, we also observe some limitations of the software and the necessity of the typist to use her ingenuity to compensate for the limitations. The spell-checker is able to initiate correction but is not initially able to offer a correct suggestion, since the edit distance is too great. Since the non-typist is otherwise preoccupied, she doesn't

react to Sara's displayed difficulties. Instead by segmenting "**Siccorhands**" (line 12) and then targeting "**Siccor**" as containing the misspelling, she is able try out another spelling bringing the edit distance down from three letters to one (**S_i<u>cc</u>or > S_issor**, line 30 ❹), thereby allowing the spell-checker to provide an acceptable (and correct) spelling suggestion (line 38 ❺). Thus actively combining the use of the red underlining as an (under-specified) diagnostic tool (Čekaitė 2009: 326) with right-clicking allows for epistemic progression and a potential learning opportunity.

3.2 Correction Facilitated by Collaboration

Collaboration frequently occurs in the composition process, through the typist verbalising what s/he is typing (e.g. Excerpt 3, line 1), the other student dictating what to type or a combination of the two (e.g. Excerpt 4, lines 1–6), thereby negotiating exact formulations. However, when it comes to spellings, the preference structure described above means that misspellings are usually detected first by the typist, secondly – if the language tools are activated – by the spell-checker (when a word is completed and the spacebar is pressed) and only thirdly by the non-typist (cf. Excerpt 1, line 4). Collaboration from the non-typist is salient and therefore usually occasioned when the typist has missed a spelling error or missed heeding an underlining (if the language tools are switched on). Yet, occasionally when the typist does not know how to spell a word, s/he may request the other student's help (cf. Excerpt 2, line 6). Otherwise collaboration in spelling is most evident in cases of other-initiated self-corrections and – far rarer – in other-initiated other-corrections, where the current non-typist takes control of the keyboard. The latter normally occurs after repeated (failed) attempts to initiate or correct an error (cf. Excerpt 4, line 13 ❶), not least because taking over can be a face-threatening action.

There are five identified methods in this data set for the other student to initiate spelling corrections: (1) saying aloud the word containing the trouble (including pronunciations representing the misspelling; cf. Excerpt 1, line 4), (2) pointing at the screen, (3) explaining the error or how to correct it, (4) making other metalinguistic comments (e.g. "the spelling is wrong") and (5) saying "no" when the wrong letter has been (re)typed (usually in cases of chaining, as in Excerpt 4 below). Methods (1), (2), (4) and (5), in particular, tend to under-specify the exact trouble source, but they do allow space for self-correction (as is preferred in other-initiation in conversation – Schegloff et al. 1977). However, even the more precise methods of pinpointing the faulty letter(s) are prone to chaining, as in Excerpt 4. More than one method may also be used in one and the same correction initiation (e.g. saying "no" and explaining how to correct the error in line 13 of Excerpt 4).

We start our examples with one that shows how the non-typist contributes to correction, but where there is no evidence that the typist lacks epistemic access, i.e. a probable typographical error. In Excerpt 3 Anna and Sara are making notes (in bullet points) about their chosen famous character (Tim Burton). Here the language tools are switched off, which heightens the salience of the non-typist's role.

Excerpt 3: "Cetain"

Participants: Anna (A) & Sara (S)

```
1    A:   🗣   um cer- (0.7) t'n (.) themes, [(at)]
          💻      ce t   a  in·  t  h e me    s❶
          💻❶  • Obsessive about cetain themes|
2    S:   🗣                                       [cer:]tain¿
     A:   💻                                         ((moves head closer to screen
                                                       while also moving cursor))
3              (0.8)
4    A:   🗣   °oj°
               whoops
5              (0.7)
     A:   💻   ((places cursor between the "e" & "t"))
6    A:   🗣   c::❷ certain,
     A:   💻   {ce}r{tain}
          💻❷  • Obsessive about cer|tain themes
7              (0.5)
8    S:   🗣   °☺nhhh☺°
9              (0.3)
10   A:   🗣   um
```

Correction summary:

3.	OISC	**cetain·themes** > **ce**<u>**r**</u>**tain·themes**	O initiates, S inserts (typo, omission)

While Anna types "**cetain themes**" she also verbalises it with a slight delay (line 1). Since the spell-checker is not activated, no red underlining appears under the misspelt "**cetain**" (❶). Moreover, Anna has almost finished typing the next word when Sara initiates correction. This delay in initiating correction compared to the spell-checker's underlining (after pressing the spacebar) is typical of other-initiation. Sara's correction initiation displays her epistemic access to the correct spelling by emphasising the first syllable with a prolonged rhotic vowel [ˈsɝːːten] (line 2), thus highlighting the missing "r". Anna responds immediately after the first syllable by moving her head closer to look at the screen while also starting to move the cursor to make a correction. She also responds verbally (*oj* 'whoops', line 4), suggesting that this was an accidental slip. Indeed, without any further prompting from Sara, Anna demonstrates that she also has epistemic access to the correct spelling by placing the cursor in the right place and typing the missing "**r**" (line 6 ❷). Moreover, the speed and ease of the spelling correction suggest that "**cetain**" was a typographical error rather than a genuine spelling difficulty. Sara's soft laughter-infused snort (line 8) is treated po-facedly by Anna, whose hesitation marker (line 10) immediately precedes her resuming the composition process (beyond the transcript).

Now we turn our attention to how collaboration between the non-typist and typist brings about epistemic progression, that is, where the typist is not readily able to correct the spelling error by himself. The nature of the trouble in Excerpt 4 concerns "**lead**" vs. "**led**" in the sentence that finally reads: "**One of their homes was situated near an Air Force base which <u>led</u> to a growing interest in aircrafts.**" As in

the previous excerpt (3), the language tools are not activated, limiting the participation framework to a dyadic rather than a triadic one.

Excerpt 4: "Lead"
Participants: Syd (S) & Bruce (B)

```
1   Syd:    🗣  which,
            💻  which
2               (0.8)
3   Bruce:  🗣  ts. [↑led ((glances towards S))
4   Syd:    🗣      [inf-
    Syd:    💻       in
5               (0.3)
6   Syd:    🗣  whi[ch led (0.3) or (.) [°an' that (led)° to¿
            💻  in                      lead to
7   Bruce:  🗣     [uh                  [*u::h*
8               (1)
9   Bruce:  🗣  *ee a:y-* skip the a:y. ((the letter 'a'))
    Syd:    💻  a
10              (1.5)
    Syd:    💻  a
11  Syd:    🗣  bigger.
    Syd:    💻  big
12              (.)
13  Bruce:  🗣  >NO N' N' n' no< (.) skip the❶ ay in lead.
    Syd:    💻              big
            ❶
                ((moves right hand to the keyboard and slips it under S's))
14              (0.2)
15  Bruce:  🗣  an' so it,
    Bruce:  💻  {le}ad to
16              (0.5)
17  Syd:    🗣  hoh
18  Bruce:  🗣  it was [led (.) yeah?]
    Bruce:  💻      {le}d
19  Syd:    🗣         [led (.) oh.  ]
20              (0.9)
    Syd:    💻  ·
21  Syd:    🗣  u:h
    Syd:    💻  t
22              (0.6)
    Syd:        {·t}o·
23  Bruce:  🗣  .hhh
24              (1.3) ((B. pats S. on the shoulder))
25  Bruce:  🗣  yeah
26              (.)
27  Bruce:  🗣  ☺c[uhuhi☺
28  Syd:    🗣    [°I'm sorry°
29              (.)
30  Bruce:  🗣  ((pats B. again)) good boy. ☺khu☺
31              (0.3)
```

```
32 Bruce:  🗣  .hh >jus' kidding< (0.3) °'kay°?
                   ((B. looks down & lifts hands off his lap))
                        ((S. puts hand to side of head & turns towards B.))
33             (0.6)
34 Bruce:  🗣  ((nods to the camera)) >jus' kidding<
35             (0.3)
36 Syd:    🗣  ☺huhuhuhahu .hhhuh☺ right [which led] to uh:::
37 Bruce:  🗣                            [☺huhu☺  ]
```

Correction summary:

1.	OISC	**lead to a** > **lead to ~~a~~ big**	S deletes + continues
2.	OISC	**lead to big** > **lead to ~~big~~**	S deletes
3.	OIOC	**lead to > le~~ad to~~** > **led**	O deletes + retypes

Although Syd is the typist, both he and Bruce are jointly composing their text (lines 1–6). Bruce's suggestion of how to proceed after "which" results in a correction from "**in**" (perhaps "influenced") to "**lead to**" (line 6). Bruce then identifies the spelling error, "**lead**", which he does by first naming the vowels "ee a:y", immediately followed by instructing Syd how to correct the misspelling (line 9). Thereby Bruce displays his epistemic access to the correct spelling. In the meantime, Syd has continued typing the continuation of this sentence, which just so happens to be the indefinite article "a". Hence confusion arises, resulting in Syd deleting the indefinite article (line 10) in accordance with the second part of Bruce's instruction "skip the a:y" (line 9).

Since Syd's deletion of "a" in line 10 does not solve the initial problem, he instead carries on verbalising and typing the continuation of the text (line 11), Bruce initiates a correction of "**lead**" once again with multiple loud "no"s (line 13), which targets Syd's "in progress course of action" (Stivers 2004: 260). In the continuation of line 13 Bruce ups the precision of his "initiation technique" (Mazeland 1987) by specifying which "a" to delete: "skip the ay in lead" (pronouncing "**lead**" [liːd], as the misspelling suggests). However, Syd has already deleted " **~~big~~** " and displays no epistemic access to the nature of the trouble (line 13). Therefore, rather than wait for Syd to heed his more precise correction initiation, Bruce makes an other-correction by slipping his hand under Syd's (❶) and deleting back to before the incorrect "**a**" and retyping the final "**d**", while also accounting for taking over the keyboard (lines 15–18). Once again, Bruce displays his epistemic access, this time by both initiating and carrying out his other-correction. At the same time, he ascribes to Syd a lack of epistemic access in that Syd has failed to pinpoint the misspelling despite the "strength" or precision of Bruce's

initial correction initiation. Furthermore, the epistemic "change of state" or realisation tokens ("hoh" line 17 and "oh" line 19; cf. Heritage 1984) suggest at the very least that Syd has not understood which word Bruce's correction initiations have been targeting. However, Syd's initial misspelling and late realisation of the locus of the problem do suggest that he lacked epistemic access, in which case this example illustrates epistemic progression by bridging the initial knowledge asymmetry between Bruce and Syd.

Returning briefly to Bruce's other-correction, we can see that collaboration is not just a question of addressing a displayed potential lack of epistemic access. Taking control of the keyboard is not the first option; it is a potentially face-threatening and dispreferred action. Here the chained nature of the correction cycles first allows for unsuccessful attempts at self-correction before Bruce intervenes. Furthermore, there appears to be face-work after the other-correction, such as Bruce's pats on Syd's shoulder (lines 24 and 30). Syd apologises for his part (line 28), which may have occasioned more face-work from Bruce, e.g. his self-ironising "good boy" and mitigating laughter particles (line 30), as well as the repeated follow-up "jus' kidding" (lines 32 and 34). Moreover, the second "jus' kidding" is addressed to the video camera, acknowledging his socially risky action as accountable to a wider audience. Syd then reacts with chuckling before continuing with the composition process (line 36).

3.3 Neither the Spell-Checker nor Collaboration Facilitates Epistemic Progression

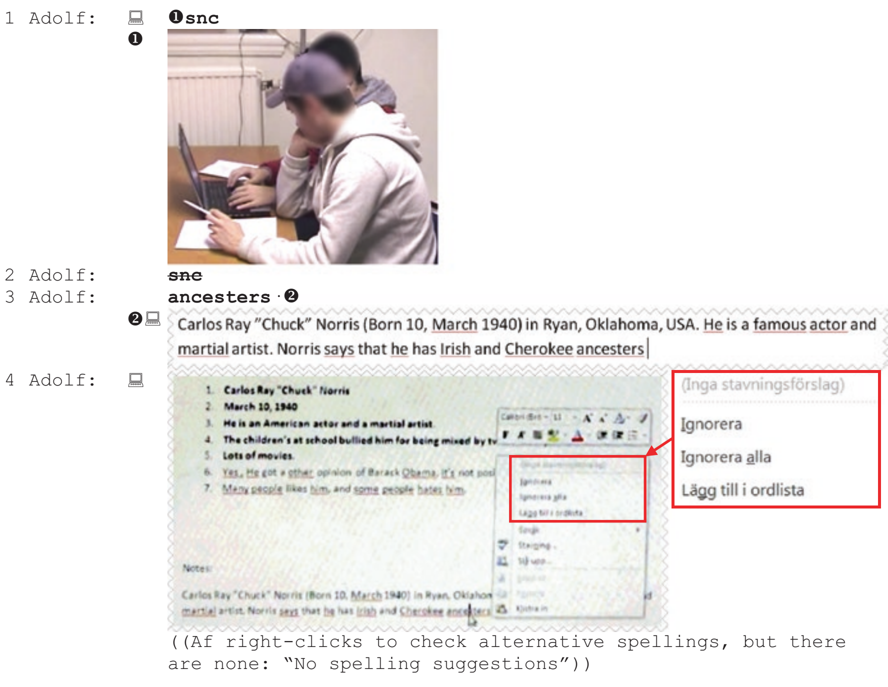
The most frequent reason why the spell-checker does not facilitate correction in the data is because the language tools are not switched on or they are set to Swedish. If the language tools are not switched on or they are set incorrectly, no underlinings appear to signal misspellings and neither will right-clicking show a menu with relevant spelling suggestions (cf. Excerpt 5, line 5). Other recurrent cases where no help is forthcoming arise when the spelling is incorrect, but the faulty spelling results in another existing word. The following examples appear in the data: **arouse** instead of **arose**, **tuned** instead of **turned**. Alternatively, if the language tools are set to the wrong language, as in Excerpt 5 below, correctly spelt words in English may be underlined (cf. line 2 ❷), and right-clicking can only produce correct spellings in the configured language.

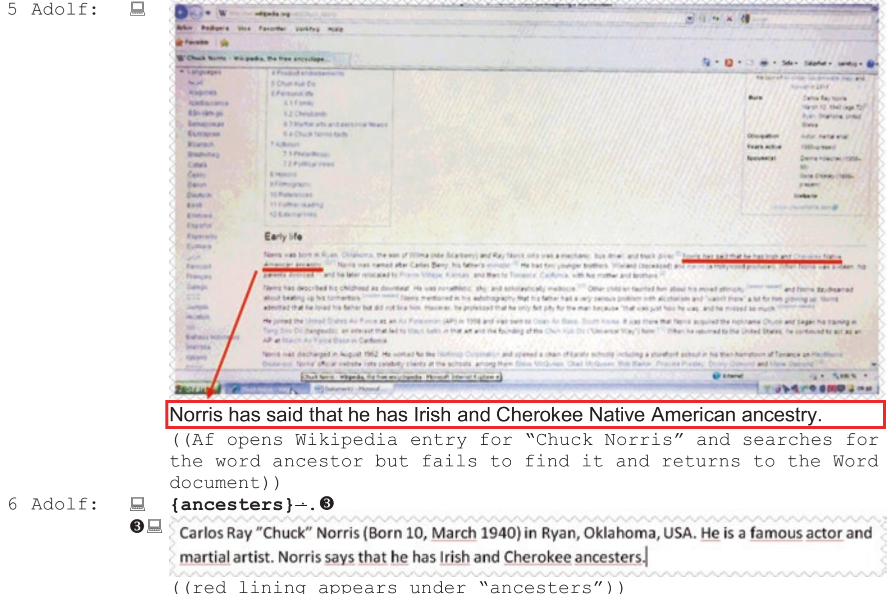
If the typist lacks epistemic access to the correct spelling and the spell-checker is either switched off or set to the wrong language, the non-typist is often able to catch misspellings as we saw in the previous section and can either initiate correction (Excerpt 3) or – far more rarely – correct misspellings (Excerpt 4). However, there are cases in the data where the typist displays spelling difficulties, but no help is forthcoming and therefore no epistemic progression occurs whereupon a potential learning opportunity is missed.

An all-round lack of epistemic access is illustrated by Excerpt 5. Yet, despite the language tools being incorrectly set to Swedish, the red underlining becomes salient (even though it is in fact flagging that ***ancester** does not exist in Swedish) because this emerges as a genuine spelling trouble (rather than a typo).

Excerpt 5

Participants: Adolf (Af) & Adam (Am)





5 Adolf: Norris has said that he has Irish and Cherokee Native American ancestry.
((Af opens Wikipedia entry for “Chuck Norris” and searches for the word ancestor but fails to find it and returns to the Word document))

6 Adolf: **{ancesters}-.**❸

❸ Carlos Ray "Chuck" Norris (Born 10, March 1940) in Ryan, Oklahoma, USA. He is a famous actor and martial artist. Norris says that he has Irish and Cherokee ancesters.
((red lining appears under “ancesters”))

Correction summary:

1.	SISC	**snc** > ~~**snc**~~ > **ancesters·**	S deletes + retypes	(typo, adjacent key)
2.	CINC†	**ancesters·** > **ancesters-.**	S right-clicks + checks Wikipedia	(genuine spelling error)

† Computer-initiated no correction (i.e. no correction made)

Adolf makes an error in typing the first letter in line 1 (<**s** > instead of the adjacent <**a**>). As is typical of spelling corrections in the data, Adolf deletes back to before the incorrect letter, in this case, the whole word so far: “ ~~**snc**~~ ” in line 2. He then swiftly retypes these letters correctly and proceeds to type the rest of the word followed by the space bar, which then activates the spell-checker and produces a red underlining (line 3, ❷). Although Adolf has ignored most previous underlinings – which are mostly incorrect because the language is set to Swedish – this underlining initiates a new correction cycle, which also demonstrates Adolf’s epistemic uncertainty about whether ***ancesters** is correctly spelt. Thus, the spell-checker function is initially treated as having epistemic salience, i.e. that it is able to detect a misspelling in English. Adolf proceeds to move the cursor back to middle of the problem word and right-clicks (line 4). However, since the language setting is wrong, the spell-checker is unable to make any suggestions.

The apparent short-coming of the spell-checker thus occasions a new attempt to check the spelling, this time with recourse to the Wikipedia entry for Chuck Norris that the pair have been using as a source (line 5). The Wikipedia entry is thus part of

the epistemic ecology that is drawn on to solve the spelling problem. However, the entry includes the word "ancestry", but not "ancestors" and therefore provides only partial help in checking whether Adolf's spelling "**ancesters**" is correct. Adolf does not request Adam's help and neither does Adam offer any, despite the fact that he has been following what Adolf has been doing by gazing at the screen. This suggests that Adolf does not presume Adam to have epistemic access to the solution, which also appears to be borne out by Adam's passivity. The outcome is that Adolf makes no further attempt to correct the spelling but instead completes the sentence by deleting the space and adding a full stop. Thus, despite Adolph's attempts to achieve epistemic progression, the resources he resorts to do not suffice and he therefore makes no correction, either because no further options are readily available or because he concludes that his spelling is possibly correct (despite the red underlining, which only appears because the spelling does not exist in Swedish).

4 Discussion and Conclusions

As in the case of the generalised findings for the three categories in the analysis section above, the following paragraphs draw on both the examples presented above, but also bring in evidence from analyses of the whole data set used for this study (cf. Musk 2016), in order to offer a fuller discussion. The discussion starts with an illumination of the "opportunity space" for initiating and correcting misspellings, which affects the affordances of both the spell-checker and collaboration. Attention is then paid, in turn, to the role of the spell-checker and collaboration in correcting misspellings. Finally, conclusions are drawn about the affordances of the epistemic ecology of digital collaborative writing for epistemic progression and potential learning.

The sequential structure (timing) of correction entails that the typist gets the first *opportunity space* (Schegloff et al. 1977: 375) to notice any emergent misspelling and correct it – or seek help if s/he lacks epistemic access – *before* the word is fully typed. Hence, the preference structure shares the general preference for self-initiation and self-correction with repair in informal conversation (Schegloff et al. 1977). However, unlike conversational repair, typically the spell-checker gets the second opportunity space to initiate and (occasionally) correct spelling errors as soon as the space bar is pushed, which activates underlinings and/or automatic computer corrections. When the language settings are configured correctly, the spell-checker tends to be ascribed epistemic primacy, i.e. that it is treated as 'knowing' best. Unless the language tools are switched off (Excerpts 3 and 4), the third opportunity space falls to the non-typist, either to notice an error that both the typist and the spell-checker have missed or to notice a coloured underlining and then initiate correction. Thus, the non-typist adopts a stance of epistemic access (knowing the correct spelling), though the typist almost always has the final veto. Indeed, only very rarely does the other student take over the keyboard and assert his/her epistemic primacy (e.g. Excerpt 4).

Let us now examine in greater detail the role of the spell-checker in correcting misspellings, i.e. whether the spell-checker does offer help in spelling. When the language settings are correct, the computer can play a limited agentive role, mostly by initiating corrections, which the typist then effectuates. Nonetheless, a red underlining offers only an "under-specified" indication (Čekaitė 2009) that there is a misspelling. It is then up to the students, particularly the current typist, to act on this correction initiation. The spell-checker is regularly afforded epistemic access and primacy when it comes to red underlinings and to far less frequent automatic corrections (usually faulty capitalisation and simple misspellings of frequent words). However, in the current data set the typist only rarely right-clicks to activate the spell-checker's menu with suggestions of alternative spellings (but see Excerpts 2 and 5). Instead, computer-initiated self-corrections mostly involve deleting back to before the misspelt letter/word. Probably deleting and retyping are less disruptive to the progressivity of the writing process (Musk 2016: 52).

However, what emerges from the data is that often the language tools are either not switched on or they are switched to Swedish by default, since the laptops are used for different school subjects, mostly taught through the medium of Swedish. At best, the students then acknowledge the problem and occasionally reset the language (though in the current data set no one turns on the language tools if they are switched off). At second best, the spell-checker offers no help (and has no epistemic access), either because the tools are switched off (e.g. Excerpts 3 and 4) or because students understand that the language setting is wrong and they thus ignore any faulty underlinings. However, at worst when the language setting is wrong, the spell-checker can be misleading when students heed a faulty underlining. Ironically, it is when students lack epistemic access or epistemic certainty – and therefore need the help of the spell-checker most – that the faulty flagging of errors can be most detrimental, since the spell-checker may erroneously be assumed to offer epistemic access/primacy – at least initially (cf. Excerpt 5). In all three scenarios, longer correction trajectories tend to ensue, typically with *chaining* (multiple correction cycles) or attempts to reset the language correctly.

Let us now turn to the role of collaboration in the correction process, i.e. whether both students contribute to ensuring that spellings are correct. All cases of collaboration are contingent on either the current typist or the other student either noticing a misspelling or heeding an underlining. This, in turn, means that at least one of the students has (potential) epistemic access to the correct spelling. Furthermore, collaboration is dependent on both students taking on joint responsibility for the text-in-the-making, which includes correcting misspellings. In fact, *co-ownership* of the final product is envisaged as contributing to joint responsibility (Storch 2005: 154). However, two of the pairs collaborate significantly more in the composition process (Anna/Sara and Syd/Bruce) and understandably therefore they are both more active in the correction process too.

As was noted above, the opportunity space for the non-typist's correction initiation tends to come after that of the current typist and the spell-checker, unless the typist requests the assistance of the other student due to epistemic uncertainty (e.g. Excerpt 2) or a lack of epistemic access. The opportunities for the non-typist's

participation thus include responding to requests for help – that is, if s/he has epistemic access – or spotting errors that have gone undetected by the typist and/or the spell-checker. The agency of the non-typist is greater than that of the spell-checker, insofar as it encompasses a broader range of actions – from under-specified pointing to metalinguistic explanations – which can be tailored to the particular error. In cases of chaining, the "initiation technique" is subsequently adjusted in terms of its precision (Mazeland 1987).

At the same time, the typical structural delay in detecting and initiating correction allows for minimal interruption in the composition and typing process, since most misspellings (especially typos) are usually swiftly dealt with by the typist. The preference for self-correction also makes for less disruption to the progressivity of the typing, when the typist him−/herself has epistemic access to the correct spelling, because more extensive metalinguistic turns designed to pinpoint the exact trouble source are not needed (e.g. "ee a:y- skip the a:y" in Excerpt 4, line 9). Where the other student does very rarely take over the keyboard to correct an error – and thereby adopts a stance of epistemic primacy – it is a dispreferred and potentially face-threatening action, and therefore resorted to only after failed chained attempts to initiate or pinpoint the exact trouble source (e.g. Excerpt 4). Otherwise, the typist generally reserves the preference-based right (not) to make a correction.

In conclusion, let us consider whether the epistemic ecology of computer-assisted collaborative writing can and does provide for *epistemic progression* (i.e. knowledge gains, cf. Balaman and Sert 2017; Gardner 2007) and thus learning opportunities when genuine spelling problems arise. Where the typist makes spelling errors and lacks epistemic access to the correct spelling, it is safe to conclude that both the spell-checker and collaboration may, indeed, open up spaces for bridging epistemic gaps and thus offer learning opportunities (cf. Excerpts 2 and 4, respectively), given that the non-typist and/or the spell-checker has epistemic access and is therefore able to scaffold correction.

The discussion above has already dealt with the differences between the agency of the spell-checker and the students as well as the structural constraints (i.e. timing) on each of the three 'agents', so here more will be said about other aspects of potential learning trajectories. Usually the trajectories displaying epistemic progression are characterised by chaining (multiple correction cycles), whereby the current typist resorts to external help either individually (e.g. Excerpt 5, lines 4 and 5) or by requesting the non-typist's help (e.g. Excerpt 2, line 6). Alternatively, the non-typist scaffolds spelling correction by means of increasingly precise initiation techniques (Mazeland 1987), such as a metalinguistic explanation (e.g. "skip the ay in lead" in Excerpt 4, line 13). If these repeatedly fail, s/he may resort to taking over the keyboard, as in Excerpt 4, line 13.

On the other hand, neither the spell-checker nor collaboration offer a guarantee of epistemic progression; for example, Adolf does not succeed in ascertaining whether ***ancesters** is spelt correctly (Excerpt 5), because the other student is not consulted and neither does he offer any help (probably because he too lacked epistemic access) and the spell-checker offers no help either (since it is set to Swedish).

All the same, one could conclude that the epistemic ecology of computer-assisted collaborative writing does offer a 'safety net' insofar as the spell-checker and other student may detect and initiate the correction of misspellings that the current typist has missed, which in turn opens up opportunities for epistemic progression and thereby learning. In other words, the epistemic ecology studied here is primarily characterised by co-ordinated, co-operative and transformative actions which laminate (combine) epistemic resources to co-construct the knowledge of spelling to correct misspellings (cf. Balaman and Sert 2017; Goodwin 2013; Musk and Čekaitė 2017).

5 Pedagogical Implications

There is strong evidence that the wrong language setting can give rise to unnecessary uncertainty in how to spell correctly or at worst it gives rise to misspellings. Thus, where computers are used in the foreign language classroom, students should be given explicit instruction on how to check and reset the language tools in Word and PowerPoint (or whatever software is used). Furthermore, since evidence suggests that students very rarely – if ever – switch the language functions on and off, there should also be explicit instruction on how to do this. Students also need explicit instruction on what help the spell-checker offers, for example through right-clicking to activate alternative spelling suggestions, since evidence from this data set indicates that the right-clicking function is rarely used and only then by a quarter of the students. Thus, one first practical implication is to ensure that all students are at least aware of how the language settings and the spell-checker work as well as how to make the list of spelling suggestions appear (through right-clicking on a PC).

The second step is to assess the spell-checking functions, since it is not just a question of knowing *how* to use the spell-checker functions, but also making use of them to aid students in ascertaining a correct spelling or in correcting misspellings, preferably in a pedagogically sound way. To this end, it would be worthwhile getting students to try out different alternatives, such as having the language tools activated during the composition process or at the end of the composition process (editing). One could also have them make notes about the process (e.g. examples of how the spell-checker has helped/confused them). It may be an advantage to give them some structured questions to guide them in their comparisons (e.g. Were the underlinings helpful? How did the underlinings affect your writing flow? Did you use the right-click function? Were the suggestions useful?). Together (in groups and/or as a whole-class activity) it would then be possible to discuss and assess the advantages, disadvantages and limitations of using the spell-checker at different stages of the writing process. This discussion could be augmented with reference to the findings of the current study, which suggests, for example, that most spelling errors are corrected before the spacebar is pressed and that most underlinings are dealt with more or less immediately when the language tools are correctly

configured. On the other hand, right-clicking is rarely used, perhaps because not all students are aware of this function or because this disrupts the progressivity of typing. There are also limitations in what the spell-checker can solve, especially for names (cf. Scissorhands) or when more than one or two letters are wrong.

By the same token, it would be possible to experiment with individual writing, collaborative writing and peer editing with a view to comparing and assessing the pros and cons of collaboration. In a similar fashion, one could let students make notes (with the help of pre-set questions) to prepare for a group/whole-class discussion. Once again, students' impressions could be compared with the findings of this study. For example, collaboration provides the advantage of an additional 'safety net' to screen the text for misspellings. Moreover, the structural preference for the non-typist to initiate correction but first allow the typist to identify the actual error contributes to reducing the potential disruption in the flow of the composition process. Conversely, the flow is temporarily disrupted when the current typist has genuine problems with a spelling, since it often takes more than one attempt to pinpoint the error and correct it. On the other hand, such cases also offer potential opportunities for epistemic progression and learning.

Comparing students' impressions and preferences (in the non-technical non-CA sense of this word) with the findings of this study after having practised and reviewed different options would at the very least serve to raise students' awareness of the benefits and risks of spell-checkers and collaboration at different stages of the writing process.

Acknowledgement This study has been funded by the Swedish Research Council, registration number 2017-03529.

Conventions for Transcribing Embodied Conduct

🗣	Talking head: line of talk
💻	Computer icon: line involving the computer screen
❶	Numbered disc: point at which a snapshot (or description) of action/screen shot is shown below
people	Bold: typed text appearing on the computer screen
pe~~pole~~	Struck-through bold: typed characters/words that are deleted
{pe}ople	Bold curly brackets: already typed letters (added for increased legibility) Bold outside curly brackets: newly typed characters
people·that	Bold centred dot: typed space appearing on the computer screen
↵	Angled arrow: pressing the return key

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Instruction-Giving Sequences in Italian as a Foreign Language Classes: An Ethnomethodological Conversation Analytic Perspective

Silvia Kunitz

Abstract This paper adopts an ethnomethodological, conversation analytic approach to analyze the social organization of the instruction-giving sequences that were accomplished by a teacher of Italian as a foreign language during the last phase of a writing task conducted in pairs. Specifically, the paper explores the linguistic, prosodic and embodied resources mobilized by the teacher as she engages in various rounds of instruction giving to prompt each pair of students to read their texts aloud. As the analysis shows, while the first round (targeting the first pair of students) is rather lengthy and subject to repair, the last round (targeting the last pair of students) consists of a minimal summons-answer sequence. Such minimization results from the students' increased familiarity with the task. That is, by the time the teacher is about to select the last group of students as next speakers, these students have already listened to multiple rounds of instruction-giving sequences and seen multiple implementations of the task. Overall, the paper contributes to the research concerning the mundane, yet complex, social action of doing pedagogical instructions. The implications of these empirical findings for teacher education are discussed at the end of the chapter.

Keywords Instructions · Classroom interaction · Task-based language teaching

1 Introduction

This paper unpacks the social organization of teachers' instruction-giving sequences in an Italian as a Foreign Language (IFL) class at an American research university by focusing on a specific interactional practice: the progressive minimization of instruction-giving sequences, which occurred during the last phase of a group task.

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_7

Following Lindwall et al. (2015), in the present paper, instructions are defined as directives; that is, as social actions that are "designed to get someone to do something" (Goodwin 2006, p. 517) and that have an "educational import" (Lindwall et al. 2015, p. 145). From an ethnomethodological (EM) perspective, these sequences are an interesting object of study because the complexity of these members' practices is hidden by the unremarkable nature of their mundane commonness. In other words, while anybody might have an intuitive understanding of how instruction giving works, we are usually not aware of all the resources (talk, other embodied conduct, artifacts) that the participants use to make sense of instruction giving on a moment-by-moment basis. At the same time, from a conversation analytic (CA) perspective, it is interesting to develop a sequential account of how instruction giving plays out in the unfolding interaction, turn by turn, action by action.

EM/CA research so far has focused on instruction-giving sequences in settings such as math and craft education, driving and dance classes, doctor-patient interaction, etcetera (see Amerine and Bilmes 1988; Broth and Lundström 2013; De Stefani and Gazin 2014; Keevallik 2014; Lindwall and Ekström 2012; Lindwall et al. 2015; Stukenbrock 2014). Overall, these studies have shown that instructions are intrinsically incomplete; that is, instructions require the recipient(s) to understand what the targeted action is and how it can be accomplished in the contingencies of the local interactional setting (Garfinkel 1967; Lindwall et al. 2015), irrespective of whether this setting is institutional or not. This means that not only instructions can be formulated in innumerable ways, but also that their interpretation is locally situated and that the subsequent implementation of instructions may be quite unpredictable (see Markee 2015a).

In CA work within applied linguistics, the topic remains under-investigated. To my knowledge, work on instruction-giving sequences has been conducted by Hellermann and Pekarek Doehler (2010), Markee (2015a), Seedhouse (2008) and Somuncu and Sert (2019). While Hellermann and Pekarek Doehler (2010) focus on how students interpret and implement the teacher's instructions in a way that is observably different from the teacher's conceptualization of the task-as-workplan (see Coughlan and Duff 1994), Markee (2015a) and Seedhouse (2008) focus on the formulation of instructions per se. Specifically, Markee (2015a) highlights how teachers in different contexts seem to use similar linguistic resources (e.g., unmodulated forms such as imperatives, but also more modulated forms that include the use of modals) in the formulation of instructions and how they appear to structure instruction-giving sequences in similar ways, providing students with information about: the allotted time, the participation framework in which they are supposed to work (e.g., pairs vs small groups), the resources they will need, the kind of task they are required to accomplish, and the rationale for engaging in such a task. Furthermore, Markee (2015a) emphasizes the role of embodied conduct in instruction giving (e.g., embodied actions such as eye-gaze and pointing, and the use of and orientation to relevant cultural artifacts, such as handouts). From this study, it emerges quite clearly that giving instructions is a complex, multifaceted skill, a fact which is also discussed in Seedhouse (2008). Specifically, Seedhouse (2008) illustrates that effective instruction giving, done by experienced teachers, has to do with the clarity

with which teachers are able to describe and establish the pedagogical focus of the new, upcoming activity, as they attempt to shift the students' attention from the current activity and mobilize it towards the new activity. Teachers who are successful in producing this attentional shift in focus manage the transition from one activity to the next with discourse markers and prosodic features that clearly mark the pedagogical boundary between the previous focus and the new one. Somuncu and Sert (2019), on the other hand, focus on students' displays of non-understanding and reveal how teachers, when they orient to these displays, can ensure understanding of the task at hand.

The studies mentioned above are crucial in showing the need for more research on instruction giving, both at the level of basic research and at the level of applied research that might lead to pedagogical implications for teacher educators, teachers in training, and in-service teachers (see specifically Markee 2015a; Seedhouse 2008). Ultimately, these studies have just started to explore the complexity of instruction giving, which means that we still know little about how instruction-giving sequences are achieved in language classrooms as a nexus of embodied social practices and pragmatic/grammatical resources, and how these sequence-initiating actions are set in motion in and through embodied talk-in-interaction. In addition, researchers have mainly focused on ESL/EFL data.

This paper on IFL classroom interaction expands the range of languages in which such sequences have been studied, thereby eventually contributing to the development of a comparative, cross-linguistic, collections-based research agenda in CA-based work on classroom interaction. More broadly, the paper also deepens our understanding of how instruction-giving sequences are achieved through a lamination of different resources in classroom settings and show how findings in this area might be used for teacher education purposes.

2 Data

The minimization of instruction-giving sequences has been observed in three IFL classes that were part of a second-semester course taught at an American university. For reasons of space, the minimization of instruction-giving sequences is illustrated on the basis of one IFL class. For this class, the participants include the teacher (T), who is an L1 speaker of Italian, and eight American students.

The IFL classes (lasting 1 h each) were recorded as part of a larger project including Spanish and German classes for a total of ca. 10 h of recordings. The project was reviewed and approved by the local Institutional Review Board and the participants were recruited following institutional ethical procedures; all the recorded participants gave their informed consent. The classes were recorded with two cameras, one focusing on the teacher, the other focusing on the students; occasionally, the cameras were moved in order to better capture what was occurring in the classroom. However, due to the dimension of the rooms and to the spatial disposition of the students, who were often engaged in group work, it was not always possible to

Table 1 Prompts for students' dialogues

Come comincerebbero gli interlocutori una conversazione nelle seguenti situazioni?
How would the interlocutors start a conversation in the following situations?
1 Due vecchi amici di scuola che non si vedono da qualche anno e si incontrano alla stazione.
Two old school mates that haven't seen each other for a few years and meet at the station.
2 Due amici che fanno jogging insieme ogni sabato, si incontrano per caso al pub un venerdì.
Two friends who run together every Saturday meet by chance at the pub on a Friday.
3 In una discoteca vedi un ragazzo/a che vuoi conoscere.
In a disco you see a boy/girl that you want to meet.

record all the participants' actions at the same time. Selected parts of the recordings were subsequently transcribed following Jeffersonian CA conventions (Markee 2015b). A description of relevant embodied actions and relevant frame grabs are provided in the transcript; the co-occurrence of embodied conduct with talk is marked with a plus sign. Furthermore, in the description of embodied actions, L stands for "left", R for "right", and H for "hand".

The language center where the recordings were collected aimed to teach interactional competence; that is, the ability to accomplish recognizable social actions through the interactional mechanisms of turn-taking, repair, and sequence organization (see Pekarek Doehler this volume). As a result, a common task in the classes focusing on IC involved writing dialogues in the foreign language. In the present data, the students were divided into four pairs (named Groups 1, 2, 3, and 4), who had to collaboratively write a dialogue based on one out of the three prompts shown in Table 1. Only two prompts were chosen: Groups 1 and 2 chose prompt 3 (later referred to as the "disco prompt"), while Groups 3 and 4 wrote a dialogue based on prompt 2 (later referred to as the "pub prompt").

The task of writing a dialogue based on one of these prompts had been assigned as homework. However, most students had not completed this assignment and T, who had prepared a completely different lesson plan on conversation closings, decided to do the homework task in class. Nine phases of work were empirically observed during the class (see Table 2).

This paper focuses on Phase 9(a) and, more specifically, on how T instructs each group of students to read the revised version of their dialogue aloud. At this point, the dialogues have already been revised three times; i.e., twice in plenum (Phases 2, 4, 5, and 7), and once in pairs (Phase 8). The focal data for Phase 9(a) consist of four rounds of instruction-giving sequences (one per group), during which these sequences become minimalized as the students' familiarity with the task increases.

A chart of the classroom spatial arrangement is provided in Fig. 1.

Table 2 Pedagogical phases of the recorded class

Phase	Participation framework	Activities
1	Pairs	Students write dialogues on the board. The dialogues are based on the homework prompts.
2	Plenum	Two cycles (reading + revision): (a) Groups 1 and 2 read aloud the dialogue they wrote, based on prompt 3 (disco prompt). (b) After each round of reading, each dialogue is revised.
3	Plenum	Listening to recorded dialogue *In discoteca* ('at the disco').
4	Plenum	Revision of the students' dialogues based on the recording and related transcript.
5	Plenum	Two cycles (reading + revision): (a) Groups 3 and 4 read aloud the dialogue they wrote, based on prompt 2 (pub prompt). (b) Each dialogue is revised.
6	Plenum	Listening to recorded dialogue *Al Pub* ('at the pub').
7	Plenum	Revision of the students' dialogues based on the recording and related transcript.
8	Pairs	Each group writes modifications of its own dialogue on the board.
9	Plenum	Four cycles (reading + revision): (a) Each pair of students reads aloud the revised version of their dialogues. (b) Each dialogue is revised for grammar; specific changes done by the students are also discussed.

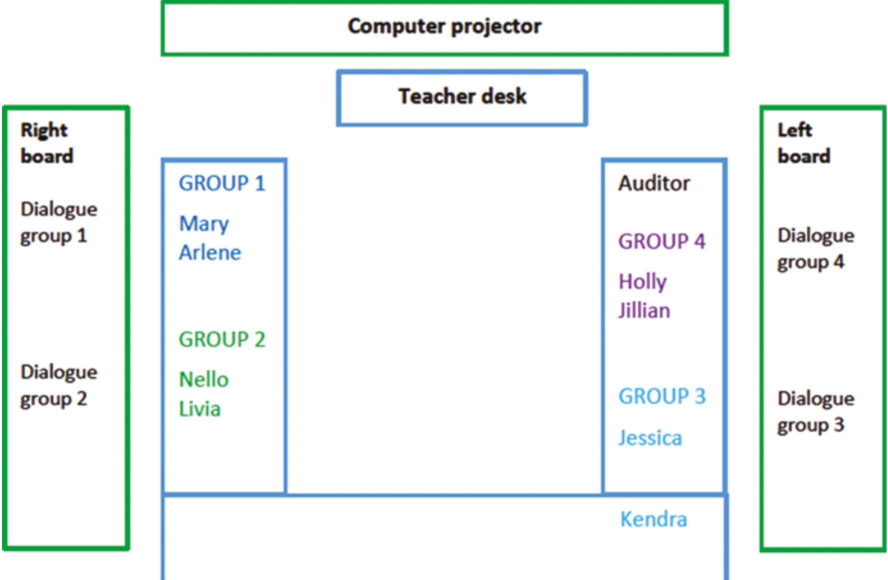


Fig. 1 Spatial arrangement of the classroom

3 Analysis

In what follows each round of successive instruction-giving sequences is presented to show: a) how these sequences are organized on the fly by the instructor; and b) how they are embedded in other work that T has to accomplish in order to get the students to fulfill her instructions. The four sets of instructions that constitute the focus of this paper are exhibited in Table 3. As a pre-analytic observation, we can clearly see how T's turns become minimalized from Round 1 to Rounds 2–4; notice also the similarities between Rounds 2 and 4, when T does not even name the group of students that is selected to speak next.

Now, Table 3 reproduces only the verbal resources used by T to achieve the action of instruction giving. In what follows, I will also develop a multimodal analysis to unpack the exquisite choreography of talk and embodied actions that characterizes the moment-by-moment co-construction of T's instruction-giving work in these data.

3.1 Round 1

In order to make the transcript more immediately accessible, Excerpt 1 has been divided into shorter parts (Excerpts 1a, 1b, and 1c). In talk not reproduced here, as the students are still engaged in modifying the dialogues they had written on the white boards during Phase 8, T says: *va bene. allora. abbiamo fatto ragazzi?*, 'okay. so. are we done guys?').[1] The students in Group 3 then start to move back

Table 3 Sets of instructions

Round 1
allora. vediamo. ar↑lene e:::: arlene. volete cominciare? ('so. let's see. ar↑lene and arlene. do you-PL want to start?') . . . *volete c- volete leggere le vostre correzioni?* ('do you-PL want to s- do you-PL want to read your corrections?')
Round 2
ALLORA. ('so.') . . . *vediamo:::::::::::* ('let's see')
Round 3
↑Allora. forza::. kendra:::: e::::: p- (.) u:::::h jessica ('so. come on. kendra and p- (.) uh jessica')
Round 4
Allora. ('So.') . . . *↑vediamo un po'?* ('let's see').

[1] I have chosen to translate the phrase *va bene* (literally 'that's good' in English) as 'okay.' In fact, when spoken with downward intonation, *va bene* closes down the previous activity as a precursor to the following talk. In English, the discourse marker that prototypically achieves this function is *okay* (Beach 1993).

to their desks, thereby displaying their understanding of T's turn as a request to move on to a new phase of activity; Groups 2 and 4 discuss last minute changes to their respective dialogues; meanwhile the students in Group 1 are already at their desk.

Excerpt 1a picks up the talk as T again asks whether the students are done (*abbiamo fatto?*, 'are we done?', line 3). As she produces this turn, T walks toward her desk and looks at the board on the right side of the room.[2] In short, T's simultaneous verbal and embodied actions not only indicate that she is actively monitoring the students' work on the board but that a transition to a new activity is underway.

Excerpt 1a – Sequential Boundary and First Summons

```
1      TEACHER: +((T walks towards desk while looking at right board))
2               +((Group 2 students start moving to their desk))
3               +abbiamo fat+to?
                +  are we do+ne?
4      ARLENE:               +((Arlene looks down))
5                            +((inaudible))=
6               =talk to your (partner) after
7               +[(     )](    )=
8      TEACHER: +[arl-=uh]
9               +((Group 4 students start turning their back to board))
10     ARLENE:  =[( )]
11     TEACHER:  [ al][lora. vedia[mo.  ar][↑lene  ]=
                 [  s][o.  let's s[ee.  ar][↑lene  ]=
12     STUDENT?       [      (>cono[sce:?<)]
                      [   (>s/he kn[ow:s?< ]
13     NELLO:                       [(there ][it is.)]
14     TEACHER: =+e::::=
                =+a::::nd=
15               +((Arlene lifts head)) - Fig.2
16               +((Nello turns to look at T)) - Fig.2
```

Fig.2

[2] From this moment on T is not visible on the video, until we next see her turning to Jillian in line 26.

While T is delivering her turn, the students in Group 2 start moving to their desk (line 2), in response to T's prior attempt at shifting to the next phase of the task (not reported here). In the meantime, one of the students in Group 3 is already seated and is looking at something on her desk (unfortunately the other student in Group 3 is not visible in the video), while the students in Group 1 are focusing on an artifact placed on their desk, possibly the handout with the written instructions for the task (not visible in the video). In partial overlap with the end of T's turn, Arlene appears to be reading aloud (or possibly translating) the instructions written in the handout (lines 4–7). At this point, then, it becomes clear that the students do not treat T's turn as making a verbal response conditionally relevant (see also Majlesi this volume; Eskildsen this volume, in which the theme of how students' moving around the classroom has an impact on participants' verbal behaviors also emerges as a matter of analytic interest).

As the students in Group 4 start turning their backs to the board where they have written their dialogues and begin moving to their seats (line 9), in an interruptive overlap with Arlene, T starts summoning her, but cuts off and produces the hesitation token *uh* (*arl- = uh*, line 8). T then marks the sequential (and pedagogical) boundary of the new activity by saying: *allora. vediamo.* ('so. let's see', line 11). *Allora* in Italian seems to work like English *so*; that is, it orients to the beginning of a new course of action (Raymond 2004). In this case, it marks the beginning of the instruction-giving sequence that will lead to Phase 9 (i.e., to the sharing and revision of the changes to the dialogues made by each group during Phase 8). Finally, T summons Arlene with high-pitched intonation on the second syllable (*ar↑lene*, line 11) and then projects that she is about to summon another person (i.e., the other student in Group 1) by delivering an elongated *e::::* ('and', line 14). This vowel stretch may indicate that T has forgotten the name of Arlene's partner. It is precisely after T has summoned Arlene that Arlene lifts her head (line 15, Fig. 2). Simultaneously, Nello (a student in Group 2), who has just produced a turn directed at his group mate Livia (*there it is*, line 13), turns to look at T (line 16, Fig. 2). At this point, then, T has successfully mobilized the attention of at least two students; i.e., Arlene (Group 1) and Nello (Group 2).

As shown in Excerpt 1b, T summons Arlene again in line 17 (*arlene. volete cominciare?*, 'arlene. do you-PL want to start?'). This question-formatted turn follows up on her previous turn in lines 11 and 14, and clearly mobilizes a response (Stivers and Rossano 2010) from the students, inviting them to 'start'. It is now becoming apparent, then, that the summons in lines 8, 11, and 14 of Excerpt 1a was not simply a way of getting the students' attention, but also a technique to select the next speakers who will be involved in a new phase of the task.

As T starts producing *cominciare* ('start', line 17), Nello starts a mimicking action that enacts dancing (line 18, Fig. 3). Given that, by now, all students are familiar with each other's dialogues, Nello's embodied action displays his interpretation that the new phase of the activity will focus on Group 1's dialogue, which is based on the disco prompt. At the same time, Nello's action embodies a shift in footing (Goffman 1979) from the classroom setting to the fictional setting of a disco that frames the two dialogues based on the disco prompt. He is therefore preparing the stage for the performance of these dialogues.

Excerpt 1b – Second Summons and Repair Initiation

```
17    TEACHER: =arlene.      volete    +cominciare?=
               =arlene. do-you-PL want +to start?=
18                                     +((Nello starts dancing)) - Fig.3
```

Fig.3

```
19    STUDENT? =E::w:::: +[Hhhh]
20    ARLENE:            +[hu::]:?
21                       +((Arlene turns to white board)) - Fig.4
```

Fig.4

In line 20, in overlap with the previous turn (a vocalization produced by an unidentified student), Arlene initiates repair on T's instructions by saying *hu:::?* As she does this, she simultaneously turns to the white board on her left side (line 21, Fig. 4). Since *hu:::?* is an open class repair initiator that does not locate a specific trouble source (Drew 1997), it is hard to determine what trouble this repair initiation

is targeting. That is, Arlene might be initiating repair because she had a problem hearing T's instructions or because she did not understand them. After all, T's instructions-so-far are rather vague, in that T has simply indicated that Arlene and her partner should start a new course of action, but she has not specified what kind of task the students are required to start. Indeed, one might speculate that T provides minimal and underspecified instructions at this moment because she is relying on the students' familiarity with the activity of reading aloud their dialogues, an activity which they have previously done in Phases 2a and 5a. In any case, Arlene's action of turning to look at the white board displays her orientation to the dialogue written on the board as possibly relevant for her compliance with T's instructions.

In response to Arlene's repair initiation, in Excerpt 1c T reformulates her instructions by saying *volete c- volete leggere le vostre correzioni?* ('do you-PL want to s- do you-PL want to read your corrections?', lines 22–23). The beginning of T's turn (*volete c-*, 'do you want to s-', line 22) shows how T initially interprets Arlene's repair initiation as addressing a problem in hearing that calls for a repetition of the prior turn. In fact, by saying *volete c-* ('do you want to s-'), with *c-* possibly projecting *cominciare* ('to start'), T projects that a simple repetition of her instruction in line 17 (*volete cominciare*, 'do you want to start') is underway. However, she cuts off at *c-* and repairs the beginning of her turn with *volete leggere le vostre correzioni* ('do you want to read your corrections', line 23). With this self-repair, T clarifies what "starting" involves: the students should read aloud the changes they have made to their dialogue during the third round of revisions (Phase 8). T's action thus repairs her original interpretation of Arlene's repair initiation, which is now treated as targeting a problem in understanding that was due to the underspecified nature of T's instructions in line 17 (i.e., 'do you want to start?').

After T's turn, two different courses of action are pursued by Arlene and Jillian (a student in Group 4, sitting on the opposite side of Groups 1 and 2). In line 27, Arlene responds to T's reformulated instructions (lines 22–23) with *oka::y*, thereby aligning with the course of action projected by T. Finally, in line 29, Arlene displays compliance with T's instructions by starting to read the first correction: *ciao* ('hi', enacted as *cia:::::o*), which replaces *scusami* ('excuse me'; see Fig. 6, which reproduces part of Group 1's dialogue as it is written on the board). As Arlene is producing the elongated *ciao*, T – who had momentarily directed her attention at Jillian (lines 25–26; see analysis below) – turns back to look at the right board where the dialogue that Arlene is reading is written (line 30).

Excerpt 1c – Task Beginning

```
22    TEACHER: volete c-
               do-you-PL want to s-
23             volete leggere        le vostre correzio[ni? ]
               do-you-PL want to read    your correctio[ns? ]
24    JILLIAN:                                         [°s::]ono°=
                                                       [°i-a]::m°=
                                                                  Fig.5
25             =[je(h)rry(h)] pa+(h)(h)(h)wns.=
26                               +((T turns to look at Jillian))
27    ARLENE:   [oka::y.     ]
28    JILLIAN: =.HH [ha ha  ha]
29    ARLENE:       [cia::+:::]o.=
                    [ hi::+:::].=
30                         +((T turns to look at right board))
                                                       Fig.6
31    JILLIAN: =ha[ha haha  ]
32    STUDENT?    [hh hu    ][+huhu   huhu]
33    ARLENE:     [we didn't][+really do a]=
34                            +((Arlene turns to T))
35                  +((Arlene and T turn to white board))
36             =lot +o:f        ]
37    TEACHER:      +>but< ↑tha]t's okay. non importa.
                                          it doesn't matter.
38             vediamo. forza.
               let's see. come on.
39    STUDENT? ↑A:h [huhu  hu ]
40    ARLENE:       [<cia:::o.] mi piace molto la tua maglietta:,
                    [  <hi:::.] I like your t-shirt a lot,
41             (.) s:ono lea, (.) e tu?>
               (.) i-a:m lea, (.) and you?>
```

Let us now focus on Jillian's actions. In lines 24–25, Jillian laughingly talks into relevance one of Group 2's corrections, which involved the replacement of Nello's name with the name of a fictional character, Jerry Pawns. Jillian in fact reads aloud the relevant part of the line in Group 2's dialogue (see Fig. 5 in the transcript), intersperses it with laughter tokens (°*s::ono*° *je(h)rry(h) pa(h) (h) (h)wns*, 'I am Jerry Pawns', lines 24–25), and keeps laughing (lines 28 and 31).

As another student joins in Jillian's laughter (line 32), Arlene produces an incomplete disclaimer with which she reports that she and her partner *didn't really do a lot*

o:f (lines 33 and 36). As she delivers the disclaimer, Arlene first turns to T (line 34), then back to the board (line 35). She seems to be suggesting that she and her partner did not make many changes to the original version of their dialogue, and that this might be problematic for the implementation of the current task. T responds by disagreeing with Arlene's treatment of the scant number of corrections as potentially inadequate (>*but*< ↑*that's okay. non importa.*, 'but that's okay. it doesn't matter', line 37). Instead, T prompts Arlene to comply with the instructions anyway (*vediamo. forza.*, 'let's see. come on.', line 38). In lines 40–41, Arlene then starts reading the first line of the dialogue (<*cia:::o. mi piace molto la tua maglietta:, (.) s:ono lea, (.) e tu?*>, 'hi. I like your t-shirt a lot, (.) I'm lea, (.) and you?'), thereby displaying her interpretation of T's instructions as requiring her to read the whole script, not just the corrections added in Phase 8 (as hinted by T's turn in line 23). The new task is now well underway and the Group 1 students, in subsequent lines not reported here, read aloud their dialogue.

To summarize, in the data presented here, the first round of instruction giving follows another activity, the closing of which needs to be managed before the instructions to the new activity can be delivered. To this end, T asks the students whether they are done with the previous phase of the task (i.e., revising their dialogues in pairs), before summoning two students to start with the subsequent phase. As we have seen in Excerpt 1, one of the summoned participants orients to the lack of specificity of the instructions. Once it is clarified, through a repair sequence, that the students must read their corrections to their own dialogues, the same student orients to the possible inadequacy of her group's implementation of the task, since they have not modified their dialogue much; upon receiving encouragement from T, the students reinterpret the task as involving the reading of their revised dialogue in its entirety and complete the task.

Overall, the analysis has illustrated that, when the instructions for a new task are given for the first time, a number of competing issues might need to be addressed before, during, and even after the delivery of such instructions. First, the sequential placement of instructions within the broader organization of the class is crucial. Specifically, T has to clearly mark the boundary between the previous activity and the new one, while securing the students' attention and mobilizing it to the new course of action. Second, additional issues may come into play, such as the formulation of the instructions itself, which might be not specific enough, thereby possibly triggering a repair initiation from the students.

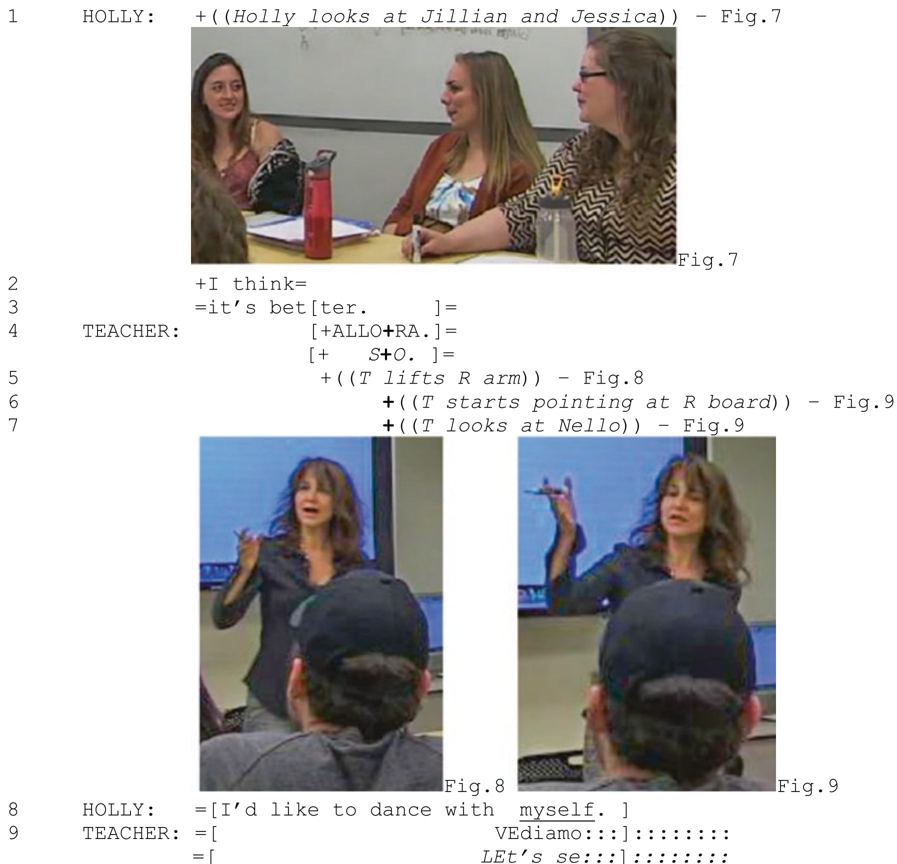
3.2 Round 2

Excerpt 2 (also divided into shorter parts) illustrates the second round of instruction giving. This excerpt occurs after the whole class has been discussing Group 1's dialogue and the modifications made to it. Specifically, during the grammatical revision of the dialogue, T has directed the students' attention to the following line, written on the board: *vorrei ballare con me?*, which literally translates to 'would I

like to dance with myself?'. The verb form *vorrei* ('I would like') has then been repaired to *vorresti* ('you would like'); the revised line now reads *vorresti ballare con me?* ('would you like to dance with me?').

Excerpt 2a picks up the talk as Holly (Group 4) is interacting (lines 1–3) with two other students – Jillian (Group 4) and Jessica (Group 3) – who are sitting by the left board (see Fig. 1 and Fig. 7). As will become apparent in the unfolding interaction, Holly is still orienting to the correction of *vorrei ballare con me?* ('would I like to dance with myself?') in Group 1's dialogue and claims that *vorrei ballare con me* would be a better line (*I think it's better*, lines 2–3) if it were used in the affirmative form, which would translate into *I'd like to dance with myself* (line 8).

Excerpt 2a – Sequential boundary



1 HOLLY: +((*Holly looks at Jillian and Jessica*)) - Fig.7

Fig.7

2 +I think=
3 =it's bet[ter.]=
4 TEACHER: [+ALLO+RA.]=
[+ *S+O.*]=
5 +((*T lifts R arm*)) - Fig.8
6 +((*T starts pointing at R board*)) - Fig.9
7 +((*T looks at Nello*)) - Fig.9

Fig.8 Fig.9

8 HOLLY: =[I'd like to dance with myself.]
9 TEACHER: =[VEdiamo:::]::::::::
=[*LEt's se:::]::::::::*

In line 4, T overlaps Holly by saying *ALLORA.* ('so'), with high volume and downward intonation. As in Excerpt 1, *allora* displays T's orientation to the initiation of a new phase of the class period. At the same time, the high volume with

which T produces *allora* appears to be a recipient-designed feature of the delivery of her turn, which achieves two simultaneous actions: making herself heard and mobilizing the students' attention to the new course of action. T's overlap with Holly (line 3) is therefore interruptive in nature. The fact that Holly continues talking (line 8), while Jillian and Jessica keep orienting to her instead of T, produces a schism.

Let us now focus on the embodied actions that accompany T's turn at talk in line 4. As she is producing *allora*, T lifts her right arm (line 5, Fig. 8) and starts pointing (line 6, Fig. 9) at the right board, where Group 2 (Nello and Livia; see Fig. 1) has also written a dialogue based on the disco prompt. Figure 9 shows that T is now looking toward Nello (line 7), thereby orienting to him as a possible next speaker. Overall, the layering of talk and embodied actions displays T's orientation to moving the class's attentional focus onto the dialogue written by Group 2. The use of *allora*, the pointing gesture and the direction of her eye gaze mark the sequential (and pedagogical) boundary between the first part of the task (focusing on Group 1's dialogue) and the second part of the task (focusing on Group 2's dialogue).

T's orientation to the second group of students is further evidenced in T's embodied action of starting to walk toward Nello and Livia, as illustrated in Excerpt 2b (line 10, Fig. 10).

Excerpt 2b – Next-speaker selection

```
9   TEACHER: [VEdia+mo:::]::::::::
             [LEt's+se:::]::::::::
10                 +((T starts walking towards Nello and Livia)) - Fig.10
```

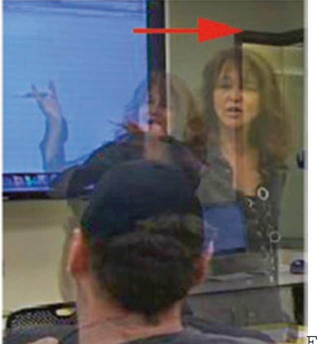


Fig.10

As she walks toward them, T produces an elongated *VEdiamo::::::::::* ('let's see', line 9). The coupling of these two actions suggests that T is projecting a forthcoming action that will involve Nello and Livia as the selected next speakers. Note that, similar to *allora* ('so') in line 4, T's delivery of *vediamo* ('let's see', line 9) presents marked prosodic features, such as a significant elongation and louder

volume on the first syllable. *Vediamo* is in fact produced in overlap with Holly's turn (line 8). Therefore, as in the case of *allora*, marked prosody is a resource for making the transition to Group 2's work a hearable change of focus designed for the class as a whole; at the same time, T's action of walking towards the students in Group 2 makes this change visible as well.

The course of action suggested by T is immediately responded to by Nello (Group 2) through the embodied action of dancing.

Excerpt 2c – Students Dancing: Two Different Orientations

```
9      TEACHER: [ VEdiamo:+::]+:::::::
                [LEt's se:+::]+:::::::
        …
11                          +((Jillian starts dancing)) - Fig.11
12                             +((Nello starts dancing)) - Fig.12
```

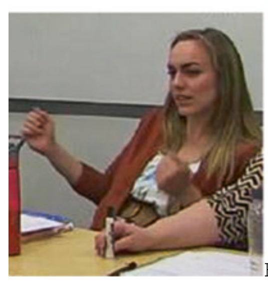


Fig.11

Fig.12

Nello, in fact, during T's delivery of the elongated vowel in *vediamo* (line 9), starts dancing (line 12, Fig. 12). With his embodied action, he creates the fictitious world of a disco where he will talk to a girl. In other words, the action of dancing indicates Nello's shift in footing (Goffman 1979) from the institutional setting of a classroom to the imagined mundane setting of a disco that frames the dialogue he created with Livia. Therefore, his dancing action is the embodied emergence of his response to T's selection of his group as the next set of speakers. Furthermore, this embodied action displays Nello's emerging compliance with T's instructions and projects that he is about to read and act out the dialogue that he wrote (see line 22, Excerpt 2e below).

At the same time, Holly, Jillian and Jessica achieve a schism (see above) by accomplishing a different course of action. We saw that, at the beginning of Excerpt 2a, Holly was still orienting to the line *vorrei ballare con me?* ('would I like to dance with myself') in Group 1's dialogue and suggested that *I'd like to dance with myself* (line 8) would be a better line (lines 2–3) to be produced in a disco. The imaginary disco setting is then evoked, in an embodied fashion, by Jillian who starts dancing (line 11, Fig. 11, Excerpt 2c; reproduced also in Excerpt 2d) roughly at the same time as Nello (though they observably do not orient to each other's embodied

actions). A moment later, Jessica engages in the production of a turn that resists Holly's suggestion.

Excerpt 2d – Schism: Orienting to Previous Phase

```
9  TEACHER: [VEdia+mo:::]:::[:::::
            [LEt'❜s+se:::]:::[:::::
   …
11                +((Jillian starts dancing)) - Fig.11
   …
13 JESSICA:                    [would you like=
14          +=to d-
15          +((Jessica starts dancing))- Fig.13

                                          Fig.11                 Fig.13
16 JILLIAN: +balla[re?  ]
            +  dan[ce?  ]
17 JESSICA:       [would] you like to dance][with ↑me?]+
   …
19 STUDENT?                               [(        ]+   )
20                                                    +((T turns to Jessica))
```

More specifically, Jessica starts translating the revised line (*vorresti ballare con me?*, 'would you like to dance with me?') into English with *would you like to d-* (lines 13–14), with a cut off on *d-*. As her action of starting to dance (line 15, Fig. 13) shows, the projected verb is most likely *to dance* (as in *would you like to dance*, see line 17). At this point, Jillian fills the slot for the projected verb with Italian *ballare* ('to dance', line 16); that is, she seems to be completing Jessica's turn, which was cut-off at *d-* (for *dance*), by providing an Italian infinitive form. On the other hand, in overlap with Jillian, Jessica reformulates the translation as *would you like to dance with ↑me?* (line 17). Finally, note that T only momentarily shifts her attention to these three students by briefly looking towards Jessica (line 20) after she has produced the translation. However, as soon as Nello starts reading his and Livia's dialogue (line 22, Excerpt 2e below), T turns back to look at him (line 23). Remember that a similar behavior occurred in Excerpt 1 when T, momentarily distracted by a parallel (i.e., simultaneous and unrelated) course of action (in that case Jillian's laughter; see line 26, Excerpt 1c), turned immediately back to look at the right board with Group 1's dialogue as Arlene (Group 1) started to read it (line 30, Excerpt 1c).

Finally, Excerpt 2e shows how the students selected by T achieve the beginning of the task.

Excerpt 2e – Task-Beginning

```
9  TEACHER: [VEdia+mo:::]:::+:::::
            [LEt's+se:::]:::+:::::
10                +((T starts walking towards Group 2)) – Fig.10
     …
12                          +((Nello starts dancing)) – Fig.12
     …
18 TEACHER: [in] discoteca.  ]
            [at] (the) disco.]
   …
21 STUDENT? un[z +unz unz         ]((rhythmically))
22 NELLO:     [ e+:::::hi:::! <cia]o bella::::,>
              [he+::::y:::!   <h]i beautifu::::l,>
23               +((T turns to look at Nello))
```

As mentioned earlier, Nello's response to T's turn in line 9 (*vediamo*, 'let's see') and to her action of walking towards him and Livia (line 10, Fig. 10) consists of a mime that enacts dancing (line 12, Fig. 12). With this action, he displays incipient compliance with T's instructions. Then, in line 18 T says: *in discoteca* ('at the disco'), with falling intonation. This turn seems to be soliciting the beginning of the next relevant activity (i.e., reading aloud another dialogue), while specifying that the next dialogue to be read aloud should be based on the disco prompt. At the same time, coupled with the action of walking towards the students in Group 2 (line 10), the turn in line 18 explicitly selects those students as next speakers. In fact, since the other group which wrote a dialogue based on the disco prompt has already read such a dialogue (Group 1 in round 1), this prompt can only select the students in Group 2. In other words, the explicit reference to the disco prompt acts as a technique for next-speaker selection. One student rhythmically produces the sounds that I have tentatively transcribed as *unz unz unz* (line 21). These sounds seem to mimic the rhythm of disco music and therefore set the scene for the enactment of the dialogue, which in fact starts in partial overlap with these sounds, with Nello saying *e:::::hi:::!* < *ciao bella::::,*> ('hey! hi beautiful', line 22). Finally, note how Nello self-selects to be the next speaker/performer of the dialogue.

To summarize, the analysis of Excerpt 2 has shown the emergence of a schism. That is, while T attempts to gain the attention of the whole class and prompts the students in Group 2 to read their dialogue, three students dwell on a dialogue line that was discussed in the previous phase of the task. The packaging of T's instructions, which includes selecting the next group of speakers through a mention of the relevant dialogue prompt (line 18), proves to be a complex nexus of verbal and embodied actions that 'act' into relevance specific classroom artefacts (the

second dialogue on the right board) and specific people (Nello and Livia). Note however how, in this second round of instructions, T does not mention what the students in Group 2 have to do. In fact, T's actions merely summon the next group of speakers. Thus, T and the selected students rely on the public display of instructions and task implementation that occurred in round 1 both to formulate and implement the instructions in Round 2. In other words, they rely on their familiarity with the publicly displayed task-as-activity (Coughlan and Duff 1994) to co-construct the local understanding of what needs to be done in round 2.

3.3 Round 3

Excerpt 3 illustrates the third round of instruction giving that is initiated by T after she comments on the revisions done by Group 2 on their dialogue. In Rounds 1 and 2 of Phase 9(a), the participants focused on the two dialogues based on the disco prompt, which had been written by Groups 1 and 2 on the right board (see Fig. 1). In the last two rounds of Phase 9(a), the participants focus on the two dialogues based on the pub prompt, written by Groups 3 and 4 on the left board. The shift in focus from the dialogues on the right board to the dialogues on the left board is embodied by T's action of turning to the left board to face the dialogue written by Group 3 (line 1, Fig. 14). Her embodied action is accompanied by ↑*Allora.* ('so', line 2), produced with initial high volume and pitch; together, the two actions (embodied and verbal) mark the sequential and pedagogical boundary between the previous rounds of Phase 9(a), focusing on the right board, and the new rounds, focusing on the left board.

Similar to line 4 in Excerpt 2a, the prosodic features of T's turn at this sequential boundary achieve the action of making her heard and of mobilizing the students' attention to a new, shared course of action. Note also that, during the delivery of the high-pitched *allora* ('so', line 2), T quickly moves her right hand down, with the pen in her hand pointing at the dialogue on the left side of the board (line 3). This embodied action accompanies the delivery of the accented syllable of the word (*lo* in *allora*) and thereby constitutes a beat gesture which, together with the pointing it achieves, marks a shift in focus.

Excerpt 3 – Round 3 (Kendra and Jessica)

1 TEACHER: +((*T turns to left board*)) - Fig.14

Fig.14

2 +↑Al+lora.
+ ↑*S+o.*
3 +((*T quickly moves RH down, pen pointing at L board*))
4 +↑forza::.
+↑*come o::n.*
5 +((*T turns R and points at Group 3*)) - Fig.15
6 +((*Jessica turns and lifts head to look at T*)) - Fig.15

Fig.15

7 kendra:::: e::::: p- (.) u:::::h
kendra:::: a:::::nd p- (.) u:::::h
8 +jessica.
9 +((*T and Jessica turn to white board*)) - Fig.16

Fig.16

10 (0.7)
11 KENDRA: cia:::::o:::! (.) che ci fai qua:? (0.4) come stai.
hi::::::::! (.) what are-you doing he:re? (0.4) how are-you.

T's pointing action and her physical position in the room already indicate that T is mobilizing the class's attention to Group 3's dialogue, which is written on the right side of the left board. One of the students in Group 3, Jessica, turns and lifts her head towards T (line 6, Fig. 15),[3] exactly when T turns right toward Group 3 and extends her right arm to point at them (line 5, Fig. 15). Simultaneously, T prompts them to speak next with ↑*forza::.* ('come on', line 4). She then summons and selects Kendra (*kendra::::*, line 7); after some uncertainty (*e::::: p- (.) u:::::h*, 'and p- (.) uh', line 7), she addresses Jessica as well (line 8). As she delivers Jessica's name, T turns her head to look at the white board, and so does Jessica (line 9, Fig. 16). With this action, T once again 'acts' into relevance the dialogue on the right side of the board. After a pause of 0.7 seconds (line 10), Kendra finally self-selects as next speaker and starts reading aloud the first line of the dialogue (*cia:::::o:::! (.) che ci fai qua:? (0.4) come stai.*, 'ciao! (.) what are you doing here? (0.4) how are you.', line 11).

The analysis of this excerpt has illustrated that T, after gaining the students' attention, is using minimal embodied and verbal resources to mark the sequential and pedagogical boundary that transitions into the third round of Phase 9(a). At this stage, the sequential boundary marker *allora* (line 2), the prompt *forza* ('come on', line 4), and the students' names (lines 7–8), coupled with eye gaze direction and pointing gestures (focusing both on the students and on the dialogue they have to read) are sufficient to solicit the relevant response from the students (line 11) and therefore achieve the beginning of the new round.

3.4 Round 4

Excerpt 4 illustrates the fourth round of instruction giving, which is initiated right after the class has worked on the dialogues written by Groups 2 and 3. Excerpt 4a picks up the talk as T produces an in-breath (line 1) and simultaneously turns to face the left board (line 2, Fig. 17), where the dialogue created by Group 4 is written. She then starts walking towards the board (line 3, Fig. 18) as she produces the sequential boundary marker *Allora.* ('so', line 4), in partial overlap with Livia (line 5). In fact, Livia and Nello, the students in Group 2, are engaged in a schism (lines 5–6) and seem still to be orienting to the prior revision of their dialogue (unfortunately, what they say is inaudible).

[3] Unfortunately, we cannot see what the other student, Kendra, is doing.

Excerpt 4a – Sequential Boundary

```
1      TEACHER: +.hh
2               +((T turns to face L board)) - Fig.17
```

Fig.17

```
3               +((T starts walking towards L board)) - Fig.18
```

Fig.18

```
4               +Allo[ra.]
                +   S[o. ]
5      LIVIA:       [(  ][      ][  )]
6      NELLO:            [(    )]
```

In Excerpt 4b, in overlap with Livia (line 5), T prompts the next speakers by pointing at the students in Group 4 (line 10), Holly and Jillian, as she says ↑*vediamo un po'?* ('let's see'; literally 'let's see a bit', line 7) with upward questioning intonation.

Excerpt 4b – Summons and Task Beginning

```
4     TEACHER: [Allo[ra.]
               [   S[o. ]
5     LIVIA:        [(  ][      ][  )]
6     NELLO:             [(    )]
7     TEACHER:                   [↑ve]diamo   +un po'? ]
                                 [↑le]t's see +a bit?  ]
8     JILLIAN:                                +ha ha ha]
9                                             +((Jillian looks at Group 2))
10                                            +((T points at Group 4))
11    STUDENT? uh hu
12             (0.6)
13    HOLLY:   +°okay.°
14             +((Holly and Jillian look at L side of L board)) – Fig.19
                                                           Fig.19
15             (0.4)
16    JILLIAN: #e:::::::::::h# ↑CIAO. come stai?
               #u:::::::::::h# ↑HI. how are-you?
```

Holly, however, does not start reading, while Jillian is possibly engaged in the schism with Nello and Livia: she in fact looks in their direction (line 9) as she produces some laughter tokens (line 8), in overlap with the final part of T's turn (line 7). Another student briefly joins Jillian's laughter (line 11); then, after a 0.6 second pause (line 12), Holly receipts T's instructions with °*okay.*° (line 13, with low volume) as both she and Jillian turn to look at the left side of the board (line 14, Fig. 19), where their dialogue is written. After another short pause (line 15) and an elongated hesitation token delivered with creaky voice *(#e:::::::::::h#*, 'uh', line 16), Jillian finally starts implementing the task by reading the first line of their dialogue (↑*CIAO. come stai?*, 'hi. how are you?', line 16).

To summarize, the analysis of Excerpt 4 has shown that the organization of the last instruction-giving sequence is even more minimal than in the previous excerpt. In fact, embodied actions (such as gazing at the left board, walking and pointing), the sequential boundary marker *allora* ('so') and a generic prompt (*vediamo un po'?*, 'let's see?') are sufficient to mobilize the class's attention to the last dialogue on the board and to solicit a response from the last group of students. Note also that Excerpt 4 is similar to Excerpt 2 in that T does not select the students who have to read next by addressing them with their first names. Rather, in both Rounds 2 and 4 of instruction giving, T relies almost exclusively[4] on embodied actions to summon and select the next group of speakers.

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[4] Remember that, in Excerpt 2e, T also produces the verbal turn *in discoteca* ('at the disco', line 18) as a way to further clarify which dialogue needs to be written and to pursue compliance from the students.

In contrast, in both Excerpts 1 and 3, T names the students who are selected to read next. A possible explanation for these different techniques in selecting next speakers might lie in the fact that, in rounds 1 and 3, T shifts the students' attention to new foci: the two dialogues on the right board in Round 1 and the two dialogues on the left board in Round 3. She then specifies which of the two dialogues must be read first by naming the students who wrote it. In round 2, though, since one of the two dialogues written on the right board has already been read aloud, it is sufficient for T to simply point at the right board (line 6, Fig. 9, Excerpt 2a), look at one of the students in Group 2 (Nello; see line 7, Fig. 9, Excerpt 2a) and walk towards them (line 10, Fig. 10, Excerpt 2b) to prompt the beginning of the dialogue performance (see Nello's dancing in line 12, Fig. 12, Excerpt 2c). A similar situation occurs in Excerpt 4, where it is even clearer who the selected next speakers are, since Holly and Jillian are the only students who have not read their dialogue yet.

Excerpt 4 also shows that – even though T establishes who the next *group* of speakers is – individual speaker selection is managed within the group. We see this in the way Holly receipts T's prompt (°*okay.*°, line 13), but does not comply with it. More specifically, she waits until Jillian finally self-selects as next speaker and reads the first line of their dialogue (line 16). While the student management of speaker selection occurs in Excerpts 2–3 as well, its accomplishment is particularly evident in Excerpt 4.

4 Conclusions

This chapter has provided an EM/CA account of how a teacher accomplishes instruction-giving sequences during an IFL class at an American research university and has shown that the practices that are involved in this mundane activity are surprisingly complex. The chapter focuses on the final phase of a task implemented in the classroom, as the students are instructed to read aloud the dialogues that they have collaboratively written and revised in pairs during previous phases of the task. In the data presented here, the action of instruction giving involves a progressive minimization of the instructions over four rounds of activity (see Table 4). More specifically, while the first round of instruction giving (targeting the first pair of students) is rather lengthy and subject to repair, the last round (targeting the last pair of students) consists of a minimal summons-answer sequence. Such minimization results from the students' increased familiarity with the task.[5] In fact, by the time T is about to select the last group of students as next speakers, these students

[5] In cognitive-interactionist second language acquisition research, familiarity has been treated as a variable that affects language learning in various ways (see Gass and Varonis 1984; Plough and Gass 1993; Winke and Gass 2013). In contrast, here familiarity is analyzed in *post-cognitive* (that is, *behavioral*) terms; specifically, the paper shows how familiarity with the task affects the emerging organization of multiple instruction-giving sequences over time on a moment-by-moment basis. I thank Numa Markee for this observation.

Table 4 A summary of the organization of each round of activity

Round 1 (Excerpt 1)	Round 2 (Excerpt 2)	Round 3 (Excerpt 3)	Round 4 (Excerpt 4)
Closing prior activity: *abbiamo fatto?* ('are we done?') + looking at board	–	–	–
Marking sequential and pedagogical boundary: *allora. vediamo.* ('so. let's see')	Marking sequential and pedagogical boundary: *ALLORA.* ('so') + pointing to board	Marking sequential and pedagogical boundary: *Allora.* ('so') + turning to board and pointing	Marking sequential and pedagogical boundary: *Allora.* ('so') + turning to and walking to board
Summoning and selecting speakers: *arlene e:::: arlene* ('arlene and arlene')	Summoning and selecting speakers: *vediamo::::::::::* ('let's see') + walking towards selected students	Prompting and selecting speakers: *forza::. kendra:::: e::::: p- (.) u:::::h jessica* ('come on. kendra and jessica') + pointing	Summoning and selecting speakers: *vediamo un po'?* ('let's see') + pointing at selected group
Instructing students on what to do: *volete cominciare* ('do you want to start')	–	–	–
Completing student initiated repair with more specific instructions: *volete leggere le vostre correzioni* ('do you want to read your corrections')	–	–	–
Disagreeing with student targeting potential inadequacy of task implementation: *>but < ↑that's okay. non importa.* ('it doesn't matter') Prompting: *vediamo. forza.* ('let's see. come on')	–	–	–

have already listened to multiple rounds of these sequences and seen multiple implementations of the task; consequently, a mere summons is sufficient to prompt them to read their dialogue. In other words, the data show how instruction-giving sequences and task implementation in plenum are public loci where the participants manage and co-construct their understanding of the task. It is in this sense that the last group of students benefits from the preceding successive public displays of understanding.

The analysis developed here has also illustrated, in line with Seedhouse (2008), that instruction giving involves the ability to manage transitions between tasks (or between different phases of the same task). Similar to the findings in Seedhouse (2008), the present data have shown how T uses prosodic features (e.g., loud volume and high pitch) and linguistic tools (e.g., discourse markers such as *allora*, 'so') to somewhat forcefully mark the sequential and pedagogical boundary that leads into the new phase/round, in order to mobilize the students' attention to a new shared focus and in order to engage them in a new course of action. In fact, at the sequential boundary achieved by the teacher, the students might be engaged in other, competing activities (e.g., they might be still orienting to the previous phase of activity and be engaged in talk about that) and might be orienting to artifacts that may not be relevant to the incipient task. Therefore, the teacher has to mobilize the students' attention to new foci (Goodwin 2013). Since the teacher's effort might not be immediately successful, schisms might occur, with some students involved in a separate course of action and other students who are starting to comply with the instructions.

At the same time, in line with Markee (2015a), the paper has demonstrated that it is also crucial to consider the teacher's and the students' embodied actions and the cultural artifacts that are talked or acted into relevance. Specifically, a multimodal analysis of instruction giving is necessary in order to understand how the teacher visibly manages the shift in pedagogical focus (e.g., by pointing at specific artifacts or walking towards specific students) and to examine whether and how the students comply with the teacher's instructions (e.g., by looking at relevant artifacts such as the board or by enacting shifts in footing through the action of dancing).

As Markee (2015a) observed, during instruction giving teachers typically provide students with information about: the allotted time, the participation framework for the upcoming task (e.g., pairs vs small groups), the resources they will need, the kind of task they are required to accomplish, and the rationale for engaging in such a task. In the data presented here, T does not provide information about the allotted time and the task rationale. Regarding the participation framework, T simply summons and selects the next speakers who are due to engage in the new (round of) activity. Moreover, the resources needed to perform the task are simply invoked through the embodied actions of pointing at the board or walking towards it. At the same time, T formulates what the students actually have to do in rather vague terms; this sets up a sequential environment in which the students have to work out what implementing T's instructions actually entails. Consequently, T's instructions in Excerpt 1 are repaired and marked by disclaimers. The following rounds of instruction giving (see Excerpts 2, 3 and 4), though, are less amenable to repair, since the students have witnessed what the accomplishment of the task involves. Therefore, instructions become simpler and are structured in a similar way (i.e., marking the sequential boundary, summoning and prompting students), although each round of talk is also marked by locally contingent work.

Note also that next speaker selection is a complex matter, which involves both pre-allocation and local management of turns: in the data analyzed here, the selection of groups is done by T in a fairly predictable order based on the groups' physical location in the class (i.e., the students on the right are selected first, then the students on the left, in counterclockwise fashion; see Fig. 1), while next speaker selection within the just designated group is locally managed by the students (a clear example of this is Excerpt 4).

In conclusion, the specific contribution of the present chapter concerns the observable impact that the students' emerging familiarity with the task has on the teacher's formulation of the instructions and on the students' interpretation and implementation of such instructions. In broader terms, this paper contributes to EM/CA research on the interactional work that teachers and students observably do as they give and follow instructions, respectively. This kind of research yields rich insights into how the mundane, yet immensely complex, social action of doing pedagogical instructions is routinely achieved by these participants. At the same time, these research findings can yield significant pedagogical insights and applications (see the pedagogical implications provided below), in that they can provide both pre-service and in-service teachers with useful practical insights into how complex the prototypically seen but unnoticed practice of instruction giving and following is organized in real time.

5 Pedagogical Implications

As already advocated by Seedhouse (2008), Markee (2015a) and others (see for example: Kunitz and Skogmyr Marian 2017; Sert 2015, 2019, this volume; Waring 2015), the findings of CA research on classroom interaction can be fruitfully used in teacher education programs for pre-service and in-service teachers in order to sensitize them to their own interactional practices in the classroom and to the interactional affordances that such practices might open up for students' participation, learning and understanding. Specifically, research on instruction giving contributes to an empirical definition of what constitutes classroom interactional competence (see Walsh 2012). In what follows, I sketch the phases of a pedagogical unit that could be used in a teacher education program.

Phase 1 – Discussion (in pairs/small groups first, then in plenum)

- (i) What kind of memories do you have as a student having to follow your teacher's instructions or the instructions provided in the textbook?
- (ii) According to you, what are the features of "good" instructions?
- (iii) If you already have some teaching experience, how do you perceive the task of formulating instructions that your students have to follow? Is it difficult for you? Have you experienced any challenges (e.g., your students did not understand the instructions at all or interpreted them very differently from what you had originally intended)?

Phase 2 – Guided analysis of selected examples

(i) Look at the clip of Excerpt 1 and read the transcript.
(ii) In pairs/small groups, analyze what the participants (the teacher and the students) are doing turn-by-turn and try to get a general sense of what is happening in this short clip. Discuss your analysis in plenum.
(iii) In pairs/small groups, focus on the teacher's instruction-giving turns. How are the instructions formulated? That is, what kind of linguistic and embodied resources are used by the teacher to instruct her students? Discuss your answers in plenum.
(iv) In pairs/small groups, focus on the students' actions. Specifically, consider how Arlene responds to the teacher's instruction-giving turns. What kind of challenges is Arlene facing? Discuss your answers in plenum.
(v) Look at the other clips (Excerpt 2–4) and read the transcripts. Make as many observations as possible concerning: (a) the linguistic and embodied resources used by the teacher to instruct her students; (b) the students' responses; and (c) any observable similarities and differences between the instruction-giving turns in Excerpt 1 and the instruction-giving turns in Excerpt 2–4. Discuss your observations in plenum.
(vi) In pairs/small groups, discuss the challenges that the teacher in these excerpts is facing as she tries to get the students' attention. Consider also what you would do in the face of schisms (i.e., students visibly not attending to you and the upcoming new task for which you are providing instructions). Discuss your observations in plenum.

Phase 3 – Evidence-based reflection[6] on one's own teaching

(vii) Record one of the classes you teach with a video camera.
(viii) Choose one specific task that was implemented in the recorded class and create a short clip that includes the moment you start formulating the instructions and the beginning of the task implementation by the students (in other words, the clip should show the first moments of the students being on task).
(ix) Transcribe the clip. You need only transcribe the words produced by the teacher and the students. You may mark the presence of overlaps and pauses.
(x) With a peer or a mentor, look at the clip and read the transcript. Then focus on the way you formulated the instructions: are you satisfied with what you did? Could you have done something differently? If so, what would you change?
(xi) With a peer or a mentor, focus on the students' actions. Did they display any problems understanding the instructions and implementing the task?
(xii) Write a self-reflection concerning what you have learned in this teaching unit and formulate a series of "notes-to-self" to remind you of what you should pay attention to when you formulate instructions.
(xiii) Compare your notes-to-self with those of another teacher/teacher in training. Have you focused on the same issues? What kind of advice would you give to a novice teacher?

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[6] For the importance of dialogic, evidence-based reflection in teacher education see: Walsh and Mann (2015).

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Part II
CA Research in Content Based Language Classrooms

Introduction to Part II

Numa Markee, Silvia Kunitz, and Olcay Sert

Abstract In this text we summarize the chapters contained in Part II. That is, after a short introduction to the specific research area addressed by the chapters, we briefly summarize the content of: Evnitskaya (this volume), Kääntä (this volume) and Lee (this volume).

Keywords CLIL · Content-based instruction · CA · Classroom discourse

Part II presents research in content-based language classrooms. This approach to teaching language and content is called content-based instruction (CBI) in the North American context and Content and Language Integrated Learning (CLIL) in Europe. CBI/CLIL has three main goals: (1) teaching and learning language through (2) content, while (3) developing academic skills that are both general and content-specific (i.e., specific to the subject matter being taught). Although the conceptualization of CBI/CLIL as a method has been debated (see Cenoz et al. 2014; Dalton-Puffer et al. 2014) and investigations into CBI/CLIL classroom practices are not limited to CA methodology (see Nikula and Moore 2019; Pavón Vázquez and Ramos Ordóñez 2019), the interactional dynamics of teaching and learning in CBI/CLIL classrooms have been well documented by CA researchers. A growing

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_8

number of studies has focused on a variety of interactional and pedagogical phenomena, including epistemic search sequences in peer interactions (Jakonen and Morton 2015), clarification requests (Kääntä and Kasper 2018), definitional practices (Kääntä et al. 2016), vocabulary explanations (Morton 2015), multimodal resources in students' explanations (Kupetz 2011), and multimodal displays of willingness to participate (Evnitskaya and Berger 2017), among others. As demonstrated by the chapters in this volume, CA researchers of classroom interaction are continually investigating CBI/CLIL classrooms.

The first two chapters in this section examine examples of CLIL in two different countries: Spain and Finland. More specifically, in her chapter Evnitskaya (this volume) uses a multimodal CA methodology to show how facework (see Goffman 1967; Lerner 1996) and collaborative learning are achieved in real time in a primary school mathematics classroom in Barcelona. Investigating a revision lesson in which groups of students carry out a collaborative task aimed at revising geometrical concepts, Evnitskaya explicates how participants display a strong preference for affiliation and agreement while orienting to the group tasks at hand. Her multimodal analysis reveals the ways students co-construct alignment through the use of their first languages, manipulation of material objects, and positive assessments. The chapter has pedagogical implications, advising CLIL teachers to give students guidelines for group work that include aspects of social interaction (e.g., giving opinions, agreeing and disagreeing).

In the following chapter, Kääntä (this volume) situates her analysis of teachers' definitional practices in physics and history lessons in the theoretical context of CLIL research. More specifically, Kääntä draws on but also respecifies Dalton-Puffer's (2013, 2016) theoretical construct of cognitive discourse functions by using the methodological power of multimodal CA. The author demonstrates how participants orient to various semiotic resources (e.g. language, gestures, and objects) as they do definition sequences in real time (see also Kääntä, Kasper, and Piirainen-Marsh 2016; Kääntä and Kasper 2018). More specifically, Kääntä shows that, while there are obvious differences in how the two teachers do subject-specific definition talk (for example, in their use of technical versus everyday vocabulary and how they use gestures and objects found in the local environment), there are also important similarities. In fact, definitions in both classrooms focus on vocabulary and conceptual issues and emerge as locally contingent answers to students' problems in understanding during the course of extended, multi-unit turns. Translation and synonyms are also frequently used. The chapter therefore shows that definitional practices are complex discourse objects.

Finally, Lee (this volume) argues that, in order to fully understand how teachers' work-practices are achieved in classroom discourse, we need to develop sequential analyses of extended teaching action sequences that go beyond the canonical Initiation-Response-Evaluation/Feedback sequence (see Mehan 1979; Sinclair and Coulthard 1975) massively found in teacher-fronted classroom talk in many different countries. Lee draws on classroom interaction data that come from two EFL content courses and one ESL content course at universities in South Korea and the United States, respectively. He documents how, as teachers worked out in real time what students did or did not understand at any one time in the unfolding interaction, they adjusted the order in which they addressed students' problems. It is by

documenting how such topical shifts are achieved on the fly by teachers that researchers and practitioners can get an empirically based sense of how teachers' interactional work-practices function as orderly courses of actions.

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Does a Positive Atmosphere Matter? Insights and Pedagogical Implications for Peer Interaction in CLIL Classrooms

Natalia Evnitskaya

Abstract This chapter examines video-recorded peer interactions in one primary Content and Language Integrated Learning (CLIL) maths classroom in Barcelona (Spain) from the perspective of facework (Goffman E, Interaction ritual: essays on face-to-face behaviour. Penguin, Harmondsworth, 1967). It aims to identify and describe how participants establish and manage facework (i.e., pay attention to the possibility of giving offence to others) through interactional resources, including embodied practices, how face concerns are oriented to by co-participants and how collaborative tasks are accomplished in the unfolding interaction. A multimodal conversation-analytic examination of two small group interactions reveals that in Group 1 learners employed a range of linguistic and other semiotic resources, turn-taking practices and the sequential organization of interaction primarily in order to have their individual work revised and approved by other members of the group, which generated a disfluent interaction, a competitive atmosphere and the implicit exclusion of one of the learners. Meanwhile, Group 2 displayed a mutual and continuous orientation towards collective meaning-making, ongoing interaction and the task progress, which generated a positive team atmosphere. The chapter concludes with implications of CA research for CLIL pedagogy and calls for a further exploration of peer interactions in CLIL classrooms and the necessity to raise teachers' and students' awareness of the interactional aspects of what constitutes successful group work from an emic perspective.

Keywords CLIL · Primary education · Facework · Peer interaction · Multimodal conversation analysis

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_9

1 Introduction

In the pursuit of explaining the ritual organization of social interactions, Goffman (1967) suggested the concept of 'face', 'the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact. Face is 'an image of self-delineated in terms of approved social attributes' (p. 5). In Goffman's understanding, face is a socially constructed 'public property' which includes both individual aspects, such as one's social identity, personal qualities, and attributes to be validated by others, and social roles. Being at the very core of every social action, face concerns and their management by interactants or 'facework' then constitute an essential aspect of the interactional organization of social encounters. This inevitably transforms 'the social self into an interactional self' (Lerner 1996: 304).

For decades, however, a much narrower understanding of 'face' as linguistic politeness (Brown and Levinson 1987) has been and is still predominant in pragmatics. Brown and Levinson's Politeness Theory is based on a strong assumption that participants in social interaction – the speaker and the hearer – are rational agents who always adopt a working hypothesis that there is no 'faceless' or 'risk-free' communication (Scollon and Scollon 1995: 38). 'Face' is then seen as a matter of constant mutual concern and maintenance, which at each moment depends on other participants' willingness or not to satisfy mutual face wants and to avoid possible face-threats. Yet, this perspective is strongly limiting since it views social interaction only in the light of participants 'mounting guard over their territories and their faces' (Kerbrat-Orecchioni 1997: 13) rather than as interactants' deployment of an array of multimodal resources and strategies aimed at establishing and maintaining social relationships (e.g., Locher and Watts 2005; Sifianou 2012).

It is understandable hence why Conversation Analysis (CA) research on social interaction has always been so cautious in making any allusions to Brown and Levinson's conception of 'face' with its focus on participants' individualistic, cognitive states and needs, considering it strongly incompatible with CA. Yet, it might be argued that, to a certain degree, the interactional aspects of preference organization, repair and disagreements (e.g., Atkinson and Drew 1979; Pomerantz 1984; Schegloff et al. 1977) addressed in CA research have sometimes, although mostly indirectly, touched upon the questions of how face is displayed and managed in interaction. In pragmatics, CA-oriented studies on face and the related concept of (im)politeness in informal interaction (e.g., Georgakopoulou 2001) have shed light on how these are jointly accomplished on the moment-by-moment basis through the interactants' exploitation of turn-construction and turn-taking practices, sequential organization and preference structures.

However, very little research has been done so far on facework in instructional settings such as L2 and Content and Language Integrated Learning (CLIL)

classrooms, and particularly in terms of small group interaction. This chapter aims hence to push this area of research a step forward by examining the sequential and multimodal accomplishment of facework in small group collaborative tasks in one primary level CLIL maths classroom.

The chapter is structured in the following way. The next section first presents a theoretical overview of CA research on preference organization, repair and disagreements, always attempting to establish connections with face and facework, and then reviews CA studies on L2 and CLIL peer interaction, also in the light of facework. This is followed by a multimodal micro-analytic exploration of the management of facework in peer interactions in CLIL contexts. Finally, the chapter concludes with a discussion of the findings and their pedagogical implications.

2 CA Research on Preference Organization, Repair and Disagreements and Face and Facework in Social Interaction

Within CA research, the concept of preference organization of actions in talk (e.g., Pomerantz 1984; Sacks 1973/1987) does not refer to the psychological notions of individual dispositions or desires, but to a discursive 'structural phenomenon very close to the linguistic concept of markedness' (Levinson 1983: 333). That is, preference describes how interactants systematically use turn-constructional, turn-taking and sequence-organizational practices 'to maximize the likelihood of affiliative, socially solidary actions, and minimize the consequences of disaffiliative, socially divisive ones' (Heritage and Raymond 2005: 16). This is routinely accomplished through adjacency pairs in which a specific first pair-part (FPP) initiates an interactional exchange and creates expectations for a particular responsive action to be accomplished as a second pair-part (SPP). The expected relevant action constitutes a 'preferred' interactional action (e.g. acceptance of an offer) while any alternative relevant action – a 'dispreferred' action (e.g. refusal of an offer).

Early CA work on preference, mainly done in the context of adult middle-class interactions, has uncovered a systematic preference of certain SPPs, a notably higher frequency of preferred SPPs, and a strongly institutionalized turn-shaping and sequencing of each action type (e.g., Heritage 1984; Lazaraton 1997; Pomerantz 1984; Sacks 1973/1987). Thus, preferred actions (e.g., agreements or acceptance) are usually structurally simple, being performed immediately and directly. Dispreferred actions (e.g., disagreements or refusals), on the contrary, tend to be structurally more complex as they seem to require additional interactional work in order for speakers to display disaffiliation with the previous turn (also see Duran and Sert 2019 for embodied aspects of such turns) while still

attending to their own and others' face. So, dispreferred actions are recurrently delayed from early positioning and prefaced through mitigation devices such as pauses, hesitation markers, insertions, requests for clarification, questioning repeats, partial repeats of the FPP, 'yes-but' type partial agreements, and accounts justifying a performed action (e.g., Atkinson and Drew 1979; Heritage 1984; Lazaraton 1997).

Such findings imply that participants view affiliation in SPPs as default which clearly evidences their orientation to display solidarity, interactional cooperation and interpersonal consensus as well as to decrease conflict as a highly confrontational action. 'Preference for agreement and contiguity' (Sacks 1973/1987: 58) is therefore intimately connected to the promotion of sociability, support and solidarity in social encounters (e.g., Heritage and Raymond 2005; Pomerantz 1984; Robinson and Bolden 2010). Even in cases of face-threat, participants have been shown to maintain such preference structure by systematically converting emerging dispreferred actions into preferred alternatives and collaboratively achieving agreement through the anticipatory turn-completion (Lerner 1996). Thus, '[b]y situating self and other as consequential constituent features of the organization of particular types of action sequences, one thereby establishes a site for face, face-threat, and face-work grounded in the particulars of talk <…> in interaction' (p. 319).

Valuable insights into how participants engage with the management of face-work might also be gained from CA research on the organization of repair sequences. As Schegloff et al. (1977) argue, in adult conversation there is a clear preference for self-initiation and self-repair over other-initiation and other-repair. This means that repair, i.e. the treatment of a conversational trouble, is more frequently initiated and performed by the speaker who produces the turn with trouble source ('self') rather than by a different self-selected next-speaker ('other') (ten Have 2007). This might be so given the fact that repairing oneself might be viewed as less face-threatening – and consequently treated as such interactionally – than repairing others. This has been explained in the light of the turn-construction and sequential organization of repair: (a) within-turn self-initiation has higher opportunities to occur than other-initiation, (b) other-repair is routinely treated as face-threatening and dispreferred, being thereby considered disagreement, and (c) both self-initiation and other-initiation systematically trigger self-repair (e.g., Lerner 1996; Schegloff et al. 1977).

However, CA research on disagreements and arguing in diverse interactional contexts has shown that preference is in fact a highly context-sensitive phenomenon. In informal and intimate conversations, for example, these, a priori disaffiliative, social practices seem to strengthen interactants' group bonds (e.g., friendship or kinship) and display mutual solidarity and cooperation, often being treated as signs of intimacy and camaraderie (e.g., Georgakopoulou 2001; Goodwin 1983, 1998; Goodwin et al. 2002). Meanwhile, in certain types of institutional talk, such as e.g. in courtroom sessions or TV interviews, strongly face-threatening SPPs (e.g.,

unmitigated disagreements and denials) are in fact expected and hence oriented to by co-participants as preferred relevant actions (Atkinson and Drew 1979; Greatbatch 1992).

The wide body of research on children's game disputes done over the years by M.H. Goodwin and her colleagues evidenced their strong preference for disaffiliation and self-positioning through direct opposition (e.g., Goodwin 1983, 1998). Children systematically forward their aggravated correction and disagreement to turn-initial position using 'polarity' markers (Halliday 1994), interjections ('response cries', Goodwin 1983) and emotionally charged pitch leaps. They have also been found to frequently provide explanations for positions taken and embodied demonstrations through gestures, gazes, body postures or handling of game-related material objects. Aggravated conflict talk is thus a social practice through which children 'build and display themselves as agents in the constitution of their social order' (Goodwin et al. 2002: 1621).

It might be argued hence that, although very often indirectly, CA findings on preference organization, repair and disagreements do contribute to deepen our understanding of how facework is actually accomplished in social interactions, both informal and institutional. That is, previous CA research sheds some light on how participants establish and manage facework through interactional resources, including embodied practices, how face concerns are oriented to by co-participants, and how unfolding interaction establishes, maintains and changes participants' rights and obligations, increases or reduces social distance and power among them, and strengthens or weakens their affective bonds.

3 The Multimodal Accomplishment of Group Work (and Facework) in L2 and CLIL Classroom Settings

In L2 and CLIL classroom contexts, CA work on facework in peer interaction is still notably scarce, mainly due to the conceptual tensions already mentioned in the Introduction. Group work has often been examined in terms of preference organization and disagreements and how these configurate group work dynamics in terms of both the development of collaborative tasks and individual learners' learning trajectories, among other things. Thus, researchers have found that disagreements are often used to provide support to group discussions and debates (Fujimoto 2010) while the unmitigated 'no' can be recurrently employed for other-correction and third-position repair to display disalignment with peers' actions (Hellermann 2009). Instead of being interactionally treated by the co-participants as face-aggravating actions, these highly contextually sensitive instances of disaffiliation seem to be oriented to as normative and appropriate for the ongoing language learning task within the given Community of Practice (CoP, Lave and Wenger 1991). According to Fujimoto (2010), disagreements often helped the group members to co-construct

collaborative opinions and arguments, thereby going beyond their individual abilities.

The fact that face concerns and facework play an important role in group debates can also been seen in those disagreement sequences in which participants first ‘build a peer alliance’ with those group members who hold the same position, then ‘propose an alternative position’ to the already established stances but at some point in the discussion might however give up their stance and accept that of the opposing party (Sharma 2012). Sharma argues that by engaging in peer disagreement and its resolution students are afforded opportunities to display and negotiate their own and others’ stances in the L2 in order to arrive at a consensus and successfully accomplish the collaborative task at hand.

Situations during collaborative tasks when more capable students assume tutoring or ‘expert’ roles and provide language scaffolding to their peers in the form of other-initiated other-repair might as well be regarded as directly related to facework. Research on group work in L2 and CLIL classrooms (e.g., Devos 2015; Hellermann 2009; Seedhouse 2004) evidences that this type of repair is recurrently oriented to as acceptable and face-neutral repair format since it seems to lack the face-threatening potential attributed to it in naturally-occurring L1 interactions (Schegloff et al. 1977). The importance of language play has also been found to be beneficial for a range of phenomena such as group dynamics, masking L2 anxiety, saving face, and creating L1 and L2 identities (Devos 2015). Facework is also displayed in group members’ verbal and embodied actions oriented to creating ‘a safe environment where students are not afraid of being penalized or mocked by peers, and where students develop a positive self-image through their interactions’ (Escobar Urmeneta and Walsh 2017: 186).

Summing up, it can be suggested that although not addressing the topics of face concerns and facework directly, CA research on group work in L2 and CLIL settings can greatly benefit researchers interested in how these phenomena are interactionally accomplished in CLIL classrooms and their effect on the quality of group work in terms of the development of the collaborative task at hand.

4 Data and Method

The data examined in this chapter belong to a larger data corpus of the Language and Education (LED) research group collected by staff members of primary and secondary schools in Metropolitan Barcelona as part of a school-university knowledge transfer partnership project (Tsui et al. 2009). The project aims at improving the quality of multilingual education and social inclusion through CLIL programmes in the context of Catalan-medium schooling in a largely Spanish-speaking student population. The data analysed here were video-recorded in a grade 5 (age 10) primary classroom in which low level learners of English study CLIL maths. This

publicly funded primary school is located in an obsolete industrial neighbourhood with a high number of working class and disadvantaged families. Informed written consent regarding the audio and video-recording of the lessons and the use of the collected data for the research and publication purposes were obtained from all participants.

The data come from a revision lesson in which students, organized in groups of five or six and using teacher-designed hands-on materials, carried out a fill-in-the gap collaborative task aimed at revising geometrical concepts (e.g., radius, diameter, circumference, or bisector) which the class studied through a series of teacher-fronted activities in previous lessons. Each group was given a set of coloured flashcards with incomplete definitions of the concepts and coloured strips with single words and text segments which the students had to match to slots on the cards to finish the definitions (see Fig. 1) (also see Kääntä this volume, for an analysis of how oral definitions are interactionally achieved in CLIL classrooms). This main, group work activity was preceded by a teacher-fronted instructional sequence and followed by a plenary in which the results were shared and discussed. According to the teacher, students were used to group work.

Selected data excerpts were anonymised and transcribed following standard CA conventions for talk (Jefferson 2004) and multimodal transcription conventions for participants' embodied actions (Mondada 2007). The excerpts contain peer interactions from two groups: group 1 (five boys) and group 2 (five girls and one boy). To present the data analysis in a reader-friendly format, a rather lengthy excerpt from group 2 was divided into two shorter ones (Excerpts 3 and 4).

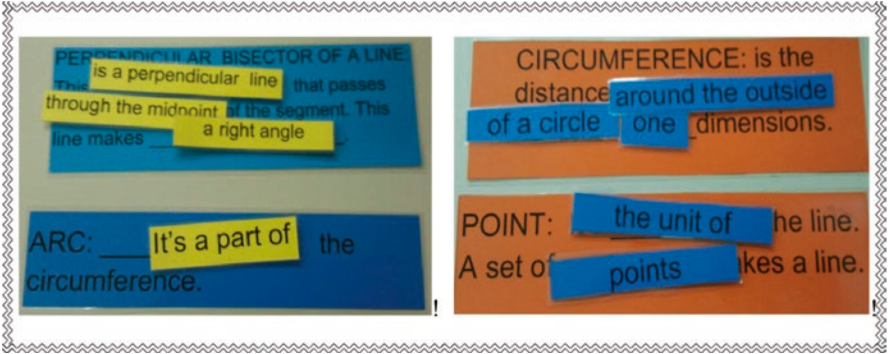

Fig. 1 Examples of teacher-designed materials containing cards with slots and strips with text

Using a multimodal CA approach, this case study performs a fine-grained examination of peer interactions during a pedagogical collaborative task in one primary school CLIL maths classroom aiming to answer the following research questions:

1. How do group members establish and manage facework through interactional resources, including embodied practices?
2. How is facework oriented to by co-participants?
3. How does it affect the quality of group work in terms of the development of the collaborative task at hand?

5 Management of Facework and Group Work in CLIL Peer Interaction

Group 1

Group 1 is made of five male students: Adrià (ADR), Arnau (ARN), David (DAV), Jordi (JOR) and Miguel (MIG) (Fig. 2).

Excerpt 1 starts with David reporting that he has finished the definition on his card:

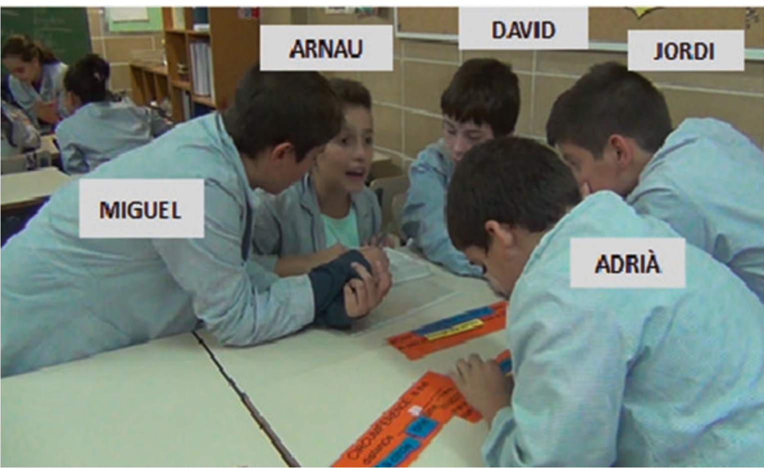

Fig. 2 Group 1 participants

Excerpt 1

```
01    DAV:  %Adrià (.) %he hecho esto%
             Adrià       I've done this
      dav   %GAZE AT ADR               %
      dav               %SHOWS HIS CARD TO ADR%
02          (0.9) ADR TURNS TO DAV, GAZES AT HIS CARD,
            TAKES IT, SILENTLY READS IT
03    DAV:  %☺esta bien?☺%
                is it fine?
      dav   %GAZE AT ADR   %
04    MIG:  a ver (.) y ésta?
            let's see  and this one?
05          *perpendicular bisector of a ↓line (.)
      mig   *READS HIS CARD ALOUD-->
06          [thi-*
      mig     -->*
07    ADR:  [^%#*diametro ^es línea recta (del segmento)
                 diameter  is  straight line (of the segment)
      adr    ^SHOWS DAV'S CARD TO PEERS
      dav    %GAZE AT HIS CARD, SMILES-->
      arn    #GAZE AT DAV'S CARD, LAUGHS-->
      mig    *GAZE AT DAV'S CARD-->
      adr                  ^MOVES INDEX FINGER ALONG LINES-->
08          que *pasa alrededor de fuera (0.3)*^
            that passes around the outside
      mig    -->*LEANS FORWARD, GAZE AT ADR     *
      adr                                   -->^
```

```
09          ^*está bien (.) eh?^%#
              it's fine        huh?
      adr   ^GAZE AT ARN          ^
      mig   *GAZE AT DAV'S CARD-->
      dav                    -->%
      arn                    -->#

10    ARN:  %(xxx)
      dav   %GAZE AT ARN, SMILES-->
11    DAV:  %☺lo he hecho a %voleo☺%
            I've done it without much thinking
      dav   %SLIGHTLY RAISES AND LOWERS SHOULDERS%
      dav                  -->%GAZE AT ADR%
12    ADR:  ^pero está bien (.) *David*^
             but   it's  fine      David
      adr   ^PUTS CARD IN PILE WITH OTHER FINISHED CARDS^
      mig                       -->*LEANS BACK*
```

David addresses his groupmate, Adrià, both with a verbal nomination and a gaze (line 1), thereby directly stating his recipient in this multi-party interaction, and then briefly reports in L1/Spanish that he has finished the definition on his card. He contextualises his report by using a deictic to refer to the object, the card, and by showing it to his peer. His multimodal FPP is responded to with a preferred alternative SPP: during a 0.9 pause Adrià acknowledges his turn through a series of embodied actions (line 2). Thus, first, he accepts being selected as the next-speaker by slightly changing his body positioning to David. Second, he recognises his report by reorienting gaze and body positioning to David's card. And, finally, he takes the relevant object and initiates its silent reading.

Adrià's actions make it sequentially appropriate for David to pursue further and produce another FPP, this time a request for assessment of his task-related accomplishment (line 3), which he supports by gazing at Adrià and smiling. In this way he positions himself as a 'novice' and his peer as an 'expert' within the CoP of this group of students. His actions, however, may as well be interpreted within a bigger community of classroom practices. First, David seems to establish a 'public image

of (him)self' (Goffman 1967) as a 'good learner' who is actively engaged in the ongoing pedagogical activity. And second, his request in line 3 opens what resembles a request-for-feedback sequence in teacher-student interaction which allows for the emergence of 'a relationship in which an expert assumes a teacher-like role with one or more classmates' (Devos 2015: 99).

Adrià indeed assumes the suggested role. Yet, before providing a SPP, he inserts an expansion sequence through which he confirms the correctness of the definition on David's card (lines 7–8). Having been addressed by David twice in L1/Spanish (lines 1 and 3), Adrià translates the first part of the definition, including the strip added by David (see Fig. 3), into the same language while showing the card to other groupmates and pointing to each word in it (lines 7–8). His actions are closely monitored by David and another student, Arnau, evidenced in their gaze orientation to the relevant object and smiles. Given that the rest of the definition is already provided on the card, Adrià resumes his translation and finally performs the expected SPP: the positive assessment of David's work, also in the L1 (line 9).[1] Interestingly enough, he addresses his assessment not to the expected recipient, David, but to Arnau and closes it with a tag-like interjection and a rising intonation. This allows for a tentative suggestion that what Adrià is actually doing is withdrawing from the face-compromising 'expert' role, thereby saving his face, and passing the role on to Arnau. This interpretation is supported by the fact that David also acknowledges this speaker change as he re-orients his gaze from his card to Arnau (line 10).

Although, due to the absence of external microphones during the class recordings, Arnau's turn (line 10) has not been captured by the camera's microphone, it seems to have been heard by David, who is sitting next to Arnau. That this is so can be inferred from David's smile and his turn as the next speaker (line 11). His multimodal conduct moreover allows interpreting Arnau's turn as some sort of positive account. In his turn David acknowledges Arnau's words by providing what can be understood as a justification for his good outcome (line 11) in which he admits having completed the definition "without much thinking". What he seems to be doing

DIAMETER: is a straight line segment that passes [SLOT 1: around the outside] the circle and whose endpoints are on the circle.

Fig. 3 David's card with a completed definition. Underlined part is the added strip

[1] The reader should keep in mind that the analytic focus of this chapter is how facework is accomplished in peer interactions and its effect on the quality of group work, thereby the appropriateness and correctness of student-made definitions in terms of the L2 and/or academic content is only examined when it is explicitly oriented to by co-participants.

is protecting his face by claiming that in case the definition on his card is not correct, it should not come as a surprise since he spent little time or effort on it. He strengthens his face-saving statement with a slight 'questioning' body movement, a smile and a gaze shift to his initial recipient, Adrià. The strategy works since now Adrià explicitly orients to David while producing an aggravated disagreement in order to reconfirm his positive assessment regardless of the quality of the explanation provided (line 12). His simultaneous storing of David's card with other finished cards strengthens his face-enhancing verbal action and seems to perform a sequence-closing move.

Throughout this interactional sequence between David, Adrià and Arnau, another student, Miguel, also attempts to take the floor to present his outcomes. First, he produces what can be considered a 'pre-announcement' (Schegloff 2007), for which he employs a sequence-opening discourse marker and a deictic to identify the object of his announcement sequence, namely the card he has just finished to complete (line 4). Then, in the absence of any kind of response – being it verbal or embodied – from his groupmates, and without having selected any specific recipient, Miguel directly launches his turn but only manages to read a rather lengthy name of the concept to be defined. His second utterance (line 6) is abruptly cut off by Adrià's first verbal response to David's announcement (line 7), already analysed above. Miguel opts to withdraw verbally and instead to align with his peers' 'public focus of attention' (Goodwin 2000). So, he first shifts his gaze from the card in front of him to David's in Adrià's hand (line 7) and then, half way through his peer's second turn (line 8), he moves even closer to the material object and gazes at the current speaker, perhaps to be able to see and hear better, in this way displaying his attentive listenership. Further, during Adrià's assessment, he shifts his gaze back to David's card (line 9). However, Miguel maintains his embodied orientation to the relevant object over several participants' turns and only releases it once the sequence is clearly closed (line 12).

We can say thus that, within the sequential unfolding of interaction, his embodied conduct throughout lines 7–12 might be considered highly affiliative as displaying his solidarity and convergence with the actions of his peers, even though in the role of an 'unaddressed' recipient (Goffman 1981) as opposed to David, Adrià or Arnau who at some point are explicitly addressed either through talk or gaze. As regards Miguel's verbal contributions, produced within the contour of the group 'multilogue' (Schwab 2011) and particularly at the moment when David and Adrià are jointly oriented to the assessment of David's achievement, these are not acknowledged by the co-participants and Miguel remains an 'unratified' speaker (Goffman 1981) until the end of the sequence.

Approximately 2 min later and after rearranging several strips on his card, in Excerpt 2, Miguel considers his card finished and makes another attempt to report his results:

Excerpt 2

```
01          (0.7) MIG HOLDS HIS CARD, SILENTLY READS IT
02    MIG:  ↓a:: (.) *ya'stá (0.3)
             oh::       it's done
      mig              *GAZE AT HIS CARD-->
03    MIG:  ya'stá ^#ya'stá ya'stá (.) ‡ya'stá^
            it's done  it's done it's done  it's done
      adr          ^GAZE AT MIG'S CARD
      arn          #GAZE AT MIG'S CARD   #SLIGHTLY LEANS TWRD MIG
04          ^(0.5)^*#
      adr   ^TAKES MIG'S CARD^
      mig        -->*GAZE AT ADR, LEANS TWRD HIM-->
      arn          #LEANS TWRD MIG'S CARD IN ADR'S HAND-->
05    ADR:  ^això és una línia perpendicular que passa (.)
              it  is  a   perpendicular line    that passes
      adr   ^READS MIG'S CARD ALOUD AND TRANSLATES-->
06          +per dos angles iguals de- (.) del segment (.)
            through two equal angles of-   of the segment
      jor   +LEANS TWRD ADR, GAZE AT MIG'S CARD-->
07          ↓val (.)
            okay
08          això fa línies (.) through the vertex^*#+
            this makes lines
      adr                                       -->^GAZE AT ARN-->
      mig                                       -->*
      arn                                       -->#
      jor                                       -->+
09    ARN:  through creo que era::::-#
                    I think that it was::::-
      arn                             #GAZE AT ADR, ROLLS EYES UP
```

```
10    ADR:   (xxxxxxx)^
      adr             -->^
11    MIG:  está bien (.) no?
             it's fine,    isn't it?
12    JOR:  eh +David ha hecho (xxx) ^#%* (de la circunferencia)
            hey. David has done (xxx)        (of the circumference)
      jor      +TAKES HALF-FINISHED CARD
      arn                              #GAZE AT JOR'S CARD
      dav                              %GAZE AT JOR'S CARD
      mig                              *GAZE AT JOR'S CARD
13          (0.5) ADR LEAVES MIG'S CARD ON DESK, TURNS TO JOR,
            GAZE AT HIS CARD
14    MIG:  *jo (.) está bien*
             man    it's fine
      mig   *TAKES BACK HIS CARD*
```

While re-reading his card, Miguel realises that the definition is finally complete (lines 1–3). He displays it with a 'claim of understanding' by using a change-of-state token (Heritage 1984) and an emphatic confirmation in L1/Spanish that the card (or definition) is done while keeping his gaze on it. After a short pause he produces a 'multiple saying' (Stivers 2004) of the same contracted confirmation token.

His self-oriented, emotionally charged utterance becomes a successful FPP when two of the group members, Adrià and Arnau, perform a relevant SPP by embodily orienting to the material object in question (line 3), first through gaze and later, in the case of Arnau, also through a slight change in body position. During another brief pause, Adrià stretches his hand and takes the card Miguel is still holding in his hand (line 4). His embodied action is acknowledged, also in embodied fashion, both by Miguel and Arnau who orient to their peer and the object, thereby creating a 'joint focus of attention' (Kidwell and Zimmerman 2007). Adrià continues his line of action by engaging verbally with the object as he starts translating Miguel's card into L1/Catalan to his groupmates (lines 5–6, also see Fig. 4). Two interesting observations might be made here. First, considering that Adrià has employed this strategy earlier, in Excerpt 1, when dealing with David's card, resorting to the L1 might be suggested as his routine interactional practice when accomplishing the public checking of his peers' outcomes. And second, while in Excerpt 1 Adrià displays his orientation to the L1 preference of the peer who requested his assessment

PERPENDICULAR BISECTOR OF A LINE:

this [SLOT 1: is a perpendicular line] that passes

[SLOT 2: into two equal angles] of the segment. This

line makes [SLOT 3: through the vertex].

Fig. 4 Miguel's card with a completed definition. Underlined parts are the strips added by Miguel

and therefore produces translation into L1/Spanish, here, in the absence of an explicit request from Miguel, he seems to employ the default school language, Catalan.

Adrià momentarily resumes his translating activity to validate the correctness of the definition so far, including the first two strips added by Miguel, with a positive feedback token (line 7) and then resumes the translation of the card's content (line 8). He however provides no translation for the third and last strip on Miguel's card (see Fig. 4) but, instead, simply reads it. Given that upon finishing reading he gazes at Arnau, it might be construed as an implicit request for information. By soliciting help from his peer, Adrià positions himself as an 'unknowing' participant and the addressed recipient as a possible knower, thereby initiating what can be regarded as an 'epistemic search sequence' (ESS, Jakonen and Morton 2015) in order to jointly solve the emerging (language and content-related) knowledge gap (see also Lee this volume; Musk this volume, regarding epistemics).

That the emerging new interactional sequence is indeed an ESS is evidenced in the way how the recipient addressed through embodied resources (Arnau) designs his turn. Namely, Arnau responds with what can be seen as an attempt to solve the problem related to Adrià's word search. His turn is produced immediately and addressed to the requester (line 9, see also Arnau's gaze direction), thus constituting a preferred SPP. However, instead of providing the expected L1 translation of the lexical items which were implicitly problematized by Adrìa (line 8), Arnau uses 'format-tying' (Sacks 1992) in recycling one of the items and then performs a notably mitigated and unfinished utterance by resorting to a marker of epistemic modality and a lengthy syllable stretching in L1/Spanish. His turn contains no actual expected SPP, being thus a 'non-answer', and therefore does not contribute to the progress of information-seeking (Heritage and Raymond 2005; Jakonen and Morton 2015).

This may indicate that, although having formally accepted the 'knowing' role assigned to him by the peer, Arnau in fact displays his insufficient knowledge of the requested information and hence indexes his weakened commitment to the knowledge gap resolution. His gaze at Adrià and face expression (line 9) after a notably

stretched verb supposed to preface the L1 term and his dropping off the turn might be a face-saving strategy aimed at creating a humorous effect and thus lowering the face-threatening situation of not providing a ‘knowing’ answer. The addressed recipient displays his understanding of the sequential development of interaction by intervening at the clearly marked turn-transition relevance place (TRP, Sacks et al. 1974) and producing the expected action (line 10). Due to the absence of the external microphone, his turn is inaudible which makes it difficult to state whether the ESS has been resolved or not.

In pursuit of his own agenda, the next turn is taken by Miguel. He now explicitly requests assessment of his task-related accomplishment (line 11), which is probably addressed to Adrià who is still holding his card. A final L1 tag-like element in Miguel’s turn design might be signalling his attempt to engage in face-enhancing work. However, Miguel’s FPP receives no SPP since the intervention of another student, Jordi, initiates a topic shift (line 12). Jordi uses an attention-calling marker to preface his announcement which he produces while simultaneously picking up another, only partially completed card from the desk. The shift in the co-participants’ gaze direction (line 12) and Adrià’s release of Miguel’s card and body re-orientation to Jordi (line 13) clearly evidence the dissolution of the previous joint focus of attention and the emergence of a new one. That this is the case is confirmed by Miguel’s re-orientation to his own card (line 14): he takes it back from where Adrià has left it and produces, in L1/Spanish and in a face-enhancing way, a positive assessment of his work which he had requested earlier and had never obtained.

Group 2

Group 2 consists of five female students (Alba, ALB, Andrea, AND, Gisela, GIS, Laura, LAU, and Neus, NEU) and one male student (Marc, MAR) (Fig. 5).

Excerpt 3 starts with Laura suggesting group members work on Neus’s card:

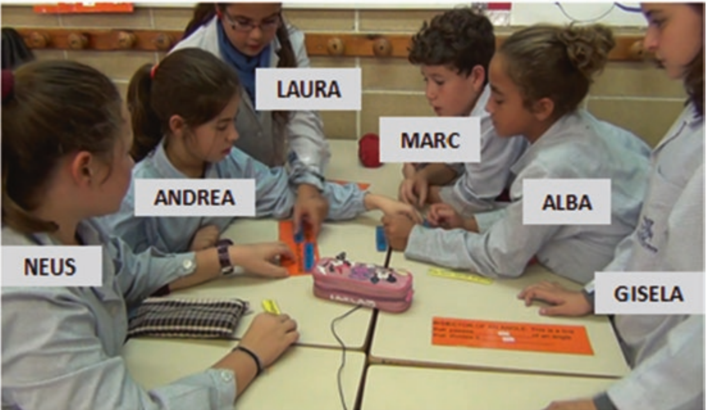

Fig. 5 Group 2 participants

Excerpt 3

```
01   LAU:   la de la &Neus (.)&
            the one from Neus (.)
     lau              &POINTS AT NEU'S CARD&
02          ×Neus×
     neu    ×PLACES HER EMPTY CARD IN THE CENTRE OF DESK×
03          &×radius-&×
     lau    &READS NEU'S CARD&
     neu    ×TAKES STRIP×
04   NEU:   [×distance-]×
     neu     ×READS CARD ×
05   AND:   [¤distance-]¤
     and     ¤READS NEU'S CARD¤
06   NEU:   ×of- (.)×
     neu    ×STICKS STRIP TO SLOT 1 IN NEU'S CARD×
07   ALB:   &€sí&€
              yes
     lau    &BENDS OVER NEU'S CARD&
     gis    €BENDS OVER NEU'S CARD€
08   LAU:   &of [any points- (.) o::f-   ]&
     lau    &READS STRIP IN SLOT 1       &
09   NEU:       ×[of any points- (.) o::f-]×
     neu        ×READS STRIP IN SLOT 1     ×
10   ALB:       §[of any points- (.) o::f-]§
     alb        §READS STRIP IN SLOT 1     §
```

```
11   AND:   ¤of a §circle-¤§
     and    ¤LEANS FORWARD, STRETCHES LH TO TAKE STRIP¤
     alb          §TAKES ANOTHER STRIP§
12   ALB:   of the unit §o::f (.) the: (.) circle§
     alb                §STICKS STRIP TO SLOT 2§
13   NEU:   no[×::::×
            no:::
     neu      ×TRIES TO UNSTICK ALB'S STRIP×
14   LAU:     [no (.) &no §no no&§
               no       no  no  no
     lau                &MOVES FINGER SIDEWISE, SLIGHTLY SHAKES HEAD&
     alb                    §UNSTICKS HER STRIP§
```

Fig. 6 Neus's card with empty slots

RADIUS: distance [SLOT 1: ______________]
[SLOT 2: ______________] the circumference.

With both a pointing gesture and talk, Laura refers herself and the rest of the group to the card of her peer, Neus (line 1). Her further direct verbal nomination of the groupmate (line 2) occurs simultaneously as Neus displays her understanding of the unfolding interaction and the required SPP. Namely, Neus places her card with empty slots in the centre of the desk, thereby making this material object available for everybody in the group to see and manipulate (line 2, see also Fig. 6).

Despite having nominated Neus as the next-speaker, Laura maintains her current speakership as she reads aloud the first word on Neus's card, the concept to be defined (line 3). Meanwhile, Neus displays her embodied alignment with her peer's actions by picking up a strip with a candidate text segment from the desk, thereby anticipating the upcoming empty slot on the card (see Fig. 6). Only in line 4 does she take on the speaker role assigned to her by Laura when she reads the second provided word on the card. Her turn, however, overlaps with Andrea's who performs

the very same action (line 5) which reveals the students' joint attention to the material object and the task at hand. However, given the fact that Laura allocates the next turn to Neus in line 2 but still holds the floor in line 3, these actions might also have created a certain confusion among other co-participants about turn allocation and led to Neus and Andrea's overlapped turns. Continuing with her agenda, Neus attaches the strip in her hand to the first slot on the card while reading the first element on the strip (line 6). Her actions are closely attended by the co-participants who index their alignment by orienting to the object in question multimodally (line 7). Thus, Laura and Gisela display alignment through their body positioning while Alba produces a short positive assessment of Neus's actions with an L1 agreement token.

In what follows different group members further display their active engagement in the co-oriented interactional space. Thus, Laura, Neus, and Alba read the strip suggested by Neus in chorus (lines 8–10). Andrea joins her peers by offering a candidate next text segment while simultaneously orienting to a strip on the desk containing the corresponding segment (line 11). Andrea's turn receives no acknowledgement from the other participants in this multi-party endeavour, even though her candidate fits the text segment suggested for the first slot, both in terms of the structural grammatical agreement and the subject-specific content.

Alba, having taken the nearest strip to her on the desk during Andrea's turn, now contributes to the ongoing interaction by selectively reusing resources provided in the previous speaker's intervention (see 'structure-preserving transformation action' by Goodwin 2013) (line 12). She not only adds a new bit of information but also substitutes the indefinite article with the definite one in the reused part. She also contributes in an embodied fashion to the joint construction of the definition by attaching her candidate strip to the empty slot the group is currently trying to fill in. Her contribution however is immediately assessed by Neus and Laura as incorrect. Both students display their negative alignment to the prior course of action and produce a direct other-repair. Thus, Neus contests her peer's utterance with an unmitigated and stretched 'no', produced with a clear L1 contour (line 13) and makes an attempt to take off Alba's strip from the card. Her face-threatening conduct is further aggravated by Laura's structurally even stronger disagreement shaped as a multiple saying of the same L1 negative 'polarity' token and her embodied disapproval of Alba's actions (line 14). Such a bold disaffiliation could be attributed to a possible content-related incongruence of Alba's candidate and to the imposition of her choice upon the rest of the group through her embodied action. The degree of face aggravation is evidenced in how quickly Alba aligns with it – half way through Laura's turn she self-repairs her contribution in an embodied fashion by unsticking the suggested strip from the card.

In Excerpt 4, which immediately follows Excerpt 3, the group progresses in the co-construction of the definition on Neus's card:

Excerpt 4

```
01  NEU:  ×és la distància que hi ha d'un pu:nt-×
          it is  the   distance   that  there is from one point
    neu   ×POINTS TO EACH WORD IN HER CARD          ×
02  AND:  [al cen-]=
          to the cen-
03  ALB:  [a un-   ]
          to one-
04  MAR:  =al centre-
          to the centre
05  AND:  ¤al centre-¤
          to the centre
    and   ¤STRETCHES LH TO TAKE STRIP¤
06  MAR:  €no::€
           no
    gis   €LEANS FORWARD, STRETCHES LH TO TAKE DIFFERENT STRIP€
07  LAU:  from &the centre::&
    lau        &LEANS FORWARD, STRETCHES LH TO TAKE ANOTHER STRIP&
08  ALB:  §the centre§
    alb   §TAKES STRIP LAU WAS LEANING TWRD, STICKS IT TO SLOT 2§
09  LAU:  &¤from the centre (.) the circumfe&rence&¤
    lau   &POINTS AT EACH WORD IN ATTACHED STRIP      &
    and   ¤NODS AT EACH LAU'S WORD                    ¤
10  ALB:  §BIN¥€GO::§¥€
    alb   §LEANS BACK, LIFTS INDEX FINGER, MAKES CIRCLES IN AIR§
11  LAU:  [&SI:: (.) YES::&
            YES::
    lau    &TAKES NEU'S CARD, PUTS IT IN PILE WITH FINISHED CARDS&
12  AND:  [¤yes¤
    and    ¤nods¤
```

Having rejected Alba's candidate for the second slot in the definition the group is currently engaged with, Neus now resorts to the same strategy which was systematically deployed by Adrià in group 1, that is translation, perhaps in order to check whether the definition is being constructed appropriately and makes sense. She initiates the L1/Catalan version of what the group has done so far which she supports with a pointing gesture to the corresponding items on the card (line 1). Here again her peers display attentiveness to her actions by precisely timing their own contributions with that of the current speaker. Thus, on the emergence of the first, syntactically possible TRP, Andrea and Alba simultaneously launch their turns with alternative candidate translations of the next text segment, although none finishes her utterance (lines 2–3).

In such a highly competitive multi-speaker interactional environment, Marc latches his utterance to Andrea's cut-off turn and finishes her lexical item (line 4). His turn is echoed back by Andrea who now successfully produces her candidate translation completely while orienting in an embodied way to one of the strips on the desk (line 5). Marc's unmitigated 'no' (line 6) displays his negative alignment to the ongoing course of action. It is impossible yet to affirm whether it is self-oriented disagreement, aimed at his own turn, or rather other-oriented disagreement, thus at Andrea's turn; this ambiguity dwells on the identical wording in both utterances.

Laura's contribution (line 7) reveals her alignment with Marc's disaffiliative stance: she suggests an alternative candidate which differs from the previous ones in two ways. First, it contains a preposition which indexes the opposite direction of the movement suggested in the candidate translations so far and, second, it is accomplished in the L2. By doing so, Laura affiliates with the way the text segment is presented on the strip she is orienting to through her embodied behaviour. Alba's next turn is strongly aligned with Laura's since she format-ties it by taking out the preposition in Laura's utterance and repeating the rest of it (line 8). She further displays her alignment with the previous speaker's actions by taking the strip Laura was leaning toward and attaching it to the second slot on the card, the joint focus of attention.

By way of contrast to Excerpt 3, here Alba accomplishes a preferred and expected action which is evidenced in the way Laura's turn is built on Alba's embodied contribution (line 9), thereby further developing the unfolding course of action. Laura repeats her own previous candidate accompanying it with a pointing gesture at each item on Alba's strip. After a micro-pause, she further confirms the appropriateness of her suggestion by reading the next, and actually last, lexical items provided in the definition (line 9, see also Fig. 6). In this way she not only self-positions epistemically as a 'knower' but also implicitly orients to the closing of the current sequence. Her multimodal actions are timely attended to and aligned with by Andrea's embodied display of affiliation with a head nod.

Once Laura's turn is over and there is a possibility for a speaker change, Alba aligns with Laura in displaying her orientation to the sequence closing (line 10). She utters a loud, highly emotional token usually employed to indicate the achievement of something, such as the correct completion of one's card in the game with the same name. She does so while performing a series of embodied actions. First, she

leans away from the desk to show her disengagement from the focal material object (see also Markee and Kunitz 2013, p. 665 for a similar analysis of how leaning away from an object functions as a closing-relevant embodied action). Then she lifts her index finger and starts moving her hand making circles in the air and displaying her enthusiasm on the successful completion of the task-related activity.

Alba's positive assessment of the group accomplishment is multimodally supported by two more students, Laura and Andrea. Thus, Laura affiliates with Alba by placing Neus's card together with the other completed cards while producing the same token of agreement twice, first in the L1 and then in the L2 (line 11). She displays her strong affiliation with a louder volume and emotional sound stretching. Andrea also performs a preferred action of agreement, both verbally, with an unmitigated positive token, and through the embodied action of nodding, thereby displaying affiliation with her peers' orientation to the sequence closing (line 12).

6 Discussion

This section presents a discussion of the analytic findings. In terms of the establishment and management of facework, on the one hand, and the group members' orientation to face-related actions of other co-participants, on the other hand, the analysis has shown that the participants displayed a strong preference for affiliation and agreement. Group members closely monitored the ongoing course of actions performed by their co-participants and routinely displayed in a timely fashion their orientation to and alignment with those through talk and/or embodied resources (e.g., gaze, gesture, body positioning, head movement). They also displayed their understanding of the sequential unfolding of interaction and signalled affiliation by taking turns at the first emerging TRPs and by format-tying to build on the previous speaker's turn. Affiliation was also evidenced in the way the students built alliances with their peers (Sharma 2012), using an array of multimodal resources, to simultaneously display both their mutual alignment with some peers' actions and their joint disalignment with those of others.

Preference for face-enhancing over face-threatening was also revealed in peers' alignment with the specific choice of the L1 variety by their groupmates. The detailed examination of the data, produced in the context of a Catalan-medium educational system addressed at mostly Spanish-speaking students, has revealed dissimilar L1 orientations in the two groups. Hence, group 1 primarily resorted to L1/Spanish, thereby displaying a strong orientation to their home language, whereas group 2 always adhered to L1/Catalan, thus consistently aligning with the official school language policy. A generally predominant use of the L1 observed in the data might be explained by the limited linguistic resources available to students, lack of any additional linguistic support to scaffold group interaction (e.g., sentence starters to express one's opinion as well as agreement/disagreement) and even the task itself. However, Jakonen's (2016) study on peer interaction in Finnish secondary CLIL classrooms shows that even older students regularly 'displayed normative

orientation to using L1 in front of peers for both task management and socializing' (p.25).

The participants also displayed alignment when initiating, managing and dissolving a joint focus of attention, which was recurrently organized around material objects relevant for the ongoing interaction and the learning task at hand. To signal the emergence of a co-oriented interactional space, group members often directly manipulated the focal material objects (cards or strips) by taking them from the desk and initiating their reading or their translation into the L1. To maintain interactional co-orientation, participants routinely increased their physical proximity to the focal object in an embodied fashion or by manipulating the relevant material objects in relation to each other by, for example, sticking or unsticking a certain strip to or from the card. Finally, resolution was accomplished either through the sequence-closing action by the current speaker and the co-participants' embodied actions to display alignment or through the emergence of a new focus of attention and the participants' subsequent re-orientation to it.

Another display of the participants' preference for alignment was through individual and group-oriented face-enhancing actions, as when students were doing being 'good learners' or providing positive self-assessments of their own achievement, or when they provided positive feedback to peers. Meanwhile, group-oriented actions were performed as emotionally charged announcements of group success resulting from the effort of each contributing participant. Finally, embodied resources such as smiles and laughter were also employed to establish intersubjectivity (Schegloff 1992, see also Sidnell 2014), and display peers' shared group membership.

So, the findings presented until now clearly point to the fact that both groups resorted to similar ways and resources to establish and manage facework by strongly preferring affiliation over disaffiliation. Let us now consider the effects of students' face-oriented actions on the quality of group work in terms of the development of the collaborative task.

The analysis of Excerpts 1 and 2 has shown that the members of group 1 used a range of linguistic and embodied resources, turn-taking practices and the principles of sequence and preference organization of interaction to present their individual task-related work for its revision and assessment by one of the groupmates. This interactional orientation was displayed through report and announcement sequences as well as, on occasion, through epistemic search sequences. During these sequences the reporter or requester was observed to self-position as a 'novice' and 'unknowing' while positioning the addressed recipient as an 'expert' and a 'knower' within this group CoP. Such configuration of interpersonal relations among the group members also presupposed the reporter's self-positioning as a 'good learner' as a highly advisable, if not required, action in order to obtain the expert's positive assessment. Yet, it should be noted here that in both cases when novice-expert relations were established, although the 'knowers' officially assumed the assigned role by producing the expected SPP, they however either mitigated their statement or displayed a weakened commitment to providing a 'knowing' answer.

Such expert/novice role distribution contributed to generating a hierarchical and asymmetrical group dynamic which strongly resembled teacher-student interaction. It might be useful to interpret these findings in terms of Storch's (2002) model of dyadic interaction. Using Storch's terms of 'equality' and 'mutuality', group 1 then showed a low level of 'equality' among its members as regards 'the degree of control or authority over the task' and a high level of 'mutuality' or symmetry as regards 'the level of engagement by the interlocutors in the interaction' (p. 127). The results of such group dynamics were a highly competitive atmosphere among the participants and the implicit exclusion of one of the learners.

The analysis of Excerpts 3 and 4 has revealed that the members of group 2 relied on diverse multimodal means to display their mutual and continuous orientation to group work and collective meaning-making, as well as to the joint revision of group results. The participants' face-oriented actions resulted in configuring a symmetrical, solidary and collaborative group dynamic with high levels of equality and mutuality. Each member's turn was equally acknowledged, whether through alignment or disalignment, and viewed as a building block to make the ongoing interaction and the task flow. Group 2, therefore, generated a positive team atmosphere which aided the peers in their orientation to the progress of the main task and the successful fulfilment of each partial learning activity within it.

Summing up, we can say hence that despite the fact that the students in both groups established and managed facework in a similar way, the effect on the group work and the development of the collaborative task was highly dissimilar. This resulted in two clearly different patterns of group dynamics and peer interaction: individual-oriented and group-oriented.

7 Pedagogical Implications and Conclusions

This chapter joins Sharma's (2012) recent call for the necessity to further explore peer interactions in language classrooms by expanding it to CLIL settings. A microanalytic underpinning of the way CLIL students use multimodal resources and the sequential and preference structures to accomplish the interactional intricacies of facework seems crucial to deepen our understanding of the interactional configuration of what constitutes successful group work from a participants' (emic) perspective and the effect peer interaction has on content and language learning.

It is equally important, however, to raise teachers' and students' awareness of these aspects. Teachers might find them insightful to better comprehend possible group dynamics in their classrooms and the conditions necessary to create optimal learning environments within each group. For this purpose, Storch's typology of peer interaction patterns and the notions of equality and mutuality might be highly useful for those teachers who would like to introduce group work and peer interaction into their classrooms but are concerned about their benefits as compared to individual student work, whole class work and teacher-student interaction. Such notions would be equally useful for those teachers who already use group work. As

has been shown in this chapter, a close look at peer interaction can also help them gain a better understanding of the role teacher-designed materials play in the organization of group work and the progress in the task.

On the other hand, to promote effective group work and peer interaction, teachers need explicitly to teach students how to accomplish learning-promoting facework and interact more efficiently in groups. A good way to start is to make a list of ground rules or norms of group work which covers aspects such as turn-taking procedures, listening to others, giving opinions, agreeing and disagreeing, each member's role, task management, tolerance and patience, group cohesion, individual and group face-enhancing, etc. Teachers can give the list to the students and discuss each aspect with them, develop the list together with their students or even ask students to make their own lists of the most important aspects of what they think successful group work implies. A good example of how to bring these ideas into practice and help students learn how to collaborate when working in groups, engage critically but constructively with each other's ideas, learn together and communicate efficiently can be found in Neil Mercer's (1995) book '*The Guided Construction of Knowledge*'.

Acknowledgements This work was supported by the Spanish Ministry of Science and Innovation (Grant FPDI-2013-18840) and the Catalan Agency for Management of University and Research Grants (Grants 2014-SGR-1190 and 2017-SGR-1728). The author would also like to express gratitude to the anonymous reviewers and the volume editors for their insightful and constructive comments on earlier versions of this chapter. All remaining errors and omissions are entirely my responsibility.

Appendix: Conventions for Transcribing Embodied Conduct

Embodied actions relevant for the analysis are described in the line following the line containing utterance, in italics, and are synchronized with talk thanks to a series of landmarks:

DAV / dav	Participant accomplishing the action is identified. Capital letters are used when the action accomplished by the participant is verbal; lower case is used for embodied actions.
^ ^	Delimitate descriptions of Adrià's embodied actions.
# #	Delimitate descriptions of Arnau's embodied actions.
% %	Delimitate descriptions of David's embodied actions.
+ +	Delimitate descriptions of Jordi's embodied actions.
* *	Delimitate descriptions of Miguel's embodied actions.
& &	Delimitate descriptions of Laura's embodied actions.
× ×	Delimitate descriptions of Neus's embodied actions.
¥ ¥	Delimitate descriptions of Marc's embodied actions.
§ §	Delimitate descriptions of Alba's embodied actions.

¤ ¤	Delimitate descriptions of Andrea's embodied actions.
€ €	Delimitate descriptions of Gisela's embodied actions.
^ / # / % / + / * / -->	Described embodied action of a particular participant, as identified by their specific symbol, continues across subsequent lines.
-->^ / # / % / + / * /	Described embodied action of a particular participant, as identified by their specific symbol, continues until the same symbol is reached.

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Multimodal Perspective into Teachers' Definitional Practices: Comparing Subject-Specific Language in Physics and History Lessons

Leila Kääntä

Abstract This chapter compares two teachers' definitional practices in two Content-and-Language-Integrated-Learning (CLIL) lessons, i.e. physics and history, which are taught in English in Finland. It adopts Dalton-Puffer's (Eur J Appl Linguistics 1(2):216–253, 2013; Cognitive discourse functions: specifying an integrative interdisciplinary construct. In: Nikula T, Dafouz E, Moore P, Smit U (eds) Conceptualising integration in CLIL and multilingual education. Bristol: Multilingual Matters, pp. 29–54, 2016) theoretical construct of cognitive discourse functions (CDF) and showcases how it can be operationalized with empirical grounding. Multimodal conversation analysis (CA) is used to trace and observe how the teachers employ various multimodal resources in performing definitions of key concepts in classroom interaction, whereby they make the conceptual field related to the lessons' topic accessible to the students. The study has two aims. First, it describes the similarities and differences in the teachers' definitional practices and thereby contributes to our emerging understanding of what subject-specific language comprises when approached from an interactional perspective. In doing so, it also provides new insights into the relationship between content and language not only in L2, but also in L1 teaching. Second, by proposing a 'pedagogical reflection tool' that is based on the repeated and comparative practice of viewing either videos or transcripts, it illustrates methods to help raise and broaden teachers' awareness of the notion of subject-specific language and of the relevance of multimodal resources in teaching. The findings can thus serve as a stepping-stone for pre- and/or in-service teacher training, which is not meant to provide 'recipes' of how definitions ought to be done, but rather to demonstrate how locally situated, yet recognizable teachers' definitional practices are. As such, they are also transportable and adaptable to different situations across different subjects.

Keywords CLIL · Subject-specific language · Definitions · Conversation analysis · Multimodality

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_10

1 Introduction

This chapter compares teachers' definitional practices in two Content-and-Language-Integrated-Learning (CLIL) lessons, physics and history, which are taught in English in Finland. Specifically, it takes up Dalton-Puffer's (2013, 2016) theoretical construct of cognitive discourse functions (CDF) and showcases how it can be operationalized with empirical grounding. To do this, the study uses multimodal conversation analysis (CA) to examine how teachers harness a range of resources (e.g. language, gestures, and objects) in performing definitions in classroom interaction (see Markee et al. this volume, for a discussion of different levels of granularity in CA transcription). It thus highlights the quintessential role of the material ecology and the participants' bodily-visual actions in teachers' use of 'subject-specific language', which refers to the characteristic academic language functions through which subject content is taught (see e.g. Barwell et al. 2005; Dalton-Puffer 2007; Lemke 1990; Nikula 2012, 2015; Nikula et al. 2016; Schleppegrell 2004). It also underscores that teaching and learning are not solely accomplished through language: meanings are conveyed in context-sensitive and recipient-appropriate ways. Therefore, the detailed scrutiny of all the resources teachers employ is necessary to understand how teachers teach and students learn subject-specific language use, especially when the instruction is in the participants' second or foreign language (L2/FL), as is the case with CLIL lessons (see Eskildsen this volume, for a similar argument, and Evnitskaya this volume, which also uses multimodal transcription in the context of analyzing CLIL instruction in Catalonia).

The second aim of the chapter is to show how the findings of the study, together with its companions (i.e. Kääntä 2016; Kääntä and Kasper 2018; Kääntä et al. 2018), can be applied in establishing a pedagogical 'reflection tool' for in-service teachers and teacher trainees (see the pedagogical implications at the end of the chapter). The tool serves as an awareness raising exercise of the notion of subject-specific language and the role of language in content-based teaching, alongside the quintessential role of multimodal resources. Fundamentally, the 'tool' is based on the repeated viewing of selected video segments and related transcripts in a systematic fashion to compare and to grow an understanding of how definitions are performed in different subjects. The practice of viewing springs from CA, where video-recordings of actual classroom events form the basis of the analysis, while transcripts serve as tools to capture the details of interaction, e.g. the use of different multimodal resources, and to draw the analysts' attention on them. This study serves as an example of what kind of phenomena are analyzable, how the chosen phenomenon can be selected in such a way that allows its comparison in and across different subjects, and what the potential shortcomings of such an analysis are.

2 From a Theoretical Construct to an Academic Discourse Practice

The conceptual bedrock of the CDF construct by Dalton-Puffer (2013, 2016) is highly complex and multifaceted: it combines research approaches and findings from subject-specific pedagogy (i.e. curriculum design and objective studies), to language teaching pedagogy (i.e. studies on academic language and literacy), to linguistic theories (i.e. systemic functional linguistics, speech act theory, and studies on genre and register). These linguistic theories provide the basis for understanding the relationship between language and thought (i.e. cognition) adopted in the construct.[1] Its main aim is to gain an understanding of how discipline-related thought processes manifest themselves in classroom interaction as teachers and students engage in knowledge construction. The rationale is that the thought processes are observable and traceable in participants' language use, i.e. in academic language functions, specifically in relation to how language is employed to negotiate content, independent of what school subject is in focus. To that end, the construct helps advance our understanding of how language and content are integrated *in praxis* in classroom talk.

The construct comprises seven categories of "communicative intentions that materialize as speech acts" (Dalton-Puffer 2016: 31–32), i.e. as discourse functions. The categories are: CLASSIFY, DEFINE, DESCRIBE, EVALUATE, EXPLAIN, EXPLORE AND REPORT, each of which includes a varied set of related members (Dalton-Puffer 2013: 235, 2016: 32–33). For instance, DEFINE consists of define, identify and characterize, while EXPLAIN includes explain, reason, and deduce. Yet, the categories are not fixed, rather each consists of prototypical discourse functions that encompass all subjects, while the boundaries of the categories are fluid (Dalton-Puffer 2013: 236). That is, the different discourse functions within and across categories are partly exclusive and partly nestled (Dalton-Puffer 2016: 33). The analysis in this chapter will show how the embeddedness of the categories manifests itself in classroom interaction, particularly with definitions being produced within explanations.

Fundamentally, the construct serves as a heuristic that can be applied in empirical studies and that still needs to be tested, validated and modified with empirical evidence in different subject-cultures and educational contexts (Dalton-Puffer 2013, 2016; Dalton-Puffer et al. 2018). In this chapter, the heuristic is applied to an empirical study that illustrates how teachers in two subjects define concepts to students in context- and activity-specific ways. In doing so, the study also addresses a call by Heller and Morek (2015) to approach academic language (AL) as a situated practice. They argue that previous research on AL has emphasized the abstract, decontextualized nature of academic discourse and focused primarily on written texts. As a developmental step, they propose the concept of 'academic discourse practice', which refers to participants' context-sensitive, locally emerging actions of

[1] The theoretical basis of the construct is too wide to be fully covered here, so the reader is advised to visit the original 2013 paper.

constructing knowledge as these occur in classroom discourse. This way, the emphasis on written texts and the decontextualized register- and genre-based research is balanced with a discourse approach that sheds new light on the *situated, multimodal* use of AL in classroom interaction.

As Heller and Morek (2015) point out, much of the research on AL in L1 settings has examined, for instance, the structural aspects of written registers and genres of history by using systemic functional linguistics (SFL; e.g. Coffin 2006a, b; Schleppegrell 2004; Schleppegrell et al. 2004; Schleppegrell and de Oliveira 2006). In contrast, research on CLIL education in L2 settings has mainly focused on teachers' and students' spoken AL skills in different subjects, including history, geography and science (e.g. Llinares and Morton 2010; Llinares et al. 2012; Morton 2010). However, in both L1 and L2 settings, studies have aimed to identify the characteristic features of subject-specific language, e.g. 'the language of history', while also bringing up their differences. They have shown that different types of (personalized) narratives, causal explanations and historical recounts, among others, form an essential part of the academic genres of history (e.g. Coffin 2006a; Llinares and Morton 2010; Llinares et al. 2012; Schleppegrell 2004).

Explanations have formed a key focus of recent discourse and conversation analytic CLIL studies that investigate AL in classroom talk (Escobar Urmeneta and Evnitskaya 2014; Llinares and Morton 2010; Morton 2010, 2015, inter alia), while definitions have received only little attention (Dalton-Puffer 2007; Kääntä et al. 2018 see next section) (see Evnitskaya this volume, for an account of how written definitions are integrated into students' talk in a CLIL classroom in Catalonia). Both Escobar Urmeneta and Evnitskaya (2014) and Llinares and Morton (2010) show how explanations in biology and history lessons are dialogical and co-constructed by teachers and students. More relevantly, during such sequences, teachers construct semantic networks of target concepts by drawing on both everyday and scientific vocabulary, thereby creating linguistic bridges between the two types of lexicon (Escobar Urmeneta and Evnitskaya 2014). The building of bridges, partly arising due to students' problems of understanding the concepts, provides "students opportunities for the integrated appropriation of language and content" (ibid., p. 178). Nikula (2015) makes a similar observation: she found that the physics teacher in her data introduced the theory and concepts related to the day's topic only during a post-task phase, while the chemistry teacher focused on them in pre- and post-task phases. The physics teacher's practice occasioned students to request clarifications of meaning of concepts that resulted in collaboratively produced negotiations of subject-specific language, whereas the chemistry teacher's practices did not achieve this to the same extent. A relevant observation in these studies is that in none of the subject lessons did teachers explicitly talk about features of subject-specific language: it was all implicitly present in their talk (also Dalton-Puffer 2016). Although this implicitness evidences that CLIL teachers have internalized subject-specific language, they need to be made *aware* of the relationship between language and content in their subjects and how understanding this relationship can be beneficial for teaching and learning AL. Hence, the 'reflection tool' that this study proposes.

Overall, this study demonstrates how the theoretical categories of the CDF construct can be traced and observed in classroom interaction and describes how

teachers realize DEFINE not only in terms of lexico-grammar (Dalton-Puffer 2013: 241) but also interactionally by focusing on the temporal and sequential unfolding of teachers' multimodal definitional practices.

3 Definitions as a Situated Practice

As Dalton-Puffer's CDF construct manifests, defining is a general academic discourse practice that cuts across all subject boundaries. That is, in all subjects, teachers define various concepts to students to help them understand and learn the subject-specific ways of constructing knowledge (also Dalton-Puffer et al. 2018). Yet, defining is more characteristic in subjects that have a great deal of subject-specific terminology, such as mathematics, biology, physics, and chemistry. Moreover, the purposes definitions serve can differ between subjects; e.g., in mathematics, they provide the basis for logical argumentation (e.g. Morgan 2005), while in physics they aid in the logical structuring of the lecture (e.g. Flowerdew 1992).

Although their purposes are various, classroom research on definitions, whether of the written or spoken mode and whether in the L1 or L2/CLIL context, has shown that formal definitions are realized with a specific linguistic format (e.g. Dalton-Puffer 2007; Flowerdew 1992; Temmerman 2009; Trimble 1985; Watson 1985). This format is 'X is Y that Z'. An example from a CLIL biology teacher from the current data corpus illustrates what its components are: "DNA is very big molecule which you have in your cells in the nucleus". Here, *DNA* (=X) is the concept to be defined (i.e. the definiendum), *molecule* (=Y) is the class to which DNA belongs, and the remainder of the teacher's turn (=Z) provides the characteristics of DNA that separates it from other molecules (i.e. the differentia). Together Y and Z make up the definiens. Besides formal definitions, Flowerdew (1992) has identified three other formats in his study on L2 science lessons: semi-formal definitions, substitutions, and ostensive definitions. According to him, different paralinguistic features, such as graphic support, visual support and emphatic stress, can complement verbal definitions.

What is however problematic in these studies, as Markee (1994) points out, is that they have investigated the phenomenon with a priori categories and with methods, e.g. elicitation questions, SFL, and discourse analysis, that have not considered participants' context-sensitive, locally situated practices of 'doing definitions'. Likewise, they have not aimed at describing how participants employ multimodal resources in divergent configurations in designing their definitions. A situated practice approach to examining teachers' definitions as they emerge from and are constructed in the moment-by-moment unfolding of classroom interaction enables such a detailed scrutiny.

An initial attempt is offered by Markee (1994), who examined spoken definitions in an L2 group work context. His study sheds light on the prototypical sequential and linguistic structures through which definitions, as participants' concerns, are requested and produced. When students request definitions, teachers' responses in those instances serve "as explanations of lexical items or phrases whose meaning is

actually or potentially unclear [to students]" (Markee 1994: 106). Although Markee (1994) mentions briefly that participants also utilize different nonverbal means (e.g. pointing and drawing), he does not elaborate on how and when such resources are used. This has been done by Belhiah (2013), whose study on ESL tutoring sessions offers insights on the role of gestures during spoken definitions. By identifying three functions for the tutor's gestures (i.e., reinforcing meanings conveyed in talk, disambiguating lexical meanings, and creating cohesion within extended turns), he demonstrates how the gestures are often produced before their lexical affiliates and maintain their form throughout the definition in ways that help the tutee to learn the meanings of the defined words. The tutor's gestures thus form an indispensable part of doing teaching. In addition, Kääntä, Kasper and Piirainen-Marsh (2018) have described a CLIL physics teacher's multimodal practices of defining the key concepts of Hooke's law to students. They show that the teacher's embodied and material actions are closely intertwined with the verbal turns that elucidate the meaning of the target concepts and that the way in which the definitions unfold as multi-unit turns is influenced by the students' recipient actions. Thus, a crucial finding in these studies is that definitions are always embedded within the ongoing instructional activity so that they gain their meaning as definitions based on the temporal and sequential position in which they are produced, whereby their multimodal configuration(s) is a contingent manifestation of the spatio-material ecology of the classroom setting.

4 Data and Methodology

The data come from a classroom corpus collected in the University of Jyväskylä, Finland. Since 2000, CLIL researchers have video-recorded diverse subject lessons in primary and secondary schools located in different parts of central and coastal Finland.[2] To date, the corpus comprises 50 lessons in the following subjects: history, biology, physics, chemistry, physics-chemistry, religion, English, English conversation, and PE. From this corpus, six 7th-grade physics and 16 8th-grade history lessons were chosen for closer examination. The participants include the subject teachers and 25 students (six in physics and 19 in history), all of whom are native Finnish speakers. English is thus a foreign language to all. Yet it is also both the medium and the target of the instruction as the students are taking part in a small-scale CLIL program offered in their school. This means that only selected subjects are taught in English and that students' participation in the program is voluntary (hence the size difference in the groups).

The main reason for selecting the two subjects is that both have been studied either in terms of their subject-specific language, whether in L1 or L2/CLIL settings, or in terms of teachers' definitional practices (see above). Such studies provide crucial empirical results that are foundational for this study in that they serve as a springboard for building the arguments and developing the pedagogical reflection

[2] Before the data collection was begun, an oral or a written consent from the pupils' parents was obtained. To protect the pupils' identity, their names in the transcripts are pseudonyms and the frame captions depicting them are intentionally unclear.

tool that are elaborated in this chapter. Another reason is that they represent different fields: while physics is part of the natural sciences, history belongs to the social sciences. It is thus interesting to learn about the similarities and differences in the teachers' definitional practices and to understand what subject-specific language entails.

Since defining is a general academic language function, it is no surprise that teachers in both subjects define a wide variety of concepts to students. Moreover, they do so in different lesson phases: during plenary talk, whole-class discussion activities, task instructions, group work and/or students' independent deskwork. Thus, to be able to compare teachers' definitional practices while adhering to CA principles, a specific interactional sequence was chosen as the analytical locus of the study (see e.g. Dingemanse and Enfield 2015; Sidnell 2009 for comparative work in CA). This sequence is present in both subject lessons and consists of a question-answer sequence, an adjacency pair,[3] where students explicitly request a definition of a concept from the teacher. The teachers' definitions in such instances are unplanned actions (also Lazaraton 2004; Markee 1994) that are designed in the here-and-now for the current audience by utilizing the locally available resources: language, bodily-visual actions and the material ecology of the setting.

As an inductive and descriptive research method, CA provides the analyst the tools to trace those instances across situations and settings that participants themselves frame as being somehow problematic, e.g. not understanding prior speaker's talk, and the ways, in which they resolve those problems through the interaction (e.g. Sidnell 2009). More pertinently, CA pays attention to the various multimodal resources participants mobilize in designing their actions and how the resources are intertwined and only make sense together within the locally situated, temporal and sequential environment in which they are produced (e.g. Deppermann 2013; Mondada 2016; Streeck et al. 2011). This contrasts with studies where nonverbal phenomena are seen as only supportive of or even redundant to verbal elements (e.g. Flowerdew 1992; Lazaraton 2004).

To be able to examine the verbal and bodily-visual details of interaction, participants' talk is transcribed according to standard CA conventions (see Jefferson 2004), whereas the conventions for depicting participants' bodily actions in this study are adapted from Mondada (2016, see Appendix 1). The analysis involves the repeated viewing of the recordings together with the transcripts to develop an understanding of how actions, such as definitions, are performed, where they occur and from where they emerge, what their purpose is and how recipients respond to them. In reporting the results, the transcripts are animated with frame captions of key phenomena so that the reader can also develop an understanding of participants' bodily-visual actions and the material setting.

The analysis is in two parts: first two data excerpts are analyzed from each subject after which the findings are drawn together by discussing the similarities and differences between the teachers' multimodal practices of doing definitions. Excerpts 1 and 2 come from the physics lessons, while Excerpts 3 and 4 are from the history lessons.

[3] The adjacency pair consists of two parts. The student's request is the first pair-part (FPP), while the teacher's response is the second pair-part (SPP).

5 Analysis of Data Excerpts

In Excerpt 1, the teacher is lecturing about Hooke's law and its key conceptual elements to students. Prior to the excerpt, he has both named and written the law and its theoretical statement on the blackboard ("Extension is proportional to the force"). In addition, he has opened up the law by explaining, on a general level, that many phenomena in physics are proportionally related to one another ("one thing is proportional to the other"). Of this relationship, he has also given a quantitative example: "if you double the one quantity then the other will be doubled as well". By doing this, the teacher has provided the students with a definition of a key concept of the law (i.e. proportionality), the definition being embedded within the larger explanation sequence of Hooke's law. At this point, we learn that the meaning of 'proportional' has not become clear to Liisa and Jaana, who are displaying non-understanding (Excerpt 1a).

Excerpt 1a: Physics 301003_Proportional

```
44   Liisa   +extension is <proportional>+
             +LIISA READS FROM HER NOTEBOOK-----+

45           (1.1) T WALKS TOWARD BB, GAZE AT IT
                   LIISA GAZE AT HER NOTEBOOK, LEANING BACK IN HER CHAIR
                   JAANA GAZE AT BB

46   Jaana   what does that <pro-+por-ti-o-ˣnal> mean¿ˣ
                                           ˣJAANA GLANCES AT LIISAˣ

47           (0.9) T GAZE AT JAANA
                  JAANA GAZE AT BB/TEACHER
                  LIISA GAZE AT BB

48   T       you mean in Finnish.=

49   Jaana   =yea

50           (0.3) T TURNS TO BB
                  JAANA GAZE AT BB/TEACHER
                  LIISA GAZE AT BB

51   T       it's, hh suoraan verran^nollinen.
                      directly     commensurate
                                      ^T BEGINS TO WRITE

52           (1.1) T WRITES ON BB
                   LIISA GAZE AT BB
                   JAANA GAZE AT BB, AT 0.9s WRINKLES NOSE AND FOREHEAD
```

What happens is that Liisa reads aloud from her notebook the statement of the law, producing the word 'proportional' with slower speed than the rest of the turn (l. 44). After a short silence (l. 45), Jaana builds on Liisa's turn and syllabizes the word, thereby further foregrounding it as a trouble source (l. 46). Her turn explicitly requests a clarification of the meaning of the concept from the teacher.

As Markee (1994) has shown, requests such as 'What does X mean' make a definition by the question's recipient a conditionally relevant next action. Consequently, the teacher responds drawing on different multimodal resources. Yet, he does not immediately produce the response; rather he first checks his understanding that Jaana

is requesting the Finnish translation of the concept (l. 48). After Jaana has confirmed his understanding (l. 49), the teacher produces the definition in a bilingual format: *it's suoraan verrannollinen*. In addition, he writes the Finnish translation equivalent on the board next to the theoretical statement of Hooke's law. By not automatically offering the Finnish translation (cf. Dalton-Puffer 2007: 136), the teacher ensures that he understands what the students' understanding problem is related to: is it a vocabulary issue or a conceptual problem. The vocabulary problem now dealt with, the teacher elaborates his response by providing a definition in English (Excerpt 1b), whereby he orients to unpacking a potential conceptual problem the students have.

Excerpt 1b: Physics 301003_Straight Line Relationship

```
64   T       well, basically proportional means the (.)
65           ^uh ~straight^ +line #^relationship.^~ (.) so=
             ^T STEP CLOSER TO BB^      ^T STEP BACK------^
                ~T RH POINTING GESTURE #Fig.1--------------~
66   Jaana   =°oka'°
67   Ronja   [a]straight line.
             [a]RONJA GAZE AT NOTEBOOK
68           (1.8) T WALKS TOWARD STUDENTS, GAZE AT THEM
                   LIISA GAZE AT BB, AT 0.7s GAZE DOWN
                   JAANA & LEENA GAZE AT BB
                   RONJA GAZE AT HER NOTEBOOK
                       AT 0.8s SHIFTS GAZE AT BB->
                                                        FIGURE 1
69   T       y[eah^
             T---->^
70   Ronja    [in a straight [a]line.
                            [a]RONJA GAZE AT NOTEBOOK
71           (1.0)  T STANDS, LOOKS AROUND, THEN TOWARD LIISA & JAANA
                    LIISA GAZE AT HER NOTEBOOK
                    JAANA, LEENA & RONJA WRITE IN THEIR NOTEBOOKS
72   T       but (.) I- actually we've had uh ^similar (0.8)^
                                              ^T RH POINT TO BB^
73           ideas be[a]fore, for instance=
                     [a]RONJA SHIFTS GAZE AND UPPER BODY UP
74   Ronja   =wait.
             RONJA GAZE SWEEPS BB
75           (1.0)  RONJA SEARCHING HER NOTEBOOK
                    T GAZE AT RONJA
76   Ronja   I have it somewhere the word (1.4) [a]li- /laɪnɛɑːʀ/
                                                [a]RONJA GAZE SHIFT TOWARD T
77   T       linear=
78   Ronja   =linear.
79           (0.5) T GAZE AT STUDENTS
                   STUDENTS GAZE AT DIFFERENT PLACES
80   T       uhh (0.5) we've had (0.3) this^(0.2)
                                           ^T RH POINT TO BB->
81           >proportional to before,^ for instance^ uh< (0.4)
                                     ^T WITHDRAWS HAND^
82           with force an' acceleration we also noticed that (0.6)
83           force is proportional to acceleration. (0.8) and
84           #^(.) WEIght# is proportional#^ to mass.^#
              ^T BH GESTURE TO LEFT----------------^BH GESTURE TO RIGHT^
             #Fig.2       #Fig.3           #Fig.4        #Fig.5
```

The teacher's definition is produced in the 'X means Y' format (l. 64–65) and is offered as a synonym: 'a straight line relationship' (also Dalton-Puffer 2007; Flowerdew 1992; Markee 1994). The synonym might not enable students' understanding of the concept, but the multimodal packaging of the teacher's turn helps contextualize it. Namely, as the teacher utters the definiens, he not only emphasizes 'straight', but also points to and gazes at a graph of extension he has drawn on the board, particularly to a straight line in the middle of it (l. 65, Fig. 1). The line represents the outcome of students' hands-on experiments, which they did before the lecture. During the experiment, they measured the extension of a spring as they added weights to it. The teacher's pointing action together with his gaze and bodily orientation thus recruit an existing drawing through an ostensive definition (cf. Flowerdew 1992: 212),[4] whereby he invokes the students' first-hand experience of the concept in practice.

Two students respond to the teacher's definition. While Jaana utters a quietly produced acknowledgement token ('okay', l. 66) and thus claims understanding, Ronja repeats the 'straight line' (l. 67). The teacher orients to it as an understanding check, which he confirms (l .69). Overlapping the teacher's confirmation, Ronja produces a modified version that displays her emerging understanding of the concept (l. 70). After a brief silence, the teacher continues by stating that they have talked about similar phenomena on earlier occasions (l. 72–73). Before he can provide examples, Ronja, who draws the teacher's attention to the earlier occasion (l. 74–78), interrupts him. After they establish shared understanding of the concept, the teacher repeats that the class has discussed the concept of 'proportional relationship' before and gives two examples of this (force and acceleration, l. 82–83, and weight and mass, l. 84). When he utters the second example, he performs a gesture ensemble: first a downward facing semi-circle with right hand to left (Fig. 2–3) and then another with both hands to right (Fig. 4–5). The gestures visualize the proportional relationship between the two elements in that they are roughly alike in manner of execution. By bringing up the examples, the teacher again invokes the students' prior knowledge of the topic and helps them associate the concept of 'proportionality' as a general phenomenon in physics.

In Excerpt 2, the teacher is lecturing about wave motion after students have completed a hands-on experiment, in which they made waves with a Slinky (i.e. a

[4] Flowerdew (1992) considers ostensive definitions to be limited to pointing gestures that are used alone without accompanying talk, whereas I consider all pointing gestures that are associated with graphs, inscriptions and drawings to be ostensive definitions. Furthermore, these embodied actions form a part of the entire multimodal packaging of the teacher's definition. Perhaps due to the narrow definition of ostensive definitions, Flowerdew (1992) contended that ostensive definitions were in the minority in his study, while in the current data they are frequent.

metallic, helical spring). Just moments before the excerpt, he has introduced the students to a new concept, 'amplitude', and defined it verbally and by graphically drawing an example wave on the board that visually locates amplitude in it. As he is explaining about transverse and longitudinal waves while writing the two concepts on the board, Ilona requests for a clarification of the meaning of 'amplitude' (l. 85).

Excerpt 2: Physics 311003_Amplitude

```
84              (4.4) T WRITES 'LONGITUDINAL' AND COLON AFTER IT ON BB
                      ILONA TURNED TOWARD NEEA
                         AT 0.6s TURNS GAZE AT BB
85     Ilona    >what di[d it] mean that< ^amplitude describes what¿
                                            ^T BEGINS TO WRITE 'SOUND' ON BB
86     T                  [(is)]
87              (1.0) T WRITING 'SOUND' ON BB
                      ILONA GAZE AT BB
88     Liisa    (täh)^
                (what)
                T WRITES^
89     T        well ^amplitude is this^
                      ^T RH TO WAVE CREST AND LH TO HORIZONTAL LINE^
90              ^(0.6) the size of^^ the wavin'.#
                ^T LIFTS AND SETS HANDS BACK ON BB^                    FIGURE 6
                                    ^HOLDS GESTURE--#Fig.6
91              (1.1) T HOLDS GESTURE ((FACE NOT VISIBLE IN CAMERA))
                         AT 0.6s WITHDRAWS HANDS FROM BB
                      ILONA GAZE AT BB
                         AT 0.4s TURNS GAZE AT NOTEBOOK
92     T        an' (0.3) it's (0.6) it's really the strength or,
93              (0.8) ILONA TAKES ERASER FROM DESK, GAZE AT NOTEBOOK
                      ((T NOT IN CAMERA VIEW))
94     Ilona    oka'
95              (4.2) ILONA ERASES AND THEN WRITES IN HER NOTEBOOK
                      T NOT IN CAMERA VIEW
96     T        an' maybe you know this,
97              you need a bit ^more force to make a (0.6)
                               ^T GAZE AT ST.-->>
98              make a wave of (0.2) of greater *amplitude.
                                                *ILONA GAZE SHIFT TO T
99     Ilona    NODS X 2, GAZE AT T
```

The beginning of Ilona's turn is constructed via the canonical 'what does X mean' format but it is in the simple past tense and references 'it' instead of the focal concept. The 'it' functions as a cataphoric reference to the quote 'that amplitude describes what', which she recycles from the teacher's earlier verbal definition ("an amplitude sort of describes how strong the wave is"). By repeating part of the teacher's prior talk and incorporating the question word in the

place of the definiens, Ilona's turn highlights it as the trouble source, which she did not hear or understand.

The teacher orients to Ilona's request as an understanding problem and defines the concept again. He begins with the 'X is Y' format (*amplitude is this*), where Y is accompanied by an environmentally coupled gesture (Goodwin 2007): he places his right hand on the crest of the example wave on the board and his left hand on the horizontal line that cuts across the wave (l. 89). The gesture together with the drawing provide a visual definiens of the concept. Next, the teacher elaborates on the combination of the deictic anchor ('this') and the gesture and defines amplitude in everyday words, pronouncing the key element with emphasis (*the size of the wavin'*). Concurrently, he lifts his hands away from the board and places them back, therefore further emphasizing the size (Fig. 6). After having released the gesture (l. 91), the teacher gives a more technical term (i.e. 'strength', l. 92).

Ilona acknowledges the teacher's definition with a curt 'oka' as she erases something from her notebook (l. 94–95) and thus closes the sequence. The teacher, however, continues by explaining that to make a bigger wave more force is needed (l. 96–98). By explicitly assigning knowledge to Ilona/all students ('maybe you know this'), he invokes the students' first-hand experience of how it felt to make different sized waves with the slinky. At the end of the teacher's turn, Ilona stops writing, shifts her gaze toward him (l. 98) and nods twice in response (l. 99), thereby (minimally) affiliating with the explanation and claiming understanding.

The history excerpts come from a lesson where students are working independently and/or in their groups on a text on the Tudor period in England. In Excerpt 3, Susanna requests a definition of an unfamiliar expression she reads from the text (l. 1–2; also Temmerman 2009). Like Ilona in Excerpt 2, Susanna foregrounds the trouble source through the construction 'what does it mean that'. Akin to Llinares and Morton's (2010) findings on historical explanations, the teacher's response is accomplished through two explanation sequences: within the first, she clarifies the meaning of the whole expression (Excerpt 3a), while in the second she defines the concept of 'penknife' (Excerpt 3b).

Excerpt 3a: CLIL History2_Pick Your Teeth

```
1    Susanna   ↑what does it mean that +don't pick your teeth
                                        +SUSANNA READS FROM BOOKLET-

2              with your penknife or your fork+
               --------------------------------------+

3              (0.6) SUSANNA GAZE AT T
                     T STARTS TO WALK TO SUSANNA'S GROUP, GAZE AT HER

4    T         ↑jo[o
               yeah
                                                                  FIGURE 7

5    Susanna      [is it like they can't ^take *the#ir teeth* off^
                                               *SUSANNA PULLING GESTURE*
                                  ^T RH DIGGING GESTURE----------^
                                                 #Fig.7

6    T         >NO no< what's- uhh

               ((lines omitted))

14   T         .hh yea' it means *^if I had a (.)^
                                  ^T TAKES SPOON FROM COFFEE CUP^
                                 *SUSANNA GAZE TO T->>

15             uh ^fo:rk, or penknife, (.)
                  ^T STRAIGHTENS HERSELF AND TAKES

16             I- I would be eating,^
               STEPS AWAY FROM GROUP-----^

17             an' suddenly I would think                         FIGURE 8

18             ^@↑uhh: there's a- there's ~#something (there)@^~
               ^T LH INDEX NEAR MOUTH ON RIGHT SIDE#Fig.8-----------------^
                                              ~T LIFTS RH W/ SPOON NEAR LH~

19             ^oh pardon ^urhm uhrm hhh hehe
               ^T TURNS TO CLASS^T WALKS TO FRONT CENTER OF ROOM-

20             (>bu' not forgotten<) .hh then,^
               ---------------------------------------^

21             ^what I would do I would simply take
               ^T TURNS TOWARD SUSANNA'S GROUP->>
                                                                  FIGURE 9
22             an' ^st#art diggin'^ there at the dinner table.
                   ^T DIGGING GESTURE-^
                       #Fig.9

23             .hh would you love to: (.)

24             have so- somebody a visitor ^would come^
                                           ^T SPOON FROM RH TO LH^

25             an' say ^@↑uuh I think (I's got) (.)
                       ^T BRINGS RH NEAR MOUTH------------

26             ^I got a piece of meat ↓there.
               ^T ACTS IF FEELING SOMETHING IN MOUTH W/ RH INDEX AND THUMB-

27             *.hh I think I'll (.) ^dig it there.@^*
               ----------------------------^T RH DIGGING GESTURE^
               *SUSANNA SMILES---------------------------------*
```

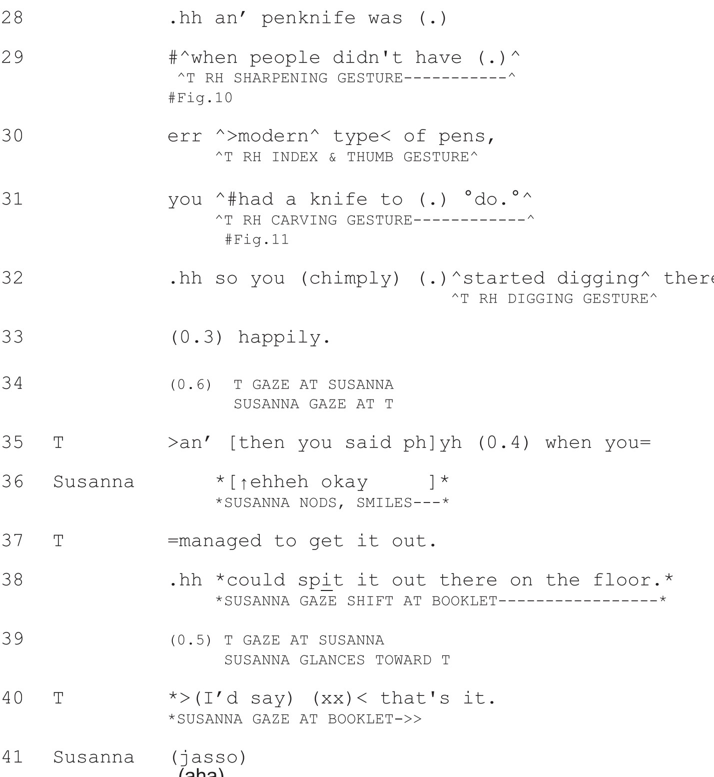
However, before the teacher begins her response (l. 4), Susanna offers a candidate understanding (l. 5). Simultaneously, she makes an iconic gesture of pulling teeth out (Fig. 7), thereby also manifesting her understanding through embodied means. The teacher also performs a gesture, an embodied enactment: she places her right hand next to the right side of her mouth and mimics the digging of teeth (l. 5). Her gesture thus functions as an 'embodied definiens' without accompanying talk. Although Susanna gazes toward the teacher, there is no visible reaction from her to the gesture. In line 6, the teacher rejects Susanna's candidate understanding, after which she initiates a repair sequence to check her hearing of the wording of the expression (lines omitted).

Having clarified the wording, the teacher launches the definition with the 'X means' format (l. 14). However, from there onwards, the definiens gets a story-like form where she describes a hypothetical dining scene. She adopts a first-person narrator view and pretends to be eating dinner with a fork or a penknife (l. 14–16). As she depicts the scene, she simultaneously reaches for a teaspoon that is in a coffee cup on the student's desk (l. 14). She then describes (l. 17) and acts as if suddenly realizing there is something stuck between her teeth (l. 18). As she talks, she first brings her left-hand index finger close to the right side of her mouth, and then places the spoon near the mouth (l. 18, Fig. 8). Here, she realizes that she is addressing only Susanna's group: she apologizes and moves to the front of the class (l. 19–20). This way the story is audible, and visible, to all students.

Next, the teacher continues how she, in her diner's role, starts digging teeth while everybody is watching (l. 20–22). Another embodied enactment of the action of digging accompanies her talk but this time she does an up-down twisting gesture with her right hand, twice, next to her mouth (l. 22, Fig. 9). Once finished, she lowers her hands. Then, she presents a hypothetical situation to students (l. 23–24), where a stranger comes to dine at their house and picks his/her teeth (l. 25–27). For the second time, the teacher adopts the diner's role and enacts the digging of teeth, in slightly larger up-down twisting motion, while describing the action (l. 27). As Belhiah (2013) suggests, the teacher seems to upgrade each successive enactment so that they are more visible and noticeable to the students and thus provide support for understanding the meaning of the target concept.

During the teacher's narration, Susanna not only listens to the teacher but also follows her with gaze (l. 14 onwards). When the teacher arrives at the end of the narration (l. 27), Susanna smiles, whereby she affiliates with the teacher's humorous explanation and displays understanding. Stepping out of her role, the teacher moves on to define 'penknife'.

Excerpt 3b: CLIL History2_Penknife



```
28              .hh an' penknife was (.)
29              #^when people didn't have (.)^
                 ^T RH SHARPENING GESTURE-----------^
                #Fig.10
30              err ^>modern^ type< of pens,
                    ^T RH INDEX & THUMB GESTURE^
31              you ^#had a knife to (.) °do.°^
                    ^T RH CARVING GESTURE------------^
                     #Fig.11
32              .hh so you (chimply) (.)^started digging^ there
                                         ^T RH DIGGING GESTURE^
33              (0.3) happily.
34              (0.6)  T GAZE AT SUSANNA
                       SUSANNA GAZE AT T
35   T          >an' [then you said ph]yh (0.4) when you=
36   Susanna        *[↑ehheh okay     ]*
                    *SUSANNA NODS, SMILES---*
37   T          =managed to get it out.
38              .hh *could spit it out there on the floor.*
                    *SUSANNA GAZE SHIFT AT BOOKLET-----------------*
39              (0.5) T GAZE AT SUSANNA
                      SUSANNA GLANCES TOWARD T
40   T          *>(I'd say) (xx)< that's it.
                *SUSANNA GAZE AT BOOKLET->>
41   Susanna    (jasso)
                 (aha)
```

FIGURE 10

FIGURE 11

The teacher begins with the 'X was' format, which is followed by an explanation of how during the Tudor period people had penknives instead of modern pens (l. 28–31). Interestingly, her definition of penknife is mostly built through the co-occurring gestures that provide relevant information about what is done to pens, i.e. they are sharpened (also Belhiah 2013). First, she enacts the sharpening of a pencil with a hand-held sharpener (i.e. rotates the pencil in the sharpener, l. 29, Fig. 10). Then she traces the shape of a pen(cil), with her right-hand index finger and thumb forming a narrow gap between them, as she brings up the idea of modern pens (l. 30). The rotating sharpening gesture together with the iconic representation of a modern pen(cil) advance the ensuing definition of penknife. As she says, 'a knife to do', she enacts a carving gesture (l. 31, Fig. 11). While the verb 'to do' does not specify what is done with the knife, her gesture manifests it: the gesture glides away along the tip of an imagined pen, thereby depicting how quill pens were sharpened. Thus, her talk provides the conceptual affiliate (de Ruiter 2000: 291) to the gesture that conveys the purpose of a penknife. To finish the explanation, she repeats that people dug their teeth happily in the middle of the dinner (l. 32–33) and that once the food was cleared it was spat on the floor (l. 35, 37–38). In overlap, Susanna reacts to the teacher's telling by laughter tokens, an acknowledgement token and by nodding (l. 36), thereby claiming understanding and affiliating once more with the teacher's humorous explanation.

In Excerpt 4, Inka requests the definition for another expression, 'three strokes of the cane' (l. 1). Akin to excerpt 3, the teacher's response consists of two explanation sequences, within which definitions of key words are embedded. In the interest of space, only the first is analyzed below.

Excerpt 4: CLIL History2_Three Strokes of Cane

```
1   Inka      what means (0.2) +three strokes (0.2) of the ↓cane+
                                +INKA READS FROM BOOKLET-----------------+

2             (0.5) INKA GAZE DOWN AT BOOKLET
                    T STANDING, GAZE TOWARD INKA

3   T         ↑o:↓::h↑ (.) you donno [what it's about (.) HEY=]

4   Susanna                          [jotai (0.2) (piiskua)   ]
                                      some         beating

5   T         =I have to explain to you. (.)

              ((lines omitted))

13  T         .h have to tell tha' a stroke is: uh ^(0.6)#^ (0.4)
                                                   ^T HITS POINTER ON LH^
                                                           #Fig.12

14            an' th- a cane^ is normally,
                           ^T GAZE TO POINTER, LIFTS IT IN

15            this could be a ^bit's #longer.=^
              FRONT OF HER W/ RH--^T LH TRACES LENGTH OF POINTER^
                                     #Fig.13

16            .hh an' have to explain my husband-err

17            he's err eh >older< an' he- .hh

18            he's still thu:h uh in England uhhm up-

19            to ni- uh ninetee:n seventies .hh

20            it was so that the pupils could be given cane

21            or punish°ing° .hh uhh

22            it's either [cane ^which is the (.)
                                ^T LH TRACES LENGTH OF POINTER--

23  Inka                  [piiskaa ((to Susanna))
                           beating

24  T         err st-^ long #stick. (.)^
              ---------^T LH TRACES LENGTH OF POINTER^
                             #Fig.14

25            an' it was used for ^(.) ↓beating.=.hhh^
                                  ^T HITS POINTER ON LH X 2^

26            ↑or then-uh even better one,

27            the one which my husband's relations got was

28            the .hh >cricket bat.< (.)

29            (0.6) INKA & SUSANNA GAZE AT T
                    T GAZE TOWARD INKA & SUSANNA
```

FIGURE 12

FIGURE 13

FIGURE 14

The teacher resolves Inka's understanding problem by first clarifying the lexical meaning of the two nouns, 'stroke' and 'cane'. The former she defines through the 'X is Y' format (l. 13). Yet, instead of providing a verbal definiens, she hits her hand lightly with a pointer, thereby producing an embodied definiens through an embodied completion (Olsher 2004, Fig. 12). Then she defines 'cane' with a similar formulation ('cane is', l. 14). As the teacher talks, she lifts the pointer in her hand and gazes at it (l. 14–15). The gaze both directs students' attention to it and helps evaluate the pointer as she comments on its shortness (l. 15). The words 'bit's longer' co-occur with an environmentally coupled gesture that traces the length of the pointer (Fig. 13). The latter definition thus comprises a description of one characteristic of a cane (i.e. its length) that is visualized through the comparison to the canonical classroom object and the gesture around it.

Next, the teacher unravels the meaning of the historical concept of 'three strokes of cane' by invoking her husband's school experience in the UK (l. 16–20). She defines the expression 'given cane' through a synonym: *or punish°ing°* (l. 21). Inka registers it by whispering loudly its gist in Finnish to Susanna, her neighbor (l. 23).[5] However, the teacher seems not to orient to this, as she elaborates that punishment could be given with two instruments. It is only here that the teacher explicitly defines cane as a 'long stick' (l. 22, 24). Again, two successive gestures that trace and go beyond the tip of the pointer accompany the verbal definiens (Fig. 14). Likewise, only now does the teacher explicate through another synonym that 'giving cane' means *beating* (l. 25); the verb is coupled with two hits of the pointer on the teacher's left hand. An or-formulated explanation follows that elaborates her husband's and his relatives' school experiences and in which she brings up the other instrument used for punishing: the cricket bat (l. 26–28). The excerpt continues so that Inka receipts this information through a slight frowning of eyebrows, while Susanna looks slightly astounded, as the teacher defines a cricket bat through its shape and texture and explicates the reasons for punishment.

6 On the Similarities and Differences of the Teachers' Multimodal Definitions

In comparing the teachers' definitional practices, it becomes clear how the concepts on the one hand are defined through similar kinds of practices, while on the other hand quite divergent resources are used. The following digests the findings by focusing on the verbal, embodied and material resources teachers utilize in 'doing definitions'.

A key observation on the teachers' practices is that the definitions are not constructed as canonical formal definitions (also Dalton-Puffer 2013: 132, 137–38,

[5] In fact, Susanna whispered the same candidate meaning in Finnish to Inka already in line 4, but it remains unclear whether Inka heard it, as she does not register it in any way.

2016: 36) in the analyzed sequential context. Rather they unfold through multi-unit turns that attend to the understanding problems students have conveyed, as locally emergent responses. The canonical question format of the students' requests – i.e. 'what does it/X mean (that)' – influences the design of the teachers' responses in that they are produced with the 'X/it is/means Y' form. As such, this study underscores Markee's (1994) finding that the sequential placement of the definition influences its linguistic form. Moreover, the definitions are realized as different kinds of semi-formal definitions (e.g. 'amplitude is this', 'cane which is a long stick'; Dalton-Puffer 2007, 2016; Flowerdew 1992). The differentia, if provided, are produced in a separate turn unit, as a contingent response to students' claims of understanding ('okay'), or lack of therein. For instance, in Excerpt 1, the physics teacher provides the differentia, but through an elaboration that highlights the generality of 'proportionality' in physics instead of its particularity. The generality is further highlighted with the gesture ensemble which is a modified repetition of a similar gesture ensemble he has used earlier in defining 'proportional' (see Kääntä et al. 2018).

Overall, the teachers' definitions display that they orient to the students' understanding problems as both a vocabulary and a conceptual issue (also Escobar Urmeneta and Evnitskaya 2014; Morton 2015). In the analyzed excerpts, the former tends to be resolved first, most likely because the lexical-semantic features of the target concept provide a primary resource for the structural design of the definition (Mazeland & Zaman-Zadeh 2004: 154). Thus, a shared feature in the definitions is that the teachers produce semantic definitions by giving translations (Excerpt 1a 'it's suoraan verrannollinen') or synonyms (Excerpt 1b 'proportional' → 'straight line relationship', Excerpt 4 'cane' → 'stick', 'given cane' → 'punishing'). Thus, as have been shown for explanations in CLIL lessons (also Dalton-Puffer 2007; Escobar Urmeneta and Evnitskaya 2014), definitions are also predominantly designed through similar practices. A crucial difference is in the teachers' use of everyday vocabulary versus subject-specific terminology. The physics teacher's translations and synonyms offer students technical equivalents, in either Finnish or English, whereas the history teacher deploys everyday words. Yet, when the physics teacher's definitions are designed through paraphrases, he first employs everyday words (Excerpt 2 'amplitude' → 'the size of the waving'), after which he provides a more technical term ('strength'), or vice versa. To that end, both employ everyday and specialized vocabulary in ways that make the defined concepts accessible to students (also Escobar Urmeneta and Evnitskaya 2014). A noteworthy point is that both teachers reformulate the definiens so that each reoccurrence is realized differently either through everyday words or an alternation of everyday and subject-specific vocabulary, including equivalent (scientific) translations.

Interestingly, the definiens in both teachers' definitions is accompanied by embodied and material actions, each contributing in different ways to clarifying the meaning of the target concept. The physics teacher recruits the inscriptions and drawings on the board in ways that his embodied actions help address the conceptual basis of the students' understanding problems. The ostensive definition gesture toward the graph while he says 'straight line relationship' directs the students'

attention to the graph and thereby invokes their first-hand experience of the concept in practice (Kääntä and Kasper 2018). In Excerpt 2, the gesture together with the drawing of the wave create a visual definiens, and alongside talk, serve to define the concept of amplitude. In contrast, the history teacher's gestures are mostly iconic,[6] and they are either accompanied by talk or produced in lieu of talk. In Excerpt 4, the teacher defines 'cane' through descriptions that focus on the size and shape of the defined object (also Dalton-Puffer 2016: 38). Her verbal descriptions (i.e. 'bit's longer', 'long stick') and the co-occurring gestures invite students' attention to the pointer and help them visualize the key characteristic of the defined objects viz. the pointer. In addition, she defines the target concepts either through an embodied definiens (Excerpt 4 'stroke' → hits her hand with the pointer) or enactments (Excerpt 3a 'pick teeth' → gestures digging teeth). The latter – as part of the story that she recites – parallel scene enactments that involve dialogic narration through which teachers explain unfamiliar vocabulary in the L2 classroom (Waring et al. 2013). Her definition of 'penknife' (Excerpt 3b) differs from the others in that her talk provides only the frame for the meaning, while her gestural enactments (sharpening a pencil with a modern sharpener vs carving a quill with a knife) clarify its meaning, both semantic and conceptual.[7] What is crucial, however, in both teachers' embodied practices is that they are "precisely timed to accompany the verbal elements of the turn" (Kääntä et al. 2018: 703), whereby they form an integral part of the definiens, i.e. are produced as multimodal packages.

A notable difference in the teachers' multimodal definitions is the role the material ecology plays in how they unpack the meaning of the target concepts. As mentioned above, the physics teacher utilizes the inscriptions and drawings he has written/drawn on the board during the hands-on experiments or the plenary lecture. In this way, he can contextualize the definitions within the concrete activities and discussions the class has had, either on that day or during previous lessons (also Morton 2015). The history teacher exploits the objects that are available in the setting, i.e. a teaspoon and a pointer, and recruits them for symbolic representations, i.e. as penknife and cane. Their symbolic task is crucial in the narratives she constructs as they help visualize the objects and/or activity involved with/in the concepts. The fictional narratives, somewhat atypical of the subject-specific language of history (cf. Llinares and Morton 2010; Llinares et al. 2012), also help contextualize the definitions. In Excerpt 3, the historical concept of 'penknife' is clarified through her gestural enactments and the story of how people in old times used to pick their teeth with it while having dinner as opposed to modern table manners, which are implied via the story. Its definition is thus different in that the teacher not only provides a semantic meaning, but also offers socio-cultural information to the students about table manners in Tudor time and thus draws on students' general

[6] This is not to say that the physics teacher does not use iconic gestures. He does but not in these sequences.

[7] The reason why the teacher does not verbally explain 'penknife' cannot be explained. Naturally, one can speculate that she is not capable of doing it in English, and thus she uses gestures to compensate her lack of L2 vocabulary, as suggested by Evnitskaya (2012).

knowledge of life. The invoking of students' own experiences, albeit in different temporal scales, is thus a practice that both teachers engage in when defining the target concepts.

The final observation relates to the structural organization of the teachers' responses. As was mentioned, the physics teacher produces the definition through different turn units, one of which consists of the definition proper (Excerpt 1b, l. 64–65; Excerpt 2, l. 89–90) and another elaborates it through an explanation by providing the differentia (Excerpt 1b, l. 80–84; Excerpt 2, l. 96–98). Between these turns, he creates space for students' displays of understanding that further guide the design of his response. In contrast, the history teacher builds the responses through multi-unit explanations, in which the definitions are embedded (Excerpt 3b, l. 28–31; Excerpt 4, l. 21–22, 24). She appears not to wait for students' displays of understanding, although they manifest it in different ways as the explanations unfold. Interestingly, as both build their responses through multi-unit turns, both also provide more information to the students than what their requests make relevant,[8] thereby orienting to making the concepts more accessible to the students.

7 Conclusion

This study set out to explore how the theoretical concept of CDF by Dalton-Puffer (2013, 2016) can be traced and observed in teachers' and students' interactional practices in the classroom, i.e. to test it empirically by using the methodological tools of CA. It has done this by focusing on an under-researched topic in CLIL, i.e. on teachers' definitional practices from a multimodal viewpoint. One of its aims has been to describe not only the differences in the teachers' practices in the two subjects but also potential similarities. In so doing, the study has provided empirical evidence and contributed to our emerging understanding of what subject-specific language consists of when the focus is on classroom interaction (also e.g. Llinares and Morton 2010; Morton 2010; Nikula 2012, 2015). Another aim has been to approach the notion of AL as an academic discourse practice (see Heller and Morek 2015). This means that the teachers' definitional practices are contingent, locally situated accomplishments that gain their meaning and design from the temporal, sequential and multimodal organization of the unfolding interaction. They are context-sensitive and recipient-designed in ways that help teachers contextualize the meaning of the target concepts to students, and thereby make the conceptual field related to the lesson's topic accessible to them. The study has thus provided new insights on the relationship between content and language in L2 teaching (also Escobar Urmeneta and Evnitskaya 2014; Morton 2015; Morton and Jakonen 2016)

[8] I am grateful for Jan Berenst for pointing this out when I presented a version of the paper in the ARTE symposium in Hanover, 2017.

and on how the lexico-grammatical features of definitions are intertwined with teachers' embodied and material actions, or occasionally replaced by them. It has also shown how definitions are in different ways embedded in the teachers' response turns and interlace with other CDFs such as explanations and descriptions.

In terms of the second aim of the study, what it means in practice to use the pedagogical 'reflection tool' is outlined through specific steps in the section on pedagogical implications. What this study has demonstrated in view of it is how the focal phenomenon is selected so that it is comparable in and across different subjects. From a CA viewpoint, the key aspect is to choose an interactional sequence and/or social action that occurs in all the lessons one is observing. Here, the teachers' definitions offered an identifiable and comparable social action that occurred in a specific sequential position, as answers to students' questions.

Yet, when one critically reflects on the comparability of the focal segments from a broader perspective, two issues emerge that potentially affect the teachers' practices. The first issue has to do with lesson activities. Namely, the lessons are quite different in that the physics teacher lectures considerably more than the history teacher, and thus the concepts for which students request clarifications are often on the blackboard or in the teacher's talk. In the history lessons, students do many task-based activities in groups so often the concepts and expressions to be defined are in the texts that students use. For this reason, the physics teacher can harness the inscriptions and drawings as well as the hands-on experiments the students have done in his definitions, while the history teacher utilizes other means, e.g. recruits different artefacts for symbolic representations. In fact, this difference in the location of the definable items is also reflected in the way students design their requests, e.g. in how they highlight what the problematic item is.

The second issue relates to the target concepts. In physics, they are part of the subject-specific lexicon, and thus straightforwardly categorizable as scientific concepts. The definitions the teacher produces are 'technical' (Wignell 1998) in that they clarify not only the lexical but also the conceptual meaning of the target concept in a way that highlights their scientific nature, e.g. by contrasting the everyday word 'size' with its technical counterpart 'strength'. In contrast, in the history lessons, the target concepts are everyday expressions, although with historical connotations (i.e. 'cane', 'penknife'). Yet, the way the teacher defines them creates a sense of technicality for them (Wignell 1998) since they are treated as historical concepts, explainable from a historical perspective. The teacher does not settle for clarifying their lexical meaning; rather she also provides socio-cultural information that helps students understand the historical perspective. The narrative format further underlines this.

Overall, this study has illustrated how its findings and the comparative practice of viewing and analyzing videos, together with transcripts, serve as a basis for pre- and in-service teacher training. Naturally, the transcripts when used for pedagogical purposes do not have to be as detailed as above: the level of detail can be adjusted according to how familiar practitioners are with CA. For instance, the simplest

transcripts can contain words only, and when practitioners' understanding of CA is more developed, more features can be added into them. The key is always to view the videos and the transcripts together to gain an understanding of teachers' and students' actions, perhaps with VEO (see next section) or any other application meant for such purpose.

Because classroom interaction is a contingent product of teachers' and students' displayed intersubjective understanding, and as such varies from lesson to lesson and activity to activity, the pedagogical reflection tool is not meant to provide 'recipes' of how things ought to be done. On the contrary, the study has demonstrated how situated *and* recognizable teachers' definitional practices are. As Dalton-Puffer (2016: 31) argues, CDFs provide "patterns and schemata of discursive, lexical and grammatical nature which facilitate dealing with standard situations where knowledge is being constructed and made intersubjectively accessible". Since definitions are part of each subject lesson, and thus a standard situation, teachers' definitional practices are transportable and adaptable to different subject lessons. The key issue is to make CLIL teachers realize that being more aware of the role language plays in content learning and bringing this explicitly to students' attention "is not an extra demand on them but rather something they already orient to in classroom interaction" (Nikula 2015: 25).

8 Pedagogical Implications: Instructions for the Pedagogical 'Reflection Tool'

The pedagogical 'reflection tool' described in this chapter is meant to provide you, whether you are a pre- or an in-service teacher, ideas on how to become aware of the role of (subject-specific) language in content teaching. As stated, the tool is not meant to provide recipes of how, for instance, definitions are performed by teachers in different subjects; rather it aims to show the range of practices used and how their multimodal configuration depends on the temporal and sequential organization of the emerging interaction and the material ecology of the setting.

Having said that, there are specific steps that you need to take before you can begin to reflect on how language and other multimodal resources are used to teach content in different subjects. These steps are outlined in the following and as you can see, quite a lot of work goes into getting the 'tool' established. However, eventually, I believe that the learning process is rewarding and has immediate effects on your teaching practices.

1. Video-record 2–3 lessons per subject, whose language use you are interested in. If possible, record each lesson with several cameras and voice-recorders to capture as much of the participants' talk and bodily-visual actions. If you use the

VEO app (see below), then use several ipads. Remember to ask for permission from the participants.

2. Watch the videos several times and make notes of the phenomenon that catches your attention. This does not have to be definitions, it can be one of the other CDFs Dalton-Puffer (2013, 2016) has identified, or any other pedagogical action. The basic premise is that you narrow your focus to **a** phenomenon so that your task is not overwhelming.
3. Once you have identified the focal phenomenon, e.g. classifying, you start to note down more specific things about it. These include:
   (a) who does the classifying – is it the teacher or a student/students,
   (b) how is the classifying done – how are language and other resources used,
   (c) in what phase of the lesson and during what kind of classroom activity the classifying is done, and finally
   (d) in which sequential position is the classification produced – is it a first pair-part (FPP), e.g. a teacher's question or a student's request, or is it a second pair-part (SPP), e.g. a student's response to the teacher's question.
4. Most likely, after you have reached this point, you have plenty of instances to build a collection of classifications. The key is to narrow down your focus once more. As described in the chapter, to be able to compare classifying in and across subjects, you need to focus on a specific action in a specific sequential position that is present in all the recorded lessons. This can be students' understanding requests that classify a phenomenon (FPP) and the teachers' responses to them (SPP). Or it can be students' classifications as responses (SPP) to teachers' questions (FPP). Whatever phenomenon you choose, this is the point to transcribe in necessary detail the participants' actions.
5. Once you have transcribed them, you meticulously analyse the instances, one subject and one lesson at a time. As you get further with the analysis, you start seeing the similarities and differences in the participants' practices. After this, it is time to reflect on how you could use this knowledge in your own teaching.

To help you make detailed enough notes of the participants' practices and to keep track of them, it is helpful to use an annotation tool. One such audio-visual tool is the VEO app (Video Enhanced Observation, www.veoeuropa.com) that has been developed for teacher training and professional development. The app allows you both to record the lesson and to tag and label different actions the participants do during the lesson (see Sert 2019, this volume). If you cannot get access to such a tool, then writing notes, transcribing the data and labelling each occurrence manually in a text editor is also manageable.

Acknowledgements I am grateful to Christiane Dalton-Puffer, Numa Markee, and the anonymous reviewers for their critically constructive comments that helped me improve the study. I am also indebted to my co-authors, Gabriele Kasper and Arja Piirainen-Marsh, as this study was inspired by our joint work. My thanks also goes to our research assistant, Neea-Stiina Urpilainen, for her editorial assistance. Finally, I thank the Academy of Finland for funding my postdoctoral project (2014–2017, no. 274539), during which this study was carried out.

Appendix 1: Multimodal Transcription Conventions and Shorthand

The conventions for marking participants' embodied actions are adapted from Mondada (2016). Different symbols indicate the timing and duration of a participant's bodily or material action. For example:

`^T GAZE AT BB---^`	shows the beginning and ending of teacher's gaze toward the blackboard and its duration in relation to ongoing talk.
`^T GAZE AT BB-->`	single arrow indicates that the action continues until the next symbol
`^T GAZE AT BB->>`	double arrow indicates that the action continues beyond the extract

Figures are indexed to the participants' talk by a hash (#).

The used shorthand includes the following:

BB	blackboard
RH	right hand
LH	left hand
BH	both hands
ST.	students
w/	with

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Tracing Teachers' Ordering Decisions in Classroom Interaction

Yo-An Lee

Abstract While discourse studies have uncovered regular structural patterns in classroom interactions, these patterns are often the result of interpretive decisions teachers make in performing various pedagogical actions. Notably, however, teachers' instructional decisions often stretch beyond topical boundaries and are thus not limited to the current topics of their instruction. To capture teachers' instructional decisions, it is necessary to trace the trajectories of interactional sequences in their entirety. This manuscript offers descriptions of these instructional decisions based on three data sets collected from an ESL composition course and two EFL content courses. The findings elucidate the processes in which classroom teachers make ordering decisions regarding when and how to discuss particular content knowledge. Teachers often enact these ordering decisions through topic shifts, which changes the direction of interactional trajectories. Tracing these sequences offer descriptions of the pedagogical practices teachers deploy that are illuminating for practitioners who have eyes for such practical details.

Keywords CA for SLA · Sequential ordering · Sequence organization · Language moment · Topicality · Topical coherence

1 Introduction

Conversation Analysis (CA) has been successful in developing detailed analytical descriptions of interaction processes across a wide range of routine institutional practices (Heritage and Clayman 2010a) from emergency service (Raymond and Zimmerman 2007; Whalen and Zimmerman 1998), doctor-patient interaction

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_11

(Maynard 2003; Stivers 2007), and trials examination (Atkinson and Drew 1979; Goodwin 1994) to classroom teaching (Sert 2015; Waring 2016). The question is, how can we represent these work-practices, informatively, without compromising the descriptive precepts that have made the CA enterprise so successful over the years? In what ways can these practices be specified and explicated to inform even those who are not familiar with CA's sequential analytic conventions? While a number of CA researchers have endeavored to describe teaching practices in classroom contexts (e.g., Lee 2006b, 2010; Seedhouse and Walsh 2010; Sert 2015; Walsh 2006; Waring 2016), are there ways to describe teacher's work-practices in such a way to instruct professionals in the field?

In applied linguistics, discourse studies have focused on revealing structurally regular features in classroom interactions, such as the three turn sequence-represented as either Initiation-Response-Evaluation (IRE) or Initiation-Response-Feedback (IRF)(Lee 2007; Macbeth 2003; Mehan 1979; Sinclair and Coulthard 1975; Wells 1993) or instructional repairs (Hosoda 2006; Kasper 1985; Seedhouse 2004). These structural features are often regarded as representing routine teaching work-practices that indicate the nature and quality of teaching (Barnes 1982; Mehan 1979; Nassaji and Wells 2000; van Lier 1998).

However, these structural patterns do not explain all classroom interactions. The parties' interpretive actions are often parts of broader organizational sequences; their contingent choices in interaction often influence those turns beyond current topical boundaries. For this reason, sequence organization can be used to identify the process by which participants assemble the individual turns into extended stretches of coherent talk (Markee and Kunitz 2015). In his book on sequence organization, Schegloff (2007) discussed the need to describe such extended sequences as follows:

> What is at issue here is a course of conduct being developed over a span of time (not necessarily in consecutive sequences) to which co-participants may become sensitive, which may begin to inform their inspection of a next sequence start to see whether or how it relates to the suspected project, theme, stance, etc. (244).

To shed light on teachers' instructional actions in classroom settings, we need to examine extended sequences so that we can trace the interpretive choices classroom teachers make and determine how these choices impact their instructional sequences. From these organizational sequences, it is possible to identify the action and activity trajectories that constitute routine practices of teaching in their classrooms.

In examining instructional sequences, the present study pays particular attention to the ordering decisions that classroom teachers make in their lessons. Here, ordering decisions refer to teachers' interpretive choices in shifting topical talk from ongoing conversation; teachers shift their interactional foci from one topic to the next in the course of interactions. These shifts are akin to topical shifts in topic management (Crow 1983; Jefferson 1993), whether they involve moves to new topics or shifts in emphasis within given topics (Clift 2001; Wong and Waring 2010). These shifts are likely to reflect the contingent decisions made by teachers regarding

what to discuss and when to move from one topic to the next. These decisions are contingently made in relation to students' responses in the course of interactional exchanges.

While each new topic shift engenders a different interactional trajectory than preceding topic shift, these decisions are far from random. Rather, they reflect rational actions designed to steer conversation in directions that teachers see as relevant or useful in the evolving sequences. Thus, the analytic task is to trace what prompts these changes, how the changes develop, and how they influence subsequent turns.

The present study traces these ordering decisions in two EFL content courses at a university in South Korea and one in an ESL context in the US. These ordering decisions often extend across various topical boundaries, which makes it necessary to trace multiple exchanges of turns to identify the processes that lead to the shifts and their consequences. Specifying teachers' moves this way makes work-practices of teaching informative and visible to practitioners.

2 Literature Review

2.1 Structural Regularities and Teacher Pedagogical Actions

One key finding of classroom studies is the presence of structural patterns that regularly manifest in teacher-fronted settings-namely, the three-turn sequence represented through initiation (I), response (R) and evaluation (E). Researchers have regarded the IRE sequence as capturing the organizational features of the questioning sequences classroom teachers employ to assist students in processing target content knowledge (Mehan 1979; Sinclair and Coulthard 1975; Thoms 2012). Noting the prominence of these sequences in classroom contexts, many researchers have commented on the role and effects of the IRE format, contending that it prevents students from developing more complex ways of thinking and communicating (Barnes 1992), negotiating the topic or the direction of conversations (van Lier 1998) and responding meaningfully to their teachers (Nassaji and Wells 2000). This line of research has treated the IRE sequence as something that highlights underlying forces that may determine the nature and scope of classroom interaction.

Note, however, that the IRE sequence can be an important analytic resource for tracing turn-by-turn progressions in classroom teaching. Its presence alerts analysts to the progression of interactions sequentially and thus helps them discover the methods and choices participants deploy within given structural parameters. For example, a delayed second turn answer by a student may prompt the teacher to respond differently in her third turn by repeating or reformulating questions (Lee 2007; Macbeth 2004; McHoul 1990; Payne and Hustler 1980). In this way, IRE can illuminate the parties' orientation to the relative positioning of the talk and actions

it enacts. As Wells (1993: 3) noted, IRE is therefore "neither good nor bad; rather, its merits- or demerits- depend upon the purposes it is used to serve on particular occasions, and upon the larger goals by which those purposes are informed" (Wells 1993: 3). A number of researchers have examined these relationships in various instructional settings (Lee 2006a, 2007; Macbeth 2003; Waring 2009; Zemel and Koschmann 2011).

Given the inextricable link between structural patterns and the content matters enacted in IRE, the analytic task to pursue here involves clarifying how pedagogical actions are embodied and enacted in these structural patterns. Teachers accomplish pedagogical actions through series of contingent interpretive choices within IRE sequences (Lee 2007, 2008) by, for example, initiating questions, dealing with silent turns, recognizing assumptions and correcting errors; each of these series of choices may have some recognizable purposes.

To capture teachers' interactive choices, I contend that analyses need to trace pedagogical sequences in their entirety, not just focus on a few snippets of turn exchanges (Lee 2015). Teacher's instructional decisions frequently extend beyond current topical boundary, often reinserting prior topics in the sequences, while at times projecting and intimating what is to come. Teachers often navigate through these complex tasks in various ways based on the contingencies of the ongoing sequences arising from the interactional exchanges (Heath and Button 2002).

2.2 Topic Shift and Topical Coherence

In classroom interactions, classroom teachers generally manage topics through extended sequences in which they initiate, develop, and finally close the topics. In so doing, they maintain topical coherence, which has the effect of keeping their students on task. Sacks (1978) raised the issue of topical coherence, noting that turns in stories are sequenced for particular purposes. Each utterance in storytelling is not a disparate utterance but part of the evolving whole.

In contingent interaction, however, maintaining topical coherence requires interpretive work because topic shifts often occur, particularly at the margins of topics (Wong and Waring 2010). Topic shifts can occur gradually through step-wise processes in which speakers gradually disengage from prior topics by "linking up whatever is being introduced to what has been talked about" (Jefferson 1984: 198). The following excerpt is a case in point.

Excerpt 1

01 A: And she jus:t gr:abed her by the ha:nd when she

02 got through with it It was:: (0.4) it= n

03 =[was rea:lly ? Oh it]( )

04 P: [?Oh::: that's]

05 (0.3)

06 A: one of the most thri:lling, programs I know I've

07 ever (0.6) been to [( )

08 P: [Well it had a ni:ce writ:e up in

09 the paper [too

10 A: [Yeh I noticed [that

11 → P: [Well that's good .hhh well?

12 → LI:STEN uh- ? Tuesday ni:ght we're starting

13 that Mother's Club bit again at the church.

(Modified from Jefferson, 1993, p. 9-10).

In the excerpt, the speaker uses "well, that's good .hh well?" to assess the previous topic raised by A. This assessment serves as the pivot from which the next topic is drawn by P saying "LI:STEN." This gradual shift reveals the process through which the participants maintain topical coherence by relating one story to the next in the course of the interaction.

Topical shifts can occur disjunctively when the move toward a new topic is not tightly fitted to the current topic. These disjunctive shifts are often indicated by such remarks as "actually" "one more thing" "you know what?" or "by the way" (Crow 1983). Notable here is that topic shifts can occur within a topic, changing into one aspect of the topic (Clift 2001). In the following segment, one of the participants (Alice) shifts to one aspect of the topic that had been described by Mike. The excerpt is about the practice among eighteenth-century upper-class women of drinking hot chocolate in church.

Excerpt 2

11. Mike: and some would have their- their servants to (.) rush into

12. church during the- just before the se:rmon with their fix of

13. chocolate.

14. (2.0)

15. Gus: [that's right and then-

16. Mike: [(and nobody seemed) to object.

17. Gus: then a bit of laudanum a:fterwards,

18. (1.5)

19. Gus: huhhuhhuh

20. Mike: that's right, yeah yeah that's [true yes.

21. Gus: [then the men- the

22. men had chocolate (1.0) lauddanumsnuff:::.

23. Harriet: hehehe

24. (1.0)

25. →Alice: *Actually* why are the la::dies there, cus I- (found most)-

26. (2.0)

27. Mike: I suppose the men stu- [stuck to bee::r I don't know.

28. → Alice: [I don't know if this is just me, but

29. I think girls are more addicted to chocolate than (.)

(Clift 2001: 282 cited in Wong and Waring, 2010: 119)

Alice's turn begins with "actually," marking a topic shift, and is followed by the discussion of chocolate addiction. While there seems to be a disjunctive shift from the prior discussion of eighteenth century women, the conversation remains focused on the idea of chocolate and women. This turns out to be a shift within the general topic Mike had been discussing.

Overall, research into topic shifts has demonstrated that potential tellers and their interlocutors orient toward topical coherence by relating to ongoing stories or by marking shifts if they involve disjunctions. The question is how classroom teachers maintain topical shifts in their talk exchanges with their students. Classroom interactions are contingent upon unpredictable and thus improvised interpretive work; after all, students' responses to their teachers' initiating actions can be diverse.

2.3 Teachers' Ordering Decisions

Teacher-fronted discussions in classroom contexts often involve multiple series of step-by-step interactional exchanges that lead students to particular content knowledge (Roh and Lee 2018). Decisions about what to address are often prompted within the course of the interactions, which can lead to shifts in the direction of subsequent exchanges. Teachers do not make these decisions randomly, however. These decisions take into account the various assumptions, concerns, dilemmas, and problems the teachers observe in the course of the interaction.

In classroom settings, teachers are generally considered the primary knowers of the target content. Accordingly, they have the authority and means to initiate, discuss or even revise the content. This highlights the relevance of epistemic status (see also Can Daşkın this volume; Evnitskaya this volume; Musk this volume; Sert this volume) among teachers and students, which is variably recognized and manifested (Heritage 2013 but also see Lynch and Macbeth 2016). While recognition of epistemic status in classroom interactions may create a sense of knowledge asymmetry with teachers being in the know, many factors defy this binary rendering of who has or does not have relevant knowledge. In fact, several studies have found that knowledge asymmetries were not inherent to participants' states of knowledge; instead, they were occasioned and constructed in the course of action sequences (Park 2007; Sert 2013). Even when teachers know the target knowledge, there are many things they may not know in advance; for example, they may not know what knowledge the students have or who will respond to their questions and in what manner (e.g., promptly, reluctantly or not at all, to name a few). In other words, there are contingent factors or issues that impact how teachers may address the target knowledge (Koole 2010; Lee 2015; Sert 2013; Sert and Walsh 2013).

It is particularly important that classroom interactions oblige teachers to come to terms with the incorrect, inadequate or insufficient knowledge students may display. Such interactions have been classified as *trouble shooting procedures* (Aston 1986) in which teachers identify areas that require corrective actions (Gass and Mackey 2006; Long 2007; Lyster 2001). However, managing target knowledge in interactions is a complex matter. Koole (2010), for example, differentiated teachers' questions based on whether they called for displays of understanding or displays of knowing. The first may require claims of understanding whereas the second involves demonstration of understanding, and these different displays produced

different sets of interactional opportunities in subsequent turns. Sert and Walsh (2013) found that teachers made different choices when dealing with insufficient knowledge; they either opted to move interactions forward for the sake of "progressivity" of interaction or pursued clarification to accomplish *intersubjectivity* (for information on the distinction between these two concepts, see Heritage 2007: Stivers and Robinson 2006).

These studies illustrate how the need to manage numerous topics is part of classroom teachers' instructional work. Teachers often need stretches of exchanges to identify and address any problem. In examining action sequences, therefore, it is important to analyze the issues that the teachers face and how they deal with them interactionally. In an examination of an ESL composition course, for example, Lee (2015) analyzed a long stretch of interactional exchanges in which a teacher dealt with the conflicting knowledge bases to which her students subscribed, which differed from the source text.

Of particular interest is when teachers change the directions of sequences through topic shifts. In such instances, teachers are making contingent decisions about what knowledge has to be addressed first, what needs to come later, how that knowledge should be presented, and how to address any problems that arise. To capture this process, we need to identify the shape and trajectory of interaction (Schegloff 2007) in their entirety.

This paper presents three sequences of classroom interactions in which the teachers shift the interactional trajectories during the interaction. The teachers' ordering decisions reveal their assumptions, concerns and/or problems related to the students' understanding of the target knowledge revealed in the course of interactions. These shifts were designed to maintain coherence and order so that each series of turns are meaningfully connected to the prior and subsequent series. Tracing these sequences, therefore, reveals the professional teaching work-practices that are routinely observable in classroom interactions.

3 Data and Methods

This chapter examines three long excerpts of classroom interactions in which teachers make ordering decisions in teacher-fronted discussions in college courses. These excerpts were selected for their telling quality (Mitchell 1984) in demonstrating how teachers' contingent decisions are consequential in subsequent turns. The three excerpts show, in different ways, the processes through which classroom teachers make contingent ordering decisions that shift the foci of interactions and thereby reflecting distinctive rational actions. While these excerpts do not represent the whole spectrum of ordering decisions, they are sufficient to illustrate types of contingent choices that classroom teachers routinely make.

The first excerpt is from an ESL class at a US university while the other two excerpts come from content courses in EFL settings in Korea. The ESL data were

taken from a speaking course that included 17 international students from South Korea, Japan and Saudi Arabia. The teacher was a female doctoral TESOL student with several years of teaching experience both in the US and abroad.

The EFL excerpts were selected from an Eastern Philosophy and Business Communication course at a Korean university. The business course was an undergraduate course in which English was the primary medium of instruction. The instructor had diverse experience as an editor for an English newspaper, a business executive, and college professor with several years of teaching experience at the university level. Eight students were enrolled in the course. Eastern Philosophy course was an English mediated course with a focus on major Eastern Philosophies such as Confucianism, Taoism and Buddhism. A total of 16 Korean students and two international students from the Philippines were enrolled in the course. The instructor had received a doctoral degree in Chinese Philosophy from a US university and had 10 years of teaching experience at the university level. The Korean students' English proficiency was relatively low and they were therefore allowed to use Korean in class, which the teacher translate into English during the discussions.

Ten two-hour class sessions from the ESL course were video-taped and transcribed for analysis. For each of the two EFL content courses, three 75-min class sessions were taped. Written consent forms permitting the use of data for research purposes were obtained from all participants including the three instructors and their students. The collected materials were transcribed according to CA's analytic convention (Heritage and Clayman 2010b; Jefferson 1984). These transcripts serve as technical resources to retrieve the interpretive actions the participants display to one another (Lynch 2011).

4 Analytical Exhibits

4.1 From Content to Language

The first excerpt was taken from the transcript of an intensive ESL speaking course in the US. In this excerpt, the teacher goes through the written instructions for the final exam scheduled to take place in two weeks. Because this was a speaking class, the students were required to give 10-min presentations that involved teaching something to their classmates, such as how to prepare an ethnic dish, how to travel in Osaka or how to play soccer. Notable in the excerpt is how the students' silent turns (in lines 664 and 672) prompt ordering decisions by the teacher, which opens up a different interactional trajectory than what the teacher's initial question had projected.

Excerpt 3

660. T: Okay, so: that's the first thing, deci:de o:n the ta:sk, (.) so:,

661. make sure you are doing this. (.) second thing, analyze your

662. audience, what do I mean by this, analyze your audience,

663. what does this mea:n¿

664. (4.0)

665. T: Who is your au:dience gonna be, for this presentation,

666. S: ([   )

667. K: [Classma[te and the::

668. S?:   [◦Classmate◦

669. T: Good, (.) Okay¿ [so: (.) not just me: but all your classmates,

670.   [((pointing to her and then, the cohort))

671. (.h) no:w, what would you need to analyze,

672. (4.0)

673. → T: What- (.) what would you need- what does the word

674. analyze mea:n¿

675. (4.0)

676. → T: Do you know what this word means?

677. (3.0)

678. S?: ([ )-

679. W: [◦Consider?◦

680. T: Yeah,=

681. T: &Nodding

682. → K: =We know what that mean.

683. T: What does it mean?

684. (0.5)

685. K: The:: (0.5) make order, [and::

686. T: &Nodding

687. O: To tell [to::

688. T: &Turning to O and nodding

689. (2.0)

690. K: Step:s.

691. → T: Okay, so, what would it mean to analyze your audience,

692. (5.0)

693. T: Before you give a spee:ch to someone, what would you-

694. what might you want to know¿

695. (0.5)

696. T: Why would this be important,

697. K: Consider o:f (.) our audience.

698. T: Yeah, <u>consider</u> about- Okay- take some consideration (.h)..

The segment begins with the following questions in line 662–663, "What do I mean by analyze your audience" and "what does this mean?" These questions relate to the teacher's written instructions for the upcoming presentation.

This question, however, is met with silence from the cohort in line 664. In the third turn in line 665, the teacher reformulates her question asking about the possible audience for the students' presentations. This question involves an important ordering decision for the subsequent turn. First, it addresses only the "audience" part of the original question. Second, rather than asking what the word "audience" means, the teacher calls for a particular referent for the "audience" part by saying, "who is your au:dience gonna be, for this presentation"; this reformulation breaks down the original question into two parts while eliciting concrete referents. As a response to the silent turn, this question displays the teacher's sense-making work regarding what could be preventing the students from answering the questions.

Two students begin to answer in lines 667 and 668, and the teacher accepts and elaborates on their responses in her third turn in lines 669–670. In the next turn in line 671, the teacher moves on to the second part of the original question by asking "What would you need to analyze." Here again, the teacher calls for a concrete referent in the question rather than asking what the clause means. In the subsequent turn in line 672, however, the student cohort does not provide any answer and the teacher reformulates her question again in line 673. This revised question, however,

contains a series of repairs; the initial "what" is repaired to "what would you need-" and again to "what does the word analyze mean?"

In classroom research, repairs have often been classified into teachable and learnable objects (Kasper 1985; Lyster 2001; Morris 2002). The repairs here, however, indicate how the teacher heard the silent turn of the students. The first repaired phrase "what would you need" contains the previous question in line 671, thus addressing the content knowledge regarding "what analyze" means. However, the next repair "what does the word analyze mean?" projects a completely different possibility as it shifts the topical focus of the question from the question's content to a language issue. This shift indicates the teacher's interpretation that these students may not be familiar with the word. This shift seems to occur gradually, demonstrating the process by which the teacher comes to make important ordering decisions, first by realizing what has become problematic and then by acting on it accordingly.

To this question, the student cohort continues to remain silent in the next turn in line 675. Consequently, the teacher pursues the vocabulary issue further in line 676 by questioning whether the students know the word or not, as part of an epistemic status check (Sert 2013). With the teacher's encouragement, a couple of students respond by offering definitions of the word in lines 678–679.

Note, however, that in line 682, one student (K) responds with "We know what that mean." This answer is quite different from the previous two in line 678 and 679. It directly addresses what the teacher called for, namely, "do you know what this word means?" Up until this point, the teacher has shifted the direction of the interaction from a content matter to a language issue by calling for a definition of the word. K, however, tries to shift the topic back to the content matter by telling the teacher that the pragmatic sense of the word is what matters, not its definition; that is, K's answer was designed to problematize the teacher's ordering decision.

Notice also that K's remark is a claim of understanding (Koole 2010; Sacks 1992), not a demonstration of it. Therefore, the teacher pushes further, calling for a demonstration of that understanding in line 683, "what does it mean?" This pursuit results in a few exchanges in lines 685–690 in which the students demonstrated their understanding by offering answers. When the teacher has gathered enough responses, she goes back to her original question in line 691, thereby shifting the focus back to the content matter. This is another topic shift; this time, the teacher gradually returns to the content matter after first acknowledging the students' answers with "okay" and "so."

The whole series seems to be a side sequence that diverged from the main activity (Jefferson 1972). However, this sequence involves a series of contingent decisions by the teacher, shifting the directions of the exchanges from the content to a language issue and back to the content again. Each decision is prompted by the teacher's interpretive actions in response to what the students know and what is problematic. The teacher's ordering decisions are contingent on the students' actions, which she uses to make inferences about the students' knowledge of the word, and possibly their linguistic proficiency. These actions exemplify the types of routine interpretive practices that only become visible by tracing the sequential organization of classroom interactions.

4.2 *From Technical Concept to Vocabularly Issue*

The following excerpt presents a case in which a teacher makes a contingent decision regarding technical business terminology within a questioning sequence in a business course. This sequence shows the gradual manifestation of various teaching objectives during the interaction. The episode begins with a commentary by the instructor about a particular concept-namely, "goodwill."

Excerpt 4

100. T: Aha:: (.) o:n chapter thirty fi:ve,

101. (4.0)

102. T: aha:: (1.0) I have an ah- little bit interest o:n the: aha(h) (.h) (0.5)

103. your level o:f (0.5) aha: (0.5) acquaintance or knowle:dge (.h) ah:

104. (.) in the expression of goodwill, (.h) if you have taken (0.5)

105. → courses (.) o:f (1.0) aha: (.) accounting, (.h) goodwill, aha what

106. → kind of Korean expression do you us:e to indicate goodwill¿

107. (3.0)

108. T: It belongs to: (.) aha: one of the: <u>assets</u> (0.5) of the company.

109. S: Good-

110. (0.5)

111. T: Goodwill?

112. S: Goodwill?

113. T: Yeah↑

114. (4.0)

115. S: aha:: (.) in Korean, Jegongpoom^

offered good

116. T: Jegongpoom?

117. T: &Showing a surprised look on his face

118. (1.0)

119. T: Did you say Jegongpoom?

120. T: &Look at S
121. (2.0)
122. → T: Okay after reading it, we'll come back(h). ah: intangible assets.
123. (1.0) aha intangible asset^ (2.0) Eyjung^
124. E: Yeah¿
125. T: What is (.) intangible.
126. (5.0)
127. T: What is tangible then, hhhh hhh
128. (2.0)
129. T: hhh
130. (2.0)
131. T: This waterbottl:e^ (.) i:s I feel it^
132. T: &grabs his water bottle and makes sound by squeezing it
133. Ss: Tangible.
134. T: So: it's tangible, okay^(2.0) aha: something intangible,
135. E: Moohyung¿ Moohyung jasan,
136. T: Moohyung (2.0) Moohyung jasan, (1.0) so intangible^ (.) is you-
137. you cannot (.) aha: touch it, (.) it's not concrete^ it's not a thing^:
138. → aha intangible asset (.) Moohyung jasan, for example, goodwill,
139. → the value that ah- the company think^(.) it ha:s as a functioning
140. → organization with its existing customers: an:d (.) in some cases
141. → bran:d (.) because established bran:d (.) have the power to ea:rn^
142. → it money and would not- would ha:ve value for any potential
143. → buyer of the company.

144. (2.0)

145. T: I:m (.) I want to discu:ss this expression goodwill becau:se (4,0)

146. hm: (1.0) in rea:l (1.0) real estet- (.) real es- estate markets (.) these

147. → day- these da:ys, this expression is use:d frequently, (.) in Korea's

148. → day to da:y (.) real estate (.) market.

…. (5 minutes later)

291. T: If I want to want to rent a well performing restaurant, the

292. previous person who have been running that prosperous restaurant

293. will be asking additional money from you. Because the restaurant

294. will perform in the future. That is called goodwill money.

Beginning at line 100, the teacher goes through the business concepts presented in the textbook. In the next turn in lines 102–105, he makes a comment regarding the term "goodwill."

Notice how the teacher presents the target concept. In lines 103–104, the teacher says that he wants to know the students' knowledge levels. This introduces the possibility that the students may not know the specialized jargon he is about to present, a possibility that is confirmed in the subsequent turns in lines 104–105 in which the teacher characterized the term as something that the students would learn in a specialized course, such as accounting.

Interestingly, the teacher begins his question by calling for the Korean expression for the term in lines 105–106, "what kind of Korean expression do you use to indicate goodwill." The student cohort does not give any response to this call in line 107. Therefore, the teacher offers a clue in line 108 by saying, "one of the assets of the company."

This is followed by a few exchanges in lines 109–113 between the teacher and a student (S) seeking clarification about what is being asked. In line 115, S tries an answer in Korean, "Jegongpoom" meaning offered goods. In the third turn in line 116, the teacher initiated a repair by using an elevated tone while showing a surprised facial expression at the unexpected answer. The student does not respond immediately, and therefore, the teacher initiated a repair again in line 119 with a puzzled look in line 120; the second repair seemed to call for a clarification of what the student had said earlier.

The video clip does not show the student's face; however, the teacher's repair initiation indicates that "Jegongpoom" may not have been the expected answer. This could explain the teacher's contingent decision in line 122, when he says, "okay

after reading it, we'll come back." This is a running commentary that is designed to mark a topic shift indicating that the teacher is moving on to the next term in the textbook. This is an ordering decision that influences the subsequent turns; it shows the teacher's understanding of what needs to be addressed before pursuing this question. Also notable is that the teacher does not provide an answer, thus deferring it to the student cohort (McHoul 1990).

Nevertheless, the next series of exchanges has some relevance to the concept of "goodwill," which allows the teacher to return to this issue. In line 122, the teacher selects "intangible assets" from the textbook. He nominates one student and asks in line 125, "what is intangible." No answer is forthcoming in line 126. Accordingly, the teacher asks a different question in line 127, "What is tangible, then?". This is an update of the previous question regarding "intangible" calling for the students' recognition of the word. When the students do not answer in line 130, the teacher grabs his water bottle and squeezes it saying, "The water bottle, I feel it."

Notice that the teacher's questions regarding the word, "intangible" and "tangible" so far have been ambiguous; they could be about the word as much as they could be about the business term. With this demonstrative action in line 132, however, the teacher's questioning sequence shifts progressively from the content issue "intangible" to the vocabulary matter "tangible." A few students say "tangible" in line 133 in response. The students do not say what "tangible" means; rather, they recognized what the teacher is doing and name the action by saying "tangible." The teacher quickly moves back to the issue of "intangible" in line 134.

Notice the interesting parallel action sequences. The teacher begins with the technical concept "intangible assets" and then asks about the word "intangible." When no answer is forthcoming, he moves on to the word "tangible," seeking to elicit some recognition from the students. In line 134, the teacher goes back from "tangible" to "intangible." Finally, an answer is received for the question regarding "intangible" in line 135, "Moohyung jasan," which means "intangible assets" in Korean. The teacher's question in line 134 was about the word "intangible"; however, student E cuts across this vocabulary definition to state the technical business term "intangible assets." This demonstrates that this student understands the reason behind the series of vocabulary questions that the teacher has deployed to that point. When student understanding is accomplished, the teacher goes back to the content issue and resumes the initial activity (Macbeth 1994).

Later on, beginning in line 136, the teacher makes a series of moves to guide the students toward the target knowledge. First, he describes "intangible" by saying "you cannot touch it," "It's not concrete" and "It's not a thing." Then, he mentions "intangible assets" in line 138. At this point, the teacher goes back to "goodwill," which he mentioned earlier in the sequence enacting an important interpretive choice. First, he notes the relationship between "intangible assets"

and "goodwill" that "goodwill" is part of "intangible assets." He then explains the meaning of "intangible assets" in lines 139–143, saying that concepts such as a "company brand" are regarded as intangible assets. In so doing, the teacher explains the logical relationship between the terms "intangible assets" and "goodwill."

Further down in lines 147–148, the teacher explains how *goodwill* is used in the real estate market in Korea. After several minutes of interaction, the teacher finally explains the relevance of *goodwill* to the real estate market through an example in lines 291–294. This is another topic shift that returns to the topic that was suspended earlier. Notice that "Goodwill money" is a reference to a unique Korean phenomenon; it refers to an "intangible asset" that is paid to cover the intangible value of real estate. It now becomes clear why the teacher wanted to address the term "intangible asset" first; the students need to understand "intangible assets" before they can learn the meaning of "goodwill."

In the flow of the lesson, the teacher makes several pragmatic choices that shift the interaction's direction. While the textbook featured the term, "intangible assets," the teacher wanted to also include the concept of "goodwill." Over the course of the interaction, the teacher learned that the students are not familiar with the term and he, therefore, organizes his lessons to address relevant terms first before returning to the concept. This instructional decision is enacted in two topic shifts that change the direction of the ongoing discussion. In this way, the teacher delays the explanation to deal with a vocabulary gap, and then returns to the knowledge matter. Thus, the use of topic shifts enables the teacher to enact and embed some important and contingent instructional choices based on how the students respond to his questions in the evolving sequence of turns.

4.3 From General Description to a Specific Account

The previous excerpt reveals the process by which a teacher introduces preliminary information to lead students to a target concept. By contrast, the following excerpt concerns a repair sequence in which the teacher leads a student away from an inadequate answer. This excerpt was taken from an East-Asian Philosophy class offered at a Korean university. The topic here concerns two interpretations of Confucianism: a modernist view and an ecological view. Early on, in lines 104–120, the teacher introduces the two views while writing them on the board. When he introduces the second view, the ecological view of Confucianism, the teacher announces and writes down the name of the proponent, "Tu Weiming" in line 120.

Excerpt 5

101. T: Can we mo:ve (0.5) on to: (.) second question? (1.0) Richard,

102. (0.5) feels tire:d¿ (hh)(.h)

103. (2.0)

104. T: Okay, ha: ah: (.) the second question i:s (.) ah: it's related to

105. the: (0.5) ah: interpretation of Confucianism,(.) oka:y^ (.h)

106. with respect to: (.) ecological thinking. tha- we ha:ve (0.5)

107. tw:o¿ (.h) two: ah: interpretation o:f (0.5) Confucianism, (0.5)

108. T: [((Putting < sign on the board))

109. T: the first one i:s (.) ah: modernist, (.) moderni- the modernist

110. T: &Writing "modernist" on the board

111. T: modernist (1.0) ah interpretation. (1.0) interpretation.

112. T: &writing "interpretation" on the board

113. T: Hm:: (1.0) and the sec- (.) of Confucianism= and secon:d

114. T: &Writing "2"

115. T: on:e i:s (.h) the ecological:, the ecologica:l (1.5) ah:

116. T: &Writing "ecological"

117. T: interpretation of Confucianism, okay? (.h) the secon:d, ah

118. interpretation was ah (1.0) hm claimed by, (.) Tu Weiming:

119. okay, Tu Weiming, (2.0) Tu Weiming.

120. T: &Writing "Tu Weiming"

121. (2.0)

122. T: ah: he sa:ys ah: (.) Confucianism should be interpreted, ah: in

123.→ the light of (.) ecological thinking. okay? (1.0) so: what is the

124.→ difference between (0.5) the modernist interpretation an:d, (.)

125.→ the ecological (.) interpretation.
126. (0.5)
127. T: Tu Weiming expla:ins, (0.5) Reggie, can you tell us¿ (.) what
128. is the modernist (.) interpretation of (.) Confucianism.
129. R: I'm not sure, but:,
130. T: Ah:
131. R: I think that modernist interpretation woul:d, (0.5) ah: with
132. rega:rd to the: (0.5) mo:ve movement of civilization to
133. modernism which, [which linked to progress,
134. T: [hm hm
135. (0.5)
136. T: Progress=
137. R: =Yeah.=
138. T: =Okay.
139. R: An:d that ah: (0.5) it go:es in conflict with the: Confucian,
140. ecologica:l (.) principle.
141. T: Hm hm^
142. R: becau:se (.) in the modern theory, there is no: such thing
143. T: [hm
144. R: as (.) ecological thinking.
145. T: Hm hm, (0.5) yeah ye- (1.0) so (.) you says that, this is, (.) ah
146. T: &Pointing to "modernist" on the board
147. T: contra:sted with ah: with an ecological interpretati:on. (.) but,
148. (2.0)
149. T: what the: (.) cla:im, (0.5) hm about Confucianism, (0.5) that if

150. → (.h) if you: take the modernist interpretation of Confucianism,

151. → you sa:y, (.) Confucianism is such and such, right?

152. (0.5)

153. → T: Ah- (1.0) what is tha:t.

154. (4.0)

155. R: Hm (2.0) oh, anthropocosmic?

156. T: anthropocosmic. (.) athem- anthropocosmic is, (.h) is taken

157. by ecologica(h)l interpretatio, (.) interpretators.

158. (0.5)

159. T: Anthropo:(.)centric=yeah, anthropocentric, (.) anthropocosmic,

160. okay¿ (h) you you said anthropocosmi:c^ or anthropocentric=

161. R: =Cosmic

162. Ss: [((Cosmic))

163. T: Cosmic, okay, (0.5) ah: (hh) it's ah: this is a anthropocosmic,

164. T: &Drawing a line from "ecological"

165. T: anthro, anthropo: cosmic. okay? cosmic, but it is (.) the (0.5)

166. T: &Writing "Anthropocosmic"

167. T: the modernist is anthropo (0.5) anthropo:centric, (0.5) it's

168. T: &Writing "anthropocentric" next to "Modernist"

169. T: har:d, it's anthropocentric is, (.h) human centered (.) world

170. vie:w¿ (.) okay? so, (0.5) so:me (0.5) interprete-, interpretators

171. said, Confucianism, i:s based o:n, (.) anthropocentric, (.) it

172. mea:ns, (.) human centered, world view, okay? why (.) why

173. they interpret (.) Confucianism, like that,

174. (5.0)

175. T: Ah? what (.) aspects of Confucianism, (.) make, (1.0) make
176. them, ah (.) clai:m, (1.0) like that,
177. (4.0)
178. T: And what do you think of (.) ah Confucianism is a human
179. centered(h) world view¿ o:r, (.) ah: (1.0) it's the world view
180. that, (.) ah: ecolizes everything,

The first question occurs in lines 123–125: "what is the difference between the modernist and ecological interpretation of Confucianism?" The teacher then begins with the modernist view and asks a student, Reggie, about this in lines 127–128. In lines 131–133, Reggie answers that the modernist view is about the "movement to civilization" and is linked to "progress." Subsequently, in lines 139–140, he frames the modernist view with reference to its conflict with ecological principles; he even says, "there is no such thing as ecological thinking" in the modernist view in lines 142 and 144.

These are long answers and the teacher's response is a bit delayed in line 145 (Macbeth 2003; Lee 2007), a harbinger of the problem. In the third turn position, the teacher begins to formulate Reggie's answer in his own words in lines 145–147. In line 147, he makes a contrasting remark using "but," which continues up to line 149 when he says "What they claim about Confucianism." The teacher then reiterates the comment differently as follows: "if you take the modernist interpretation" and "you say Confucianism is such and such."

This shows complex interpretive choices on the part of the teacher and involves a topic shift. First, he forms a compound turn constructional unit (Lerner 1991) that consists of the preliminary "if you take the modernist interpretation" and the final component "you say Confucianism is such and such." This is followed by an actual question in line 153: "what is that?" The teacher organizes his questioning so as to indicate to Reggie that there is one particular answer that he is looking for and that the answer should fill the slot of "such and such"; this is a type of display question whose answer the teacher obviously knows (Lee 2006a). Notable also is how the teacher, rather than offering the answer himself, returns the turn to Reggie for the answer.

Second, the teacher clarifies that rather than a general account of the modernist view like the one on which Reggie's answer was based, he is looking for a particular account (Lee 2015); that is, the teacher's question directs Reggie to a sequence of a different kind, which refers to the teacher's initial comment in lines 115–117 calling for the ecological interpretation of Confucianism. In so doing, the teacher shifts the topic from an open question about Confucianism to a call for a particular term. This question is thus designed to return to the topic the teacher had initiated earlier. By

shifting the direction back to the earlier question, the teacher changes the line of reasoning Reggie's answer had projected.

Reggie seems to understand what is being asked as he produces the technical term "anthropocosmic" in line 155. Unfortunately, as Reggie offers the wrong answer, the teacher states the correct word "anthropocentric" in lines 156–160 that reflected the modernist interpretation of Confucianism. It becomes apparent that there are two competing perspectives that the teacher is seeking to elicit. The subsequent exchanges clarified this in line 167. The "anthropocentric" view argues that humans are the most significant species on Earth; therefore, the maintenance of a healthy environment is necessary for human well-being. In contrast, the anthropocosmic view reflects the ecological view that man and nature are equal and that nature cannot be used for human exploitation no matter how useful it is to humans. In other words, this interactional organization shows the contingent interplay between the teacher and Reggie in identifying the problem that needs to be addressed (Koole 2012).

To sum up, the above excerpt involves a sequence of interactional exchanges in which the teacher initiates a question, learns what was problematic, and then acts in the sequence to shift the topic. As the teacher recognizes where R's answer is headed, he shifts the direction so as to elicit the particular concept of anthropocentrism. When the two technical terms are recognized, the teacher proceeds to explain why "anthropocentric" is the answer that he was looking for.

This exchange demonstrates that the initial question led Reggie to a general account of the modernist view, which is not what the teacher had projected earlier. Accordingly, the teacher finds a way to guide the student in the direction he wants by shifting the trajectory of the interaction. The teacher's instructional decisions manifest in his topic shift, which changed the direction of the interaction. Moving away from a topic and then returning to it takes multiple exchanges as the teacher identifies what becomes problematic and decides when to come back. Sequential analysis allows us to trace the process by which these instructional decisions are made across sequences. This is where we find the routine practices of teaching that are often hidden or taken for granted if the focus is only on the structural or functional categories of classroom discourse.

5 Conclusion

Analyses of classroom interactions can be presented in different ways according to how researchers use the regular and recurrent features of conversational organization found in the interactions (McHoul 1978; Mehan 1979; Seedhouse 2004; Sert 2015; Waring 2016). Following CA-for-SLA studies that have sought to contribute to second language teaching and learning (Kasper and Wagner 2011; Lee and Hellermann 2014; Markee 2000), the present study pursued a new analytic route by tracing sequences of teaching actions to reveal the routine work practices of teaching.

Excerpts 3–5 illuminate the contingent choices the teachers made when ordering and sequencing their lessons. In this process, the teachers learned what the students knew about the content and acted on what had become problematic by making important ordering decisions. By tracing these sequences sequentially, we learned how the teachers' topical decisions often stretch into various topical boundaries through which pragmatic choices are made in the evolving sequences. When these sequences are described closely, we can reveal the details of the contingent choices teachers make in coming to terms with the students' responses in real-time discourse. When their choices are reviewed analytically, the analytic descriptions can be instructive because they reveal the concerns, assumptions, agendas and even the problems that the different parties experience.

CA's sequential analysis traces how each turn at talk relates to the others as current turns exhibit the relevance to prior and subsequent turns; the parties' interpretive actions drive these interactional sequences. Tracing these sequences allows us to identify the coherent, orderly, and meaningful courses of actions that are integral to the work-practices of teaching. The relevance and implications of pedagogical actions are far reaching and often cross topical boundaries; topics are initiated, revisited and closed in the course of contingent interactional exchanges. The sequences provide a key framework for teasing out what utterances mean and what types of actions they perform (Goodwin 1995). Sequential analysis reveals, not just the minute details of interactions, but also resources to understand why lessons are organized in certain ways, what decisions are made, and what effects these decisions have on subsequent sequences.

6 Pedagogical Implications

CA's close analytic findings are often considered to focus on uncovering the minute details of conversational interactions without providing any prescriptive information about what actions to take for practitioners. From a CA perspective, pedagogical suggestions in other research traditions seem to impose external frameworks that may shift the analytic focus away from the participants' choices and methods in performing their teaching actions.

It is therefore important to consider the nature of the analytic descriptions provided in CA research. The findings of this paper represent particular ways of treating empirical cases in classroom teaching. In this regard, Sharrock and Anderson (1982) offered a very useful conceptual explanation regarding what CA studies show in their empirical analyses:

> We are taking it that the elemental problem is to understand not what patterns activities fall into, but how they are 'put together' into whatever patterns they might make: it is the assembling, not the final shape of the assembly, that is of interest (175).

Prior studies have uncovered an array of patterns of activities in classroom teaching and sought to identify the variables that underlie these patterns-for example, the goals of the activities, the students' knowledge of the content, or the students' linguistic proficiency. These patterns constitute the assembly mentioned in the quoted passage. CA research goes one step further by specifying the processes through which these patterns are pulled together via assembling work. Such assembling actions can elucidate the routine practices of teaching and reveal their meaningful relevance.

To derive pedagogically useful points from CA findings, readers need to go through a two-step process. The first step is to identify those elements that constitute the assembly in the empirical cases. Readers can probe, for example, what purpose each question carries, what is the nature of the content material, or what is the students' general language proficiency. Typically, CA studies describe this type of information before presenting the data excerpt.

Once readers are fully informed regarding relevant factors, they should be encouraged to examine the sequential progression of the exchanges. CA studies often note technical descriptions such as turn-taking, repairs, preferences or IRE; these structural features are important but they are only a means of understanding the process by which the participants put together their actions and activities through the assembling process. By following sequential analyses presented in CA studies, readers can trace the teaching practices as the teacher experiences them.

Excerpt 3 in the present study, for example, the teacher tries to determine what is preventing her students from answering her initial question (i.e., word problem or pragmatic sense of the word, "analyze."). This is not something that was planned but rather something that came up in the course of the interaction. Excerpt 4, the teacher decides to switch the order of the technical terms being taught. By following the transcripts, readers can understand why the teacher decides to move away from the target concept initially and to come back to it later. Excerpt 5, the teacher learns how one student's answer takes the interactional focus away from the target concept and therefore uses questioning sequences to return to the concept.

The purpose of working with transcribed interactions is to review the participants' choices and thereby to simulate their experience. CA's sequential analysis allows us to refine and delimit the analytic scope so that classroom interaction can be pulled into view more realistically and authentically as participants experience them. This enables readers make independent and reasoned decisions regarding what to do in their own teaching.

Acknowledgments I am grateful to the editor, Numa Markee, and two reviewers for their close reading and thoughtful comments. This work was supported by Global Research Network program through the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2016S1A2A2911491).

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Part III
CA Research and Teacher Education

Introduction to Part III

Olcay Sert, Numa Markee, and Silvia Kunitz

Abstract In this text we summarize the chapters contained in Part III. That is, after a short introduction to the specific research area addressed by the chapters, we briefly summarize the content of: Sert (this volume), Waring (this volume), and Kim and Silver (this volume).

Keywords Teacher education · Reflective practices · Classroom interactional competence · Classroom talk

Part III shows how CA findings could be used in teacher education. The papers included in this section reflect the two current lines of research that are at the intersection of teacher education and CA: (1) studies that focus on post-observation feedback sessions and interactions between mentors and mentees as well as trainers and trainees (e.g. Harris 2013; Kim and Silver 2016, this volume; Waring 2017), and (2) studies that look into the dynamics of classroom interaction and include critical self-reflective practices (e.g., Walsh 2011) for implementing CA-informed frameworks for teacher education (e.g. Sert 2015, 2019, this volume). Such studies typically combine CA findings with self-reflection and peer-feedback practices to document teacher-learning over time and cross-sectionally (Sert 2019). An important outcome of this second line of research consists of teacher education

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_12

frameworks that are based on classroom interaction studies; these frameworks include SETT (Walsh 2006, 2011), IMDAT (Sert 2015, 2019), and SWEAR (Waring this volume).

In his chapter, Sert (this volume) presents a framework for transforming CA findings into future L2 teaching practices. Sert argues that findings of CA studies of classroom interaction can be integrated into teacher education programs in the form of audio-visual materials. In doing so, through analysis of classroom data from Luxembourg and Turkey and with a focus on a trajectory of language alternation, he first explicates a comparative agenda (Markee 2017) for identifying interactional phenomena and developing video materials to be integrated into a CA-inspired teacher education program. He then goes on to describe how CA findings can be integrated into a technology-enhanced language teacher education framework, building on Walsh's (2011, 2012, 2013) concept of Classroom Interactional Competence (CIC) and his earlier teacher education framework IMDAT (Sert 2015).

In the following chapter, Waring (this volume) draws on the concept of heteroglossia (Bakhtin 1981) to show, among other things, how a particular aspect of teacher talk can achieve more than one goal (for example, controlling while opening space for participation). With an emphasis on student participation and engagement, Waring presents a teacher education framework, SWEAR, which promises to help teachers to develop heteroglossia to manage various classroom paradoxes. For example, teachers who attempt to attend to individual voices within the larger classroom interactional context may well end up having to deal with competing demands which may ultimately result in the current pedagogical focus being derailed, cause student participation to be undermined, discourage volunteering, or deny individuals important opportunities to learn. Waring's framework consists of five stages that include (1) (S)ituating a problem, (2) (W)orking with a classroom recording, (3) (E)xpanding discussions, (4) (A)rticulating strategies, and (5) (R)ecording and repeating. Waring argues that the framework is best used as a method to enhance teachers' awareness of the challenges and possible solutions in classroom talk.

In the last chapter of this section, Kim and Silver (this volume) examine how mentors interacting with practicing primary school teachers of English in Singapore enacted two different, potentially contradictory roles as feedback-providers versus facilitators of reflection during post-observation conversations that were designed to contribute to the teachers' ongoing professional development. The authors begin by showing that, when teachers initiate reflection episodes, such episodes run off more smoothly than when mentors initiate such talk. They then go on to show that when mentors act as feedback-providers, opportunities for teachers to engage in meaningful reflection on their own teaching practices are inhibited. Conversely, when mentors adopt the role of facilitators of reflection, teachers are able to engage in reflection that is much more conducive to their own observable professional development. Such roles are obviously not the product of individual decision-making or cognition, but are interactively achieved by all participants on a moment-by-moment basis. It is therefore in the observable micro details of video-recorded post observation conversations that researchers, teacher educators/trainers and teachers may find

answers to the question of how to make such conversations a more reflection-based rather than a feedback-oriented exercise.

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Transforming CA Findings into Future L2 Teaching Practices: Challenges and Prospects for Teacher Education

Olcay Sert

Abstract This paper focuses on the transformation of conversation analytic findings on L2 classroom interaction into resources for changing teachers' pedagogical practices. It argues that identification of problems in student-teacher interaction or of interactional sequences that create learning opportunities can provide valuable insights for teachers, as many of these practices display commonalities across different contexts. However, research is scarce on integrating CA findings into teacher education, especially in the form of audio-visual materials. To enable this, CA findings of classroom interaction need to be based on a comparative research agenda. In order to illustrate how this can be done, the chapter presents analyses of three different extracts of talk that exhibit different trajectories of code switching behaviors by teachers and students in two different countries. More specifically, these analyses show how two teachers in EFL classrooms in Luxembourg and Turkey managed their students' use of the L1s, and how the students responded to this behaviour. These analyses potentially have pedagogical value for language teachers in that they may be used to develop audio-visual tools that are designed to help teachers engage with their own on-going professional development. This is demonstrated through detailing the integration of a mobile application into a teacher education framework known as IMDAT, thus transforming CA findings into future L2 teaching practices.

Keywords Conversation analysis · Language teaching · Classroom interaction · Code-switching · Teacher education

1 Introduction

The last decade has witnessed a conversation analytic turn in applied linguistics (in its broad sense). One of the fields of research that this turn has sharply affected is without doubt L2 (i.e. second/foreign/additional) classroom interaction, as is obvious from the publication of book-length manuscripts (Hellermann 2008; Markee

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_13

2000; Seedhouse 2004; Sert 2015; Waring 2015), edited collections (Hall and Looney 2019; Jenks and Seedhouse 2015; Nguyen and Malabarba 2019; Markee 2015a; Salaberry and Kunitz 2019), and an increasing number of research papers that address the teaching and learning of a variety of L2s in classroom contexts, including L2 Turkish (Çimenli and Sert 2017), L2 Swedish (Lehti-Eklund 2013), L2 Korean (Park 2016), L2 Italian (e.g. Kunitz this volume), L2 French (e.g. Broth and Lundell 2013; Evnitskaya and Berger 2017), L2 English (e.g. aus der Wieschen and Sert 2018; Can Daşkın this volume; Eskildsen this volume; Hosoda and Aline 2013; Sert 2013, 2017), and L2 Danish (Hazel and Wagner 2015). The speech exchange systems investigated in these classrooms include teacher-fronted interaction (e.g. Waring 2008; Sert and Walsh 2013; Can Daşkın 2015; Lee this volume) as well as learner-learner interactions (e.g. Hellermann 2008; Jakonen and Morton 2015; Ziegler et al. 2015). A broad range of topics have been covered, including vocabulary explanations (Markee 1994; Käänta this volume; Morton 2015; Tai and Brandt 2018; Waring, Creider and Box 2013), prosody (Hellermann 2003), questions (e.g. Lee 2006), pedagogical gestures (Belhiah 2013; Matsumoto and Dobs 2017; Sert 2015), student smiles (Sert and Jacknick 2015), instruction giving sequences (Markee 2015b; Somuncu and Sert 2019), and social epistemics (e.g. Jakonen 2015; Kääntä 2014; Lee 2015; Musk this volume; Rusk, Pörn and Sahlström 2016; Sert 2013, 2015).

By giving researchers access to their classrooms, language teachers around the globe have contributed greatly to the growing body of knowledge on teaching and learning practices in L2 classrooms. Yet, the findings of CA researchers rarely feed back into the classroom. This situation is inequitable. Collaboration between CA researchers and language teachers can be fostered by showing teachers videoed moments when interactional troubles emerge, or when teachers successfully engage students in learning through the skilful use of various interactional resources. Teachers can also stimulate their own professional development by reflecting on their own and each other's practices and doing simple transcriptions as part of a professional development agenda (Walsh 2006, 2011; Sert 2015; Sert 2019). In order to facilitate these kinds of activities, we need to integrate such practices into teacher education programs. Although CA interventions for professional development, like CARM (Stokoe 2014), have been out for some time now, CA-driven frameworks that can be integrated into teacher education programs are still rare and are limited to SETT (Walsh 2011), IMDAT (Sert 2015, 2019) and SWEAR (Waring this volume). As will be explained in the following sections, in IMDAT, researchers and trainers start with a recording of a particular classroom behavior that is already available to teachers and teacher educators; however, finding a recording that suits the specific needs of teachers is a substantial challenge (see also Kunitz this volume; Kääntä this volume; Waring this volume for similar positions). Furthermore, each selected video focuses on specific kinds of teaching behaviors (e.g. how teachers manage students' use of first language(s) in L2 classrooms; how they correct pronunciation in a speaking activity; or how they use particular interactional resources

to explain vocabulary). Consequently, teacher educators need to make sure that the selected video material represents a pedagogical sequence that is common and is a useful example of a teaching practice. If we want to develop audio-visual materials for teachers who work in different educational contexts, then we need to make sure that the selected videos represent collections of cases, rather than one-time occurrences of classroom practices. So, the selected videos should be based on collections of actions, and if possible, on comparative CA and comparative re-production research (Markee 2017).

Building on this need to generate audio-visual materials to be integrated into teacher education programs, in this chapter I first provide a short review of conversation analytic research on (language) teacher education. In order to showcase a comparative approach to designing audio-visual training materials for teachers, I then present empirical analyses of selected extracts from two different English as a Foreign Language (EFL) classrooms in two different countries. These analyses show how learners use their L1s (German/Luxembourgish and Turkish, respectively) in these classrooms and how teachers respond to students' use of the L1 to maintain a target language use/L2 policy promulgated by school authorities (see also Amir and Musk 2013). I argue that these analyses potentially have pedagogical value for language teachers in that they may lead to the development of audio-visual tools designed to help them engage with their own on-going professional development. I also illustrate how the empirical findings based on collections of cases can inform the implementation of a mobile tool, called VEO (Video Enhanced Observation), into language teacher education programs all over the world.

2 Conversation Analysis and Language Teacher Education

CA studies that aim to understand teacher education practices mainly fall in two categories: (1) research that focuses on the interactional organisation of mentor/trainer – teacher talk (e.g. Kim and Silver 2016, this volume, Waring 2013, 2014, 2017) or collaborative post-observation feedback practices (e.g. Harris 2013), and (2) research that combines conversation analysis of classroom interactions with the analysis of reflection and feedback practices in teacher education programs (e.g. Walsh 2011; Escobar Urmeneta 2013; Sert 2015; Bozbıyık 2017; Sert and Bozbıyık 2017; Sert 2019). One of the important characteristics that these studies have in common is their use of reflective practice. In the studies that fall into the first category, the elicitation of reflection is a focal point of the analytic inquiry (e.g. Kim and Silver 2016; also this volume). In contrast, in the studies that fall into the latter category, reflection represents the dialogic event(s) that help(s) teachers become aware of, and verbalize, the interactional and pedagogical practices that are commonly used in language classrooms. The awareness that is co-constructed by reflecting on recorded classrooms becomes the driving force behind what Walsh (2003)

calls Teacher Language Awareness, which is a constitutive aspect of a developmental turn in L2 Classroom Interactional Competence (or CIC; see Walsh 2011, 2013), itself defined as teachers' and learners' ability "to use interaction as a tool for mediating and assisting learning" (Walsh 2011, p. 158). More specifically, Mann and Walsh (2017) argue that reflective practice is an important element in learning to become a competent teacher. Furthermore, Li (2017), who uses CA and Discursive Psychology to investigate teacher cognition, puts forward the idea that when teachers engage "in critical reflection on their teaching, they are more likely to learn and develop" (p. 186).

Using CA, Waring (2014) investigates video-recorded mentor-teacher meetings to show how particular practices stimulate reflection. Drawing on data collected in a graduate TESOL program in the US, she shows that mentor invitations for reflection vary along three dimensions: general vs. specific, analysis vs. account, and cause vs. solution. Waring argues that the various "dimensions of such invitations can provide an alternative lens for identifying and further exploring the complexities of mediational conduct" (p.118). In a more recent study, Kim and Silver (2016) adopt Schön's (1988, cited in Kim and Silver ibid.) conceptualization of "provoking reflection" and use it as a tool to help teachers reflect on their own practices. Based on video-recorded post observation conversations of six teachers in Singapore, Kim and Silver reveal a relationship between the structure of opening questions and elicited teacher responses. They find a common pattern in what they refer to as successful cases of mentor-initiated episodes:

> What we learn from successful cases of mentor-initiated episodes is that the mentor first offered her own observation of what was going on in the lesson after stopping the video rather than trying to elicit the teacher's comments right away. She gradually built up the talk toward the feedback point as she elicited the teacher's observation through more specific and factual queries. (p.214).

The papers reviewed thus far centre around the idea of generating reflection, since one of the main aims of post observation conversations seems to be facilitating reflections. However, Kim and Silver (this volume) also show that in such conversations, mentors enact two different roles, specifically as feedback providers and facilitators of reflection. The role of a professional as a feedback provider is very prominent in this context, as Harris (2013) argues that reflective practice as an interactional activity includes topics of feedback within which the trainees "engage in interactional processes with the trainers, through which they reflect on their practices in a series of stages" (p. 1). Experienced mentors and teacher educators know that feedback and reflection are intertwined discourse events and are two sides of the same coin in a professional development process. That is, feedback with no reflection may result in an incomplete understanding of self, while self-reflection with no feedback received may result in an incomplete and subjective picture of one's own performance. In particular, in initial teacher education, or in what is known as pre-service teacher education, initial feedback of the "expert", be it a mentor, an academic, or a peer, is not just a process of feedback but it also provides

a model 'language' or terminology for the novice teacher to be used in peer feedback practices as well as in self-reflective practices in the future. Thus, the content and the form of the feedback received from an expert may form the bases for successful future self-reflection.

In modern teacher education programs, mentor/peer observations, reflection, and mentor/peer feedback practices form the three main pillars without which it would not be easy to talk about a developmental agenda for teachers. In the first decade of the new millennium, it has been suggested that video recordings of teaching practices should be integrated into language teacher education programs to complement feedback and reflection (Seedhouse 2008; Sert 2010), although realization of such frameworks was rare. One notable exception (but note that this was initially based on audio) has been Walsh's (2006, 2011) Self Evaluation of Teacher Talk (SETT), which includes teachers' critical self-reflection on audio recorded classroom interaction. SETT includes a set of interactures, in other words, interactional moves that are more appropriate for a given pedagogical moment in a language classroom. For instance, a direct repair can be more appropriate for what Walsh (2011) calls skills and systems mode, since providing an error correction directly may be more relevant to classroom activities which aim at emphasizing linguistic accuracy. Walsh (2013), however, argues that the interactures in SETT are "intended to be representative rather than exhaustive, and do not claim to account for all types of verbal behaviour" (p. 85). There is a growing number of studies now (e.g. Aşık and Kuru Gönen 2016; Baumgart 2019) that illustrate the positive effects of SETT in teacher education. SETT is central to L2 Classroom Interactional Competence (Walsh 2006, 2011), which includes a set of practices (e.g. maximising interactional space, shaping learner contributions, and effective elicitation) that help create more engaging L2 classrooms. Recent research has expanded the practices that relate to CIC. For example Sert (2015) has shown that teachers' management of students' use of L1s is also a feature of CIC and is a common feature of EFL classrooms that needs to be handled.

CIC is at the heart of IMDAT (Sert 2015), a teacher development framework that is micro-analytic and reflective. IMDAT involves a series of steps in teacher education that includes (I)ntroduction of CIC to teachers, (M)icro-teaching experiences, (D)ialogic reflection on video-recorded teaching practices with the help of a mentor/supervisor, (A)nother round of teaching and (T)eacher collaboration for peer-feedback. IMDAT integrates visual experiences (through the use of video recordings) and micro-analyses of these recordings into various forms of dialogic and written reflective practices (see Sert 2015 chapter 8 for more details and a case study). The initial step for implementing IMDAT is the introduction of CIC to teachers with the use of pre-recorded videos and their transcriptions. The use of videos here to illustrate practices like teacher questions, teacher feedback, and students' use of the L1 is crucial at this initial stage, as such visual materials also help teachers develop professional language awareness that they may subsequently also use for reflection and feedback.

How can we select these training videos though? What are the criteria we might use to decide which practices, for teacher correction, for instance, are better than others? Should there be a kind of consensus among teacher educators before selecting such materials? If so, how can such a consensus be reached? The first criterion for selection is that the classroom videos used for training purposes should reflect practices that are common in many contexts, and this commonality should be based on empirical observations of collected data. This entails the use of findings based on Conversation Analytic research in classrooms. Secondly, the selected videos should not be based on one-time occurrences of interactional actions, but on collections of similar practices, if possible based on more than one classroom, group of participants, and even countries. Such a selection procedure requires taking comparative perspectives to CA research, and can be based on what Markee (2017) calls comparative re-production research. Against this background, in the following section, I will present analyses of three extracts that come from two EFL classrooms, one based in Luxembourg and the other in Turkey. The practice that I will illustrate is comparable in both contexts: students' use of the L1 (here, Turkish or German) subsequent to a knowledge check question initiated by the teacher. I will argue that teachers' different kinds of management of L1 use (in the third turn) have interactional and pedagogical consequences, and that such examples can be integrated into teacher education programs in the form of audio-visual materials. I will end the section by introducing one way to integrate such findings into a mobile technology assisted teacher education framework.

3 Developing Audio-Visual Materials for Teacher Education: A Comparative CA Perspective

As mentioned in the previous section, teachers' management of students' use of the L1 forms part of L2 CIC (Sert 2015). A collection of videoed moments of how teachers enact this in classrooms would be helpful for teachers in training and in service, as they would be able to see such interactional sequences and inform their own teaching practices. In what follows, I first provide analyses of how a teacher manages the use of the L1 in a specific sequential trajectory in EFL classrooms in Luxembourg. I then showcase the interactional and pedagogical consequences of the same practice instantiated in another EFL classroom in Turkey which, however, is managed somewhat differently and therefore has different outcomes. Finally, I discuss some potential implications for teaching, teacher education, and audio-visual materials development for teacher education.

3.1 Building a Collection of and Comparing Interactional Phenomena: Teachers' Management of Students' L1 Usage

The practice that is analysed here involves a question-answer adjacency pair sequence that consists of a knowledge check question (i.e., a teacher question designed to check student knowledge such as *What does x mean?*) that is followed by a response by students in the L1. I illustrate that the way in which teachers manage interaction following students' responses in the L1 has pedagogical consequences. I show that the teacher's attempt at having students produce turns in the L2 opens learning opportunities by producing an interactional affordance for speaking in the L2, while also not punishing them for using the L1 (e.g., the teacher doesn't produce an exposed correction explicitly addressing the use of the L1 as wrong or banned). The following extract (previously published in Sert 2015), which comes from an EFL classroom in Luxembourg, shows that a student's L1 response to a question in L2 is not rejected, but is managed by the teacher in a way that leads to the maintenance of L2 use as the medium of classroom interaction. The extract comes from a 10th grade classroom in a public school in Luxembourg, based on data collected in 2010. Before line 04, one of the students, Sam, has been reading a text aloud.

Extract 1 (Sert 2015, p. 123)

```
04     Tea:  what does that ↑mean to threaten?
05           (2.1)((starts writing on the board))
06 →         +lara do you know?
             +looks at Lar  while saying her name and keeps writing
07     Sx :  (      )
08 →   Lar:  drohen.
             to threaten
09           (0.7) ((Tea keeps writing))
10 →   Tea:  yes: bedrohen drohen.
11           (3.9) ((writes drohen bedrohen on the board))
12 →         so how would ↑you:: explain this in english?
13           (0.9) ((turns his body towards the class))
14           to th↑reaten:.
15     Lar:  er: (1.6) to:: (0.8) tell somebody that you are
16           going ↓to: (2.0)£↑hurt him£.
17     Tea:  e↑xactly: yes:(.) to put somebody: (.) under pressure
18           by telling him that you:, are going to ↑hurt him.
```

In line 04, the Teacher (Tea) asks the meaning of *threaten*, a word that Sam mispronounced while reading aloud before the extract starts. In line 06, after he writes the word on the board, Tea addresses Lar and asks whether she knows the

meaning of the word (lara do you know?). In line 08, Lar provides the second-pair part of the adjacency pair in German (drohen), and thus displays her knowledge of the vocabulary item. In what follows, Tea accepts this contribution and repeats the student-initiated L1 word also using its synonym (yes: bedrohen drohen). He also writes these words on the board and thus makes them visible for all of the students in the class. In line 12, Tea explicitly identifies his local pedagogical agenda as paraphrasing the L2 word, as he requests an explanation of the word from Lar (so how would ↑you:: explain this in english?). In doing so, he marks an explanation of the requested word as the preferred next action, while engaging in teacher-initiated micro language policing (Amir and Musk 2013). It is important that he uses *so* in turn-initial position, which demonstrates that the "induced code-switching" (Üstünel and Seedhouse 2005) has built a particular understanding, which now needs to be elaborated. In lines 15 and 16, Lar, with an extended turn, explains the word *threaten* in English and this response receives a positive evaluation from the teacher in line 17. The way the teacher manages language alternation requires special emphasis here (see also Filipi and Markee (Eds) 2018 on this topic). He accepts the student's of multilingual resources (line 10), and then encourages the student to elaborate on the meaning in L2 (lines 12–14).

A similar trajectory can be observed in Extract 2, which comes from the same classroom as in Extract 1: The teacher checks knowledge, one of the students provides a response in the L1, and in the follow up turn the teacher acknowledges/confirms the answer. However, the teacher displays a preference for an explanation or a reformulation in the L2. It should also be noted here that this trajectory resembles what Koole (2010) found with knowledge check questions (e.g. do you know x?), in that they prefer "an additional demonstration of knowing" (p.184). Although a translation in the L1 as a second pair part satisfies type conformity (Raymond 2003), the teacher requests a demonstration of knowledge in the L2 by using the L2 himsef, an action which explicitly does language policing (Amir and Musk 2013). By doing this, Tea establishes and maintains an L2 use policy, which, as will be shown in Extract 2, achieves the desired effect of getting the students to use the L2, which seems to work.

Before the extract starts, one of the students, Sam, has been reading a paragraph in the textbook aloud. In line 02, he displays difficulty in producing the word insecure (in°sec°- (0.9)).

Extract 2 (Sert 2015, p. 121)

```
01      Sam:  ‶he didn’t have many f↑riends (.) he felt lonely and
02            in°sec°- (0.9) things ↑got″=
03      Tea:  =insecure. ((raises head and looks at Sam))
04      Sam:  insecure. ((Tea looks back at the book))
05      Tea:  mm hmm.
06      Sam:  er: (0.4)‶things got through for‶=
07      Tea:  =tough.
08      Sam:  ‶tough for billy and his sister when they
09            are there for °(      )°″.
10 →    Tea:  ↑yes: that’s (      ) er: what does insecure mean?
11            he felt insecure. ((Sam and Sar raise hands))
12            (1.4)
13            sarah?
14 →    Sar:  ↑onsécher.=
                unsafe
15 →    Tea:  =ye:s in eng↑lish >in other words?<
16      Sar:  £[unsafe]£
17      Sam:   [unsafe]
18      Tea:  unsafe in a way yes: o↑kay.
19            (2.0) ((looks at the book))
20            +(they don’t)feel at ease,+ok, °they don’t feel at ease°.
              +looks at the students    +looks at the book
21            (1.9)
22            er what does tough mean? things- sh::: things got
              ((chr and his friend next to him chatter))
23            tough for  +billy? +chris what does that ↑mean.
                         +Sam raises hand
                                 +points at Chr
                                 +Chr looks at Tea
24            (0.7)
25      Chr:  er:[: ((looks at the book))
26      Tea:     [things got tough for him. ((walks towards Chr))
27            (1.1)
28      Chr:  it’s er +↑hard for him.
                      +looks at Tea
29      Tea:  ↑ye:s okay everything became hard and difficult for him.
```

In line 03 the teacher targets the trouble source by repairing the word *insecure*, renewing the participation framework by raising his head and looking at the student. In line 04, Sam displays uptake by repeating the word; Tea then delivers a response token (`mm hmm`) that acts both as a confirmation and a continuer. In line 06, Sam continues reading but is interrupted by the teacher as he replaces Sam's mispronunciation of the word *tough* (`things got through`) with its correct use. Sam, in line 08, starts with the correct pronunciation and finishes reading from the book.

In the remainder of the extract, Tea checks the students' knowledge on the meaning of the words *insecure* and *tough*. In line 10, Tea asks the meaning of the word *insecure*, and provides an example utterance, partially recycled from the text, in line 11, while Sam and Sar bid for the floor. After a 1.4 s of pause in line 12, Tea nominates Sar as the next speaker in line 13. In line 14, Sar responds in Luxembourgish

and produces the word ↑onsécher. Tea first acknowledges the student's answer that has been produced in the L1 with the turn-initial English confirmation token (ye:s) in line 15 and then orients to the "other languageness" (Slotte-Lüttge 2007) of the word by asking the student to switch to English (in eng↑lish). This response constitutes yet another instance of language policing (Amir and Musk 2013). Furthermore, the teacher completes his turn by marking paraphrasing, or alternative wording, (>in other words?<) as the preferred response type. In line 16 and 17, both Sar and Sam provide the L2 word "unsafe", which is immediately accepted by Tea who first repeats this word (notice how Tea also stresses this word, thus confirming that this is the correct answer) and then continues his turn with additional confirmation tokens in line 18. The teacher has thus shown that the preferred response for a question related to the meaning of a word (what does insecure mean?) involves providing an alternative in that L2.

It can be argued that Tea's pedagogical agenda is taken up by the learners as is evidenced by the remainder of this extract. In line 22, Tea targets the other trouble source (the word *tough*, which was mispronounced by Sam in line 06) and asks the question (what does tough mean?) in the same way that he did in line 10, using a "what does x mean" formulation. He allocates the turn to Chr, who has been talking to his classmate. After 0.7 s of silence in line 24, Chr starts producing a stretched hesitation marker while the teacher exemplifies the use of the target word in context (things got tough for him). Following a 1.1 s of silence in line 27, rather than providing a translation in German, Luxembourgish or French, Chr initiates an utterance in line 28 by emphasising the candidate word *hard* (it's er ↑hard for him), which is confirmed by the teacher in line 29. Thus, although generally lexical meaning questions are responded to with language alternation, that is by switching to the L1, the previous interactional manoeuvre of the teacher sets the pedagogical goal as requesting an alternative word in the L2. He achieved this by not rejecting the use of multilingual resources, but by building on the students' use of the L1 in a way that leads to a renewed pedagogical agenda, which is displayed to the students on a turn-by-turn basis (see also Lee this volume, on how the renewal of teachers' pedagogical agendas is accomplished on a moment-by-moment basis). What we see in the first two extracts, then, is a trajectory which includes the teachers' management of students' L1 use (see Table 1) in a way that opens learning opportunities by producing an interactional affordance for speaking in the L2, while also not punishing the learners for using the L1:

Table 1 Management of L1 to establish and maintain an L2 policy in the EFL classroom

Turn 1: Tea: Checking knowledge	**e.g. Do you know x? What does x mean?**
Turn 2: Stu: Response in L1	e.g. Direct translation of the lexical item
Turn 3: Tea: Acknowledgement, request for reformulation/explanation in L2, thus preference for demonstration of knowledge in L2	Acknowledgement/confirmation tokens (yeah/yes), followed by formulations like "how do you explain this in English? in other words?"

The above trajectory is based on a collection of cases from the Luxembourg dataset. What happens, though, if the teacher responds in another way in the third turn? Extract 3 offers a case in point. The extract comes from a collection of similar cases (knowledge check question targeting an L2 vocabulary item, followed by a response in the L1), but this time from a Turkish EFL classroom, with students at a comparable level and age as the students in the Luxembourg context. The data are based on classroom recordings of EFL teachers going through pre-service teacher education in a higher education institution in Turkey. The classrooms were recorded using the VEO mobile application, a video-tagging app designed to enhance observation and feedback practices for professional development. The students are at upper-secondary school level, and are all native speakers of Turkish. Before the extract starts, the teacher shows the students a short video clip from an animation film, which includes a scene on feeding animals.

Extract 3

```
01 → Tea:  er do you know ↑what (.) feed means?
02   Ss:   beslemek.
           to feed
03   Tea:  +er: in English its- it means u- unlike in ↑here
           +orients his body towards the board
04         its like giving + ↑food.
                           +starts writing on the board
05   S1:   yemek vermek?
           to provide +food?
                      +T looks at S1
06   Tea:  giving food to (.) +er [animals (.)anyone.=
                              +hand gestures
07   Sx:                           [doyurmak
                                 to feed (until the stom. is full)
08   S1:   =hayvanlara=
           to animals
09   Tea:  okay (.) but he doesn't want to feed the chic↑ken but
10         er he er: eats them anyway.
```

Using a *do you know x?* formulation, the teacher checks students' knowledge regarding the vocabulary item *feed* in line 01. Similar to the first two extracts, the second pair part slot of the adjacency pair is filled with a translation in L1 in line 02: the students produce the Turkish translation of the verb *to feed*, *beslemek*. Unlike what happens in Extracts 1 and 2, in line 03, the teacher marks the L2 use immediately in turn-initial position (`in English`) and engages in a vocabulary explanation sequence (also see Käänta this volume). In line 05, an individual student provides another candidate response in Turkish (`yemek vermek`, 'to provide food'), which is not acknowledged or evaluated by the teacher who, in line 06, continues with the explanation sequence initiated in line 03. In line 07, there is another candidate response offered by an unidentified student (`doyurmak`), which overlaps with part of the teacher's explanation in line 06. This is then followed by S1's contribution in Turkish (translation: to animals) in line 08, which seems to be a

translation of a part of Tea's explanation in line 06. The main issue to be highlighted here is that there is a mismatch between what the teacher is doing and how the students are responding to the teacher: first of all, we witness divergent language choices (aus der Wieschen and Sert 2018): students respond in Turkish while the teacher uses English only. Besides, the teacher does not acknowledge the use of the L1 by the students.

Extracts 1 and 2 in comparison to Extract 3 have shown that the same trajectories of language alternation can lead to opposing pedagogical outcomes according to teachers' responses in the third turn. In the first two examples, the teacher establishes meaning by first acknowledging, then shaping students' L1 use in the third turn, which has been shown to be part of teachers' CIC (Sert 2015). This is done delicately, by setting a preference for explanations/reformulations in the L2. Such comparative examples based on the same sequential trajectories have the potential to be used as video materials for training teachers.

In this section, it has been shown that arguments on the use of the L1 should be based on sequential trajectories and actions achieved by teachers and students through turns-at-talk. In the data analysed here, the teacher checks knowledge using a specific question format (see Table 1), one of the students provides a response in the L1 in the second pair part of the adjacency pair, and in the follow up turn the teacher acknowledges/confirms the answer but displays a preference for an explanation or a reformulation in the L2. This trajectory leads to the establishment and maintenance of an L2 language policy, to which the students align (see the end of Extract 2), and which opens learning opportunities by producing an interactional affordance for speaking in the L2, while also not punishing the students for using the L1. It should, however, be noted that the emergent trajectory is limited to knowledge check questions and vocabulary items, so further research is required on how the L1 and multilingual resources are enacted and managed in classrooms (see also Filipi and Markee 2018). In what follows, I will present pedagogical implications for initial/pre-service teacher education with regards to how such comparative findings can be used in teacher education programs for developing audio-visual materials for teacher candidates.

4 Pedagogical Implications: Integrating CA Findings into a Technology Enhanced Language Teacher Education Framework Using VEO

By showing such examples to teachers, instructors' awareness of their interactional practices can be raised. One should however keep in mind that such examples need to be based on conversation analytic findings, preferably based on comparative research. Although we know that generalizability is not a concern of CA or any other qualitative research (Markee 2017), basing training materials on such comparisons would make the phenomenon under investigation more convincing for

teachers and trainers alike, and would allow for enabling applications across contexts. In what follows, I describe how CA findings and video recordings can inform teacher education, with the help of a mobile application developed to enhance the professional development of teachers in training and in service.

Using empirical data, the previous section presented an argument for a comparative agenda in selecting classroom-based video materials to be used for teacher education. It has been shown that teachers' management of students' use of their L1s could be something to discuss in a teacher education program, as different ways of managing students' use of the L1 in foreign language classrooms may lead to different outcomes in terms of creating norms for students' L2 use; thus, it deserves to be looked into. Likewise, there are different aspects of teacher talk and classroom interaction that need to be covered in a language teacher education program, ranging from the types of questions that are asked and the kind of feedback that is provided by teachers as they manage/respond to students' questions or, in a broader sense, initiatives. Teacher education frameworks like SWEAR (Waring this volume), SETT (Walsh 2006, 2011) and IMDAT (Sert 2015, 2019) have documented in some detail such aspects of classroom interaction that potentially provide pedagogical insights for teachers, especially when coupled with reflective practice. This section will exemplify one way to integrate CA findings, like the ones illustrated in the previous section, into a teacher education framework.

As briefly mentioned in a previous section of the chapter, IMDAT (Sert 2015) is a teacher development framework that is micro-analytic and reflective. It integrates visual experiences (through the use of recorded videos) and micro-analyses into various forms of dialogic and written reflective practices, and the first step for implementing IMDAT is the introduction of CIC to teachers by using pre-recorded videos and their transcriptions. The use of videos to show instances of practices like teacher questions, teacher feedback, and students' use of L1s is considered crucial at this initial stage.

IMDAT has recently been updated (Sert 2019) with the implementation of mobile video technology (e.g. VEO App, see http://www.veo-group.com). As part of a European Union project, VEOEuropa (2017), we now have studies that have integrated mobile technology in the form of a video-tagging application into teacher education frameworks like IMDAT (see Seedhouse 2021 for a collection of case studies). The VEO App, developed by Paul Miller and Jon Haines, is a mobile application that helps educators enhance observation and feedback practices in teacher education by providing a tool that enables online and offline tagging and reviewing of videos. By tagging selected moments in classroom interaction, teachers are able to review moments in classrooms for reflective purposes. The audio-visual richness of this app facilitates practical observation and quality reflection and has been found to be productive and useful for teachers (see Çelik, Baran and Sert 2018 for a case study). Figure 1 below shows one of the video tagsets developed as part of VEO-enhanced IMDAT training held in Turkey. More details on step-by-step implementation of VEO in IMDAT in teacher education are documented in Sert (2019) and Bozbıyık and Sert (2021).

Fig. 1 A screen shot of sample learner tags developed in the VEOEuropa project

As can be seen in Fig. 1, each button on the right and left hand sides of the recording screen is designed to specify moments of interaction, while the tags at the bottom measure the duration of classroom foci (in this case partly based on Seedhouse 2004; Walsh 2006). CA findings (like the ones presented in the previous section) can help to create these buttons, as well as to critically reflect on interactional phenomena (e.g. L1 use) both for use at the initial stage of IMDAT and in the following stages that include mentor and peer feedback. Figure 2 summarizes these stages.

I would argue that CA findings that are based on comparative collections — including the one presented at the beginning of this section — can be integrated into the first step of the training framework given above (Introducing CIC). Conducting workshops using already recorded phenomena related to CIC (such as teachers' managing the use of the L1) would increase the awareness of teachers. This is particularly important when it comes to pre-service teachers, who have little or no experience with real classrooms. For them, such audio-visual input that is data-led is complementary to their theoretical knowledge gained in teacher education programs. Furthermore, if observed using VEO tags, teachers can get mentor feedback based on visual data and establish professional learning experiences in stage 3 through dialogic reflection as well as gain more insights through peer-feedback in stage 5. Note, however, that although these look like very promising developments for creating more explicit outcomes that are based on CA findings from classroom research, one still needs to be cautious before attempting to apply such technological solutions more widely, as there are probably more challenges than prospects.

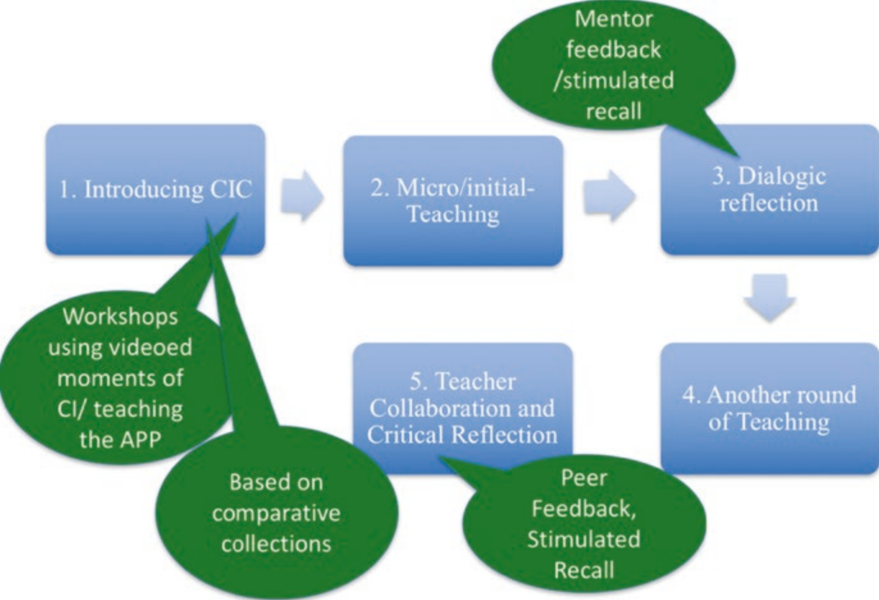

Fig. 2 VEO integrated IMDAT framework

As has been discussed earlier, collaboration between CA researchers and language teachers can be fostered by showing teachers videod moments of interaction in their classrooms, and by developing a database of videos based on conversation analytic findings from classrooms. However, a danger of using such an approach to promote teachers' professional development is that such activities may end up being formalized as a reified checklist of "good and bad teaching behaviours". The history of classroom interaction research has already witnessed the limitations of observation checklists and instruments, which tend to simplify interactional constructs into observer-imposed categories. The VEO mobile app, for instance, generates simple, frequency-based statistics after a classroom recording is completed (see Fig. 3 below).

Although such frequency-based information may be useful in order to gain a general idea of how the most commonly observed interactional features are organized, it is dangerous to use these raw descriptive statistics in assessing the performance of the teachers and for research purposes. The reason is that although this quantification may give some ideas about what happens in the classrooms, it may create the risk of reducing the complexity of teaching and learning to top-down assessment tools. Another challenge concerns the global relevancy of the videos developed, and the interactional phenomena that surface in these videos. Neither CA researchers nor teacher educators would want to overgeneralize certain classroom interaction phenomena as good or bad, given the contextual and conceptual diversity of classrooms in the world. For instance, the management of code-switching and how the L1 is used exemplified in this chapter might be relevant and

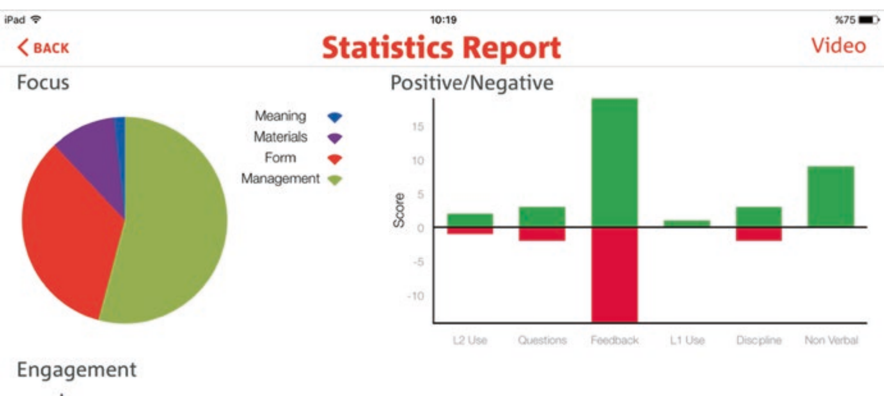

Fig. 3 The statistics screen on VEO App

useful in one classroom, but may not work in another one. One should keep in mind that there are various dynamics including differences in curricula as well as the level and age of students, which pose threats for generalizability of such training video samples. Nevertheless, I would argue that once researchers develop these materials and agree on certain tags, the emergent materials will have more benefits compared to their challenges, given that it will help teachers and teacher educators understand better the interactional and pedagogical dynamics in their local contexts, where reflection and feedback practices in teacher education exist. One way to engage in comparative classroom-based research to reach sound findings is to investigate "massively common pedagogical actions – such as how teachers do giving instructions" (Markee 2017, p. 380). Knowing that reflective practice has become the sine qua non of teacher education in many parts of the world, the training videos as well as the videos that come from teachers' own classrooms would be welcomed by trainers and teachers alike.

In this chapter, I have presented an argument for designing and developing CA-informed audio-visual teacher education materials based on findings of conversation analytic research on classroom discourse and interaction. I have raised the need to integrate CA findings into teacher education frameworks like SWEAR (Waring this volume), SETT (Walsh 2006) and IMDAT (Sert 2015, 2019) and argued that teacher education and development can benefit from a comparative research agenda. In order to showcase how this can be done, I have analysed different trajectories of code-switching in different educational contexts, which showed how different teachers managed their students' use of the L1. Finally, I have demonstrated how a mobile application can be integrated into IMDAT. CA findings and the reflection phases that are incorporated into the VEO-integrated IMDAT cycle can potentially inform future teaching practices.

Eliciting reflection is a key feature of mentor-teacher or teacher-teacher post observation sessions, and mentors and teachers rely on classroom videos to generate reflection and feedback (e.g. Kim and Silver 2016). The use of videos for reflection

and feedback includes stimulated recall sessions, which is also the case for stages 3 and 5 of IMDAT. CA researchers may be cautious about the use of stimulated recall in combination with CA analyses of classroom interaction; however, as Pomerantz (2005) argues, "using participants' comments in conjunction with recordings of interactions provides the potential for enhancing one's analytic claims and/or for opening up avenues for investigation that otherwise might go unnoticed" (p.93). The use of VEO mobile app fits into the practice of stimulated recall, providing new potentials for teacher cognition research, a field which has grounded itself on perceptions of teachers as a research programme (but see Li 2017, 2019).

I agree with Waring (this volume) that in order to contribute to the ways teacher education is done, "the time is now to begin with one conversation analyst, one teacher-trainer, one recording, one transcript, one issue, and one practice" (p. 299). Especially in in-service teacher education, starting with videos of teachers' own lessons will be the way to go, as it will put critical self reflection at the heart of teacher language awareness. Within initial, pre-service teacher education, though, I argue that relying on a database of selected audio-visual recordings that introduce teaching related concepts (e.g. L1 use, correction) is a good alternative way to go. This is possible by forming such databases for teacher education based on CA findings of classroom intetraction, as this chapter has showcased.

As recent developments in the use of technology in collecting L2 data have shown (Balaman and Sert 2017a, b; Sert and Balaman 2018), technology is having an important impact on the way we collect, transcribe, and analyse L2 data. Tagged videos and reflections on them (Çelik, Baran, Sert 2018; Körkkö 2019; Körkkö et al. 2019), combined with CA analyses of classroom interactions (Sert 2019), are also emerging as a new research venue, and this research strand has a lot to offer to teacher education and development. However, we need further research into the dynamics of interactions in teacher education contexts to see how empirical findings from these contexts will contribute to our understanding of teaching and learning in interaction.

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Harnessing the Power of Heteroglossia: How to Multi-task with Teacher Talk

Hansun Zhang Waring

Abstract To a large extent, the quality of classroom communication hinges on the teacher's ability to tune in and respond to emerging students' voices, which requires the astuteness and agility to hear layered messages, offer tailored assistance, and follow students' leads. It requires responding to multiple contingencies in real time. One important resource for managing such contingencies is heteroglossia (Bakhtin MM, The dialogical imagination. The University of Texas Press, Austin, 1981, p 324). Teacher talk can be deeply heteroglossic: a particular utterance can be saturated with more than one voice or can achieve more than one goal, making evident the multiple and potentially competing demands that teachers manage on a moment-by-moment basis. In this chapter, I illustrate what heteroglossia looks like in the language classroom and demonstrate how understanding heteroglossia as teacher talk can be usefully marshaled to create evidence-based teacher training. Throughout the chapter, problem scenarios that place the teacher in the difficult bind of having to manage competing demands such as honoring individual voices vs. cultivating inclusiveness are presented. Detailed transcripts of classroom interaction are then shown to demonstrate how heteroglossia can present at least one solution to these problems. A guided reading of each transcript will highlight the specific interactional resources that may be drawn upon to effectively produce heteroglossia. The chapter ends with a step-by-step plan for utilizing similar videotaped materials for teacher training purposes. It is hoped that understanding heteroglossia as a resource can awaken us to the ingenuity of teacher talk, and consequently, inspire us to become part of that ingenuity.

Keywords ESL · Classroom interaction · Heteroglossia · Multiple demands · Evidence-based teacher training · Multitasking

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_14

Abbreviations

BB board
LL students/class
T teacher
TB textbook

1 Introduction

To a large extent, the quality of classroom communication hinges on the teacher's ability to tune in and respond to emerging students' voices, which requires the astuteness and agility to hear layered messages, offer tailored assistance, follow students' leads, and work from within their world (Waring 2016). It requires, in other words, responding to multiple contingencies in real time. One important resource for managing such contingencies is heteroglossia, or literally, (the use of) multiple voices. As Bakhtin (1981) writes: "[e]ach utterance is filled with echoes and reverberations of other utterances to which it is related" (p. 106) and the "two voices are dialogically interrelated" (Bakhtin 1981: 324). Teacher talk can be deeply heteroglossic: a particular utterance can be saturated with more than one voice or achieve more than one goal, and a particular sequence can attend to multiple demands that the teachers manage on a daily basis: order, equity, learning, participation, progressivity, and inclusiveness. By deftly recruiting heteroglossia, teachers may succeed in, for example striking a delicate balance between exercising necessary control and fostering an open space for participation. In this chapter, I illustrate what heteroglossia looks like in the language classroom and demonstrate how understanding teacher talk as heteroglossia can constitute a practical foundation for creating evidence-based teacher training.

In what follows, I begin by highlighting the nature of teaching as a multifaceted juggling act. I then demonstrate how heteroglossia can present at least one resource for navigating the complexity inherent in teaching. The chapter ends with a preliminary guide of how to develop teachers' ability to *think and do* heteroglossia in pedagogically gainful ways as well as a general discussion on the challenges of applying conversation analytic (henceforth CA) findings to teacher training.

2 Teaching as a Multifaceted Juggling Act

The complexity of teaching has been recognized by various scholars both conceptually and empirically. In his illuminating discussions on classroom management in language education, Wright (2005) offers a portrayal of teaching as constantly managing the tasks of maintaining order, promoting learning, and last but not least,

building "a context of care" that attends to relationships and emotions. The complex interactional dimension of language teaching is also highlighted in Walsh's (2006) proposal of the construct of classroom interactional competence (CIC) to capture what he later defines as "teachers' and learners' ability to use interaction as a tool for mediating and assisting learning (Walsh 2011: 158). As Walsh (2006) writes, "[a]though CIC is not the sole domain of teachers, it is still very much determined by them" (p. 130). In his attempt to refocus language teacher education from materials- and methodology-based to more interaction-centered, Walsh (2012) characterizes the interactional demands faced by language teachers as using language appropriate to particular pedagogical goals, maximizing interactional space for learner participation, and shaping learner contributions in productive ways. In a relatively more recent attempt to conceptualize the complex endeavor of teaching, Hall and Johnson (2014) propose the concept of "interactional competence specific to teaching" (ICT). ICT goes beyond such basic teacher practices as employing the IRF (Initiation-Response-Feedback) to accommodate a wider range of interactional resources. Such resources would include not only talk, but also gaze, gesture, and body posture—a wide array of practices teachers draw upon to competently instruct and manage student involvement.

Empirical evidence for the complexity of teaching is rendered most visible in studies that document the multiple, and sometimes competing, demands managed by teachers. Without focusing on language classrooms in particular, Paoletti and Fele (2004) demonstrate how the teacher constantly endeavors to strike a difficult balance between maintaining control and soliciting student participation in a geography lesson for 13/14-year-old in Italy. Similarly, Emanuelsson and Sahlström (2008) show how in two mathematics classrooms in Sweden and the USA, the teachers navigate the tension between content control and student participation. In math tutoring with young children in the USA, an experienced teacher uses what Creider (2020) calls the *integration sequence* to promote student agency during potentially derailing student initiations while simultaneously accomplishing specific pedagogical goals. Exploring a somewhat similar issue in the second language classroom in the USA, Waring et al. (2016) describe how teachers engage two sets of resources—*respond with ironic teasing* and *invoke learning orientation* to manage moments of "disorder," showcasing how control may be exercised in ways that advance rather than inhibit learner voice. Another study that draws from the same data set also features an experienced teacher who manages to maintain an open, yet structured space that fosters connection without sacrificing control. He does so by carefully embedding conversational elements into the structural constraints of classroom talk and ensuring such embedding does not compromise the classroom order (Waring 2014a). In a refreshing multimodal conversation analytic study, Creider (2016) also offers compelling evidence for neutralizing the dichotomy of teacher control and student agency by engaging participation without asking questions, which the two teachers in a French-immersion kindergarten classroom in the USA achieve by establishing routines, exercising framing and focusing, and shifting footing.

The competing or multiple demands of teaching are not limited to the tensions between teacher control and leaner agency/participation. Nguyen (2007) shows how in one ESOL grammar class, the teacher skillfully deploys various interactional resources to build rapport with students while simultaneously accomplishing instruction. Attending to the interpersonal dimension of classroom life also figures in Hall and Smotrova's (2013) study of how teachers handle such unplanned moments as technical difficulties, where the practice of self-talk plays a significant role in maintaining the students' attention on the pedagogical task while inviting empathetic responses from latter. The ability to engage in a self-talk during these moments is therefore evidence of the teacher's "interactional dexterity" for managing such multiple demands as resolving a technical glitch, holding on to the instructional floor, and relating to students in "positive, pro-social ways" (p. 88). Interactional dexterity is also a must during moments when competing student voices emerge in responding to teacher elicitations, and the teachers may deploy *selective attending* or *sequential attending* to strike a delicate balance between such concerns as varied as advancing learning, promoting progressivity, maintaining order, and being inclusive in the adult ESL classroom (Waring 2013a). Finally, in resolving what she calls the "participation paradox" or the necessity of *engaging in* and *disengaging from* interactions with individual students to promote extended as well as even participation, Reddington (2018) demonstrates a teacher's tactful use of such practices as *gear up*, *embody active listenership*, and *close and connect contributions* in a low intermediate ESL classroom.

In sum, juggling multiple or competing demands of moment-to-moment classroom interaction is a practical concern for teachers who live the classroom life replete with complexity and contingencies. These demands include but are not limited to (also see Waring 2017):

- promote agency and participation without losing the pedagogical focus;
- foster play and exploration without undermining necessary control;
- build rapport without compromising instruction;
- cultivate "conversation"--the essence of interactional competence--in an environment that is not a natural habitat for such conversation;
- assess performance in ways that assistant performance
- resolve the paradox of authenticity, where authentic interaction is often off-task, and where greater participation may entail less authentic interaction;
- resolve the "participation paradox" (Reddington 2018), where extended participation with individual students can undercut even and inclusive participation for the whole class.

The multitudes of demands call for multitudes of measures, and one such measure, as I mentioned earlier, is the exploitation of heteroglossia in teacher talk.

3 Heteroglossia as a Potential Solution

In this section, I show three cases from the adult ESL classroom where the teacher exploits heteroglossia to manage a range of practical dilemmas: How does one attend to individual voices in a whole-class setting where such attending may derail the pedagogical focus, undermine even participation, discourage volunteering, or cost someone a learning opportunity? All three cases are drawn from a larger data set of video-recordings (Informed consent was obtained from all participants) that have been transcribed in their entirety using conversation analytic (CA) conventions (see Appendix). These transcripts provide the empirical basis for a CA analysis to elucidate the heteroglossic nature of what the teachers do in these three cases. Before we proceed, a note on transcribing nonverbal conduct is worth highlighting. As shown in the appendix, a dash that connects the verbal and nonverbal (or silence) is used to convey simultaneity. With "((*nods*))-yes," for example, the nod co-occurs with *yes*. The absence of the dash would indicate that the nod precedes the delivery of *yes*. Sometimes it is necessary to demarcate the extent of the co-occurrence, and curly brackets are used to do such demarcation. With "{((*nods*))-yes, I} did," for example, the nod ends after *I*.

The first case involves the perhaps familiar scenario of side talk (Lemke 1990). In this particular ESL classroom, the students are taking turns sharing how they spent their weekend. As Halloween took place over that particular weekend, most of the students' stories focused on their celebrations of the holiday. Immediately prior to the segment, as one student Maria was sharing her Halloween experience, the teacher noticed that three others had started looking at a phone and talking quietly among themselves, which creates a dilemma for the teacher: staying on the main floor ignores the side talkers and can deprive them of a learning opportunity, and attending to the side talkers can disrupt the flow of the conversation on the main floor, compromise the pedagogical focus at the time, or even spotlight the side-talkers in ways that potentially alienate rather than assist the latter (Waring et al. 2016). What can she do to attend to the needs of both the individual and the group? As the segment begins, upon the completion of Maria's story, the teacher produces an acknowledgement *okay* and a positive assessment *very good* (lines 01–02). Notably, in the midst of her delivery of *very good*, she shifts her gaze to the three side talkers. In other words, at this "choice point" where the sequence could go in different directions (Hepburn et al. 2014), it looks as if the teacher were about to attend to the side talkers in some way, but how? She could certainly chastise the behavior and end the disruption.

(1) side talk

01 T: ((*gaze at Maria, smiles and nods*))-okay, very
02 ((*gaze at Cindy, Noriko and Sarah*))-good. .hh ((*mock scowls*))
03 → -$↑what are you three <doing>. exactly.$
04 LL: ((*gaze at Cindy, Noriko and Sarah*))
05 Luisa: hhh
06 LL: hhhhh
07 T: ((*gazes at Cindy, Noriko and Sarah*))-{$what are you
08 looking-((*shakes head, smiles*))} at.$
09 (2.0)-((*Cindy, Norika and Sarah still looking at*
10 *phone and talking*))
11 ((*Cindy, Noriko and Sarah look up*))
12 T: [hhhh]
13 LL: [hhhh]
14 T: → $so what's going o:n. wanna sha:re?$
15 Cindy: (what?)
16 T: <$what are you↑talking about.$>
17 Cindy: (   )
18 Noriko: hh (   )
19 Cindy: (telling) that I was in a wedding this
20 ↑weekend, so I was (showing pictures.)
21 T: → Was it a Hallowee:n the:med wedding? ((*smiles*))
22 Cindy: no.
23 T: ((*shakes head*))- n(h)o(h). (.) ((*smiles*))- °that
24 would've been fun.=okay,° ↑who's wedding was it.

As can be seen, line 03 begins with an inbreath that signals perhaps the beginning of a multi-unit turn, which is followed by a quizzical look that accompanies the question *what are you three doing exactly?* (lines 02–03). The question immediately draws the class' attention to the side talkers (line 04) and subsequent laughter (lines 05–06). With this redirected focus from the class, the teacher then asks a second question in a smiley voice and a head shake: *What are you looking at?* as the side talk continues (lines 09–10), which draws further laughter from the teacher and the class (lines 12–13). The sider talkers finally look up in line 11. With this eventually obtained attention of the three, the teacher then redoes her earlier questions, again in a smiley voice: *What's going on, wanna share?* After what appears to be a repair initiation from Cindy (line 15), the teacher repeats her question in line 16, without losing the smiley voice, in a slower speed and raised pitch on the word *talk*, which finally receives a response from Cindy in lines 19–20 that reports on her activity of showing pictures of the wedding she attended this past weekend. The report is taken up by the teacher in the next turn as she asks *Was it a Halloween themed weddings?* followed by a smile, apparently registering the irony of the question and its teasing stance. Another follow-up question that seeks the details of the wedding ensues (line 24) after Cindy's *no* response.

The series of questions along with their delivery, as I would argue, are heteroglossic in that they are inhabited with the co-existence of a number of voices and achieve a number of goals simultaneously. First, they make evident the conduct of

the side-talk as outside the realm of what is considered the expected, appropriate conduct in the classroom but do so in an affiliative rather than an authoritative register. The emphasis on *you* in the first question, for example, clearly demarcates the three as bystanders apart from the main classroom floor, which is recognized via laughter from the rest of the class. This rather implicit "chastising" is also delivered in a smiley voice and teasing tone. Hence, the practical aim of ending the side talk is reached with much finesse. Second, quite apart from drawing attention to the *conduct* of the side talk, these heteroglossic questions also appear to convey a genuine interest in the *content* of the side talk without dismissing it as entirely irrelevant. The side talkers end up sharing their conversation with the class in ways that are addressed to the activity of the moment: sharing weekend activities (not shown). Through the repeated and follow-up questions then, the teacher manages to bring the side talk onto to main conversation floor and integrate what might have otherwise remained as irrelevant underground talk into the pedagogical focus at the time. With such heteroglossia, the teacher is able to build rapport without undercutting control and to honor individual voices without compromising the group agenda. This is done, in part, by designing questions, that simultaneously express interest and disapproval and delivering those questions in light-hearted and yet persistent ways.

A second scenario concerns what Reddington (2018) refers to as the participation paradox—the necessity to engage and exit interactions with individual students to ensure extended and yet even participation at the same time, part of which involves our routine difficulty of ending a student contribution that appears to be lasting longer than necessary: staying with this individual student must be done at the expense of other voices, but moving on to the others may leave this student feeling that they have not been adequately heard. In this particular ESL class, the students have been given a list of sentences with typical language errors (e.g., misplacing/missing commas in non-restrictive relative clauses). They worked in groups to correct these mistakes. As the teacher brings the class back together, he asks why even the best students would make these kinds of mistakes, and Freida volunteers her answer in line 17 after a (2.2) second gap. As will be seen, her answer continues beyond what may be considered necessary, and the teacher is placed in the position of having to deal with that continuation in ways that honors Freida's voice while ensuring participation from the rest of the class.

(2) number one

01	T:		((*lines omitted*)) why do you think (.) even the best students
02			make these mistakes. in essays. >°why do you think.°<
03			(2.2)
04	Freida:		(and even thou') sometimes? when you are sure
05			that you really know something? ((*T nods*)) then you just
06			don't think, when you are
07			writ{ing?-((*T nods and points to F with gaze away*))}
08			a:nd, you just write. [that's it.]
09	T:	→	[((*nods with gaze shift away*))] ((*nods*))
10			[$NUmber one.$ huh]-((*gaze back to Freida with nods*))
11	Freida:		[an' you USUally don't] check?
12			[°befo:re°]
13	T:	→	[.hhh-((*gaze away but points to F*))]

Image 1: Extract 2 Line 13

14			((*gaze back to F*))-$which is another problem. Yes.$=
15			=((*shifts gaze to L*))-Number two. Lena.
16	Lena:		for me:, when I need to (guess)? ((*continues*))

At the possible completion of her very first compound turn-construction unit (TCU) (Lerner 1991), Freida has offered a reason that might be considered sufficient—that sometimes people just don't think when they're writing. The teacher signals acceptance with nodding and pointing (line 07), but Freida continues with *and you just write* (line 07). When this second TCU comes to an end, the teacher again nods but with his gaze shifted away (line 09). At the same time, Freida continues further with yet another TCU: *That's it* (line 08). What the teacher does next despite Freida's further continuation is shift his gaze back to Freida and say: *Number One*, which is done in raised volume and thus in competition with Freida's continuation (Note that Freida also raises her volume immediately afterwards with *USUAally*). Such competition serves to curtail Freida's ongoing turn, which the latter registers by moving into a trail-off (Local and Kelly 1986) at the completion of her current TCU (line 12). Both the smiley voice and the ensuing laugh token (line 10) may be hearable as mitigating the blunt delivered by such curtailing. In line 13, upon immediate completion of her TCU of *you usually don't check* in overlap with Freida's trail-off °befo:re°, the teacher takes an inbreath as he points to Freida but with his gaze away, as if acknowledging the insight the latter just produced to the rest of the group. He then shifts his gaze back to Freida with an other-initiated increment to what Freida just said: *which is another problem* followed by

a confirming *Yes* in a smiley voice. Immediately thereafter in latching, the teacher shifts his gaze to Lena as he selects the latter to produce reason *Number two* (line 14). Lena then proceeds with her response (line 16).

In an effort to attend to Freida's contribution while preserving a participation space for the rest of the class, the teacher engages both verbal and embodied resources in designing his deeply heteroglossic uptake. First, while the nod in line 08 indicates acceptance of Freida's response, the gaze shift launches a move away from Freida the individual speaker to the class as a whole. Similarly, while the pointing gesture in line 12 is directed toward Freida, the gaze is to the class (see image 1). By splitting his embodied displays as such, the teacher attends to both Freida and the others. Second, as noted earlier, while the competitive launching of *number one* serves to prevent Freida from talking further, the smiley voice in which it is delivered as well as the ensuing laughter token softens the blow. Moreover, while *Number one* validates what Freida has said so far as an officially acceptable answer, it also frames her contribution as the first reason in a list of reasons that are yet to be completed—though by others in the room. It works, in other words, as an account for exiting the interaction with Freida as well as an invitation for others to contribute. Third, in lines 13–14, before his "rush" (see latching) away from Freida to select Lena, the teacher displays great sensitivity in acknowledging and confirming Freida's contribution which is delivered in overlap with his *Number one*. In various ways then, the teacher embodies the message of *being there* for both Freida and for the rest of the class. Such heteroglossia is made possible by an ensemble of verbal and embodied resources, carefully choreographed to regulate, to affiliate, to validate, and to invite.

In a third scenario, the teacher faces yet another dilemma—that of responding to "competing voices" (Waring 2013a). When an unselected student volunteers what may be considered a correct answer while the selected student struggles, moving on with the right answer would deprive the struggling student of a learning opportunity; ignoring the volunteered contribution could send subtle signals that are conducive to building a climate that discourages rather than encourages participation. The teacher is leading the class to figure out the meaning of the noun *produce*. As the segment begins, he offers a clue to the word (lines 01–03) and then selects Ana to respond (lines 05 & 07). Kara, however, is the one who offers the response (line 08) while the teacher's hand is still extended towards the direction of Ana. What might the teacher's next move be?

(3) produce

01	T:		I can tell y- every single person in this class
02			does know this word.=°you've all seen this wo:rd,
03			in supermarkets.°
04			(0.5)
05			Ana?-((*leans forward*))
06			(0.8)
07			[((*left hand extends to Ana*))]
08	Kara:		[It's agricultural?]
09			[p r o d u c ts?
10	T:	→	[°Ah°- -((*to K with finger up and then* {*points*))-°>ye[ah.<°}]
11	Ana:		[vege]
12			[t a b l e::::::s]
13	T:	→	[((*gaze and arm swerved to A*))]
14	Ana:		[a::: n [d]
15	T:	→	[((*pivots to inducing gesture*))-[A::]ND?
16	Ana:		°frui:t.°=
17	T:		=Yes-((*nods and retracts arm*))
18			(2.0)-((*T nods*))
19			((*underlines 'produce'*))
20			(1.0)-((*T nods*))
21			PROduce. >vegetables and fruits.<
22		→	((*gaze and gesture to K*))-Or agricultural
23			products °((*to LL*))-°like Kara said.°

As shown, in line 10, upon hearing Kara's *agricultural*, the teacher, with a cut-off *Ah* in low volume, immediately lifts his right index finger to an "on-hold" position that subsequently pivots to a pointing gesture along with the *sotto voce* and quick-paced *yeah* as Kara completes with *products* (line 54). The teacher's *yeah* acceptance also partially overlaps with the onset of Ana's offer of *vegetable* as an example of agricultural products (lines 11–12), at which point he promptly swings his right arm toward Ana (line 13)—a gesture that subsequently pivots into an circular inducing movement (line 15) as Ana continues with *and*. The teacher then repeats the *and* in partial overlap with a sound stretch on the word *and* and a rising intonation as he continues the inducing gesture. Finally, we hear Ana's *fruit* in line 16. The teacher's subsequent acceptance of Ana's answer begins with the latched *yes* in line 17 and ends, notably, with a repetition of Kara's contribution earlier with a specific attribution to Kara (*as Kara said*) (lines 22–23)—a response he initially stalled and only briefly acknowledged as a quick sidebar (line10).

In other words, the teacher's conduct in handling these competing voices is being strikingly heteroglossic. First, in line 10, the split second pivot from the stalling *ah-* to the accepting *yeah* as well as the low volume and quick pace in which both are delivered allow him to subtly and discreetly signal his awareness of and appreciation for Kara's contribution. At the same time, it also firmly renders the latter's voice as secondary to his primary attention to Ana. Second, the teacher's extensive support of Ana's struggle to find and produce her answer as well as his final acceptance of that answer (lines 13, 15 & 17) is not done at the expense of diminishing Kara's

contribution: he deftly enfolds the latter's earlier contribution into his final words that ends the sequence (lines 22–23). In a remarkably executed juggling act then, the teacher is able to carve out a safe space for Ana to work out her understanding without discouraging or devaluing Kara's spontaneous participation. Again, it is the skillful deployment of verbal and embodied resources in their precise sequential moments that yields the magic of heteroglossia.

4 Pedagogical Implications: Training for Heteroglossia

So far, I have offered some exhibits of how heteroglossia may be deployed at least as a partial solution to some paradoxes of the classroom, but the question remains: how do we apply this understanding to teaching and teacher training? In this section, inspired by the recent development of CA intervention (see *Research on Language and Social Interaction* 2014 special issue) and in particular the CARM (Stokoe 2014), I offer a preliminary proposal for a five-stage SWEAR framework that might serve as an initial template for launching the endeavor of making classroom CA findings useful or accessible to practioners: (1) ***S***ituate the problem, (2) ***W***ork with a recording, (3) ***E***xpand the discussion, (4) ***A***rticulate the strategies, and (5) ***R***ecord and repeat. For illustrative purposes, I return to the notion of "participation paradox" (Reddington 2018) and show how one might follow the SWEAR framework to help the teachers develop the ability to exploit heteroglossia in managing this paradox. It is important to note, as one reviewer points out, rather than being a mere set of technical exercises, the framework is best used as a way to enhance teachers' awareness of the challenges and possible solutions in classroom talk.

Situate a Problem Situating the problem is the first step in training for heteroglossia. It involves establishing and validating a particular issue of pedagogical concern, and in our case, the participation paradox--by simply starting a conversation with teacher candidates. My own experience with observing, supervising, and conversing with teachers-in-training in both practicum courses and post-observation conferences, for example, has brought me face to face with some of the routine problems teachers encounter in the classroom, a considerable subset of which revolves around the issue of participation: *How do I get everyone to participate? How do I get silent students to talk? How do I make sure that the floor is not hogged by a few?* (Compare the present discussion with the issues discussed in Kim and Silver this volume, which focus on how different participation frameworks affect mentor-mentee talk in the Singaporean educational context). Many of these questions are crystalized in the notion of "participation paradox" mentioned earlier--the challenge of engaging and exiting interactions with individual students in order to ensure extended yet even participation (Reddington 2018). In a classroom where the teacher is constantly distributing his or her attention among a collective of individuals, who gets to participate when and for how much (or how long) is indeed (or should be) one of the central practical concerns of everyday pedagogy.

During this conversation with teacher candidates, it would be reassuring to emphasize that the challenge of ensuring the active participation of all learners in the language classroom has been documented in the literature as well (Allwright 1980; Paoletti and Fele 2004; Mohr and Mohr 2007). Allwright (1980), for example, observes that "[f]or many years teachers have been urged to secure the active participation of all learners at all times, … Given a teacher with the declared aim to secure an even distribution of participation, some learners will negotiate for more than their 'fair' share, others for 'less'" (p. 166). Paoletti and Fele (2004) also remark on the tension between maintaining control and inviting participation (p. 78). It would also be helpful to point out that there are a host of strategies aimed at promoting wider participation such as designing pair or group work or following procedures like having each current-speaking student select the next speaker. These strategies, however, are not suited to managing spontaneous, whole-class discussions.

Work with a Recording (and/or Transcript) Having firmly established and validated the problem of participation paradox, the second step is to work with a carefully chosen video-recorded segment of an actual classroom where the teacher is placed in the position of navigating this paradox. Before we proceed, however, where can such a recording be obtained in the first place? One might immediately think of online resources such as the *youtube*. Indeed, various videos of English language teaching are easily accessible online. There are also video repositories in large corpora such as the Corpus of English for Academic and Professional Purposes (CEAPP) (2014) (http://ceap-php.vmhost.psu.edu) that is currently being developed at Penn State University. The most useful recording, however, would be one made of an expert teacher in the specific context for which a teacher candidate is being trained for. Even a single recording of a single class would suffice, and to obtain such a recording for training purposes should not pose insurmountable logistical difficulties. One would be amazed at the complexity and richness of what just a 1-h video can potentially offer when placed under the kinds of micro-analyses I have shown so far. As a starter, without the benefit of a recording, one can also begin with transcripts in published materials such as the ones exhibited in this chapter. For illustrative purposes, I now return to the case of managing the participation paradox discussed earlier and specify the four steps involved in working with a recording/transcript.

1. Introduce the case with a script such as: *This is an advanced level ESL, and the class is discussing why even the best students would make certain grammar mistakes. Freida volunteers to respond after approximately two seconds, and the teacher's job is to hear Freida out but at the same time ensure that others can participate as well.* Play the segment of the recording that contains the teacher's question as part of the introduction.

(3a) *teacher's question*

01	T:	((*lines omitted*)) why do you think (.) even the best students
02		make these mistakes. in essays. >°why do you think.°<
03		(2.2)

2. Play an audio-only clip incrementally as the teacher candidates listen to Freida's response in "real time" up to the following lines.

(3b) *Freida's answer (part 1)*

01	Freida:	(and even thou') sometimes? when you are sure
02		that you really know something?
03		then you just don't think,
04		when you are writing?
05		a:nd, you just write.
06		that's it.

Emphasizing that a key ingredient to being responsive in the classroom involves close and intensive listening, prior to playing the clip, try using a script along the lines of:

As the teacher, you want to hear from Freida, and you want to hear from others as well, but you have a very limited amount of time to do this, so one question you might ask yourself as you are listening to Freida is: When should I jump in and accept Freida's response as sufficient? As you listen to the recording, listen carefully and signal (e.g., raise hand, tap on desk, say "stop"*) to indicate when that "stop" point is for you. I will stop the recording upon your signal. We'll talk briefly about why that may be treated as a good time to stop Freida. I will then continue to play the recording until all the "stop" points are exhausted.*

Alternatively, stop the recording at the end of each of the lines above (without showing the transcript yet) and ask: *Would this be a good time to stop Freida? Why or why not?* At the end of line 01, for example, we reach the end of an adverbial clause, where the main clause is still to be expected, and intervening at this point could be construed as interruptive. The same can be said of the end of line 02. The end of line 03, however, could potentially be treated as the completion of an adequate response, that is, one makes mistakes when we are not thinking. A complete thought has been expressed or a turn construction unit (TCU) (Sacks et al. 1974) has been delivered, and the same can be said of the rest of the lines, where the teacher could reasonably interject.

3. Discuss choices that could be made at each "stop" point or what Hepburn et al. (2014) refer to as "choice points," where a variety of next turns become possible (p. 248). With the recording above, once a common understanding has been established with regard to where those choice points are, play the audio-only clip again and stop at each choice point to ask: *If you were the teacher, what would you say and/or do next? How exactly would you say and/or do it? What are the possible consequences (e.g., advantages or disadvantages) of the various options?*
4. Play the full video clip along with a transcript to show the teacher's choices. This is also a good time to introduce ways of capturing interactional details in a transcript and using transcripts as a tool for teacher learning.

(3c) *Teacher's response*

01	Freida:		(and even thou') sometimes? when you are sure
02			that you really know something? ((*T nods*)) then you just
03			don't think, when you are
04		→	writ{ing?-((*T nods and points to F with gaze away*))}
05			a:nd, you just write. [that's it.]
06	T:	→	[((*nods with gaze shift away*))] ((*nods*))
07		→	[$NUmber one.$ huh]-((*gaze back to Freida with nods*))
08	Freida:		[an' you USUally don't] check?
09			[°befo:re°]
10	T:	→	[.hhh-((*gaze away but points to F*))]
11			((*gaze back to F*))-$which is another problem. Yes.$=
12			=((*shifts gaze to L*))-Number two. Lena.
13	Lena:		for me:, when I need to (guess)? ((*continues*))

Highlight what this teacher does at his particular choice points as indicated by the arrowed turns in lines 4, 6, 7 and 10 and the heteroglossic nature of these choices which serve to both validate Freida's contribution and to open the floor to others to participate. This could also be the moment to raise questions such as: *Is what the teacher does an effective way of managing the situation? What are some other possible alternatives?*

Expand the Discussion If possible, a useful exercise at this particular juncture is to expand the discussion beyond the single case above and bring in additional transcribed scenarios that exemplify the participation paradox to deepen the discussion. For the sake of illustration, I turn to two more scenarios below taken from an intermediate-level adult ESL classroom (also see Waring 2013b, 2014b). The transcription symbols may be explained again at this point.

Scenario 1

In the first scenario, the teacher is leading a discussion on why a particular joke in an ESL textbook is funny. The segment begins with him asking how the joke exemplifies "incongruity." Consider (4a) below: *What can the teacher say or do after Stacy's turn in line 07 to validate her contribution and keep the opportunity to participate open for others?*

(4a) incongruity

01	T:		Okay:, (0.6) So:, how- how is this an example o:f
02			incongruity.-((*to class*))
03			(0.8)
05	T:		According to- (.) >according to what we heard in
06			the introduction [(there's) incongruity.]
07	Stacy:		[Very unexpected ending.]

Summarize the discussion so far on possible responses at this particular choice point and show the rest of the transcript that displays the teacher's response after.

(4b) what's the expected

08			(0.6)-((*T looks to Stacy*))
09	T:	→	((*points to Stacy but looks toward rest of class*))-so
10			what's the expected ending.
11	Stacy:		That- (0.2)
12	Angie:		°It was silly ending. Yeah.
13			It was unusual.°

Note that the teacher demonstrates a good hearing of Stacy's contribution by shifting his gaze to her in line 08. His follow-up question is notably directly away from Stacy to the class. By pointing his finger at Stacy at the same time, however, he acknowledges the relevance of the latter's contribution. He further acknowledges and accepts (although implicitly so) Stacy's contribution by building his next question as seeking a specification of what Stacy has said so far. With this ensemble of verbal and visible resources, the teacher is able to display attentiveness to Stacy while keeping the opportunity space open for others to join in—another exemplar of heteroglossia. Indeed, Angie speaks next.

Scenario 2

The second scenario involves Stacy as well. Again, the class is discussing whether the two cartoons in the "humor" unit of the textbook are funny, and there is uncertainty as to whether one of them actually is. As the segment begins, Stacy offers her

opinion that it is the weirdness of the the cartoon that makes it funny. Note that Stacy’s response — which expands over multiple lines — does not seem to be heading towards any clear direction. Consider (5a) below: *What can the teacher say or do at the blank lines to keep the opportunity to participate open for others without dismissing Stacy’s contribution?*

(5a) weird

01	Stacy:	=Maybe it’s a pur- it’s on purpose to make it so
02		weird, (0.4) that it’s funny.
03	T:	___________________________
05	Stacy:	You know so,
06	T:	___________________________
07	Stacy:	because I laugh >at it because I think it’s< (0.4) I
08		laugh (0.2) at it because I don’t understand it.
09		Because I think it’s so:, not fu::nny:.=Heh
10		heh so that makes me lau:gh.
11	T:	____________________________
12	Stacy:	.hhh >so I don’t know< if that’s (syl syl syl),
13	T:	____________________________

Show the full transcript after summarizing the discussion so far.

(5b) hm what about

01	Stacy:		=Maybe it’s a per- {it’s on purpose to make it so
02		→	weird, (0.4) that it’s funny.-((*T looks to Stacy*))}
03			(0.2)
04	T:	→	Ok[ay,]-((*head up to a nod and looks down to TB*))
05	Stacy:		[You] know so,
06	T:	→	>so weird that-< So, a’right °a’right°,-((*looks down to TB*))=
07	Stacy:		=because I laugh >at it because I think it’s< (0.4) I
08			laugh (0.2) at it because I don’t understand it.
09			Because I think it’s so:, not fu::nny:.=Heh
10			[heh so that makes me lau:gh.]=
11	T & L:	→	[((*giggling*))]
12	Stacy:		=.hhh >so I don’t know< if that’s (syl syl syl),
13	T:	→	H↑m::m. □ What about- ((*gaze turns to Angie*)) (0.2)
14			well, Angie do you have any thoughts about
15			this?
16	Angie:		No. I (0.2) (syl) more than the first (syl syl).

Discuss whether and in what ways the teacher’s response at each arrow may be thought of as heteroglossic—making choices that attend to Stacy and keeping the floor open for the rest of the class. As shown, the teacher turns to Stacy soon after she begins talking (line 01), showing attentive listening. Following a very brief 0.2 s gap after her turn completion, the teacher utters a minimally acknowledging *Okay* in a nodding motion and at the same time withdraws his gaze from Stacy (line 04), thereby accepting the latter’s response without encouraging further talk. In line 06, the teacher quickly repeats the gist of Stacy’s claim but comes to a cut-off and opts

for a series of closing signals as his gaze continues to be directed down to the textbook (e.g., *so…. So. A'right alright*). In so doing, he again validates Stacy's contribution but at the same time begins to disengage from her. In line 11, the teacher giggles along with another student at the same time as Stacy continues, showing appreciation and perhaps at the same time a readiness to reclaim the floor space. In line 13, the teacher employs *minimal acknowledgement* + *redirection* (Waring 2013b), where the brief acknowledgement of Tracy's contribution is followed by individual nomination of another student, again splitting his attention between the two. As shown, the series of teacher moves culminate in redistributing the floor to Angie (line 16). In summary, the teacher dispatches varied and incremental responses over the course of the sequence, each of which is carefully fitted to what Stacy says next.

Articulate the Strategies The next stage in the *SWEAR* framework is to begin a discussion on whether it would be possible to deduce specific strategies of formulating heteroglossic responses that might be more broadly applicable to one's teaching. If we make an attempt to extrapolate from this exercise on managing the participation paradox so far, for example, a few "lessons" seem noteworthy. First, *precision listening* appears to be key to building a heteroglossic response. As demonstrated earlier, it takes highly fine-grained word-by-word, sound-by-sound listening to locate the optimal point at which the teacher might intervene during an individual student's talk to ensure that the intervention is neither interruptive nor overdue. Without precision listening, one misses the timing of being heteroglossic—and the timing to walk the fine line between promoting extended vs. even participation. Second, such precision listening must be *sustained* throughout the interaction to allow for incremental responses carefully tailored to each next student turn as shown in Scenario 2 above. In other words, heteroglossic management of the participation paradox is an accumulative endeavor. It can, for example, involve gazing at a student in one turn and withdrawing that gaze in the next. Third, *embodied resources* afford remarkable efficiency in managing the participation paradox with heteroglossia. Pointing to an individual student while speaking to and gazing at the others, for instance, allows the teacher to split their attention (cf. Box 2017) to two "parties" at one time, thereby neutralizing the potential tension between listening to the individual and attending to the group. Finally, *linguistic acrobatics* may be performed while designing next turns to invite others in ways that validate the individual contributions so far. The teacher's use of *Number one* in Extract (2) above, for example, grants legitimacy to Freida's response while opening up a space for the others to contribute "Number Two." In Extract (4), when the teacher asks the class *So what's the expected ending?* immediately after Stacy's comment on the *unexpected ending*, the question implicitly accepts that comment by virtue of being an extension of the latter.

Record and Reflect The final stage in the *SWEAR* framework is to move from close observations and analyses of others' teaching to one's own. It requires video-recording one's own teaching and reflecting upon the recording with micro-analytic

sensitivities that may hopefully have been cultivated from multiple exposures to exercises such as the above. Useful questions to ask at this stage may include:

1. Are there moments when the teacher seems to engage in heteroglossia? If yes, what/where/when are they?
2. What specific pedagogical demands are being managed through such heteroglossia?
3. What specific verbal and embodied resources are deployed to choreograph such heteroglossia?
4. Are there moments when engaging in heteroglossia might be useful or called for but does not occur?
5. If yes, how so? What specific pedagogical demands are at stake?
6. What specific verbal and embodied resources may be deployed to perform the needed heteroglossia?

In summary, implementing such a framework as SWEAR would enable us to move from broad discussions of pedagogical strategies to focused observations of specific practices—practices that can resonate with teachers confronted with the messy realities of the classroom and practices that constitute real solutions to real problems. Ultimately, CA-based teacher training will need to begin with a serious interest in understanding what *actually* happens in the classroom on a moment-by-moment basis (Waring and Creider, in press), as opposed to relying on more "traditionally" theoretically prescriptive approaches to teacher education, which have tended to emphasize what "should happen. It is hoped that understanding heteroglossia as a resource can awaken us to the ingenuity of teacher talk, and consequently, inspire us to become part of that ingenuity.

5 Coda: Implications for Curricular Innovation

In his 2000 #1 U.S. National Bestseller *The Tipping Point: How Little Things can Make a Big Difference*, Malcolm Gladwell asks: "How is it that all the weird, idiosyncratic things that really cool kids do end up in the mainstream?" (p. 199). In applied linguistics, the *weird, idiosyncratic thing* called CA innovation as launched by classroom conversation analysts, to my knowledge, has barely reached the *really cool kids*, let alone the *mainstream*, and the difficulties are understandable. Markee (1993) launched the earliest discussion for curricular innovation in applied linguistics—by arguing for a diffusion-of-innovation framework for developing language teaching theory and practice. Centering on the questions of "*Who adopts what, where, when, why and how?*" (Cooper in Markee 1993, p. 230), diffusion-of-innovation addresses a vast array of complexities involved in curricular innovation in language teaching (also see Markee 1997; Filipi and Markee 2018). Not surprisingly, the SWEAR framework introduced above—with its applicability beyond

heteroglossia— bespeaks a range of practical challenges inherent in this endeavor of translating conversation analytic (CA) findings to (language) teacher training. Such challenges include, for the teacher trainer, the logistics of video-recording, the technicalities of CA transcriptions, and last but not least, access to CA research findings to begin with. These challenges would be non-existent, of course, were teacher trainers conversation analysts themselves, which is ideal but rare—at least for now. Admittedly, there is a small but emerging group of *really cool kids* in graduate programs such as applied linguistics (where CA courses are available) who are drawing upon CA research as instructors of teaching practica or supervisors of student teaching, but what we need is an epidemic of CA-based teacher training.

In describing how social epidemics work, Gladwell (2000) calls the Innovators and Early Adopters (*really cool kids*) the visionaries who need the Connectors, Mavens, and Salesmen to bring the innovation to its tipping point. These latter three categories of characters, according to Gladwell, are the "translators" who "take ideas and information from a highly specialized world and translate them into a language the rest of us can understand" (p. 200). Connectors know a lot of people; Mavens accumulate knowledge; Salesmen persuade. These are the CA translators we desperately need, and it is unclear who they are at the moment. The long-term solution would be to build CA training into graduate programs in TESOL and applied linguistics. After all, a teacher or teacher trainer arriving on the scene with an appreciation for video-recording, a familiarity with CA transcripts, and a knowledge base of classroom CA research would be at once (and at least to some extent) the Connector, the Maven, and the Salesman. Until we get there with a critical mass, collaboration between conversation analysts and teacher trainers may be a prudent intermediate step—one that would, of course, require the courage and diligence of the conversation analyst to reach out and the curiosity and adventurousness of the teacher trainer to get on board.

Still, even for a conversation analyst engaged in teacher training, the need for a true Maven is clear and critical. There is at the moment no accumulative and collective resource, aside from monographs such as Sert (2015) and Waring (2016) as well as articles scattered across a variety of journals, from which one could obtain classroom conversation analytic research potentially applicable to teacher training (also see Sert 2019, this volume). The Maven or the information specialist who voraciously gathers the growing body of relevant CA research and organizes it into digestible forms for teacher education is yet to arrive, and the current volume appears to be a promising candidate.

Until we reach that tipping point, however, the time is now to begin with one conversation analyst, one teacher-trainer, one recording, one transcript, one issue, and one practice, and if agreeable, let that practice be heteroglossia.

Conventions for Transcribing Embodied Conduct

{((*words*))-words}	dash to indicate co-occurrence of nonverbal behavior and verbal elements; curly brackets to mark the beginning and ending of such co-occurrence when necessary

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“What Do You Think About This?”: Differing Role Enactment in Post-Observation Conversation

Younhee Kim and Rita Elaine Silver

Abstract This study examines how mentoring through post observation conversations can provide opportunities for feedback and teacher reflection as part of teacher professional development. Using Conversation Analysis, and building on our previous work, we draw attention to procedural details by which a different role within the professional role-set is enacted in post observation conversation: feedback-provider vs. facilitator of reflection. The different role enactment constructs some episodes as more feedback-oriented while others are more reflection-oriented. Furthermore, the analysis illustrates how “reflecting through conversations is a discursive process”, situated within the matrix of interaction, which in turn, is shaped and constrained by sequential organization. This study shows the applicability of Conversation Analysis as an approach to better understanding post observation conversations and presents a few suggestions for better handling such interaction for teacher professional development.

Keywords Post observation conversations · Teacher professional development · Mentoring · Conversation analysis · Role-set

1 Introduction

Post observation conversations are a core component of teacher education (Farr 2011). They have often been investigated in the context of teacher supervision, especially for pre-service or novice teachers (e.g. Copland 2010; Timperley 2001),

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_15

but they are also part of in-service/professional development (e.g. Hennessy and Deaney 2009). Sometimes referred to as 'mentoring' or 'mentoring conversations' (e.g., Le and Vásquez 2011; Timperley 2001), 'post observation conferences', 'post observation meetings', 'post observation interviews' (Copland and Mann 2010; Vásquez 2004; Hennessy and Deaney 2009, respectively), 'teaching practice feedback sessions' (Farr 2011), or 'post observation feedback conferences' (e.g. Copland 2010, 2011), the different labels do not always differentiate purposes. We have adopted the label 'post observation conversation' (POC) in our school-based collaborative work with experienced teachers (cf. Orland-Barak 2006) because our purpose was to encourage interactions that were more collegial and less supervisory.

POCs are most often conducted in one-on-one sessions between a mentor and a teacher after a lesson observation (see, e.g. Copland 2011). The mentoring role itself can be fraught, with mentors sometimes acting in a supervisory capacity (e.g. Copland 2010; Timperley 2001) or as collaborators (Hennessy and Deaney 2009; Orland-Barak 2006). In addition, mentors and teachers may hold different views on the purpose of a POC. For example, mentors may see the session as collaborative and their role as mentoring, providing advice and encouragement, with support for reflection. However, teachers might see the session as one in which they are evaluated and feedback is provided accordingly (Copland 2010), (in this context, see Can Daşkın this volume; Huth this volume; Walters this volume for work on how CA may be used as an explicit tool for doing assessment). Thus, POCs represent the essence of teacher education and professional development efforts in which sometimes contravening orientations (directive vs. reflective; evaluative vs. relational [e.g., Farr 2011]) co-exist. Our study is an attempt to zoom in on this essential site of teacher professional development by placing it under the microscopic lens of Conversation Analysis. By focusing on fine-grained micro-level details of interactional particulars of POCs (e.g. Waring 2014, 2013; Vásquez and Reppen 2007) and informed by Merton's (1968) concept of role-set, the analysis reveals how different roles within the role-set are prioritized in different episodes with contravening orientations. The enactment of these roles can lead to episodes which are either feedback-oriented or reflection-oriented. The findings of the study provide insights into the dynamic nature of the mentor's role and how to better manage the discursive process of POCs.

2 Mentoring, Feedback, and Reflection Within POCs

Mentoring can be regarded as a hierarchical and one-way effort, suggesting an asymmetrical relationship between the teacher and the mentor. This understanding of mentoring is reflected in some research efforts that look into teacher-teacher educator conferences. For example, Waite (1993) reveals this assumption by categorizing teachers into three types: passive, collaborative and adversarial. It is assumed that mentors take a primary discourse role by providing feedback on a teacher's practice, while the teacher's discourse role is to respond to that feedback. As

observed by Chamberlin (2000), however, teacher supervision models (for both pre-service and in-service) have changed to one of 'reflective supervision' in which engaging teachers in talk and reflection takes a primary focus.

An increasing amount of research is responding to the call for research on interactive process of POCs. For example, Vásquez (2004) provides an analysis on politeness strategies used in delivering suggestions and advice to teachers. Copland (2011) shows how face isnegotiated in POCs by drawing on the framework of linguistic ethnography and the concept of face (Goffman 1967). Orland-Barak (2006) examines conversational triggers, participation, endings, and content in professional conversations in a training program for mentors and finds that different types of conversations can develop based on the way participants orient themselves toward problems, contexts or ideologies and assumptions.

Banerjee and Pawley (2011) explore the process and consequence of engaging teachers in reflective conversations to see how the interview process might lead to new realizations and actions through reflection. Video stimulated reflection dialogue between university-based researchers and school-based teachers has shown that the nature of dialogue varied from more monologic to more dialogic depending on who is in control of the discourse and the extent to which control was individual or shared (Jones et al. 2009, see also Hennessy et al. 2011; Mann and Walsh 2013). Some prior studies focus on question types. For example, Ashraf and Rarieya have suggested that mentor questions need to be "more specific, focused and critical" (2008: 273).

However, research on POCs that utilizes the rigorous analytic power of Conversation Analysis, which enables micro details of interactional procedures to come into view, is only beginning to emerge (Kim and Silver 2016; Waring 2014).

3 Mentoring as a Role-Set

Mentoring is a multifaceted job in which mentors enact a variety of roles ranging "from modelling and instructing to being information sources, co-thinkers and inquirers, evaluators, supervisors and learning companions" (Orland-Barak 2006: 14). The multifaceted nature of the work can sometimes lead to contravening orientations: directive vs. reflective, evaluative vs. relational (e.g., Farr 2011). Mentors' status in POCs vis-à-vis teachers are further complicated by the fact that while mentors are experts in the new strategies introduced in the professional development program, teachers are experts in their classrooms with contextual and practice knowledge. Hence, a mentor's advice is bound to be contingent on the teacher's contextual and practice knowledge. Inevitably, the mentor needs to manage the delicate balance between dispensing advice and feedback while respecting the teacher's territory and expertise. Furthermore, if facilitating reflection, rather than evaluation, is the main purpose of the activity, the teacher needs to be the primary voice of the interaction. This seems to present a difficult task to the mentor – structuring interaction in a way that the other person becomes the primary voice.

The inherent contradictions in the evaluative and collaborative roles of mentors (Aspfors et al. 2012) is not a problem confined to teacher professional development. Sarangi (2010: 83) observes that academic professionals "find themselves in competing and conflicting roles when acting out supervisor and assessor responsibilities simultaneously in relation to a student's dissertation/project. While one part of the role-set is meant to be one of facilitating and scaffolding, the other part is one of gatekeeping".

Merton's concept of role-set – a "complex of roles associated with a single social status" (1957: 111, see also Merton 1968) provides a useful framework for understanding the contradictory aspects of mentor roles. Sarangi (2010: 91) highlights that role-set goes beyond static social status and "is operationalized at the social interactional level".

This provides a crucial insight that helps us better understand our data where contravening orientations loom and pull at each other. From our previous analysis (Kim and Silver 2016), we are aware that even within data collected in the same setting[1] the action of providing feedback eclipses the effort of facilitating reflection in some episodes while reflection seems to flow more naturally in other episodes. Kim and Silver (2016) attempt to identify the difference by focusing on the design features of a mentor's initial query. In this chapter, we take a more embodied approach which illustrates how mentors enact different roles (feedback provider vs. reflection facilitator) through interactional procedures, with a particular focus on gaze and other non-verbal interactional resources. We argue further that the different roles enacted by the mentor serve to activate different roles for the teacher in a complementary role structure.

4 Methodology

4.1 Setting and Participants

The data we discuss are drawn from a larger teacher professional development project in which instructional strategies for reading comprehension and discussion were introduced to a group of primary school teachers in Singapore. The primary strategy introduced, 'Questioning the Author' [QtA] (Beck and McKeown 2006), emphasizes the use of 'queries' and 'follow up moves' to foster reading comprehension through discussion. Though the strategy has been used elsewhere for 10 years or more, it was new to these teachers and this school. The teachers voluntarily joined the research project which targeted professional development, classroom discourse, and reading comprehension. The professional development process included

[1] The two mentors and six teachers all had the same guidelines on the purpose of the session and expected behaviours.

Fig. 1 Seating arrangement

collaborative work between the mentors and teachers by introducing new instructional strategies, developing and providing feedback on lesson plans, observing lessons, and engaging the teachers in POCs (Silver and Png 2016).

The specific purpose of the POCs discussed in this analysis was to provide mentoring through opportunities for feedback and reflection. Protocols for the POCs (Silver and Png 2012) required that a laptop for viewing the lesson video be given to the participating teacher, so she[2] could decide when/if to pause for discussion. See Fig. 1 for the seating arrangement for the POCs. Mentors viewed the videos prior to the POC and selected some possible discussion points; however, these might not be used during the actual POC if other points for discussion came up. If the teachers watched the video continuously without pause or comment, mentors were instructed to ask: "Is there anything you want to comment on?" (or similar) after a period of approximately 3 min.

Six experienced teachers participated in the project and all of them were familiar with the POC process at the time of recording (approximately halfway through the school year). The two mentors who engaged in the POCs were university-based researchers at the local teacher training institute.[3] Table 1 provides an overview of the participants.

[2] Given the small number of participants and since most participants were female (five out of six) and gender is not under discussion in this chapter, we have opted to use all female names in order to maintain participant anonymity.

[3] As the focus of our analysis concerns the minutiae of interactional behaviors that enact differing mentor roles in the role-set rather than the individual characteristics of each mentor, we refer to 'the mentor' throughout our discussion.

Table 1 Participating teachers and mentors

Teacher[a]	Abbreviation	Mentor[a]	Abbreviation
Sheila	SHE	Regina	MTR
Charlotte	CHA	Regina	MTR
Mazian	MAZ	Regina	MTR
Anita	ANI	Regina	MTR
Rashida	RAS	Rachel	MTR
Hazel	HAZ	Rachel	MTR

[a]All names are pseudonyms

5 Analysis

Words only transcripts were made of the entire data set, which amounted to roughly 12 h of recordings. Given the nature of the POCs, with segments of silent video watching punctuated by segments of talk initiated by the teacher or mentor, we define 'episode' as a segment of talk about the observed lesson demarcated by watching a video of the lesson without talk. As the first author went through the video and audio recordings examining the episodes, a few potential themes emerged including when and how the teacher launches trouble talk and how the mentor invites teacher reflections. A few more rounds of preliminary analysis revealed the contrastive sequential organization between teacher-initiated and mentor-initiated episodes. The slightly turbulent nature of the opening sequences of mentor-initiated episodes caught our eyes and a decision was made to focus on the opening sequences of mentor-initiated episodes. Relevant episodes were identified and fragments transcribed to Jeffersonian standards of transcription were made. In Kim and Silver (2016), we showed that who initiated an episode served as an important factor which affected subsequent sequential development by presenting the two sequences which started with the virtually identical form of query except that the query in one episode was a response to the teacher's initiating action of stopping the video. The focus of this chapter is on illustrating how mentors enact a different role in the role-set through their interactional behavior. Specific features of those interactional behaviors include establishing mutual gaze, the timing of the question, etc. The onset and duration of gaze is marked by dotted underline in the transcript to show the choreography of verbal and non-verbal behavior. We start by presenting a representative example of teacher-initiated and mentor-initiated episode with special focus on embodied features of the participants' behavior.

6 Teacher-Initiated vs. Mentor-Initiated Episodes

It is quite clear that when the teacher initiates an episode, the episode unfolds more smoothly than when the mentor initiated the episode as can be seen in Excerpt 1.

Excerpt 1: It Tastes Horrible (Charlotte: 12:37v pt.1)

```
01          (68.6) ((video plays))
02    CHA:  Hh hh (.) this is interesting ((teacher takes up the mouse
            and the mentor looks up from her note))
03          (0.9) ((the mentor leans toward the computer screen))
04    CHA:  Ya so uh: jan- he was commenting about .hh ahh: the ta:ste
05          of pickles s[o felt, some of them felt that (.) sup- they=
06    MTR:              [mm hmm
07    CHA:  =like it well thr- err ↑Issac here doesn't like it so
08          I[ssac says that it's (.)=
09    MTR:   [mm hmm
10    CHA:  =.hhh i:t tastes horrible hhh[hhh hh
11    MTR:                                [mm huh hh [hh hh huh hh
12    CHA:                                           [mmm ↓so I thought
13          this is erm:: (1.4) err when when (.) I approach this topic.
```

After more than 1 min of silently watching the video, Charlotte, the teacher, chuckles a bit and takes up the mouse while commenting "this is interesting". As Charlotte utters the penultimate syllable of the word "interesting" (see the dotted underline in line 02), the mentor looks up from her notes. In line 03 during the 0.9 pause, the mentor leans forward to the screen. Charlotte offers her observation while looking at the screen with a smiling face (line 04–05, 07–08). The mentor turns to Charlotte at the point when Charlotte utters the verb, "commenting" (line 04) and keeps her gaze toward her until Charlotte utters the adjective "horrible" (line 10). As Charlotte starts to laugh after the adjective "horrible", the mentor shifts her gaze back to the computer screen and joins in the laughter, thereby constructing a shared affective stance (Goodwin et al. 2012). Charlotte then continues to share her observation. In this episode, as the teacher had something to comment on and stopped the video, the mentor was able to take a listener role enacted through her gaze and body posture directed toward the teacher as the teacher provides her observation. A more challenging case is when the mentor needs to initiate an episode. We found quite a few initial queries in mentor-initiated episodes that are met with a non-embracing stance[4] (Schegloff 2007: 171). Excerpt 2 presents a representative example of such a case.

[4] Sequentially, one of the things that the mentor's initial question does is to initiate a topic. In this sense, the teacher's response can be viewed as taking an either embracing or non-embracing stance toward the topic-proffer (Schegloff 2007).

Excerpt 2: What Happened for That one (Hazel: 7:11v pt.2)

```
01  MTR:   so what happened for that one. ((Rachel points to the
02         screen))
03         (0.6)
04  HAZ:   m[m:
05  MTR:    [do you recall?
06  HAZ:   >what you mean what happened<
07         ((Hazel stops the video))
08  MTR:   because I think erm after you ask your initiating que[ry
09  HAZ:                                                       [cos-
10  MTR:   then somebody sai[d large areas of an
11  HAZ:                    [said that now we still have ((her gaze
12         turned to the mentor))
13         (1.0) ((the mentor looks at the teacher))
14  HAZ:   they were saying now you still have thos:e er: kampong*
15         looking house[s
16  MTR:                [oka[y:
17  HAZ:                    [one of them said (1.0) y:a. then after
18         that this boy said no, don't- don't have eh because can
19         only be seen in °history book°
20         (1.0)
21  MTR:   can only be seen?=
22  HAZ:   =history books.
23  MTR:   in history book[s
```

Until the mentor initiated the episode by asking the question “so what happened for that one?” (line 1), both the mentor and the teacher, Hazel, had been watching the video recording. As the mentor initiates the question, her body is slightly turned toward the teacher while pointing her index finger to the screen. Hazel’s gaze is maintained toward the laptop screen as she utters a non-lexical vocalization (mm:) followed by the non-embracing stance of “what you mean what happened?” (line 6). Then, Hazel stops the video (line 7). Faced with this non-embracing stance response, the mentor provides an account for her question (line 8 and 10) with her gaze still fixed on the screen. Hazel makes an attempt at turn entry with “cos” (line 9). At the moment when the mentor utters the second syllable of the word “somebody” (line 10), she turns her gaze briefly toward Hazel, but soon redirects her gaze up in the air. On the other hand, Hazel’s gaze is still fixed on the screen as she makes a second attempt at an entry into the interaction by recycling the verb “said” from the mentor’s turn (line 11). At the point where her turn reaches the verb “have”, Hazel’s gaze is turned to the mentor. With her gaze maintained on the mentor, Hazel briefly pauses in the middle of her turn until the mentor turns her gaze to Hazel (line 14), hence establishing the first mutual gaze since the episode began.

We argue that the mentor’s inquiry “what happened for that one” was placed in a sequentially premature position given that both the teacher’s and the mentor’s gaze were toward the laptop screen when the question was asked. The question rather served as a request to stop the video and thus to initiate an episode but did not serve very well as a reflection-provoking question as indicated by the perplexed stance expressed by the teacher. Some kind of sequential work seems to be necessary to mobilize the teacher’s attention toward the plane of verbal interaction from watching the video.

Having shown the contrasting sequential organization that teacher-initiated and mentor-initiated episodes typically encounter, we move on to show how mentors, through particular details of their interactional behavior, enact a different role in the role set in mentor-initiated episodes, noting that mentors can still enact a role as a facilitator of reflection in such episodes.

7 Feedback-Oriented vs. Reflection-Oriented

We noted that in some episodes of the POCs, providing feedback was realized as a central action while in others more reflection was elicited and shared. The mentors were enacting a slightly different role in the role-set, i.e., feedback provider or facilitator of reflection, which was revealed though the minutiae of their interactional behavior. These minutiae of interactional behavior saliently included embodied features such as gaze and body posture, as well as questioning strategies. In this section, we show how different roles in the role-set are interactionally realized. This analysis responds specifically to the concern for how mentors can manage potentially contradictory roles.

Excerpt 3 is initiated by the mentor who asks the teacher, Hazel, to stop the video (line 2). This is soon followed by the mentor’s question “You wanna: (.) comment something? (line 7). In Excerpt 3, as the invitation to comment is turned down by the teacher (line 9), the mentor proceeds to provide her feedback using a typical structure in which positive assessment precedes negative assessment, where the negative assessment is often the main point. The negative assessment begins with “but the only thing was” in line 25. As the mentor sums up her point (line 27–28, 30, 32–33), another “but” appears (line 33). Note the 0.8 s pause in line 36 where the mentor has stopped in the middle of her sentence. From the syntactic point of view, this clearly constitutes an intra-turn pause. However, it is turned into an inter-turn pause when Hazel (the teacher) provides the rest of the sentence (*gone back to the girl*), making it very similar to DIU (Designedly Incomplete Utterances) as described in Koshik (2002).[5] This is validated as an expected action and confirmed by the mentor’s response “you’re right”. Then, the mentor continues to elaborate on the idea. Excerpt 3 presents a feedback-focused episode in that the mentor’s initial invitation for comment is rejected and the mentor immediately proceeds to provide her feedback. The teacher’s subsequent action to guess at the mentor’s feedback by completing the mentor’s unfinished turn makes the mentor’s feedback an even more central action. The mentor’s ratification of the teacher’s response with “you’re right” not only affirms the content of the guess made by the teacher, but also validates the action, which serves to consolidate feedback as a main action expected in this speech event.

[5] Probably, this is one type of DIU, but there is also a slight difference since the mentor’s turn in line 33 and 35 does not begin with the teacher’s words, as in the case of DIU, but her own observation (“I felt that maybe you should have”).

Excerpt 3: You Wanna Comment Something? (Hazel: 13:08v pt.1)

```
01          ((video plays till 17:56a)) (13:08v)
02   MTR:   °okay° mm (0.5) for this right? you wanna pause [okay?
03   HAZ:                                                   [mm
04          (0.6)
05   MTR:   for this part,
06          (1.3) ((Hazel stops the video))
07   MTR:   you wanna: (.) comment something?
08          (0.9)
09   HAZ:   mm ((shakes her head))[eh heh heh
10   MTR:                         [no a:h. okay. actually, I thought
11          (.) that was a good way [for you to turn it back to the::=
12   HAZ:                           [mm
13          =(.) text [because one of your students actually gave you=
14   HAZ:             [mm
15   MTR:   =your major understanding that the houses were meant to
16          last for a [long time (.)
17   HAZ:              [AH mm hm
18   MTR:   ↑right. and you actually picked it up. (0.5) erm and you
19          as::k the, them ↑how do you know [that right?
20   HAZ:                                    [which part (.)
21   MTR:   [ya:h
22   HAZ:   [ya:h
23   MTR:   °how do you know that from the [text and then they pointed=
24   HAZ:                                  [mm
25   MTR:   =out [to the (1.2) sentence.° but the only thing was=
26   HAZ:        [mm
27   MTR:   =because THAT girl gave that response that it lasted for a
28          long time [but. erm. ↑another student was the one who=
29   HAZ:             [mm
30   MTR:   pointed [the sentence.
31   HAZ:           [YA
32   MTR:   ya. >so I thought< while it's good that you actually get-
33          get them to turn back to the te[xt but (0.8) er I felt=
34   HAZ:                                  [mm hmm
35   MTR:   =that maybe you should have
36          (0.8)
37   HAZ:   >gone back to the girl< [mm okay
38   MTR:                           [you're ri:ght. for her to explain
39          her i[dea where she got the idea (0.2) from. ya instead of
40   HAZ:        [mm
41   MTR:   get[ting other students [to respond first °y[a° (0.7) but
42   HAZ:      [mm                  [okay               [mm
```

This makes a good contrast to Excerpt 4, which is initiated by the mentor's request to stop the video (similar to Excerpt 3). Anita is the teacher and Regina is the mentor.

Excerpt 4: Can We Stop for a Moment (Anita: 20:50v pt.1)

```
01          ((video plays till 20:50v))
02    MTR:  Can we stop for a moment.
03          ((Anita stops the video with a mouse click))
04          (1.2)
05    MTR:  You’re listening very inten[tly.((smiling, gaze turn to
            Anita))
06                                     [Y:ah. ((smiling gaze on the
            screen)
07    MTR:  Can you hear?
08    ANT:  ah: because I think Adeline mentioned something about the
09          quality of living right? ((gaze turn to the mentor))
10          (0.4)
11    MTR:  About the what?
12    ANT:  Quality of living, [as in like we have- ah: we can afford to
13          have better hou[ses right [now right. He mentioned something=
14                         [m hm      [m hm
15          =like that. Yah.((teacher turns her gaze back to the screen))
16          (0.5)
17    MTR:  A:nd, so (.) what was your? ((mentor’s gaze is turned from
            the
18          screen to the teacher))
19          (0.8)
20    ANT:  uh I didn’t expect him to actually, (.) it didn’t (0.4) uh
            huh
21          huh hh and when I went through this, all I wanted them to
            know
22          was actually the different types of hous[ing, but for him=
23    MTR:                                          [uh huh
24    ANT:  =to be able to get that out of [this, was (.) was very good=
25    MTR:                                 [m hm
26    ANT:  =I thought= ((gaze turned back to the screen))
27    MTR:  =more implied meaning=
28    ANT:  =ya::[h↑ ((gaze back to the mentor))
29    MTR:       [so, actually so far you said several things that
30          surprised you about this lesso[n.
31    ANT:                                [Y:e(h)s, uh [huh huh hh I mean
32                                                     [°right°
33          considering that (.) eh: you know this is a non
34          que tee ei[6] lesson [so I wasn’t actually, tsk the-, ah-
35                               [m hm
36          the major objective wasn’t something you know that I, (0.5)
37          that was (0.7) e- (0.4) deeper than than what is stated here.
38          bu[t for them to be able to actually come up with it, I=
39    MTR:    [ah hah
40    ANT:  =thought it was, (.) it was very good. Huh huh [huh huh
41    MTR:                                                 [so: what do
            you
42          ek- I mean, why do you think that was?
```

As the mentor makes a request to stop the video, Anita clicks the mouse with her gaze still on the screen. The mentor makes a comment on how Anita is listening (line 5), her gaze now turned to Anita. The teacher acknowledges the mentor’s comment with an affirmative token ‘y:ah’ with a smiling face, but with her gaze still on the screen. Then, the mentor asks a rather factual question, “can you hear?”, in response to which Anita offers what she is currently observing (line 8–9). As she does so, her gaze shifts to the mentor, from the second syllable of “mentioned”

onward. Mutual gaze is established at this moment and lasts until line 15 when Anita turns her gaze back to the screen as she wraps up her response, thus resuming the watching activity. During these few seconds of mutual gaze, the mentor initiates a repair via repetition plus wh-word "about the what?" (line 11); Anita not only repairs but also elaborates on the meaning of the student's contribution (lines 12–13, 15). As Anita is about to wrap up her response and turns her gaze back to the screen, the mentor issues another question, this time, phrased in a way to elicit the teacher's reflection of what she has observed as opposed to factual description, "A:nd so (.) what was your?" (line 17). Anita offers her observation of how she found the students' contribution going beyond her expectations. At this point, the mentor provides a reformulation of the upshot of Anita's previous turn (line 27), which elicits an intense acknowledgement (line 28) from Anita. Then, the mentor provides a summarizing characterization of what the teacher has been observing so far (line 29–30), in response to which, Anita offers her current observation again. Finally, the mentor moves on to a question that is designed to more directly provoke the teacher's reflection, "why do you think that was?" (line 42). In Excerpt 4, what we observe is the mentor escalating the level of her query from a very simple factual question to a reflection-oriented one. Rather than jumping into her feedback point immediately or asking a reflection-provoking question right after initiating the episode or using the reflection-provoking question as an opening query, the mentor manages to elicit the teacher's observation by beginning with a more light-toned question, i.e., "Can you hear?". Only when Anita has offered her observation, does the mentor moves on to ask a question that gently pushes the teacher to reflect more on what she has just observed, "why do you think that was?" (line 42).

In addition to the stepwise escalation of the question types from factual to reflective, the use of gaze is again seen to be a critical resource in bringing out more from the teacher. In Excerpt 4, Anita's gaze is on the screen even when she clicks the mouse to stop the video, as requested by the mentor, and responds to the mentor's comment "you're listening very intently" with "y:ah". It is in the middle of Anita's next utterance, i.e., describing what she is observing in response to the mentor's question "can you hear?", that her gaze is turned to the mentor (note the underlined part in lines 8–9). When Anita's gaze is turned toward the mentor as she utters the verb "mentioned", the first mutual gaze between the mentor and the teacher is established. Throughout the subsequent repair sequence, Anita's gaze is directed to the mentor (lines 11–15). As she finishes her description, she turns her gaze back to the screen (line 15) thereby indicating that she is ready to resume the watching activity. At this point, however, the mentor, with her body slightly turned toward Anita, continues the episode by saying "a:nd" as she leans forward. As the mentor utters the next word "so", Anita's gaze turns back to the mentor and the mentor's remaining question ensues, "what was your?", which is left incomplete but successfully elicits Anita's response. A similar pattern of eye gaze is observed between lines 24 through 29 as well. In line 24, as Anita's turn is coming to an end with a positive assessment of the student's comment, her gaze is turned back to the

computer screen (note the underlined part in line 24 and 26). However, with the mentor’s reformulation (line 27) of the upshot of Anita’s previous turn, Anita turns her gaze back to the mentor as she produces an intense agreeing response with a high-pitched intonation contour (line 28). Having secured Anita’s gaze, the mentor begins her turn, which eventually serves to elicit the teacher’s reflection on more general level (lines 29–30, 41–42).

Initiating a verbal episode involves transition from an activity of watching the video together with talking about it. Both parties, but particularly the non-initiating participant might need some priming to orient attention to the plane of interaction from the lesson-watching activity. Gaze seems to be a good indicator for whether the party is ready to engage in the interactional plane at a deeper level. When asked without preparatory interactional work indicated (for example, by the lack of establishing mutual gaze), the question intended to elicit teacher’s reflection does not seem to serve its function very well. Consider Excerpt 5.

Excerpt 5: What Do You Think About the Ending of the Lesson? (Hazel: 11:48v pt.2)

```
01          ((video plays till 1:05:44a))
02   MTR:   °I think i’ was the end right,°=
03   HAZ:   =YA.
04   MTR:   wha- what do you think about the ending of the lesson.
05          (1.5)
06   HAZ:   mmm what you mean.
07          (5.0)((Mentor takes the mouse and stops the video))
08   MTR:   mmm, about the way you ended. (.) °the lesson?°
09          (0.6)
10   HAZ:   mm I- cos usually that’s what we will do. Hor [after
11   MTR:                                                  [↑okay
12   HAZ:   lesson we will (.) go back to the worksheets:
13   MTR:   ↑okay=
14   HAZ:   =mmm
15   MTR:   because actually I realise that. eh? your lesson ended.
16          (1.0) and then I. when when you ga’[me the (.) lesson (.)
17   HAZ:                                      [oh there’s no >summary.<
18   MTR:   plan right, [YA::
19   HAZ:               [ah::
20   MTR:   [right
21   HAZ:   [there’s no summa[ry:
```

In this mentor-initiated episode, the mentor begins by making a comment that they are watching the ending of the lesson and soliciting a confirmation from the teacher (note the turn-final increment “right”) (line 2). Hazel, the teacher, immediately provides a confirming response (line 3), which is followed by the mentor’s question, “what do you think about the ending of the lesson?”[6] What is noteworthy here is that up until this point, both the mentor’s and the teacher’s gaze are toward

[6] See Kim and Silver (2016) for how the sequence-initial broad wh-question is negatively oriented to by the teacher.

the screen though the mentor's gaze is briefly shifted toward the teacher as she asks the "what do you think about …" question. With her gaze still toward the computer screen, the teacher utters her response in a soft voice, which turns out to be an open class repair initiation (line 6). The teacher's gaze briefly shifts toward the mentor during the moment when she utters the phrase "you mean", but soon returns to the screen. In response to this, the mentor takes the mouse and stops the video first, while maintaining her gaze toward the laptop screen (line 7). After she stopped the video, the mentor gazes at the teacher as she is producing the elongated thinking token "m::" (line 8). This brings the teacher's gaze toward the mentor, which establishes a mutual gaze.

We argue that the mentor's question in line 4 "wha- what do you think about the ending of the lesson?", while well formulated, was issued at a sequentially premature position as both the mentor's and the teacher's gaze were directed to the computer screen at the point when the question was asked. It is only in line 8 that the first mutual gaze between the teacher and the mentor is established in this episode. As the mentor elaborates on her question (line 8), the teacher still seems to be a bit perplexed about the import of the question as she defends her action by saying "cos usually that's what we will do hor after lesson" (lines 10 and 12). As the mentor further elaborates on why she has asked that question (line 15 and 16), the teacher finally expresses her realization about what the problem was, prefacing with the change-of-state token "oh" (line 17). This is receipted by the mentor's acknowledgement "right, YA" (line 18) and another "right" (line 20).

Similar to Excerpts 2 and 3, the overall structure of the episode shows that the mentor's initiating query is treated by the teacher as a display question as the teacher tries to figure out what the intent of the question is. This understanding is confirmed by the mentor's ratification of the teacher's response. While the teacher and the mentor were able to achieve a shared stance on the problem later (line 17 and 18), the overall structure of the episode reveals a clear mentor-directedness. The mentor asked a question, which sets up the teacher's response in a way that attempts to make a guess at what the intent of the mentor's question is.

We argue that an episode can be constructed into a feedback-oriented one by the interactional procedures deployed by the mentor, such as using the wh-question as a perspective-display question (Maynard 1991; see below) and immediately explicating why she asked the question when the query is met with a non-embracing stance. Excerpt 6 is another example, with another type of non-embracing stance, a claim of no knowledge, responding to the mentor's initiating query.

Excerpt 6: What Do You Think About It? (Rashida: 53:51a)

```
3           (11.3)
4     MTR   But the:, the (.) discussion of how to handle ↓that uhm
5           vocabulary ↑what what do you think about it?
6           (2.9)
7     RAS   I don't know?
8           (1.1)((the teacher shifts her gaze to the mentor, smiling))
9           Heh heh  [heh heh]
10    MTR            [because] at at this point maybe(.) partly like
11          you said.(.) because you got ↓distracted [and your ↑train of=
12    RAS                                            [mm:
13    MTR   =thoughts were affected ↓already:.
14    RAS   Mm[:
15    MTR     [Uh:m. e:rn you: you did:n't, (0.6) attempt to like(.)
16          to g[et anyone to try[and explain] right?
17    RAS       [°e::°           [yeah I was:]
18          (0.2)
19    RAS   yah
20          (1.0)
21    RAS   I was actually telling ↓them.
22          (1.0)
23    MTR   you: gave them that ex[ample ↓right
24    RAS                         [yeah
25    RAS   Yeah ((clicks the mouse and resumes the video))
```

In line 4, the mentor first specifies the theme of evaluation ("the discussion of how to handle ↓ that uhm vocabulary"), and then seeks the teacher's own evaluation by asking, "what do you think about it?" In the beginning, both the mentor's and the teacher's gaze are directed toward the laptop screen and it is only half way through the mentor's initial inquiry (see underline in line 4–5) that the mentor's gaze is turned to Rashida, the teacher. With her gaze still maintained on the laptop screen, Rashida provides a half smile and releases a puff of air which almost resembles a sigh, and she responds, "I don't know", at the end of which she turns to the mentor, smiling. This is followed by her laughter, which serves to remedy the dispreferred status of her previous response (Glenn 2003; Haakana 2001). In partial overlap with the laughter, the mentor goes ahead and provides feedback, i.e., starting with an account on the teacher's behalf ("at at this point maybe (.) partly like you said (.) because you got distracted and your train of thoughts were affected already"), and pointing out what Rashida did not do ("you didn't (0.6) attempt to like (.) get anyone to try and offer to explain"). The teacher provides acknowledgment tokens at TRPs (transition relevant places) (lines 14 and 19), and in turn-final overlap with the mentor's turn, provides an agreeing response that admits the mentor's negative feedback ("I was actually telling them" in line 21). Note that the mentor's turn is also finished with "right" (both in line 16 and line 23), which is hearable as the mentor seeking the teacher's agreement. The episode is wrapped up as Rashida provides another acknowledgement token (line 24) and clicks the mouse to resume the video.

The initial mentor question, “what do you think about it?” (line 5), is treated as a display question as shown by the subsequent sequential development, i.e., the teacher’s response of no-knowledge claim, and the original speaker going ahead to give her view on this, which is accompanied by the teacher’s effort to acknowledge and accept this view. This sequential organization is a characteristic feature of a feedback-oriented episode.

The mentor’s initiating queries in Excerpts 2, 3, 5, and 6 serve a similar role as that of a perspective-display question observed in the medical discourse literature (Maynard 1991). The query is designed not only to elicit the recipient’s opinion, but also to lead to the display of the asker’s own view, thus constructing the overall discourse pattern as feedback-oriented. It might have been the case that the mentor wanted to provide an opportunity for the teacher to reflect upon the particular point of the lesson and use the teacher’s reflection as a link to build toward her feedback point. However, as the inquiry was met with a non-embracing stance, the mentor had to go ahead to present her feedback point directly, resulting in a feedback-oriented episode with less teacher reflection generated.

In contrast to instances where the mentor initiates the episode with a “what do you think about …” type of query, the episodes we identify as reflection-oriented ones show substantial preliminary work before the mentor either presents her feedback or asks reflection-provoking questions such as “what do you think about it?”. Excerpt 7 presents a good example. Charlotte is the teacher and Regina is the mentor.

After almost 3 min of silent watching, the mentor initiates the episode by saying “can I ask y’a question about this part?”. During the subsequent 1.3 s pause (line 3), Charlotte drags the mouse and stops the video. The mentor’s initiating move in line 2 is what has been termed as a pre-pre in CA literature (Schegloff 1980). Schegloff (ibid.) observes that turn formats such as “Can I ask you a question?” “Let me tell you something” project a stated action/turn in the subsequent sequences (e.g. question or telling), but that what immediately follows is not the stated action/turn; instead they are something else. The utterances that immediately follow such turn formats are best characterized as ‘preliminary’ or ‘prefatory’ to the projected action. In this sense, turn formats such as “Can I ask you a question” are termed as preliminaries to preliminaries (‘pre pre’).

Excerpt 7: Using the KWL[7] Chart (Charlotte: 22:23v, pt. 1)

```
01          (175.0) ((video plays))
02   MTR:   >Can I ask y'a question about this part?<
03          (1.3)((the teacher stops the video))
04   MTR:   .hh kay. So >now in this↑ in this ca:↑se< (1.0) umm (0.8)
05          you're >introducing them ↑to::< KWL chart? O[r
06   CHA:                                               [mmm m: I'm
07          introducing them, >↑actually they they< know how to use
08          the KW(0.8)L chart
09   MTR:   mm hmm
10   CHA:   they have knowledge they have used it before [.hh so. Now=
11   MTR:                                                [m hm
12   CHA:   =uhm (1.8) since I- umm I've got them to predict about what
13          they are going to .hh umm re:ad about .hh ↑the:n I want
14          them to err give me the: first column
15   MTR:   mm hmm=
16   CHA:   =about WHAT they know. [about preserving food.
17   MTR:                          [mm hmm
18   MTR:   mm hmm
19   CHA:   mm so. a- anything that they can tell me about preserving
20          food.
21   MTR:   Okay. So ↑they ↑know the basic procedure for [KWL okay? [
22   CHA:                                                [mm        [mm
23   MTR:   Andit- It's okay you tell me (.) erm why did you choose to
24          use KWL. with this particular passage.=
25   CHA:   =m::: (3.6) °why hh° (2.2) ehh hh hh .hh <because> this is
26          recomm(hhh)ended .hh [    in] erm:, Stella. [Stella
27   MTR:                        [mm hmm]               [okay
28   CHA:   actually er according to our unit (.) plan [er°r° ] this is
29   MTR:                                              [mm hmm]
30   CHA:   a a:: suggestion [lah. That this is how we can introduce
31                           [mm
32   CHA:   the (0.3)
33   MTR:   m hm
34   CHA:   erm
35          (0.5)
36   MTR:   so it's part of the unit's plan >so. Uh- remember the when
37          you have this stella unit plan< you °uhm° (0.8) do you
38          follow it pretty closely? or d'you d'you chang- d'you
39          change it?
40          (2.0)
41          pretty much?
42          (1.8)
```

The overall structure of the mentor's inquiry in Excerpt 7 shows this very well. After Charlotte's go-ahead response (which was realized with her action of stopping the video), what follows the mentor's initial query (i.e., "So, now, in this, in this case, you're introducing them to KWL chart or?") is not *the* question projected by the mentor's initial move, but a preliminary to the main questions that would come up later, "it's okay if you tell me, why did you choose to use KWL with this

[7] KWL is a reading instructional strategy that encourages students to make use of prior knowledge (what they Know), make predictions or form questions about what they Want to find out, and then make note of what they have Learned in a chart format before, during and after reading (Ogle 1986).

particular passage?" (lines 23, 24) and another one, "having given the lesson, do you feel like KWL .hh is a (0.7) useful or effective strategy? for teaching this passage?", which is presented as Excerpt 7-1 below.

Excerpt 7-1: Effectiveness of KWL (Charlotte: 22:23v pt1)

```
102   MTR:     Erm I was just asking about KWL, (1.4) erm. cos>I
103            wondered>if erm (1.8) you know g- having given the lesson do
104            you feel like ↑KWL .hh is a (0.7) useful or effective
105            strategy? For teaching this pass[age,
106   CHA:                                    [This particular (1.5) erm:
107            (2.4) I I thought it is quite useful=
108   MTR:     =°mm hmm°=
```

Note that the two main questions, though projected at the beginning of the episode, are asked only after quite a bit of talk has been generated from Charlotte regarding the particular practice she adopted, i.e., the use of a KWL chart. There are two points worth noting in understanding why and how this preliminary work was necessary and led to successful elicitation of teacher reflection. First, the main question, "why did you choose to use KWL with this particular passage?" could be a sensitive one,[8] possibly interpreted as a challenging one. Both the way in which the mentor's question is formulated (the addition of the mitigating hedge, "it's okay if you tell me" before the main part of the question) and the way that Charlotte responds attest to this. Note that Charlotte's response demonstrates a considerable amount of difficulty. Her turn in line 25 in Fragment 7 starts with "m::", a token that indicates that the speaker is in the thinking mode, which is followed by 3.6 s pause. Then, she repeats the wh-word 'why' from the mentor's question in a soft voice, which is hearable as directed to herself. Eventually, she starts her response with "because" preceded by laughter and an in-drawn breath (line 25). This delay in the teacher's answer along with her laughter is hearable as a self-deprecating acknowledgement that she just followed the suggestion in the specified curriculum, STELLAR (lines 25–26, 28, 30).[9] Given that the mentor's question was a potentially challenging one, the preliminary sequential work to ensure that they are on the same page in understanding what is happening at that particular moment of interaction seems to be mandatory before presenting the main question. The mentor acknowledges the teacher's answer, that she followed the recommendation of STELLAR, and asks a further question about whether the teacher follows the unit plan very closely or changes it at her own discretion (lines 36–39, 41).

The sequence digresses quite a bit as the teacher elaborates on the matter of whether she follows the unit plan closely or not before the mentor resumes her main

[8] Note that the purpose of this teacher professional development program was to introduce a new reading instruction strategy, QtA. However, for the lesson under discussion in this POC, the teacher had been told to choose any reading instructional strategy she deemed appropriate. The teacher chose to use KWL, a strategy recommended by the national curriculum (STELLAR).

[9] STELLAR stands for "Strategies for English Language Learning and Reading", the English Language curriculum for primary school in Singapore. See http://www.stellarliteracy.sg/

question by asking "having given the lesson, do you feel like KWL is a useful or effective strategy for teaching this passage?" (lines 102–105). In the deleted lines (the ending of Excerpt 7 and the beginning of Excerpt 7-1, lines 43–101, deleted due to space constraints), the mentor and teacher spend quite a bit of time discussing the use of a semantic map. This incidental digression provided a great opportunity for contingent reflection to arise from the teacher as the talk led to somewhere unplanned.

The mentor summarizes the talk generated in the digression thus far "so far (semantic map is) not your favorite strategy" (not included in the transcript) and picks up her main question by saying "I was asking about KWL" (line 102 in Excerpt 7-1). Excerpts 7 and 7-1 show the nice balance between the contingent nature of conversation and the planned aspect of institutional talk. The mentor has a specific inquiry in mind when she requests stopping the video, but rather than immediately going to the inquiry by asking "what do you think about …?", the mentor effectively uses a preliminary move to generate some talk from the teacher, which serves to prepare the teacher for the main question. Furthermore, letting the talk digress a bit and allowing more flexibility resulted in more opportunities for teacher talk leading to oral reflection (see also Mann and Walsh 2013).

The talk that follows Excerpt 7-1 (presented as Excerpt 7-2 below) also reveals that the mentor had asked the question (lines 102–105, Excerpt 7-1) without having an answer in mind, or at least she did not present her views on it. In response to the mentor's second question (line 102–105), Charlotte advanced her opinion that KWL was an effective strategy to teach the particular passage, elaborating on what could have made it even more effective – incorporation of ICT (Information and Communication Technology).

Excerpt 7-2: Mm mkay That Was All (Charlotte: 22:23v pt.1)

```
152   CHA:    meaning mmm so °I thought° this this would .hh tie in very
153           well if .hh we:: (0.5) erm: tsk do it as an ICT lesson .hh
154           and err °think pair shares so the two° can think about it
155           (1.2) fill up this two column
156   MTR:    ↑mm okay
157   CHA:    mm.=
158   MTR:    =interesting
159           (5.0)
160   MTR:    Mm mkay that was all. Pass ((with a hand gesture))
161   CHA:    mm
162           (146.5) ((video plays))
```

Here, the mentor acknowledges Charlotte's response with a short comment, "interesting" (line 158), and briefly takes a look at her notes (line 159), then suggests moving on to the next part of the video (line 160).

Lastly, a similar, but slightly different example of reflection-oriented episode is provided. In Excerpt 8, the mentor initiates the episode by making a request to stop the video.

Excerpt 8 Did You Use All of These Questions . .? (Mazian: 20:58v pt. 2)

```
01   MTR:   (okay) can you pause it?
02          (1.8)((mouse click))
03   MTR:   okay. so did you use all of these questions that you have
04          which your follow up queries?
05          (0.6)
06   MAZ:   eeya. (0.4) er::
07          (0.6)
08          °well° er::
09          (0.9)
10          ya I did
11   MTR:   okay. >so like this one. Uh: you're at<- we:ll er:m lets
12          see. Why do you think the author included history on
13          bukit ho swee's fire? Well- I- was a where- how did the-
14          (0.3) what. how did the students respond to that, that's my
15          question cos I couldn't really tell their answers=
16   MAZ:   =er the first girl who say it >uh the first girl who
17          responded say< well cos er: it was the biggest f:ire.
18          (1.9) <e:rm it was the biggest fire.> .hh when I- I think I
19          could have sh- (0.4) erm asked her like what do you mean by
20          biggest fire? (0.4) maybe: (0.3) erm get her to elaborate
21          on that .hh cos what happen was ah I've realise what I did
22          was oh biggest fire okay, anyone e:lse? (0.7) when I
23          could have just use that oh:: (0.5) e:r so so ↑what so
24          what if it's the biggest fire? erm what (0.5) hh. what's:
25          Wha:t (0.4) did that biggest fie r:esult in? (0.8) or
26          what (.) did that biggest fire,
27          (1.8)
28   MTR:   y::a he- wh- remember before I was saying like (2.6)
29          (tongue click) (my pen's not working) so if you've got s-
30          like, students one two three make a comment, and you can:,
31          and you (.) can a:sk the students like the second student
32          responds you can a:sk or you can p:oint out how this idea
33          is connected to the first student's idea or if it's not,
34          connected and then how the third student's ideas connected,
```

The mentor's initial request to stop the video (line 01) is followed by a specific query, "so did you use all of these questions that you have which're your follow up queries?" (lines 3–4). The teacher provides an affirmative answer (line 6), but the response is provided in a cautious manner rather than being readily forthcoming (lines 5–10). This is indicated by the initial delay (line 5), lengthening of the initial semi-consonant of "eeya" (line 6), which in turn is followed by "well" and vocalization "er::" that indicates that she is doing recalling (line 8), and finally a confirmation (line 10) after another 0.9 s pause (line 9). The slow manner in answering indicates not only that Mazian is being careful in providing a 'yes' answer, but, more importantly, it suggests that the teacher is recalling what she was doing at that moment in the lesson. The mentor acknowledges Mazian's answer ("mkay" in line 11), and after going through rather extensive self-repair (lines 11, 12, 13), comes up with another factual question, i.e., "how did the students respond to that, that's my question" (lines 14–15). This question prompts the teacher to construct a verbal description of how the students responded. Mazian's first TCU "the first girl who say it" is self-repaired to "the first girl who responded say". Then, rather than

proceeding to presenting what the girl has said, her turn is briefly stopped by "well cos er:". Finally, she says "it was the biggest fire". However, this is followed by 1.9 s pause and she repeats it again in a very slow manner (line 18), which is hearable as if she is thinking about that moment of the interaction. This interpretation is confirmed as Mazian offers her self-reflection from this point onward, seen in lines 18–26, ("when I- *I think I could have* sh- (0.4) erm *asked* her like what do you mean by biggest fire?...*I've realize what I did was…when I could have…*"). Mazian's reflection, however, does not seem to hit the mark in terms of what the mentor is getting at. After a 1.8 s pause (line 27), the mentor briefly acknowledges Mazian's response and proceeds to provide feedback (beginning with "remember?" in line 28), which continues until line 85.[10] The gist of the feedback is that the teacher can use her queries to push the students to make connections between what other students have said and what is written in the passage. This harkens back to the mentor's initial query (line 3–4) in the current episode, "so did you use all of these questions that you have which're your follow up queries?". Though the teacher's reflection elicited through the mentor's question was not exactly what the mentor was getting at – making a link between what the students had said – the mentor successfully elicits oral reflection from the teacher as can be seen in teacher's verbalization in lines 18–26. The verbalization reveals the teacher's currently ongoing thinking about alternative instructional practices she could have adopted, which in turn seems to have helped the teacher primed for the upcoming feedback point.

8 Discussion and Conclusion

Close examination of the interactional features of these POCs have revealed that some episodes are more feedback-oriented and others more reflection-oriented. While a variety of interactional factors have been considered, some prefatory interactional work either through the establishment of mutual gaze between the mentor and the teacher or through preliminary queries seemed to be key. In particular, teachers seem more ready to entertain reflection-oriented questions when the queries are prefaced with interactional work rather than using as an episode opening question.

Our analysis of the micro-level details of interactional behavior reveals the ways in which the mentors enact different professional roles (feedback provider vs. reflection facilitator) in a role-set (Merton 1968). These interactional features include gaze establishment as well as types and sequential placement of questions. Establishing mutual gaze seems to be an effective way of preparing interactional space for an incipient episode. We argue that different roles as enacted by the mentor serve to activate different roles of the teacher in a complementary role structure.

[10] We will not provide transcript for this for the lack of space, but it can be provided as supplementary material per request.

In other words, by enacting a feedback-provider role, the mentor contributes to shaping the interaction in a way that places the teacher in a position of responding to feedback, thus possibly inhibiting the teacher's reflection orientation. Alternatively, an episode can be structured in a way that gives a less primary voice to the mentor and provides more space for the teacher to reflect. This can be done by preparing interactional space where mutual orientation to each other is revealed through body posture and gaze. Another way to give a more primary voice to the teacher is to begin with factual questions light in tone, which serve the purpose of getting the teachers to start to talk, ideally catalyzing teacher reflection. These features of the mentors' interactional behavior only come to light through the micro-analysis of the POCs undertaken with CA. We hope that unpacking these features will help enhance teacher educators' and teachers' understanding of POCs as interactive process.

Atkinson (2012) observes

> … reflection needs to be considered as thinking that emerges not solely from the mind of an individual teacher, but as thinking embedded in and emerging from the contextual and material conditions structured within competing ideological and discoursive constraints (Atkinson 2012: 189).

We would like to add that reflection can be considered as thinking which is made observable through verbalization that unfolds in the matrix of interaction, i.e. as a discursive process. Interaction provides a public space for verbalizing the thinking. However, interaction comes with its own sequential structure. We have shown that the sequential placement of the queries (whether to be prefaced by prefatory interactional work or not) as well as the types of queries can affect how much space the specific episode can afford for the teacher to reflect.

By drawing attention to the procedural details by which a mentor performs one role over the other, we hope that the study has shed light on interactional processes of POCs, which in turn can inform teacher educators about the ways in which they can better handle the interaction by managing the different roles in the mentor's role-set.

9 Pedagogical Implications

Our chapter focuses on teacher professional development. Therefore, we focus on suggestions for teacher educators in this appendix, but also provide a few suggestions for classroom teachers. Our analysis has shown that post-observation conversations (POCs) can be productive sites for encouraging teacher reflection. Specifically, we found that the potential for teacher reflection is influenced by how the mentor role-set is interactionally played out. And so, we suggest that mentors need to be clear about the primary role to be adopted in a particular POC. Being aware of potentially conflicting roles is a good starting point for teacher educators when trying to distance themselves from being the feedback-provider in a POC. Just as teacher reflection is thinking that unfolds within a discursive process, mentoring

to encourage reflection requires thoughtful attention to the interactional procedures of this speech event. A steady focus on facilitating reflection can lead to a series of decisions about how best to manage the evolving POC.

When consciously taking on the role of a reflection-facilitator, mentors need to work consistently toward letting the teacher's voice be the primary one. This can be done, to some extent, by asking simple and factual questions, which can help refresh the teacher's memory of the decisions she made during the lesson and the reason behind it. Our analysis suggests that mentors can better tune into teacher readiness for reflection by attending to the teacher's gaze and bodily position. When the teacher's gaze and bodily position are clearly focused toward the video or other materials, the mentor might need to undertake some interactional work to engage the teacher. While mutual gaze establishment and bodily orientation does not always mean interactional alignment, they are clear indicators which mentors can watch out for and respond to in order to better facilitate subsequent discussion. As the teacher might expect feedback as the default position of a POC, the mentor needs to attend more to the teacher and less to any specific point the mentor wishes to raise. This attention by the mentor can help to avoid sequentially premature efforts to push or rush the reflection.

In the role of a reflection-facilitator, the mentor needs to be ready to engage in the necessary, preliminary work which prepares the teacher for reflection. This can include, for example, establishing mutual gaze with the teacher while employing factual comments/questions about what the teacher was doing in the lesson. That way, the mentor can invite the teacher to verbalize thought without imposing the mentor's agenda. This preliminary work can occur over multiple exchanges which address the teacher's current thoughts and concerns before moving on to challenge teacher conceptions or encourage reflection, as in Excerpts 7-1 and 7-2. This preliminary work can also help to align the mentor with the teacher and give the teacher space to become the primary voice within the POC. This can also help to catalyze the teacher's thinking and set the stage for fruitful reflection.

For the classroom teacher, our analysis suggests two points. First, since the mentor role-set is comprised of a variety of different roles which might be apparent at different points in the conversation, it would not be surprising for teachers to feel they are being asked to manage not one conversation but many conversations within the same POC. For example, there might be episodes oriented toward feedback, toward reflection, or simply toward seeking clarification. It might be useful for teachers to seek their own clarifications by asking mentors about the purpose of particular questions or lines of discussion. While we have limited evidence of this type of clarification-seeking from teachers, we do see this in Excerpt 2. Though that episode did not seem to provoke teacher-reflection, the teacher's question (line 06) did encourage the mentor to clarify.

We also suggest that teachers can work to have a voice in these interactions by vocalizing. When teachers vocalized while viewing – even if only summarizing what they were viewing, as in Excerpt 1 – this gave them a more prominent role in the POCs as well as serving to facilitate their reflection. It not only meant that the teachers talked more but it also positioned the mentors as responders to the teacher's comments.

Finally, for both teacher educators and teachers, we suggest that the discursive process is central to teacher reflection (Ashraf and Rarieya 2008, p. 270) and this process takes time to unfold. On a practical level, it might be useful to mutually agree on a timeframe for the POC (e.g. 1 h) rather than attempting to work through a pre-determined set of material (e.g. one lesson video) in order to focus on catalyzing the reflection.FundingThis study was partially funded by Singapore Ministry of Education (MOE) under the Education Research Funding Programme (OER 40/12 RES) and administered by National Institute of Education (NIE), Nanyang Technological University, Singapore. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Singapore MOE and NIE.

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Part IV
CA and Assessment

Introduction to Part IV

Silvia Kunitz, Numa Markee, and Olcay Sert

Abstract In this text we summarize the chapters contained in Part IV. That is, after a short introduction to the specific research area addressed by the chapters, we briefly summarize the content of: Can Daşkın (this volume), Huth (this volume), and Walters (this volume).

Keywords Language testing · Formative assessment · Oral proficiency · Interactional competence

The three chapters in Part IV are representative of current CA research on matters of formative and summative assessment. Specifically, Can Daşkın's (this volume) work falls within the field of interactional research on classroom-based dynamic assessment (see Van Compernolle 2013). Her work is also connected to CA research on classroom interactional competence (CIC; see Walsh 2012), that is on the actions that teachers accomplish to shape students' contributions and create learning opportunities. Such actions can be considered constitutive of formative assessment.

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_16

On the other hand, Huth's (this volume) and Walters' (this volume) papers are framed within current debates in the fields of CA and language testing (LT) concerning the construct of oral proficiency. More specifically, their work is related to research on the testing of IC (see: Galaczi and Taylor 2018; Roever and Kasper 2018) and, in particular, to the attempt of redefining testing goals in light of new learning targets that are inspired by CA findings on IC (e.g., findings on how participants do invitation sequences or compliment sequences in English; see Huth and Betz 2019; Kley 2019; Kunitz and Yeh 2019).

In her chapter, Can Daşkın (this volume) examines how, in the classroom-based assessment literature, formative assessment has been understood as a formal evaluative procedure that occurs at pre-defined intervals during the course of instruction; she then shows how the emerging CA-based literature is reconceptualizing this construct as a set of informal, interactionally achieved behaviors that occur spontaneously during the course of classroom interaction. More specifically, Can Daşkın (this volume) uses data drawn from an EFL class at a Turkish university to show how a practice that she calls *Reference to a Past Learning Event* (see also Can Daşkın and Hatipoğlu 2019) emerges as an instance of informal formative assessment. This kind of interactional behavior, which is said to be an important part of CIC (Walsh 2011), involves the teacher reminding students that they have already encountered a currently topicalized problem in a previous learning event as a spontaneously constructed resource for checking on their past and present understanding of English grammar.

In the next chapter, Huth (this volume) introduces the social interactionist view of language with its emphasis on the use of language for social action (see also Eskildsen this volume). In such a view, oral proficiency is conceptualized in terms of IC; that is, the ability to produce timely and fitting turns-at-talk that accomplish recognizable social actions in the sequential context of their occurrence. Embracing IC as the goal of L2 instruction involves a reconceptualization of the learning targets in the L2 curriculum and, more concretely, the design of new, CA-informed teaching materials and tasks for classroom-based assessment. Indeed, the action-oriented view of language promoted by the social interactionist perspective is in clear contrast with current notions of proficiency (essentially measurable in terms of vocabulary and grammar knowledge) that are championed by transnational curriculum guidelines and assessment protocols. Huth's (this volume) paper thus engages in a critical analysis of current guidelines and depicts how a possible future for L2 teaching and the L2 curriculum might look like.

In the final chapter, Walters (this volume) addresses the compatibility of CA and LT views of language and language norms (see also Kley 2019) when it comes to assessment and discusses the theoretical and practical consequences of adopting CA-informed testing. Specifically, Walters illustrates the possibility of constructing CA-informed assessments in the L2 classroom following validity criteria that meet both CA and LT concerns on the matter. Common ground between the two disciplines can be found in their commitment to data-driven, empirically based descriptions of language that can give an adequate picture of what a test-taker does in interaction. Walters builds on this ground by discussing the design and the

validation process of a CA-informed test (CAIT) of L2 oral proficiency targeting compliment sequences. Finally, Walters provides a set of test-development principles that may be useful for test-designers and teachers.

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A Micro-analytic Investigation into a Practice of Informal Formative Assessment in L2 Classroom Interaction

Nilüfer Can Daşkın

Abstract Formative Assessment (FA) in L2 classrooms has been reconceptualized in theory as it is now recognized that it is locally situated, dynamic and co-constructed in classroom interaction and is as much an informal process as a formal one. This study adopts the term "informal formative assessment" to refer to any of those FA practices that are embedded into everyday learning activities and that emerge in and through classroom interaction contingently, continuously and flexibly. It is different from formal FA, which is carried out at pre-specified times through specially designed assessment instruments. Despite the reconceptualization of FA in theory, how FA emerges informally in practice in naturally-occurring classroom interaction has not been investigated adequately. Moreover, there is a gap between classroom interaction research, which does not discuss the relevance of its findings to FA practices, and classroom-based assessment research, which neglects the role of classroom interaction in assessment practices with a greater focus on formal FA practices. In order to address this gap, this conversation-analytic study illustrates how FA informally emerges as an interactional practice in an L2 classroom through the phenomenon called "Reference to a Past Learning Event" (RPLE) and claims that such assessment practices constitute an important component of Classroom Interactional Competence. RPLE occurs when the teacher contingently extends the main instructional activity to refer to language items and topics presented in a past learning event. The teacher does this in order to check students' knowledge and/or to deal with trouble sources in their learning states in and through classroom interaction. Data are presented from a corpus of video-recordings of an EFL class (55 classroom hours) in a preparatory school at a Turkish state university. The analysis shows that RPLE emerges as a practice of informal FA in teacher turns and reveals the complexity of informal FA which is not simply about providing feedback but is dynamic and co-constructed in classroom interaction.

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_17

Keywords Informal formative assessment · Classroom interaction · Conversation analysis

1 Introduction

Like many aspects of foreign language teaching and learning, formative language assessment has also been reconsidered at least in theory with the expanding stream of social perspectives on second language acquisition (Block 2003; Firth and Wagner 1997). It is now acknowledged that unlike standardized formal assessment, formative language assessment (1) is locally situated, dynamic and co-constructed in classroom interaction; (2) is concerned not only with individual learning outcomes or performance but also with collective performance, placing equal emphasis both on teachers and students as agents and decision-makers; (3) involves informal as well as formal procedures; and finally, (4) is not limited to giving feedback in feedback/evaluation moves of IRF/E sequences (Initiation-Response-Feedback/Evaluation) (Mehan 1979; Sinclair and Coulthard 1975) since not all evaluation moves can truly function as formative practices (Larsen-Freeman and Cameron 2009; Leung and Mohan 2004; McNamara 2001; Sherris 2011; Whitehead 2007). One of the important aspects of FA that is highlighted in this reconceptualization is the informal dimension of FA; specifically, as Rea-Dickins and Gardner (2000) suggest:

> The teacher's knowledge as a result of class-based assessment is not documented in any written (e.g., curriculum) document or formal way (e.g., minutes of meetings) but appears, nonetheless, to be highly significant in the teacher's decision-making process about language development, attainment and ability of individual pupils … (p. 231).

However, many of the definitions of FA proposed to date (e.g. ARG 2002; Black and Wiliam 1998b, 2009) fall short of explicating the dynamic and informal nature of FA. An exception is the definition that was proposed at an international conference on assessment for learning in Dunedin in 2009 because it critically examines the prevailing definitions and better reflects the informal dimension of FA: "Assessment for Learning is part of everyday practice by students, teachers and peers that seeks, reflects upon and responds to information from dialogue, demonstration and observation in ways that enhance ongoing learning" (Klenowski 2009, p. 264). In common with all previous definitions of FA, this revised definition also describes the most basic procedure of FA as involving the generation of information about students' learning states in relation to a desired goal and then using this information to make changes in instruction in order to address gaps and enhance ongoing learning. If the information about students' present learning states is not used to close gaps or to affect future performance by making instructional adjustments in

"moments of contingency", it cannot function as feedback and the assessment would not be formative (Black and Wiliam 1998a, 2009; Wiliam 2011). However, beyond this procedural aspect of FA, this definition more clearly states the dynamic and informal aspect of FA. For instance, it uses the term "everyday practice" to emphasize the interactive and dialogic nature of assessment. Besides, it clearly marks various sources of evidence (i.e. information from dialogue, demonstration and observation) and thereby, shows that the practice of FA can take place during both planned and unplanned events throughout the ongoing instructional activity (Klenowski 2009).

In order to highlight the informal dimension of FA, this study adopts the term "informal formative assessment" (Ruiz-Primo 2011) to refer to any of those FA practices that are embedded into everyday learning activities and that emerge in and through classroom interaction contingently, continuously and flexibly. It is different from formal FA, which is carried out at pre-specified times through specially designed assessment instruments. Besides, unlike formal FA, informal FA involves the teacher interpreting evidence about students' understanding and acting in response to this evidence quickly through everyday classroom interaction. For this reason, informal FA practices are not usually recorded formally. Ruiz-Primo (2011) reframes such practices as "assessment conversations" and describes these conversations as "dialogues that embed assessment into an activity already occurring in the classroom" (p.17). It is, therefore, clear that there is a dynamic and reflexive relation between informal FA and classroom interaction as the former is highly dependent on the latter. With respect to this, Antón (2015) also makes the remark that "classroom assessment is socially constructed through interaction and as such the quality of the assessment is dependent on the interaction per se" (p.74). Consequently, "much of what teachers and students do in the classroom can be described as potential assessments that can provide evidence about the students' level of understanding" (Ruiz-Primo 2011, p. 15).

Despite the recent emphasis on the informal dimension of FA in theory, the question of how FA actually emerges in practice in naturally-occurring classroom interaction has not received the attention it deserves. This may be due to the fact that the assessment literature has traditionally concentrated on formal FA practices such as standardized formal testing and progress or achievement tests (Antón 2015; Black and Wiliam 1998b; Fulcher 2012; Leung and Mohan 2004; Rea-Dickins and Gardner 2000). Formal and informal FA are equally valuable but constitute two distinct aspects of classroom-based assessment practices. Hence, "there is a need to examine in depth the formative teacher for-learning assessment issues in their own right if we are to understand how the formative aspects are actually accomplished in classroom interaction", otherwise, "special features of the formative and for-learning perspective are likely to be lost if it is assimilated into a standardized assessment paradigm" (Leung and Mohan 2004, p. 337). As for those studies that investigate L2 classroom interaction, many do not reframe their findings in relation to FA. Like many studies of L2 classroom interaction, irrespective of whether they adopt an interactionist, sociolinguistic or sociocultural

perspective, conversation analytic studies of classroom interaction have also not been concerned with classroom-based assessment processes (but see van Compernolle 2013, Heritage and Heritage 2013 for exceptions). Note, however, that there is every reason to believe CA-based analyses of FA would be relevant, since "assessment is an integral part of every aspect of teaching and learning and this is particularly evident in the analysis of classroom interaction" (Antón 2015, p. 76).

In this chapter, I intend to follow up on Antón's position. More specifically, this conversation-analytic study will examine how FA informally emerges as an interactional practice in an L2 classroom through the phenomenon called "Reference to a Past Learning Event" (RPLE) (Can Daşkın and Hatipoğlu 2019) and show how such assessment practices constitute an important component of Classroom Interactional Competence (Walsh 2011).

2 Studies on Informal Formative Assessment and Classroom Interaction

Many conversation analytic studies of naturally occurring L2 classroom interaction have been interested in investigating the interactional patterns emerging in L2 classrooms (e.g. Hellermann 2008; Markee 2000; Seedhouse 2004; Sert 2015; Walsh 2011). Some of these studies display patterns for Classroom Interactional Competence (CIC) (Can Daşkın 2015; Sert 2011, 2013, 2015, 2017; Sert and Walsh 2013; Walsh 2002, 2006, 2011, 2012; Walsh and Li 2013) defined as "teachers' and learners' ability to use interaction as a tool for mediating and assisting learning" (Walsh 2011, p. 158). CIC studies have uncovered some interactional features that can create learning opportunities but they have not addressed the implications of these interactional features for informal formative assessment. Similarly, other studies have tracked language learning behavior and the development of interactional competence from the perspective of Conversation Analysis for Second Language Acquisition (CA-SLA) (e.g., Markee and Kunitz 2015; Pekarek Doehler 2010; Pekarek Doehler and Fasel Lauzon 2015; Seedhouse and Walsh 2010), but again they do not discuss the role of informal FA practices in constructing language learning behavior. To the best of my knowledge, there is only one conversation-analytic study (Heritage and Heritage 2013) that shows how a teacher's practice of question construction elicits evidence of students' learning status and shapes the decision-making process about the next pedagogical steps. It eventually discusses how the practice of question construction acts as an interactional practice that constitutes FA.

There are a few other studies that use methods other than CA to analyze naturally occurring classroom interaction in order to reveal how FA emerges in interaction. For instance, from the perspective of the interaction hypothesis (Long 1996), Sherris (2011) shows how such communicative strategies as recasts and clarification

requests reflect and form spontaneous formative assessment. Leung and Mohan (2004), from the perspective of systemic functional linguistics, show how formative teacher for learning assessment encompasses students' decision-making, student processes and interaction.

Finally, the field of assessment in education discusses what constitutes assessment literacy, which involves the range of skills and knowledge that stakeholders need in order to deal with the new world of assessment (Stiggins 1991). The studies in this context (Fulcher 2012; Hasselgreen et al. 2004; Plake and Impara 1993; Stiggins 1991) have not gone beyond using surveys to investigate teachers' practices and have not considered the interactional competence that is required for successful classroom-based assessment practices. This is an important lacuna since teachers not only need to know how to prepare and administer tests, they also need to do the interactional competence that underlies such practices.

3 Method

3.1 Data

The data for this study come from a corpus of video-recordings of an EFL class (55 classroom hours) in a preparatory school at a state university in Turkey. The class was recorded using three cameras and four audio recorders and was supplemented by the researcher's non-participant observation. One of the cameras (under the control of the researcher) was set up at the back of the classroom to record the teacher. The other two cameras were set up at the front of the classroom. Data collection began after obtaining informed consent from each of the participants.

The class was at an intermediate level of English. The students were taking English courses to develop their English language skills and knowledge so that they could gain the necessary competence in English to be able to follow most of their studies in their own departments. The departments that they were going to study in after English preparatory school included medicine, nursing, food engineering etc. They had integrated-English lessons as well as separate language skill classes such as speaking and writing. In their main courses, they used *New English File* as their course book which also determined the majority of the curriculum they were following. The class had a traditional structure with a teacher-fronted style; in addition, the curriculum was intensive and there was great pressure on the instructors and students to cover a large number of prescribed grammar topics before the exams.

The class consisted of 32 students (7 men, 25 women) and was taught by two female teachers. One of the teachers (T1) taught the integrated-English lessons while the other (T2) taught the language skills courses. However, since the majority of their courses was integrated (i.e. 68% of the courses), T1 was their main teacher; in this study, the extracts come from her classes. T1 had more than 6 years of

teaching experience, held an MA degree in the field of English Language Teaching, and was pursuing her PhD studies in the same field.

3.2 Epistemology

The research methodology used in this study is Conversation Analysis (CA) defined as "the study of recorded, naturally occurring talk-in-interaction" (Hutchby and Wooffitt 2008, p.12). CA is used not only as a methodology but also as an emic theory of interaction which focuses on the contextual and interactional dimensions of naturally-occurring language use. In other words, the methods of CA were adopted to develop a socially informed perspective on SLA (often referred to as "CA-SLA"; see Kasper and Wagner 2011; Markee and Kasper 2004). This perspective aims to show "how learning is constructed by the use of interactional resources and to explicate the progress of their [students] learning and their socially distributed cognition or intersubjectivity" (Seedhouse 2005, p.177).

This study contributes to the field of assessment in L2 classrooms by bringing a CA-SLA perspective to language assessment and learning (for other chapters that use CA as a methodological tool to engage with L2 language assessment issues, see also Huth this volume; Walters this volume). More specifically, unlike cognitive SLA, which focuses on individual cognition, CA-SLA views cognition as observable, socially distributed behavior (Seedhouse 2005) that is embedded, situated and co-constructed in the turn-by-turn unfolding of embodied interaction. This suggests that learning is analyzable and observable through practices such as repair, hesitation, repetition, turn-taking and sequential organization as well as non-verbal behavior (e.g. gaze, gesture, body orientation and the manipulation of objects) (Pekarek Doehler 2010; Seedhouse and Walsh 2010) that constitute what Sert (2015, p. 33) has called "micro-moments of language learning". Finally, this study adopts Markee's (2008) Learning Behavior Tracking methodology (LBT) as a method of CA-SLA. LBT has two components: Learning Object Tracking (LOT) and Learning Process Tracking (LPT). While LOT involves tracking when participants use learning objects within a single conversation or subsequent speech events, LPT involves tracking how participants orient to emerging learning objects as resources for doing language learning behaviors in different speech events.

3.3 Transcription and Analytic Procedures

In line with CA procedure, the data collection process was followed by the transcription of the data. The transcriptions were done using the transcription system adapted from Gail Jefferson (2004). "LL" is used to represent many students talking at the same time and "T1" stands for the main teacher. Participants' identities are anonymized by replacing their names with pseudonyms and using letters to

represent them in the lines in the extracts. In addition, embodied actions such as writing on the board, pointing at language items on the board, nodding and shaking of the head etc. are included in the transcripts. Finally, the onset of these non-verbal actions is marked with a plus (+) sign both in the lines of the original talk and in a separate line accompanied by a description of these actions. The transcription process was followed by the unmotivated examination of the data to identify instances of "Reference to a Past Learning Event" (RPLE) (Can Daşkın and Hatipoğlu 2019). These individual examples of RPLEs were then assembled into a collection of this phenomenon for further analysis which shows that RPLEs occur when the teacher contingently extends the main instructional activity to focus on language items and topics that had been presented in a past learning event.

For example, in Extract 1, the class is matching the definitions given with the corresponding expressions. When they come to the definition "continue to communicate with somebody", the teacher allocates the turn to UM, who then provides the right expression that the definition corresponds to in line 2 (`keep in touch`). The teacher in her follow-up turn in line 3 confirms the response by repeating and writing it on the board. In her next Turn Constructional Unit (TCU), she does not move on with the next definition in the activity but expands her follow-up turn to refer to a past learning event in line 5. Here, she asks about another expression used with "in touch" by employing RPLE. By employing a "we statement" (Mercer 2008), past tense and the time expression "daha önce" (before),[1] the teacher refers to a past learning event and indexes a relevant expression studied in this event. The expression "keep in touch" makes the teacher's use of RPLE relevant because she takes the opportunity to check the students' recall of another relevant expression "get in touch". In this way, the teacher orients to students' epistemic responsibility and obligation by asking them to display their epistemic access to what they are assumed to know. It is the presence of an RPLE that creates an epistemic responsibility on the part of the students to have access to what is presented in this event. For this reason, unlike knowledge checks (Koole 2010), RPLEs do not position students as occupying K+/K- epistemic status (Heritage 2012a, b) but as having/not having access to their K+ epistemic status that is assumed to have been established in a past learning event (for other chapters that discuss the issue of epistemics, see, Evnitskaya this volume; Lee this volume; Musk this volume).

[1] The teacher's use of L1 Turkish as well as L2 English in this excerpt and the one that follows are examples of language alternation (see Filipi and Markee 2018). See also Sert this volume, and Kunitz this volume, which deal more explicitly with this phenomenon.

Extract 1: Get in Touch

```
                                                               +
1    T1: and the last one continue to communicate with somebody UM
                                                              + points at UM
2    UM: keep in touch
3    T1: keep in touch with somebody
4        ((writes "keep in touch with somebody" on the board))
                    +
5→       biz bu   "in touch"ı neyle     gördük daha önce?
         we  this "in touch"  with what saw    before
         with what expression did we see "in touch" before
                   + points at "in touch" on the board
6    LL: get in touch (with)
```

As part of the larger project reported here, RPLEs in various sequential positions were analyzed and it was seen that the findings had direct relevance to informal FA practices (Can Daşkın 2017). Drawing on the findings from this project, this chapter introduces RPLEs as a way of doing informal FA in an L2 classroom interaction. In doing so, two of the extracts that occur subsequent to each other are selected for the analysis in this chapter. These extracts have been selected because they allow the tracking of a language learning behavior from the perspective of CA-SLA and thus, can better show the formative aspect of RPLEs as an assessment practice. Since FA essentially deals with learning, the analyses of these extracts illustrate how it enhances ongoing learning in and through interaction.

4 Findings

The analysis of the following extracts demonstrates how RPLEs occur as a practice of informal FA and enhance students' L2 grammatical development. It does so by tracking and documenting socially situated cognition and learning-in-action through the micro-details of talk-in-interaction. By presenting two extracts that take place subsequent to each other, the analysis provides evidence for the role of informal FA practices in the co-construction of language learning behavior.

In Extract 2, the class is working on an activity to practice the use of prepositions with certain words. The activity is in the form of fill-in-the-blanks and students have to fill in each gap with an appropriate preposition. The teacher reads the first part of each sentence up to the blank and gets students to complete it with the right preposition. In response to incorrect student responses, the teacher resorts to an RPLE to act on the negative evidence elicited with regard to the students' knowledge of a preposition.

Extract 2: Preposition "on"

```
1     T1: psychologists gather data?
              +
2     MD: in [bence   hocam.
                I think miss
          I think it is "in" miss
          + T1 turns towards the board
3     Hİ:     [in
4         ((T1 turns back to the class and at the same time
5           raises her eyebrows))
6     İB: [on olmaz mı?
              wouldn't that be
            can't we say "on"
7     SM: [on
8     BZ: bence on [değil mi?
          I think   isn't it
          I think it is "on" isn't it
9→    T1:          [on'u biz ne diye biliyoruz on'u?
                    "on" we  what    we know  "on"
                     what is the meaning of "on" that we know
          +       +
10    MD: hu:h on üzerinde demek=
                  on top   it means
                  it means "on top"
          +MD raises his eyebrows
                  +T1 opens her right hand and turns it downwards
11    MD: =[(inaudible)
             +
12    T1:  [on'un [anlamı      üzerinde demek       dimi?
           of "on" its meaning on top   it means    right
          the meaning of "on" is "on top" right
           + directs her gaze towards MD and then opens her right hand and turns it downwards
13    BZ:  [üzeri
            on
14    UM:          [üzeri
                    on
15    SM: hasta   üzerinde
          patient on
          on a patient
                                                      +
16    T1: on'u bi de biçok yerde  özellikle     akademik şeylerde
          "on" also  many  places particularly academic things
                                                       + writes "on" and "about" with an
                                                    equal sign in between on the board
17        about anlamında     da   kullandığını görürsünüz-
          about in meaning of also he/she using you would see
                                       +
18        kullanıldığını görürsünüz.   burda mesela      veri
```

```
           being used     you would see here  for example data
19         neyle      ilgiliymiş?
           with what  it is about
                                                  +T1 looks at the worksheet
           in many places especially in academic things, you see
           "on" being used in the sense of "about". here for
           example what is the data about
20         (0.1)
21         [hastalarla    ilgili]
            with patients about
            about patients
22    MD:  [hastaların  üzerinde]
            of patients on
            on patients
                                +
23    T1:  hastaları- evet üzerinde anlamı      işte hakkında e::r
           patients   yes  on       its meaning like about
           patients- yes in the sense of "on" like "about"
                                  +points at MD
                                     +
24         veri topluyolar.          mesela (.)   işte
           data they are gathering. for example  like
           they are gathering data for example like
25         e::r ↑some of you (.) last quarter (.) gave a
                                             + points her finger backwards
26         presentation on an embarrassing experience.
27         on yani about an embarrassing experience.
              in other words
28         >işte< utanç verici bi tecrübeyle ilgili sunum
            like  embarrassing an experience about  presentation
29         ver- yaptınız mesela.
           give- made    for example.
30         genelde   onlarda     about di:lde on'u görürsünüz.
           generally with these "about" not   "on" you see
           that is you gave a presentation about an embarrassing
           experience for example. you usually see "on" rather than
           "about" in those cases.
31    UM:  [ama about   da   olur]
            but "about" also ok
            but "about" is also ok
32    T1:  [ama about   da   olur]  tabi ki huh-huh.
            but "about" also ok      of course
            but "about" is also ok   of course
```

Extract 2 begins with the teacher's First Pair Part (FPP) which invites learners to complete the rest of the sentence that she reads out with an appropriate preposition. Here, the teacher uses a Designedly Incomplete Utterance (DIU) (Koshik 2002) as an interactional resource to elicit responses from the learners. MD and Hİ provide the Second Pair Part (SPP) by offering the preposition "in" in lines 2 and 3. As MD starts delivering his response, the teacher turns towards the board; however, right after the response "in", she turns back to the class and raises her eyebrows to mark that the response "in" is incorrect (lines 4 & 5). The teacher's

embodied action of raising her eyebrows thus initiates an embodied repair action (Seo and Koshik 2010). In response to T1's correction initiation, three students (IB, SM & BZ) offer a correction. IB and BZ do so in the form of a confirmation request (lines 6 & 8) and hence, display their knowledge as less certain than SM, who does not use epistemic downgrades (line 7). Before BZ completes her turn, the teacher employs an RPLE in Turkish by asking about the meaning of "on" that they are expected to know in line 9 (`on'u biz ne diye biliyoruz on'u?`). In deploying this RPLE, she uses the Turkish verb for "to know" (`biliyoruz`) and thereby, positions learners as already knowing (K+) recipients (Heritage 2012a). In this way, the teacher marks the RPLE and displays that they have already worked on the preposition "on" and that, therefore, the learners are supposed to know one of its meanings because it was presented earlier. She does not question whether they know the meaning of "on" but solicits a display of expected knowledge. The RPLE is further marked by the Turkish first person plural pronoun (`biz`), which indicates that the knowledge addressed in the question has become the shared knowledge of the class as a community. Although the students have already repaired their peers' incorrect responses (lines 6–8), the teacher uses the RPLE to extend the repair sequence in a non-minimal post-expansion sequence. In line 10, MD, who provided an incorrect response earlier (line 2), prefaces his response with a change of state token (`hu:h`) (Heritage 1984), which is accompanied by the raising of his eyebrows. He then comes up with the Turkish meaning of "on" (`üzerinde`). The change of state token together with the raising of his eyebrows may indicate his realization and understanding of the relation between the meaning of "on" that they had studied previously and its new emerging meaning in the target context. Simultaneous with MD's response turn, T1 demonstrates the meaning of "on" with an iconic gesture (Lazaraton 2004; Waring et al. 2013) by opening her right hand and turning it downwards. Overlapping MD's turn at a turn-final position, T1 orients to MD by directing her gaze towards him and poses a confirmation question regarding the meaning of "on" in Turkish. Although MD provides the expected response, T1 asks the other students about whether they agree with his response. As she says the Turkish word for "on", she displays the same gesture that she did in line 10. BZ and UM in the subsequent lines confirm the Turkish word for "on" by repeating it (`üzeri`).

In line 15, SM reformulates her peers' responses by using the corresponding Turkish preposition in the target context (i.e. the sentence with the blank exhibited in line 1) in the form of a prepositional phrase (`hasta üzerinde`), which means "on a patient". SM's answer demonstrates her understanding of the new use of "on" in the target context and closes the RPLE-initiated sequence with regard to "on" as a preposition of place. Therefore, the student responses to the teacher's question of RPLE confirm their K+ status as ascribed by the teacher. In the follow-up turn (lines 16–19), the teacher links students' knowledge of "on" as a preposition of place with the meaning of "on" as emerging in the new context by adding that it also means "about" and writing both "on" and "about" on the board with an equal sign in between (Morton 2015). Referring to the target context, she then asks what the data are about. After a second of silence, in overlapping turns, both MD and the teacher

provide the response in Turkish that the data are about patients. While T1 uses the Turkish translation for "about" (hastalarla ilgili), MD uses the corresponding Turkish word for "on" (hastaların üzerinde) in their responses. Here, it should be noted that similar to the use of "on" in English, the Turkish translation "üzerinde" is also used both as a preposition of place and as meaning "about". The teacher's question in Turkish in lines 18–19 also elicits a response in Turkish, which is congruent with the teacher's pedagogical goal as she also delivers the response in Turkish in line 21. In line 23, in her intra-turn position, the teacher realizes MD's use of the Turkish word for "on" and orients to it by pointing at MD and repeating the word "üzerinde" followed by further reformulation of the meaning of the preposition "on" in the target sentence in Turkish. Both MD's answer (line 22) and the teacher's orientation to it demonstrate his understanding of the new use of "on" in the sense of "about" in the emerging context. From lines 25–30, the teacher further extends learner contributions by using "on" in an example sentence about students' past experience. She gives the example that some of the students gave a presentation on an embarrassing experience last quarter. In her turn-final position, her statement that "about" is also acceptable in place of "on" overlaps with exactly the same statement UM produces in line 31. The teacher orients to UM's statement by confirming it.

The analysis of Extract 2 has revealed social actions that are congruent with what a practice of informal FA would achieve in and through interaction. It can be argued that RPLEs function as a practice of informal FA in many ways. Firstly, the incorrect responses in lines 2 and 3 reveal gaps in some of the students' learning states. Although this incorrect response is repaired by peers after the teacher's embodied repair initiation, there is clear evidence that at least some of the students display trouble in their language learning behavior. Secondly, although repaired by peers, this display of trouble makes a repair a relevant next action by the teacher in her follow-up turn. Therefore, in order to treat the gap, the teacher employs a question to do an RPLE in the ensuing non-minimal post-expansion sequence to extend the repair sequence (line 9). In so doing, the teacher diverts students' attention away from the main focus of the activity (i.e. to fill in the blank with the right preposition) to the use of "on" as a preposition of place which they studied in a past learning event as different from its use in the new context in which it is used in the sense of "about". By referring to a past learning event, she projects that the use of "on" in the new context is related to its use studied earlier. In this way, she checks on students' knowledge of "on" and forms another "assessment conversation" (Ruiz-Primo 2011, p.17) by orienting to their epistemic responsibility. By doing an RPLE, the teacher indicates that students may develop an understanding of the new meaning of "on" in relation to what they are expected to know as a result of a past learning event. Eliciting the right response to her question of RPLE and confirming students' K+ epistemic status, she uses learners' knowledge of "on" as a preposition of place to link it with the new use of "on" as meaning "about" that emerges in the new target context (lines 16–19). Lastly, the RPLE is formative in the sense that

it leads to changes in some of the students' learning behavior. For instance, even before the teacher establishes a connection between the past learning context and the new one, SM in line 15 demonstrates her understanding of the connection by translating the relevant prepositional phrase from the target sentence (on patients) into Turkish. Likewise, right after the question in the RPLE, MD who is one of the students who gave an incorrect response earlier (line 2), prefaces his turn with the change of state token "huh". This may indicate his understanding of the projected connection between the past and the new learning context with regard to the preposition "on" and hence, his understanding of why his earlier response "in" is not acceptable. Besides, MD in line 22 further demonstrates understanding by providing a correct response to the teacher's question that asks about the meaning of the target sentence. Furthermore, UM in line 31 self-selects and seeks confirmation of her understanding that "on" and "about" can be used interchangeably. T1 confirms that understanding. For these reasons, it can be claimed that RPLEs emerge informally and contingently as part of an everyday instructional activity in reaction to a gap in students' learning states. Furthermore, by checking on students' knowledge, they help to treat this gap and to make the trouble source understandable at least for some of the students, which is what makes them formative and conducive to learning.

The following extract takes place 5 days after Extract 2. In Extract 3, after teaching the passive structure, the teacher, using the topic of a listening task that they had worked on previously, writes two multiple-choice items on the board (Fig. 1). She asks which of the options provided is the right one for the blanks in the sentence. The students have contradictory ideas about the right option and the teacher tries to guide them to the correct option. The first part of the extract (lines 1–18) is excluded for reasons of space. In Extract 3, following a repair sequence, the teacher draws the students' attention to the use of "on" in the target sentence with reference to what they discussed in Extract 2. Using this RPLE, she initiates an assessment conversation and takes the opportunity to check whether students remember or not what was taught in Extract 2 again in relation to another past learning event.

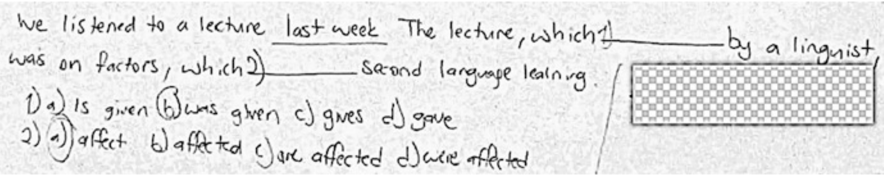

Fig. 1 Multiple choice item on blackboard

Extract 3: Preposition "on" 2

19 T1: >ikinci dil edinimi< tarafından mı etkilendi
second language learning by is it affected
20 faktörler yoksa >ikinci dil edinimini<
factors or second language learning
21 etkiler mi faktörler?
affect does it factors
were the factors affected by second language learning or do the factors affect second language learning
22 SM: +etkiler. [affect
affect
+ nods her head
23 İB: [etkiler hocam affect sadece affect.
affect miss just
24 LL: [+etkiler
affect
+ T1 points towards İB
25 KV: evet
yes
26 BZ: yaa
27 F: °anladım°
I got it
28 ((T1 circles option a))
29 T1: böyle de tek passive çıkcak diye bişi yok.
like this only will emerge no such thing
30 böyle de test gelebilir.=
like this a test may come
as in here, it does not mean that only passive structure will be asked in the exam. it is also possible that an item like this one may be asked.
31 İB =evet hocam ben de anlatıyorum ama
yes miss I am also explaining but
32 ((laughter))
33→ T1: +bu arada on'un anlamı ne burdaki on'un?
by the way of "on" its meaning what here that of "on"
by the way what's the meaning of "on" here
+ points at "on" in the sentence on the board
34 (1.1)

```
35→       neydi       biz ikinci bi anlamını    gördük on'un.
           what was it we  second a  its meaning saw    of "on"
           what was it we studied the second meaning of "on"
36   BU:   hakkında
           about
37   BZ:   sahip °mi°
           is it "to possess"
                                               +
38   T1:   about   anlamı      vardı      ↑dimi
           "about" its meaning there was  right
           it had the meaning "about" right
                                              + BZ nods her head
           +
39         ne   hangi-   o    ders    neylerle  ilgiliymiş
           what which -  that lecture with what is it about
           what which- what is that lecture about
           + points at the relevant expression in the sentence on the board
40         [ikinci dil      edinimini etkileyen   faktörlerle=
            second language learning  that affect factors
            factors affecting second language learning
41   BZ:   [doğru
            right
42   T1:   =[ilgiliymiş
             it is about
              +
43   BZ:    [°hakkında°
              about
              + nods her head
```

Extract 3 begins with the teacher's correction of student responses through her question in Turkish about whether the factors were affected by second language learning or whether the factors affect second language learning (lines 19–21). SM in line 22 utters the Turkish word "etkiler" (affect), as a correction, which suggests that factors affect second language learning. Following this word, she delivers the corresponding English word for "etkiler" (`affect`), which is given in option "a" and suggests this option as the correct response. SM's recognition of the right option is also marked by the nodding of her head as a simultaneous embodied action. Overlapping her turn at her turn-final position, İB produces the same response as SM's both in Turkish and English and in his last TCU, he marks that it is "affect" alone to display his insistence on option "a". IB's turn is followed by several other learners uttering the Turkish word for "affect" as a response to the teacher's question. In the next lines, KV, BZ and F explicitly claim understanding by saying "yes" and "I got it" in Turkish and using the change of state token "yaa" which is used in Turkish when somebody realizes something (lines 25–27). Then, the teacher circles option "a" in the item on the board and informs the students that an item on a test that the students will be taking may consist of both a passive and an active structure as in the target item on the board (lines 29–30). IB orients to the teacher's explanation in an amusing manner, which generates laughter in the classroom.

The teacher extends the sequence in line 33 and now focuses on the preposition "on" in the target sentence by using an RPLE. First, she asks the meaning of "on" in the sentence in Turkish and then after 1.1 s of silence, she reformulates her question in the form of an RPLE by explicitly referring to a past learning event in which they talked about the second meaning of "on" (line 35) (`neydi biz ikinci bi anlamını gördük on'un`). "The second meaning of on" is a reference to the metaphorical meanings of "on". Here, she actually refers to the event taking place in Extract 2. While the first question in line 33 requests whether students know the meaning of "on" in the target sentence, the reformulated question with the RPLE in line 35 asks whether students have epistemic access to what they are assumed or expected to know, thereby placing more pressure on the students to display a K+ epistemic status. In this way, the reformulated question through an RPLE places epistemic responsibility on the students and constructs "their current epistemic access as a product of previous learning" (Morton 2015, p.262). The teacher marks the RPLE by using the past tense (i.e. the Turkish past tense markers –di attached to "ne" (`neydi`) and –dük attached to "gör" (`gördük`)) and the first-person plural pronoun "biz" (we). She also openly states that they worked on the second meaning of "on" previously and orients to the students' epistemic responsibility and obligations. In line 36, BU displays her knowledge of the second meaning of "on" by saying "about" in Turkish but BZ delivers an incorrect response (`sahip`) in the form of a confirmation question in line 36. This suggests that there is a lack of understanding of the second meaning of "on" on the part of some learners. In the next turn, the teacher provides the correct response "about" followed by the token "dimi" (right) with a rising intonation, which solicits students' profession of knowing what they are supposed to know, thereby, fulfilling an epistemic obligation. Simultaneous with her use of this token, BZ nods her head, which claims her recall of the meaning of "on". The teacher continues her turn by explaining the meaning of "on" in relation to the target sentence on the board. Overlapping the teacher's turn, BZ once again confirms the teacher's explanation by uttering "doğru" (right) in Turkish and repeating the meaning of "on" in Turkish (`hakkında`) accompanied by the nodding of her head (lines 41 and 43). Therefore, the teacher's use of an RPLE in line 33 created an epistemic change in BZ's learning state regarding the second meaning of "on", which was presented to learners a week before.

Extract 3 displays a pattern of RPLEs that also acts as a practice of informal FA. Firstly, although the activity is targeted at the use of passive structure, the teacher draws learners' attention to the meaning of "on" in the sentence in a non-minimal post-expansion sequence by employing an RPLE and thus, takes the opportunity to create an assessment conversation in and through interaction. Unlike the RPLE in Extract 2, it does not emerge in reaction to a display of trouble in students' learning state but it emerges as a means of having access to students' knowledge and hence, seeking evidence for their understanding of the meaning of "on" as used in the target context. In Extract 2, the teacher presented the second meaning of "on" through an RPLE; that is, in relation to the first meaning they had learnt previously. In Extract 3, she now brings up the second meaning in relation to the learning event in Extract 2. Secondly, even though there is one learner, BU, who displays her

knowledge of the second meaning of "on" (about) in line 36, there is another learner, BZ, who displays her lack of knowledge (line 37) as a response to the teacher's RPLE. However, the teacher's explanation in lines 38–42 creates an epistemic change in BZ's learning state. The RPLE sequence has revealed that BZ could not gain the K+ epistemic status in relation to the second meaning of "on" a week before and now she has recalled it and displayed her understanding and thus, undergone an epistemic change of state at least in the short term. It is this outcome of creating a learning opportunity that makes this RPLE formative and an important means for informal FA. Lastly, the RPLE in Extract 3 assesses the outcome of the RPLE-initiated sequence in Extract 2. Therefore, considering the short-term outcomes of the RPLEs across the two extracts, it can be claimed that the RPLE as employed in Extract 2 is formative in that it helped some of the learners to gain knowledge of the second meaning of "on" as displayed by BU in Extract 3 and could not help others as displayed by BZ in Extract 3. However, the RPLE in Extract 3 is, in turn, formative since it created an epistemic change of state in BZ who progressed from an unknowing epistemic status to a knowing status. Therefore, the RPLEs in these two extracts show that informal FA is a continuous process and contingently occurs in and through interaction as made relevant by the learning context. By analyzing subsequent learning events, the extent to which such assessment practices are formative in terms of learning can be tracked at least in the short term since enhancing learning is what FA is essentially concerned with.

5 Discussion and Conclusion

This study has illustrated how an analysis of naturally occurring interaction in an L2 classroom can reveal interactional resources which act as informal FA practices. In this way, it actually bridges the gap between classroom interaction research and classroom-based assessment research. The analysis in this study has displayed one such interactional resource – that is, RPLEs – which emerge as a practice of informal FA. The emergence of RPLEs is congruent with the central idea of FA in that it is employed not only to seek information about students' learning states but also to use this information to make instructional adjustments in ways that are designed to enhance ongoing learning. The analyses have shown that the teacher uses RPLEs to check students' knowledge as well as to respond to and to repair gaps or trouble sources in their learning states. Because FA is essentially concerned with learning, this study has shown that the analysis of interactional data can explicate learner understanding and language learning behavior as a result of an assessment practice. Furthermore, it functions not only within single learning events but also across different events and hence, can reveal the extent to which such assessment practices are formative. It, therefore, presents a CA-SLA approach to learning as a way of uncovering the complexity of interaction behind classroom-based assessment practices by revealing RPLE as an interactional resource for informal FA. RPLE as a practice of informal FA constructs and shapes language learning behavior that leads

up to "observably configured" learning states within a turn-by-turn unfolding of talk-in-interaction (Pekarek Doehler 2010, p. 123). Besides, RPLEs are congruent with the informal dimension of FA since they emerge in and through interaction. In addition, they occur contingently as embedded in everyday learning activities with the teacher extending the main activity to refer to language items and topics presented in a past learning event. In these respects, RPLE also shows that informal FA is a discrete dimension of assessment. That is, it is observably different from formal FA which requires the use of specially designed assessment instruments at prespecified times.

By presenting the way in which the teacher carries out the practice of informal FA, this study has also examined a part of teacher interactional competence and thus suggests that informally assessing learners in order to enhance learning in and through interaction is an important part of teacher Classroom Interactional Competence (CIC) (Walsh 2002). By doing RPLEs, the teacher uses interaction as a tool to assess and eventually, to assist learning. Therefore, a teacher who is competent in classroom interaction also informally assesses students' learning states in and through interaction as part of everyday instructional activities for formative purposes. Consequently, this study proves that interaction "empowers teachers with assessment tools that are more meaningful to the classroom context and provides a different dimension of learning not easily captured by traditional means of assessment" (Antón 2015, p. 86).

This study has implications for teacher education as it presents an analysis of L2 classroom interaction that can be used to help teachers and student-teachers understand the relationship between interaction and FA. As well as the skills and knowledge required to prepare and administer tests, teacher trainees should be given the opportunity to gain insight into informal FA practices that emerge in and through classroom interaction and to develop the interactional competence needed for these practices. More specifically, RPLE can be introduced to language teachers and student-teachers as a practice of informal FA by showing how it is employed to elicit evidence of students' learning states and/or how it is used to make instructional adjustments in order to treat gaps in their learning states. The analyzed extracts from a real instructional setting are available resources that can be used to illustrate RPLE both in pre-service and in-service teacher training. This can also be done in a way that creates critical discussion on the relation between interaction and informal FA and that eventually raises awareness of FA practices that are an integral part of everyday instructional activities.

6 Pedagogical Implications

This chapter has introduced a practice of informal Formative Assessment (FA) (i.e. RPLE) in an L2 classroom interaction and has implications for L2 teacher education. It presents findings that can be used in both pre-service and in-service teacher education. Informal FA is one dimension of language assessment that seems to be

neglected when compared to formal FA practices. Teachers, whether pre- or in-service, are usually given training in how to prepare and administer tests. In fact, many language testing courses and textbooks also center around test construction, analysis of tests, measuring the four skills, validity, item analysis etc. (Brown & Bailey 2008; Fulcher 2012). However, as well as training in formal testing, teachers also need training in informal assessment practices that emerge in and through interaction as embedded in routine classroom instruction. Such training should encourage teachers to develop the interactional competence required for successful classroom-based assessment. Therefore, both pre- and in-service teachers should be given the opportunity to understand the relationship between interaction and assessment and eventually, the relation between interaction and learning. In offering such an opportunity, the findings of this chapter, which are based on the analysis of actual L2 classroom interaction, can be presented as available resources. In doing so, reflective teacher education models can be used by integrating such informal FA practices as RPLE into such models. To illustrate, IMDAT is one such model that was introduced by Sert (2015, 2019, this volume). It stands for these phases: Introducing Classroom Interactional Competence (CIC), Micro-teaching, Dialogic reflection, Actual teaching and Teacher collaboration and critical reflection. The following steps show how informal FA practices can be integrated into IMDAT to be used in L2 teacher education:

1. Introducing informal FA as part of CIC: This chapter has suggested that informally assessing learners in order to enhance learning in and through interaction is an important part of teacher CIC (Walsh 2002). By doing RPLEs, the teacher uses interaction as a tool to assess and eventually, to assist learning. Therefore, "doing informal FA" is proposed as a new component of CIC. In this phase of IMDAT, teacher educators may specifically focus on the ways of "doing informal FA" by showing published extracts like the ones in this chapter accompanied by the videos if available. This phase aims at raising teachers/teacher-candidates' awareness of the relation between interaction and learning by drawing their attention to any kind of informal FA practice including RPLE that is employed to elicit evidence of students' learning states and then using this evidence to enhance learning. In this way, they will be given the opportunity to realize that FA practices are an integral part of everyday instructional activities.
2. Micro-teaching: This phase requires candidates to prepare short lesson plans and to teach what they plan to their peers/colleagues who pretend to be real students. The micro-teachings are also video-recorded and allow the candidates to observe each other's teaching.
3. Dialogic reflection: The lecturer gives feedback to the candidate on his/her micro-teaching with a special focus on the interactional practices that do informal FA. The candidate is then asked to write a critical self-reflection by presenting transcripts from his/her teaching. Optionally, the candidates can be asked to observe a few lessons by an experienced teacher in a real classroom and write a critical reflection on his/her ways of doing informal FA. Similarly, they can also be asked to write critical reflections on their peers'/colleagues' micro-teaching practices in terms of their informal assessment practices.

4. Actual/another round of Teaching: This phase may be possible for pre-service teachers who carry out their practicum and teach in actual classrooms and for in-service teachers who already have their own classes to teach. In this phase, the candidates prepare lesson plans for real students and do their actual teaching, which is again video-recorded. They then critically watch both their own video and the video of a peer/colleague they choose.
5. Teacher collaboration and critical reflection: This phase involves a collaborative reflection with a peer/colleague after the candidates watch their own and each other's videos in the previous phase. They critically reflect on instances of informal FA both in their own and in their peer's/colleague's videos by selecting sequences that illustrate good and bad examples of informal FA practices. Good examples may involve those informal FA practices that contingently elicit evidence of students' learning state and use this evidence to enhance learning or to create learning opportunities. Bad examples, on the other hand, may involve the teacher who misses an opportunity to elicit evidence of students' learning state or who fails to use the evidence already obtained in creating a learning opportunity. This phase can also be carried out in the form of a stimulated-recall session.

The integration of informal FA practices in reflective teacher education models can help to raise teachers'/teacher candidates' awareness of assessment practices that emerge in and through interaction contingently, continuously and flexibly. With this awareness, they can be encouraged to create learning opportunities and assess for learning without always having to allocate special time for assessment and having to design special assessment instruments.

Acknowledgement This study comes from a PhD thesis that was submitted to Middle East Technical University (Can Daşkın 2017) and is based on a larger project that received a grant from TÜBİTAK (project number: 114 K616). I would like to thank my PhD supervisor Prof. Dr. Çiler Hatipoğlu, and Assoc. Prof. Dr. Olcay Sert for their invaluable feedback and guidance. Special thanks to the internal and external reviewers for their feedback and suggestions which contributed to the improvement of the manuscript.

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Conceptualizing Interactional Learning Targets for the Second Language Curriculum

Thorsten Huth

Abstract The skill, awareness, and perhaps the competence, of language learners to engage in specific interactional behaviors are currently encapsulated in the term Interactional Competence (IC). While IC-oriented teaching materials propose learning targets beyond vocabulary and sentence level grammar, their action-oriented view of what language is and how language works contrasts with basic notions of language and proficiency currently reflected in transnational curriculum guidelines and assessment protocols. This paper illustrates how IC-oriented teaching materials can be conceptualized for, and used in, the second language classroom and argues that their use encourages a rethinking of the notions of language and proficiency for second language teaching.

Keywords Interaction · Learning targets · Proficiency descriptors · Language teaching

1 Introduction

Curricula do not exist in conceptual voids. Second language (L2) classes reflect the larger goals of curricula, and a given institution may orient its curriculum to larger curricular frameworks in the profession. Proficiency standards of the American Council for the Teaching of Foreign Languages (ACTFL) or those of the Common European Framework of Reference for Languages (ACTFL Proficiency Standards 2012; Council of Europe 2001, 2018) offer such administrative frameworks,

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_18

including general guidelines for the setting of instructional goals, curriculum design, and assessment (see Tschirner 2012 for an attempt to compare, contrast, and align both; see Can Daşkın this volume; Walters this volume, who also use CA as a tool for doing language assessment). Both are regularly updated, reflecting insights, advances, and adjustments in theory and research as they emerge.

This paper illustrates the potential as well as the difficulties of updating the L2 curriculum with empirical insight on what language is and how it works from a social-interactionist perspective. Specifically, I discuss the notion of interactional competence (or IC, see Hall et al. 2011) and its potential trajectory on L2 teaching. The main argument of this paper is that IC's disciplinary grounding in conversation analysis (CA, Atkinson and Heritage (1984) see Schegloff 2007; Sidnell and Stivers 2013) casts language as located in the space across two or more speakers and across two or more individual turns at talk. This view of language, while empirically substantiated, does not align well with the view of language as we find it reflected in the curricular frameworks for L2 teaching and learning such as the ACTFL Proficiency Standards or the Common European Framework of Reference for Languages (CEFR). A reading of both reflects a view of language shaped by the institutional constraints that produced them, primarily focused on individual language learners and individual language production rather than on how two or more interlocutors negotiate meaning in the back and forth of talk. If the notion of IC is to have an impact on the L2 curriculum as a systematic means to conceptualize learning targets, a general shift in understanding what language is and how it works would have to be occasioned. Three empirical particulars would drive such a shift, namely that (a) language use is variable across cultures, that (b) language learners transfer what they think they know about social interaction from L1 to L2, and that (c) interaction is inherently co-constructed, that is, when people talk, meaning is constructed across turns and across speakers. Each of these points requires a rethinking of the larger frameworks for L2 teaching rather than the additive inclusion of interactional perspectives on language and language use, tagged on as it were, to already existing frameworks.

To establish this line of argument, I proceed as follows. First, I review basic empirical insights on what language is and how it works from a social-interactionist perspective, relying primarily on concepts and research in CA. I then outline the scope of IC inasmuch as it is able to furnish identifiable learning targets for the L2 classroom. Next, I provide a concrete example of how one IC-relevant learning target can be identified, conceptualized, and formalized for teaching. Last, I read the ACTFL Standards and parts of CEFR against the empirical realities surrounding language variation, language transfer, and the nature of co-constructed discourse. Appreciating all of them may help us to conceptualize specific interactional learning targets, to (re-)shape the larger frameworks for language teaching, and perhaps to shift our very idea of what language is, how it works, and how it may be assessed in second language teaching.

2 Language, Action, and Interaction

Any language user knows how to *do things* with language when they talk. For example, we give compliments ("Nice shoes!"), confirm casually ("M-hm!"), deny our accountability ("It wasn't me!"), and may repeatedly decline an offer before we accept it ("No, thank you. I shouldn't. Ok."). Clearly, that which is said also always *does* something, always accomplishes some action, indicating that humans wield a repertoire of linguistic-semiotic units that go far beyond mere sounds, words, and the rules that govern their grammatical combination. This chapter is about interactional context, about the specific placement and temporal succession of what we say (and thereby do) in the swift back and forth of talk. The placement of utterances in talk provides "interactional" context inasmuch as everything we say and do is naturally embedded in the context of the immediately preceding turns leading up to the turn we are currently producing. Thus, we match a greeting with another counter-greeting, provide answers to questions, or know that "you're welcome" succeeds a prior "thank you," not the other way around (see Fig. 1).

A variety of academic fields theorize human language as broadly action-oriented. This paper focuses specifically on what CA (Schegloff 2007; Sidnell and Stivers 2013) can tell us about how language use produces social actions, specifically in terms of how actions are produced in precise sequential contexts. CA research also produces findings on how people do action in specific contexts in specific language communities. How do Iranian speakers inquire after the well-being of family members during a telephone call (Taleghani-Nikazm 2002)? How does a recipient respond to compliments in American English (Pomerantz 1978)? How does a caller close a telephone conversation in German (Harren and Raitaniemi 2008)? CA keeps producing findings about how such actions are accomplished in and across languages and thus documents differences and variation in how social action works in and across languages (e.g., Golato 2005). These findings provide a wealth of potential teaching materials for the L2 classroom, describing in detail how utterances and

Language use: What is said	**Social action: What is done**
A: Good morning! B: Good morning!	A: Greeting B: Greeting
A: How was your day? B: Terrible.	A: Question B: Answer
A: Thank you. B: You're welcome.	A: Thanking B: Acknowledging receipt of thanking

Fig. 1 Saying is doing

their meaning connect across turns and across speakers in clearly defined contexts. These insights are based on empirical evidence and usually go beyond native speaker (and language educator) intuition (Golato 2003). Therefore, they provide conceptually safe ground for developing teaching materials, because such CA findings are not based on idealized (i.e. potentially inaccurate) notions and perceptions.

Realizing this potential of interactional learning targets in the L2 classroom goes back about 20 years (Barraja-Rohan 1997, 2011). Since then, a number of critical insights have occurred. For one, research has demonstrated that interactional structures and mechanisms, inasmuch as they are situated in the sequentiality of talk, can be successfully turned into tangible learning targets for L2 classrooms (e.g. Huth and Taleghani-Nikazm 2006). Next, interactional structures have been shown to be teachable and learnable even at the beginner's level (e.g. Huth 2006; Huth and Taleghani-Nikazm 2006; Kunitz and Yeh 2019). Finally, fully developed teaching units and pedagogical models for classroom application have emerged across various languages (Barraja-Rohan and Pritchard 1997; Betz and Huth 2014; Filipi and Barraja-Rohan 2015; Imo and Moraldo 2015; Rieger 2003).

This is the backdrop against which this paper positions interactional learning targets for the L2 curriculum. The notion of IC (see Hall et al. 2011; Pekarek-Doehler 2018, this volume; Pekarek Doehler and Pochon-Berger 2015) provides the conceptual vehicle for this effort. In light of the review above, IC can be described as encapsulating the skill of speakers of any language to engage in interaction in ways that are consistent with the interactional practices of their own language community. L2 teaching may aim to develop exactly this skill: to empower L2 learners with the skill-set to anticipate, interpret, and produce interaction structures consistent with the interactional practices in the relevant target language communities whose language they are learning. This critical language awareness goes beyond turns and speakers and broadens the scope of what language is and how it works for teachers and learners alike.

3 The Scope of IC

What exactly does the notion of IC encompass, what are its epistemological and methodological origins, and what does that, finally, mean for any application of IC to the L2 classroom inasmuch as it may help us to furnish tangible, assessable learning targets beyond sounds, words, and sentence-level grammar? What view of human language and communication does IC posit? The term *interaction* is firmly rooted in the specific terminology of CA research and its origins (Heritage 1984; Sacks et al. 1974). It encapsulates the basic insight that, when people use language for real-life purposes in face-to-face talk, this always happens in the context of specific social actions that span across turns and across speakers. Conversation thus becomes *talk-in-interaction* (Schegloff 1986), a term whose individual parts were not chosen at random. Its lexical base clearly denotes that talking produces actions,

while the prefix “inter-” indicates that these actions are accomplished across turns and speakers. As such, the term includes ordinary conversation as well as institutional talk as it occurs at the workplace, in courtrooms, or in classrooms.

The central unit of analysis of talk-in-interaction is the turn, which denotes the contribution of a social actor to the interaction-in-progress by claiming the conversational floor. Turns are carefully constructed by speakers, and in principle they encompass the entirety of linguistic-semiotic resources a language community has to offer (Drew 2013). CA research shows that across cultures talk proceeds on the basic assumption that one speaker occupies the conversational floor at a time, though speakers have to negotiate whose turn it is at a given point in talk (turn allocation; see Hayashi 2013). Interactants, while attending to sounds and words and strings of words as they are produced, also constantly monitor when someone’s turn may be over and start their own turns in transition-relevant places (see Clayman 2013). While turn-allocation is thus a matter of negotiation, turns themselves are not randomly positioned in conversation. Some turns are typed and have their own forward trajectory. This means that the action (or range of actions) that a given turn may accomplish may be specific in the sense that it requires other typed turns to follow, forming a sequence (Schegloff 2007). A minimal sequence consists of one speaker producing a first pair-part (e.g. a question) and a second speaker furnishing a suitable, fitting second pair-part (e.g. an answer). Once initiated with a first pair part, the presence or absence of a second pair part becomes noticeable and socially accountable and thus consequential for the further proceedings of the conversation. Consider the following example:

(1) (Atkinson and Drew 1979: 52)

01	A:	Is there something bothering you or not?
02		(1.0)
03		Yes or no
04		(1.5)
05		Eh?
06	B:	No.

Speaker A in example (1) clearly considers an answer as due, making the initial absence of an answer (line 2) accountable in repeated prompts (lines 3 and 5); these follow the pauses (lines 2 and 4) in which speaker B is expected to provide a relevant next action, namely an answer. Hence, even *not* talking in interaction must be understood as an action in and of itself.

In interaction, then, there is always some action that precedes and informs a given turn, and that turn will serve as a frame of reference for the next turn to follow (conditional relevance; see Schegloff 1968). Speakers monitor what was just said and thereby done, and they constantly decide what is to come next, suitably and relevantly. That which is to come next is inevitably imbued with real social consequences (Sacks 1987), providing a local and interactional context that is renewed with each successive turn that is taken. Thus, moving from turn to turn in

interaction requires the knowledge and ability to project forward and backward at the same time, because interactants constantly monitor the previous configuration of turns and the actions they engender as the backdrop against which to decide what "next" contribution may well be relevant to advance the talk. In other words, one key competency each language user has is the capacity to anticipate, interpret, and to produce relevant and fitting next turns in interaction.

This specific definition is useful for the L2 classroom. By focusing narrowly on how interactants anticipate, interpret, and produce *what comes next* in conversation in terms of turns and the actions they house, this notion pinpoints the positioning of actions in sequential context. This focus respecifies the regular objects of study in a language classroom (i.e. sounds, words, sentence-level grammar) by embracing the dimension of (inter-)action. Sounds, words, and strings of words are now viewed not just in terms of what they are, but rather in terms of what they *do* across turns and speakers. This focus draws from the robust empirical grounding that CA affords (not on preconceived notions or intuitions of native speakers) and utilizes the rich variety of CA-findings about how specific actions are accomplished across a variety of languages. Inasmuch as such published empirical studies are available for a given target language, we have access to a wealth of concrete learning targets that wait for being turned into teaching units. The next section illustrates how the theoretical foundations discussed above can be put into action with one concrete example.

4 One Example: Identifying and Formalizing a Learning Target

Above, I reviewed what it means to view language as social action, I grounded this review in the requisite disciplinary background, and I argued that a view of language as IC may respecify how language teachers approach what language is and how it works in terms of what language *does*. I now provide one example of how interaction differs in two languages (German and American English) in a clearly defined interactional context, illustrating how new learning targets emerge from interactional research and how they can be turned into workable and assessable teaching units. This provides the basis for discussing below how the notions of language and proficiency are currently conceptualized in the language teaching profession and its implications for change.

Telephone conversations and their specific interactional organization are an object of study in CA research. Particularly telephone openings have been a productive locus for cross-linguistic and cross-cultural inquiry (Luke and Pavlidou 2002). We now know that starting up a telephone conversation is more complicated than simply picking up and starting to talk; on the contrary, telephone openings involve multi-turn sequences through which both interactants accomplish a significant amount of interactional work before first topics become relevant. The

call has to be initiated by the caller, the recipient has to pick up and answer the phone, both have to achieve mutual recognition/identification, and both regularly greet one another as well as routinely inquire after one another's wellbeing. However, how these actions are accomplished, their sequential arrangement, and the relative absence and presence of these actions may and actually do differ across languages. This makes telephone openings a useful interactional learning target for the L2 classroom.

Elsewhere, I provide a full teaching unit on German telephone openings for American learners of German (Huth 2014). Drawing from that work, I here reproduce only one small part to illustrate how IC can be related to a specific social practice that, in turn, can become an object of classroom teaching. Several differences are manifest in American English and German telephone openings, and how speakers inquire after one another's wellbeing ("how are you" sequence) is one part of it.

(2)	(Levinson 1983: 312)	
01	(ring)	
02	A:	hello
03	B:	hello rob. this is laurie.
04		how's everything
05	A:	pretty good.
06		how 'bout you.
07	B:	jus' fine. the reason I called was . . .

In data example (2) we see that, in American English, a reciprocal "how are you" sequence may occur at the beginning of a telephone conversation. This is a quick, routine sequence in which the interlocutors fluidly and seamlessly produce two question-answer pairs (lines 4–5 and 6–7). Interestingly, we do not find evidence that either participant is inquiring into the larger affairs of one another's life. On the contrary, this is a routine sequence the importance of which lies in its presence and its seamless accomplishment rather than in its semantic content; note also that this sequence does not provide a topic elicitor. In contrast, a "how are you" rarely occurs in German telephone openings, and when it does, it is often unilateral rather than reciprocal. If a "how are you" occurs in a German linguistic and cultural context, it often develops into the first larger topic of the telephone conversation. This is but one example of how two languages can differ in terms of producing specific turns in specific succession in the context of a specific verbal activity (see Fig. 2).

We see how in one language a specific type of back-and-forth is required in a specific interactional context in which other languages may do slightly different things. This is how nuanced differences in doing social action across languages can be, and it is easy to see how the transfer from L1 to L2 of doing such actions and their sequential arrangement can lead to difficulties in communication across cultural lines (see Huth and Taleghani-Nikazm 2006 for instances of such transfer).

American English	German
• Quick, seamless, reciprocal routine • Two adjacency pairs (question-answer) • Orientation to completion (not to content) • Typically precedes "first topic"	• Rarely occurs • If it occurs, often unilateral (i.e. interlocutor does not ask back) • Frequently topic elicitor (i.e. "how are you" initiates the first topic)

Fig. 2 "How are you" in telephone openings across languages. (Adopted from Huth 2014)

For an American learner of German, for example, it may take some getting used to either a) not engaging in such a common-place routine action as a quick "how are you" routine, or even more so, b) initiating "how are you" and not expecting the interlocutor to ask "how are you" back, or in turn, if s/he is being asked "how are you" by a German speaker, to answer the question while resisting the power of habit to reciprocate the question. Last, should the dutiful learner of German wish to engage in typically German interactional behavior, it remains to be seen how s/he is able to bear the potentially lengthy elaboration prompted by her "how are you".

If we have empirical studies about an interactional learning target in two languages, we can formulate precise learning goals, develop teaching units as well as an infrastructure for assessment. Figure 3 suggests how this may be formalized:

Turns and connected sequences of turns as they relate to one specific social action in the L2 (such as not reciprocating a "how are you") offer a respecification of the relevant units of language we feature in the L2 classroom and await being integrated into the curriculum. Research suggests that there is no theoretical or practical restriction to work such interactional learning targets into the L2 curriculum from the very beginning, and pedagogical models that accomplish this already exist (see Betz and Huth 2014).

However, advancing an understanding of language as social action for the L2 classroom via such teaching materials amounts to a fundamental respecification of what language is and how it works. The mere inclusion of IC into already existing proficiency frameworks would sharply contrast with core ideas about human language and communication as they are formalized in L2 teaching. This includes basic notions of what a speaker is, what a listener is, and what units of analysis in language production reflect a given measure of proficiency. All of these may require basic reconsideration, likely precluding the sporadic addition or inclusion of a social-interactionist understanding of language in favor of revisiting, on a fundamental level, the foundations of currently existing frameworks. The next

Learning target: Telephone opening sequences • Telephone openings in American English • Telephone openings in German
Specific sub-targets: • Picking up the phone and answering (summons-answer sequence) • How to identify one another/achieve mutual recognition • How and when to greet with what lexical material • Whether or not and how to ask "how are you" (how are you sequence) • How to transition into first topic
Learning outcomes overall Learners are able to: • identify actions relevant for opening up telephone conversations in L1 and L2 • arrange specific actions in temporal succession and reason about options for next actions in sequential context in the L1 and L2 • compare and contrast the kinds of actions present/absent in L1 and L2, identifying similarities and differences • produce telephone openings in keeping with their sequential organization both in L1 and L2 • reason about the potential for, and consequences of, transferring L1 social practices related to telephone openings when they communicate in the L2 and vice versa • reason about how language produces actions across turns and speakers

Fig. 3 Formalizing interactional learning targets. (Adopted from Huth 2014)

section addresses this claim by taking a look at the larger proficiency frameworks guiding L2 teaching at present.

5 IC and the L2 Curriculum

One challenge remains: reconciling the notion of language and communication from which IC arises with the notion of language and communication that is entrenched in the proficiency descriptors we find in the ACTFL Standards and the CEFR. This challenge is considerable given that the infrastructure in language education (i.e. teaching materials, pedagogy, and language testing) currently reflects and thus perpetuates views of what human language is and how human language works that are not aligned with IC.[1] IC requires an appreciation of what happens across individual turns and speakers, while the L2 curriculum is largely conceptualized with individual language learners and their individual language abilities in mind. In other words, the conceptualization of what language is and how it works as we currently find it in the L2 curriculum reflects primarily a view of language as a psycho-social construct contained in a single language learner's' mind. As we will see below, this competency is to be sampled via various assessment strategies to arrive at an understanding of proficiency of the individual, not of dyads. Thus, while serving relevant and central institutional purposes, these notions are difficult to square with the empirical realities surrounding the co-constructed nature of talk-in-interaction as well as the consequences of language variation and language transfer.

Two larger frameworks for L2 teaching currently formalize guidelines and principles for language teaching across national boundaries: the ACTFL Standards and CEFR. As I seek to illustrate here, neither framework sufficiently operationalizes three central ingredients to human language that have been firmly established by social-interactionist research. First, this includes the circumstance that human communication is co-constructed (i.e. meaning is constructed across turns and across speakers); second, that communication patterns display variability across language communities; and third, the existence and consequences of language transfer (including pragmatic transfer). Addressing all three below, we will see that both the ACTFL Proficiency Standards as well as the CEFR in fact do reflect social-interactionist perspectives on language in the general framing up front. However, the mere inclusion of such perspectives does not change the circumstance that, ultimately, the strongest perspective in these frameworks is directly in line with the institutional purposes that created them, namely, the need for assessment of individual language competence and/or language proficiency as a primarily cognitive-psychological construct located in individual learner minds. As I illustrate

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[1] To appreciate the considerable difficulties innovation efforts face in the context of educational systems, see Adams and Chen (1981), Wall (1996), or Markee (1997).

Speakers at the Advanced High sublevel perform all Advanced-level tasks with linguistic ease, confidence, and competence. They are consistently able to *explain* in detail and *narrate* fully and accurately in all time frames. In addition, Advanced High speakers handle the tasks pertaining to the Superior level but cannot sustain performance at that level across a variety of *topics*. They may *provide a structured argument* to *support their opinions*, and they may *construct hypotheses*, but patterns of error appear. They can *discuss* some topics abstractly, especially those relating to their particular interests and special fields of expertise, but in general, they are more comfortable *discussing* a variety of topics concretely.

Advanced High speakers may demonstrate a well-developed *ability to compensate* for an imperfect grasp of some forms or for limitations in vocabulary by the *confident use of communicative strategies*, such as *paraphrasing*, *circumlocution*, and *illustration*. They use precise vocabulary and intonation to *express meaning* and often show great fluency and ease of speech. However, when called on to perform the complex tasks associated with the Superior level over a variety of topics, their language will at times break down or prove inadequate, or they may *avoid* the task altogether, for example, by resorting to *simplification* through the use of *description*or *narration* in place of *argument* or *hypothesis*. [emphasis mine]

Fig. 4 ACTFL Proficiency Guidelines, advanced-mid level (2012: 5)

this below, I do not provide a comprehensive reading of ACTFL's proficiency guidelines or CEFR, but rather a selective sampling to illustrate the opportunities as well as the difficulties of applying a social-interactionist perspective to the administrative frameworks of L2 teaching.

First, let us address the topic of language variability in the curriculum as it is currently formalized. The ACTFL proficiency scale, for instance, is nuanced, outlining superior, advanced, intermediate, and novice levels while also offering precisely delineated subcategories within these (i.e. intermediate high/intermediate low). Consider the following description of the advanced mid-level (see Fig. 4):

The functional orientation of this proficiency descriptor is evident: language learners as individual entities are expected to "do things" with the L2, namely: explain, narrate, talk about a topic, argue, support opinions, construct hypotheses, discuss, compensate, strategize their communication, paraphrase, circumlocute, illustrate, express meaning, simplify, describe, and avoid (all highlighted above).

All of these are clearly actions, performable by speakers when they produce written or spoken language. I emphasize the functional orientation of this proficiency descriptor in order to highlight its orientation to the notion that language is action. It is evident that, on a fundamental level, language teachers, language program administrators, and language testers understand "language" as something to do things with (i.e. achieve social actions) and formalize that main function of language in central documents guiding the organization and administration of L2 curricula.

Some of the actions listed here certainly imply that communication requires some sort of interlocutor (e.g., the process of *narrating* implies the existence of a listener; the *use of communicative strategies* requires the presence of something or someone to strategize against or with). However, most of the actions used here to describe the advanced-mid level can be, and are expected to be, performed in the absence of an interlocutor (save the proficiency tester). This clearly reflects a conceptualization of a L2 learner as a *language producer*: explaining, narrating, supporting an argument, hypothesizing, and all other functional abilities listed here are actions L2 learners can *produce* in speaking or in writing in one connected string. This is not surprising, because it is the business of educational institutions to elicit and sample tokens of language use from learners in controlled, replicable contexts. The goal is to demonstrate relative success of a learner not just in terms of language proficiency, but also in terms that are purely institutional, i.e. in terms of marks/grades for courses and/or entire academic degrees. While innovation that drives programmatic change can come from various curricular sources (such as innovative materials design and/or advancements in pedagogy and teaching methodology), language assessment and testing loom large in the design of content in, and formulating outcomes for, language programs. And as Roever (2018) notes on the nature of language assessment, "The goal of language assessment is to produce ratable samples." Such ratable samples, in turn, are widely and fundamentally conceptualized as products of individual learners (not dyads), and they do not require input, interference, or negotiation from other co-present actors across turns or sequences. The field of language testing is beginning to address this issue (Roever and Kasper 2018).

The inescapable inconvenience of talk-in-interaction (or any other verbal or written exchange that requires the back and forth of language use in temporal sequence) is that social actions as they are performed through and by language use are situated in sequential context and collaboratively ascribed by fallible human beings. That is, a given apology does not occur in a conceptual void, but is rather tied to a specific configuration of actions in temporal succession, directed at someone specific, not at the world in general. My apology can only be effective if my interlocutor/audience accepts it. In fact, my apology can only work if my interlocutor/audience a) in fact recognizes my apology *as* an apology, and b) deems the apology, once correctly recognized as one, as sufficient to accept it and demonstrably treats it as such, visibly and legibly to me, in some following next action. Hence, individual utterances in and of themselves achieve very little; only in the presence of two or more interlocutors and two or more turns can meaning be socially produced, received, and negotiated.

This back and forth of action regularly experiences difficulties. As interlocutors anticipate, interpret, and produce next turns, they constantly construct meaning on the fly, they ascribe meaning to a given turn produced by their interlocutor based on the linguistic resources and socio-cultural knowledge they have at their disposal, including the immediately surrounding configuration of turns and the actions they house. Mistakes (or better: *mis*takes) occur regularly. That is, interlocutors regularly ascribe an action to something that was said that was not intended by their interlocutor. Actions, just like word classes or word meaning, can be ambiguous, and one turn can potentially harbor several actions at once. For example, "Good morning" can be a greeting, though if an instructor utters it to a student who comes to class late, it can be both a greeting and a gentle admonition. Interestingly, whatever the instructor may have intended it to mean and/or do, it is up to the student to actively ascribe a relevant meaning (i.e., a meaning as a social action such as a greeting or an admonition) to "Good morning" in this situation. The student may well not recognize the implied admonition or choose not to acknowledge it. This is why miscommunication occurs regularly in human interaction, even within cultural and linguistic boundaries. Thus, social actions do not inhere in words or sentences *per se*, but are rather collaboratively ascribed and negotiated by interlocutors. Therefore, to accommodate the empirical realities of action ascription and the potential for ambiguity in social action, we need to stress the *inter*- in interaction: we need an understanding of meaning-making that spans across turns and across speakers, which is not what we find fully realized in our proficiency guidelines and their descriptors at present.

We see that part of the misalignment between a social-interactionist perspective on what language is and how it works and the L2 curriculum is rooted in the institutional nature of instructed L2 learning settings: they are designed with individual language learners in mind, and with ascertaining the functional language abilities of individuals based on individual contributions to a testing situation. We see this reflected in the central linguistic unit of analysis for oral proficiency testing which, in advanced speakers, amounts to an "oral paragraph": "The language of Advanced-level speakers is abundant, the oral paragraph being the measure of Advanced-level length and discourse" (ACTFL 2012: 5). As a manifest, meaning-bearing linguistic unit, the oral paragraph is presented here as accomplishing the actions in question, e.g. narrating, supporting an argument, hypothesizing. This is not inconsistent with the realities of real-life interaction, as individual turns may contain strings of words and sentences to accomplish some action, ultimately forming paragraph-length utterances.

The oral paragraph as utilized by language testers would be conceived of and is in fact designed to produce a ratable language sample in the service of institutional assessment procedures for individual L2 learners. We would have to imagine it to constitute a response to a prior prompt (likely a question) by the proficiency tester or language instructor. As a prompted response, the expected functionality of a given learners' contribution would then be relevantly located in the oral paragraph itself, that is: it would be contained within one turn and one turn alone. Such prompted responses appear to be treated by assessment procedures as linguistic

objects that are readily available for sampling, as it were, at the proverbial push of a button.

This does not reflect the realities of how social actions are in fact accomplished by social actors in any interactional situation (including testing). In institutional and in non-institutional discourse, meaning (including meaning as social action such as requesting something) is frequently accomplished across multiple turns as any turn is sequentially embedded. A view of language as interaction, with a clear grasp on what happens across speakers and across turns, does thus not fit into the traditional protocol for assessing language proficiency/functionality. It is important to point out that, while turns contain the traditional objects of language teaching and language learning (sounds, words, and grammar), they would also contain and be accompanied by additional resources contributing to the social actions the turn may summatively accomplish, including temporal resources (e.g. hesitations, vowel lengthening) and embodied resources (furrowed eyebrows, gesticulation). Oral paragraphs as they are currently utilized in language testing do not yet take such resources to accomplish action into account. However, the field of language assessment and language testing is beginning to address this issue empirically (Ross and Kasper 2013; Roever and Kasper 2018; Youn 2015).

A second basic and empirically corroborated fact is that human language exhibits variation, both within and across language communities. Arguing, hypothesizing, supporting one's opinion – all of these actions may (and often do) display variation across languages and cultures. Yet, our proficiency guidelines, while clearly reflecting a functional orientation, are largely presented in static terms. That is, actions such as arguing, hypothesizing, or supporting one's opinion are presented in terms that tacitly (and minimally) imply that they are actions we can recognize and perform in any language simply because they are structured. Thus, specific actions such as arguing, hypothesizing, or supporting one's opinion are implicitly treated not only as recognizable as such (based on their structure), but in fact as universally recognizable, i.e. as similarly structured and therefore recognizable across *all* languages and cultures. However, language use in written and in spoken genres often varies across language communities rather than being universal.

This leads us to the third and last point: verifiable language transfer, including pragmatic transfer (Jaworski 1994; Kasper 1992). Pragmatic transfer describes the phenomenon that language users employ the linguistic repertoire of the L2 to accomplish the kinds of social actions they have been socialized into in their home cultures. If a given social action in two language communities is similar, this transfer goes unnoticed (also called "positive transfer"). However, if the action (say, a request) is organized differently across two language communities, the L2 learner is likely going to face difficulties when transferring the strategies to do that action from their L1 (also called "negative transfer"). Even the most casual of travelers knows and frequently encounters that "things work differently in other cultures." As we have seen above, this includes such nuanced moves as "how are

you" sequences and whether or not we produce them at all and/or reciprocate them, or may beset the entire organization of request sequences. Pragmatic transfer happens regularly, and potentially on all action-relevant levels, including the level of turns and sequences (Golato 2005; Huth 2006; Huth and Taleghani-Nikazm 2006). Since the actions a language learner is expected to accomplish are not framed in terms of variation, the purposes of this assessment framework either do not set out to account for variation across languages or do not consider its impact. The consequences are clear: proficiency testing in this framework would expect the test taker to be communicatively competent in terms of the social practices of the L1 while using phonological, lexical, and grammatical resources of the L2 to enact these. Being communicatively competent (or proficiently functional in speaking or writing in the L2) is thus codified in terms of the socio-cultural framework of the home culture(s) of students, translated as it were by means of the linguistic resources of the L2.

CEFR largely mirrors the ACTFL proficiency guidelines on all three counts. The general orientation of CEFR is overtly functional and explicitly emphasizes its action-orientation:

> A comprehensive, transparent and coherent frame of reference for language learning, teaching and assessment must relate to a very general view of language use and learning. The approach adopted here, generally speaking, is an action-oriented one in so far as it views users and learners of a language primarily as 'social agents', i.e. as members of society who have tasks (not exclusively language-related) to accomplish in a given set of circumstances, in a specific environment and within a particular field of action. While acts of speech occur within language activities, these activities form part of a wider social context, which alone is able to give them their full meaning. We speak of 'tasks' in so far as the actions are performed by one or more individuals strategically using their own specific competences to achieve a given result. The action-based approach therefore also takes into account the cognitive, emotional and volitional resources and the full range of abilities specific to and applied by the individual as a social agent (Council of Europe 2001: 9).

This text provides another example of how the main function and complexity of language is explicitly acknowledged as one that is "action-oriented", putting front and center the circumstance that sounds, words, and sentences ultimately exist to produce (social) action. We see furthermore that this view encompasses the entirety of the human communicative capacity ("…cognitive, emotional, volitional resources…"). Interestingly, the notion of linguistic and cultural diversity appears to fall short, because learning a L2 is viewed as "activating" the already existing communicative functionality of the L1 speaker by means of the L2, by enacting competencies that are already in place by means of the phonological, lexical, and grammatical resources of the L2. Similar to the ACTFL Standards, this is viewed as given and without considering the existence and consequences of variation and difference of social practices across language communities and the "cognitive, emotional, volitional" implications for their members:

> Language use, embracing language learning, comprises the actions performed by persons who as individuals and as social agents develop a range of competences, both general and

in particular communicative language competences. They draw on the competences at their disposal in various contexts under various conditions and under various constraints to engage in language activities involving language processes to produce and/or receive texts in relation to themes in specific domains, *activating those strategies* which seem most appropriate for carrying out the tasks to be accomplished. The monitoring of these actions by the participants leads to the reinforcement or modification competences and constraints in the situations which arise in the various domains of social existence (Council of Europe 2001: 9, emphasis mine).

Common Reference Levels: qualitative aspects of spoken language use	
	Interaction
C2	Can interact with ease and skill, picking up and using non-verbal and intonational cues apparently effortlessly. Can interweave his/her contribution into the joint discourse with fully natural turn-taking, referencing, allusion making, etc.
C1	Can select a suitable phrase from a readily available range of discourse functions to preface his remarks in order to get or to keep the floor and to relate his/her own contributions skillfully to those of other speakers.
B2	Can initiate discourse, take his/her turn when appropriate and end conversation when he/she needs to, though he/she may not always do this elegantly. Can help the discussion along on familiar ground confirming comprehension, inviting others in, etc.
B1	Can initiate, maintain and close simple face-to-face conversation on topics that are familiar or of personal interest. Can repeat back part of what someone has said to confirm mutual understanding.
A2	Can answer questions and respond to simple statements. Can indicate when he/she is following but is rarely able to understand enough to keep conversation going of his/her own accord.
A1	Can ask and answer questions about personal details. Can interact in a simple way but communication is totally dependent on repetition, rephrasing and repair.

Fig. 5 CEFR and interaction

Thus, the samples I featured here from the ACTFL Proficiency guidelines and CEFR reflect the tension between recent results from empirical research on what language is and how it works in interaction and the purposes to which language is put in institutional settings.

It is interesting to note that the CEFR does include an orientation to interaction in its common reference descriptors under "qualitative aspects of spoken language use" with a separate interaction rubric (Council of Europe 2001: 37) (Fig. 5).

Discussing the level-appropriateness of this scaling model is beyond the scope of this paper. However, we can see that a beginning is made here to recognize the contingencies of face-to-face interaction and its sequential unfolding, and this recognition provides one contact point, a start, to be developed in the future. However, even here we see that interaction is viewed as a potentially universal system of social context whose successful "activation" first and foremost depends on the gradually increasing access to the linguistic (i.e. phonological, lexical, and syntactic) repertoire of the L2 which will, naturally as it were, bring communicative, functional, socio-cultural competencies about.

In sum, if we look at the ACTFL Proficiency Guidelines and CEFR, we note that the absence of language variation precludes the potential for language transfer (including pragmatic transfer on the level of turns and sequences). Second, the tacit orientation to assumed universality of social action in human communication excludes the give and take underlying the cross-cultural realities of language use in temporal sequence. Third, contingent interlocutor input and the co-constructed nature of interaction and its consequences are largely absent. Thus, if we focus narrowly and exclusively on the proficiency descriptors and rubrics as they are formalized at present as I have done above, the following view emerges of what language is, how it works, and how that translates into a notion of L2 proficiency:

1. The relevant units of language are sounds, words, and sentences, to be combined to connected discourse (either verbal or written);
2. a learner's functional ability to perform specific actions is a key measure of proficiency;
3. functionality is ascertained for the individual language learner in terms of individual language production through presentation or interaction, but primarily in terms of a language producer's relative access to the requisite linguistic resources to perform the actions underlying functionality;
4. the social actions accomplished through target language use are recognizable, therefore structured, can be activated through relative access to lexical and morpho-syntactic material alone, and are thus tacitly treated as universal.

This view of what human language is, how it works, and what that means for human communication and L2 proficiency provides the framework for the L2 teaching profession across a large number of educational systems. At its core, this view of language is deeply consonant with the institutional context in which it is being operationalized and both reflects and relevantly advances the goals of educational institutions, namely, to process, sample, and asses language production of individual L2 learners as they progress through the institution over time. As I

sought to illustrate above, this view contrasts with emerging though widely corroborated empirical insights on interaction. Contrasts between emerging empirical research on language and the purposes of instructed language learning settings and their institutional nature are a predictable function of the tension between knowledge creation on the one hand and institutional inertia on the other hand. Addressing this tension is a regular part of the stepwise process in which institutional frameworks are updated over time. Below, I discuss steps language teachers and language program administrators can take to incorporate current insights from empirical research on language as interaction into the particulars of their curricula.

6 Implications for Language Teaching

For language teachers and L2 learners alike, realizing the summative impact of the above may require a fundamental rethinking of the notion of language and proficiency, and making room for appreciating the global complexities of linguistic and cultural diversity. Language produces actions, and actions often display differences and variation across linguistic and cultural boundaries. Empirical evidence shows that a dichotomous model for human language and communication (e.g. speaker vs. listener, reader vs. writer), which views communication as involving the static sending of salient and unambiguous messages, does not align well with the realities of real-life interaction. For meaning in language to exist, it has to be encountered, for any utterance to have meaning, it has to be heard, seen, or read, i.e. actively interpreted by others. Social interaction requires the exchange of talk not just across two speakers, but also across individual turns that follow one another in temporal sequence, be it in face-to-face talk, in a comment on a social media post, or in the response to an email. Humans do this with reference to specific meaning-bearing units (such as turns and sequences of turns) and develop the capacity to anticipate, interpret, and produce "next actions" in local sequential context, a set of knowledge that may well be called "interactional competence." This competence does certainly not encompass the entirety of the "emotional, cognitive, and volitional" capacity for communication in humans. Rather, it provides one specific perspective on relevant context that shapes our understanding of each other's utterances and the actions those utterances perform.

IC thus presents a distinct and decidedly dynamic view of how meaning emerges across speakers and turns when interlocutors interact with one another. It does so with one important limitation: IC in its conversation analytic grounding does not claim to grasp the entirety of the human communicative capacity. Thus, IC stands in sharp contrast to the notion of communicative competence (or "CC", Canale and Swain 1980; Celce-Murcia et al. 1995; Hymes 1972; Savignon 1983, 1985), a widely known action-based notion of language that left a lasting mark on

second language teaching in the past decades. In contrast, IC's strength and utility primarily lie in illustrating the sequentiality of action as it proceeds across turns, and its epistemological and methodological grounding naturally does not encompass all other potentially relevant human social contexts (such as the effects of domain, power differential, or speaker demographics). Therefore, CA-informed teaching materials in the L2 classroom as I have conceptualized them here would primarily aim at furthering L2 learners' capacities to meet a given turn with a relevant next turn, to read turns and the potential action(s) they house in the sequential context in which they occur. Currently, the implications of such materials for language teaching and language testing are being investigated (Salaberry and Kunitz 2019).

This also requires respecifying what language is and does in terms of action-relevance and beyond individual turns at talk. One way to transport this view of language into the language classroom with success is to reassess existing teaching materials, especially those featuring dialogue. Wong (2002) compares existing textbook dialogue to what we know about how conversation actually works in real-life interaction, finding that textbook dialogue may and often does reflect inaccurate and idealized ways of "doing conversation", which is not surprising given that many textbook dialogues are written to serve primarily one main goal: introducing new words and grammar to the learner in some salient context. However, it is possible to create textbook dialogue in ways that reflect known principles of turn-taking and action formation across turns and speakers, which is a direct way to feature conversation *itself* as a learning target, not merely as a vehicle for showcasing lexis and morphosyntactic principles.

Another effort to begin infusing the L2 classroom with more interactional learning targets is to increase the range of such learning targets in beginning language textbooks and teaching materials. For example, telephone dialogues in textbooks were recently reconceptualized to reflect the sequential organization concerning openings and closings (Huth 2014; Kampen-Robinson 2014). But many more interactional learning targets are being explored at present and are becoming available in a variety of languages (see Betz and Huth 2014 for an overview). Inasmuch as such materials are based on empirical studies and tied to specific actions produced in specific sequential environments, developing relevant and level-appropriate learning outcomes as well as formulating assessment goals (in terms of descriptors and rubrics) in the micro-context of a single teaching unit is the object of current efforts (Huth and Betz 2019).

Overall, current administrative frameworks such as ACTFL and CEFR would eventually be updated and infused from this bottom-up approach that follows a progression from first creating teaching units, advancing to small scale testing in the context of a teaching unit or a language course, and eventually moving towards including such interactional learning targets in large-scale proficiency descriptors (for beginnings, see Council of Europe 2018). Thus, with a clear focus on how meaning as social action works across speakers and turns, interactional learning

targets may prove to be more successful than previous attempts to infuse the L2 curriculum with learning targets that advance action-based views of language. IC nominally posits potential for variation in social actions across language communities, has the potential to expand instructors' and learners' understanding of language as action across speakers and connected turns, and orients to the translingual/transcultural mandate for L2 teaching (MLA 2007), putting cultural self-awareness front and center of the language learning experience. Where communicative competence as a notion may have stalled due to its wide conceptual berth, IC in the context of CA research provides a partial though tangible account of one specific context in human interaction. The scope of IC itself and its possible implications for classroom teaching, curriculum development, and language teacher education continue to fuel further research and development (Huth et al. 2019; Pekarek-Doehler 2018; Waring 2018).

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Some Considerations Regarding Validation in CA-Informed Oral Testing for the L2 Classroom

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Abstract Conversation analysis (CA) has exerted influence both on second language (L2) classroom pedagogy (e.g., Barraja-Rohan A, Pritchard R, Beyond talk: a course in communication and conversation skills for intermediate adult learners of English. Western Metropolitan Institute of TAFE, Melbourne, 1997; Wong J, Waring HZ, Conversation analysis and second language pedagogy. Cambridge University Press, Cambridge, 2010; Betz E, Huth T, Die Unterrichtspraxis/Teaching German 47:140–163, 2014) and on areas of second language testing (LT) such as post hoc evaluation of oral-interview tests (e.g., Lazaraton A, Studies in language testing 14. Cambridge University Press, Cambridge, 2002; Ross S, J Pragmatics 39:2017–2044, 2007; Seedhouse P, Nakatsuhara F, The discourse of the IELTS speaking test: interactional design and practice. Cambridge University Press (English Profile Studies), Cambridge, 2018), oral role-play assessments (Okada Y, J Pragmatics 42:1647–1688, 2010; Kasper G, Ross SJ, Appl Linguis Rev 9:475–486, 2017) and a priori L2 test-construction efforts (Walters FS, Lang Test 24:155–183, 2007; Youn SJ, Lang Test 32:199–225, 2015). However, it may be argued that CA and LT lack sufficient paradigmatic overlap to make joint-contributions to L2 classroom instruction meaningful. For example, each has different research mandates, CA focusing on descriptions of interactional behavior with little interest in psycholinguistic processes (Markee N, Conversation analysis. Lawrence Erlbaum, Mahwah, 2000; Markee N, Kasper G, Mod Lang J 88:491–500, 2004), which is in contrast to LT's oft-explicit theoretical focus (e.g., Messick S, Educational measurement. Collier Macmillan Publishers, London, 1989; Bachman L, Fundamental considerations in language testing. Oxford University Press, Oxford, 1990). Moreover, both fields approach the subject of language norms from differing perspectives, which is problematic in regard to effective L2 classroom instruction. As an attempt at a resolution to these matters, this chapter offers, first, a comparative analysis of how CA and LT each view these methodological and epistemological issues, with reference to test validity (e.g., Bachman

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_19

LF, Palmer A, Language testing in practice. Oxford University Press, Oxford, 1996; Kane M, Educational measurement. Praeger, Westport, 2006). Following this, empirical data in the form of transcribed extracts from test responses to a CA-informed test (CAIT) of L2 oral proficiency will be examined. The aim will be to consider practical links between CA and LT and to offer a set of test-development principles possibly useful for L2 teachers interested in applying CA to their classroom assessments.

Keywords Conversation analysis · Language testing · Test validity · Language norms · Epistemology

1 Introduction

Conversation analysis (CA), while evolving into a discipline distinct from its parent, sociology (Markee 2000), has been exerting influence on fields as diverse as psychology, linguistics, and sociolinguistics (Drew and Heritage 2006); on second language acquisition (Markee 2006); and on L2 classroom pedagogy (e.g., Barraja-Rohan and Pritchard 1997; Huth 2006; Huth and Teleghani-Nikazm 2006; Wong and Waring 2010; Betz and Huth 2014). One might surmise from these classroom-related developments that CA would have been employed in L2 testing as well; and indeed it has in such diverse contexts as formative assessment (see Can Daşkın this volume); the re-specification of language testing frameworks such as the ACTFL Proficiency Standards or the Common European Framework of Reference for Languages (CEFR) (see Huth this volume); the post hoc evaluation of already-existing assessments such as oral-interview tests (e.g., Lazaraton 2002; Ross 2007; Seedhouse and Nakatsuhara 2018) or oral role-play assessments (Okada 2010; Kasper and Ross 2017); and finally in a priori L2 test-construction efforts (Walters 2007; Youn 2015).

Despite these developments, it is possible that, to some, CA and language testing (hereinafter "LT") evince an interdisciplinary mismatch, their respective paradigms lacking sufficient overlap for them to jointly contribute to L2 classrooms. Notable is the fact that each has a rather different mandate (cf. Davidson and Lynch 2001). CA's emic approach to theory construction (see Markee 2008), which is characterized by a lack of interest in invisible cognitive processes at work in the language learner's mind, might be termed *scientific-descriptive* (Markee 2000; Markee and Kasper 2004). In contrast, much of LT, which is mostly grounded in an a priori, etic, cognitive approach to second language acquisition theory (e.g., Kane 2006; Bachman 1990; Messick 1989) might be termed *scientific-evaluative* in orientation. In addition, there is the matter of how CA and LT approach the subject of *language norms* – significant since a consensus on what constitutes a standard for language learning is required for L2 curricula. Thus, a resolution, or not, to such

methodological or epistemological challenges will have consequences for how L2 teachers apply CA to their classroom assessments.

Hence, this chapter, intended for LT and CA classroom-practitioners who are interested in but who may not be specialists in the other's field, will offer a comparative analysis of how CA and LT view these issues and will do so with reference to framework(s) of *test validity*. Following this, the paper will examine empirical data in the form of transcribed extracts from test responses from a portion of a CA-informed test (CAIT) of L2 oral proficiency undergoing development; compliment responses (Pomerantz 1978) will serve as the somewhat arbitrary locus for discussion. Finally, there will be a discussion of these extracts in light of the conceptual issues surveyed earlier, the purpose of which will be to consider conceptual bridges between the two fields as well as to suggest a set of test-development principles that may be useful for L2 teachers interested in applying CA to their classroom assessments.

2 Norms, Models, Frameworks, and Constructs

One area arguably important to both CA and LT is language norms. As mentioned earlier, there are different mandates for each discipline. On the one hand, the central purpose of CA is to "uncover … the procedures and expectations through which interaction is produced and understood" (Heritage 1987: 258). That is, CA is focused on what Schegloff and Sacks (1973) would call the "*why that now*" of particular language utterances. That is, CA determines, through close analysis of the data, for what social purpose (the "why") a given utterance (the "that") was produced by a speaker in a given conversation at a particular moment (the "now"). One may term such analysis, as characterized earlier, a scientific-descriptive endeavor. On the other hand, the focus of LT might be thought of as "*how that went*" – using test responses as a measure of the developing linguistic behavior of an individual L2 learner in order to generalize the learner's performance beyond the test setting – a scientific-evaluative process. Thus, given different mandates, the respective views on normativity might not overlap.

In LT, language norms are variously expressed in the form of *models*, which are "over-arching and relatively abstract theoretical descriptions of what it means to be able to communicate in a second language" (Fulcher and Davidson 2007: 36). In applied linguistics (the general field of which LT is a part) there have been a number of influential models – Canale and Swain's (1980) model of communicative competence; Canale's (1983) modification of same; Bachman's (1990) model of communicative language ability; the model of communicative competence devised by Celce-Murcia et al. (1995); and models of interactional competence (e.g., Gass 1987; Kramsch 1986; Markee 2000, 2006; Hall et al. 2011; Pekarek Doehler and Pochon Berger 2015; Pekarek Doehler 2018)**.** Language models may differ in scope

and level of detail and may have different purposes – Bachman's is crafted from an LT perspective, but that of Celce-Murcia et al. is explicitly pedagogical in orientation – but all models describe both knowledge and abilities (McNamara 1996: 48). From a model, L2 teachers might derive, for a specific testing purpose, a focused subset, called a *framework* (Fulcher and Davidson 2007: 36). Frameworks in turn will consist of one or more *constructs*, hypothetical characteristics or abilities of an individual (loosely, "skills-in-the-head") that are inferred from observed performance on an assessment (cf. Chapelle et al. 2008: 3). In sum, in LT paradigm(s) some configuration(s) of model/framework/construct may constitute an abstract, *competency-centered* definition of a norm (cf. Messick 1994) which may underlie test construction and inform interpretation of test results. In fact, theoretical, construct-related evidence for test validity (Messick 1989; Kane 2006; Roever 2011) is central to much current L2 test-development thinking and practice.

However, competency-centered assessment is not the only approach to crafting a language norm in LT. Another is *task-centered* assessment (Messick 1994), which focuses on direct observation of language performance (e.g., in an L2 classroom) with the goal of inferring test-taker ability in a real-world context – such as using the telephone to order a pizza, or engaging in a job interview. Thus, instead of describing abstract "skills-in-the-head," the language norm in this case would consist of descriptions of overt language actions. Learning standards such as the Common Core State Standards Initiative (2010) or the WIDA ELP Standards (Board of Regents of the University of Wisconsin System 2007) can be included in this category of language norm.

The CA perspective on norms, in some respects, is comparable to LT approaches, though it differs in other ways. Similar is the general view that CA "is a field of study concerned with the *norms*, practices, and *competences* underlying the organization of social interaction" (Drew and Heritage 2006: xxii; italics added) – the "why-that-now" research-motivation mentioned above. However, CA is agnostic regarding the abstract and directly un-observable constructs at the core of much LT. For example, Bilmes (1988: 161) states that CA explicates "mechanisms that produce and explain behavior, but for *social* rather than *psychic* mechanisms" (italics added). Nor does CA engage in theorizing about relationships among constructs; for instance, Markee (2000: 28) lists as one of the "defining characteristics" of CA the absence of "etic [researcher-perspective-based] theories of social action to explain conversational phenomena." Instead, a CA-based (or emic) approach to theory construction, while "sometimes repudiating … traditionally cognitive understandings of mind," is considered to be possible, but only "as a by-product of empirical analysis" (Markee 2008: 405).

Another difference between CA and LT is in the respective approaches to "norms" in the sense of "relatively right or wrong." Language assessment of, say, oral proficiency assumes a theoretical continuum of ability from novice through native-like control, evincing along the way complex changes in grammatical accuracy, fluency, facility with turn-taking, co-construction of sequences, and so on; this LT view is derived from decades of studies into second language acquisition, or SLA (e.g., Ortega 2008), showing changes in learner production over time; hence,

features of L2 oral performance can, from the LT perspective, be "wrong" or (less judgmentally) "non-native." However, CA seems ambivalent about the idea that an utterance can be "incorrect." On the one hand, as Drew and Heritage point out, individual CA studies will suggest that certain speech phenomena will be "commonly," "frequently," "generally," or "overwhelmingly" present in the data (2006: xxxii). On the other hand, these are considered informal characterizations that do not imply a standard of competence against which performance is to be measured. In CA "there can be no such thing as an 'outlier', which may be discarded as unrepresentative of group norms" (Markee 2006: 143). In short, the Norm is all there is, and "wrongness" is, itself, wrong. In contrast, LT's mandate recognizes (and logically requires) the existence of relative, interactional *in*-competence.

Nonetheless, we might observe from the foregoing that of the two general assessment approaches of Messick (1994) mentioned above, competence-centered and task-centered measurement, CA is closer in methodological spirit to the latter, with its focus on observable language behavior. However, the actual *description* of normative conversational behavior is not a simple matter, as both the form and the position of an utterance within a conversation need to be specified (Stivers 2015; Bachman and Palmer 1996). This complex problem, which naturally has implications for CA-informed test-construction, will be directly addressed toward the end of this chapter. For now, given the above-mentioned overlap with task-centered assessment, we may tentatively state that the philosophical and practical division between CA and LT may not be absolute. The next section will further explore the epistemological side of the matter.

3 Validity and LT

From an LT perspective, fundamental to any consideration of classroom assessment, or any sort of assessment, is *validity*, though the definition of this concept has evolved over time, and in fact there are different ways in which validity is currently conceptualized (Chapelle 2012). An early definition states that validity is present "when a test measures what it's supposed to measure" (cf. Lado 1961; Bailey and Curtis 2014). While this definition, in the experience of this writer, is widely accepted and invoked among in-service as well as pre-service L2 educators, recent testing theory offers more complex and potentially more useful conceptions following the insights of Messick (1989), who states that validity is "an integrated evaluative judgement of the degree to which empirical evidence and theoretical rationales support the *adequacy* and *appropriateness* of *inferences* and *actions* based on test scores or other modes of assessment" (p. 13; italics in original). To unpack this in brief, the focus in modern validity theory is not on the assessment tool per se (i.e., on the test, quiz, interview, portfolio, etc.), but on the quality of teachers' (or other test administrators') *inferences,* concerning student skills or knowledge, that are made from assessment results, and on the justification for any instructional, curricular, or institutional-gatekeeping decisions (Messick's "actions") based on those results. Further,

Messick conceived of validity as a unitary concept, subsuming into one package earlier notions of multiple "validities" such as those pertaining to the *construct* (roughly, "skill"; see preceding section), to the test-task *content*, and to external *criteria* with which test results may be compared (e.g., a score on another test).

Further developments in thinking about validity have been made by Kane (2006, 2011), who posited an *argument-based approach* consisting of two parts. The first is an *interpretive argument*, that is, an articulation of proposed interpretations and uses of anticipated test results. The second, a *validity argument*, "provides an evaluation of the interpretive argument's coherence and the plausibility of its inferences and assumptions" (2006, p. 8). The interpretive argument articulates a "network of inferences and assumptions leading from the observed performances to the conclusions and decisions based on the assessment scores" (Kane 2011: 8). Specifically, an interpretive argument consists of an inference-chain that may include a number of steps, depending on the context, e.g.: proper *scoring*; making *generalizations* that the sample of test-observations is representative of the skill-set (or "domain") of interest; making *extrapolations* about test-taker ability beyond the test setting; and making *decisions* (e.g., whether to repeat instruction or not). For example, a *scoring*-inference would consist of "a rule [a rubric] to assign a score to each student's performance" (p. 24). In the case of an L2 oral assessment, the rubric would guide raters, and its application would depend on some *warrant* that the descriptions of oral behavior in the rubric are empirically or theoretically sound and that the rater is using the descriptors appropriately. To conceptualize the process in more fine-grained fashion, Kane describes each link in the network-chain as possessing an inferential micro-structure, based on Toulmin (1958), which describes the relationship between a datum (in Kane's formalism, D; e.g., a test performance) and a [qualified] claim (C). Any inference from D to C is supported by a warrant (W), an "if-then rule" (Kane 2011) supported by a backing (B); but the argument may be qualified by exceptions (E) describing how inferences may fail.

In sum, the approaches to validity very briefly summarized above provide conceptual frameworks for language-test creators, including classroom teachers interested in crafting useful L2 tests and in confirming (or disconfirming) their own or others' interpretations of test results. The process of engaging in this kind of inquiry, called *validation*, is the sifting of theoretical and empirical evidence, to discover what is "true" about a learner's L2 ability, and whether one can generalize about that ability beyond the classroom test setting. Whether or not principles and practices of validation are applicable to the development and use of CA-informed tests will be considered after first discussing how CA also deals with uncovering "the truth" about raw language data.

4 Validity in CA

Through fine-grained analysis of individual cases of talk-in-interaction and collections thereof (Markee 2000), CA identifies the shapes and trajectories of social behavior that are represented and accomplished by interactional mechanisms – turn-taking, repair, turn design or construction, and sequence organization (Drew and Heritage 2006). CA attempts to discover these from an *emic* (a participant's) perspective by explicating how speakers themselves *orient to* – how they demonstrate through their talk – what is going on interactionally. This emic perspective is vital; as Markee (2006) notes, "To be valid and reliable, experimental work must be properly grounded in prior analyses that explicate how *that particular piece of talk* was produced at *that particular moment* in *that particular speech event* to achieve *that particular action*" (p. 141; italics in original). In the same vein, Drew and Heritage (2006) state, "A central feature of this procedure is that the analysis of the practices used to perform a social action … can be *validated* through examination of others' responses" (p. xxxiv; italics added). Such are the core parameters that constitute "validity" in CA.

Conversely, there are criteria for *invalid* conclusions. For example, a priori, intuition-based categories of language may not be imposed on language data – such an *etic* approach would be invalid. Nor can conclusions regarding language behavior be arrived at by invoking traditional ethnographic information (Geertz 1983) such as the participants' physical surroundings during the interaction, their culture, their personal biographies, unless the speakers themselves (as revealed in the data) make explicit reference to one or more of these (Drew and Heritage 2006). While, as Markee (2000) points out, some CA practitioners do rely on such extra-conversational data in deducing features of talk-in-interaction (e.g., Bilmes 1992), here we are considering what may be called "mainstream" CA, which does not. (For a further discussion of this issue, see Kunitz and Markee 2016.)

From the foregoing, the L2 classroom teacher may perceive that both CA and LT place value on making valid inferences (of some sort) from language data, and since both are data-driven activities this is unsurprising; drawing conclusions from evidence is a basic scientific endeavor.

Thus, what now of the strength of the methodological link between the two fields? In general terms, Kane's (2006) informal, argument-based approach, useful in the LT paradigm – in particular its inferential micro-structure with its focus on data, claims, and warrants, and exceptions – may have a place in CA methodology; indeed, this statement from Markee (2006) suggests an epistemological connection: "[T]he *warrant* for any analytic claims that are made about how ordinary conversation and institutional talk are organized must be located in the local context of participants' talk" (p. 143; italics in original). However, CA may find irrelevant much of Kane's interpretive-argument structure: The scoring of L2 oral performance is alien to CA, as is making curricular decisions from test results. On the other hand, making generalizations about the representativeness of a sample of talk has some resonance but is rather complex (Stivers 2015).

Given that some tentative parallels as well as disagreements between CA and LT have been noted, it may now be useful – after a short review of studies in which CA has been applied to LT – to analyze, in the emic CA mode, some empirical data taken from a set of test-taker responses to a CA-informed test (CAIT) of L2 oral proficiency. Given the aforementioned issues – that is, rules of evidence for scientific inquiry, validation, and the complex matter of language-norm description – such emic analysis may clarify whether or not CA and LT are sufficiently compatible. Further, one might then be able to decide how feasible would be the construction and use of CA-informed assessments in the L2 classroom.

5 Applications of CA to LT

One might divide applications of CA to LT into two broad categories, those dealing with post hoc investigations into the effectiveness of having used a measure, and those involving a priori applications of CA to test development. Studies focusing on the former include Johnson and Tyler (1998), who found that in the ACTFL Oral Proficiency Interview, asymmetrical power relations between interactants confined talk within a narrow, question-answer structure driven by the tester-interviewer. This resulted in a series of practices uncharacteristic of ordinary conversation. Also, practices such as openings and repair of conversational breakdowns, were invisible. (However, see Okada 2010 for a different view.) Lazaraton (1997), in a study focusing on tester behavior in oral interviews, showed how the preferred (default) denial of an examinee's self-deprecation (cf. Pomerantz 1984) was found to be modified by the interviewer into a noncommittal, minimal response. In another study, Lazaraton (2002) found that testers sometimes went beyond their "neutral" examiner roles and intervened to provide assistance with examinees, to the extent that test results were affected by "interactional processes at work within the assessments themselves" (p. 139). Similarly, Brown and Hill (2007), while investigating the IELTS Oral Interview, demonstrated that one type of tester "makes fewer allowances and provides less support [to examinees]," and another type "uses simple language and…provides more support and feedback [to examinees]" (p. 56).

The significance of the above is that CA, applied post hoc to language-test response data, can support investigations into validity of inferences from test results. This support can be various – e.g., the description of conversational features that contribute to articulating a criterion for measuring oral-communicative success or failure (He 1998); the discovery of unexpected assessment outcomes (Lazaraton and Frantz 1997); or how the institutional nature of testing, including, for example, rater variability, can modify spoken output in unforeseen ways (Lazaraton 1997, 2002). Such information could inform both the crafting and administration of L2 classroom tests as well as the interpretation of test results.

Regarding L2 classroom test *development*, however, L2 oral assessments – in particular, those assessing L2 pragmatics – have evinced certain validity limitations. This is because speech act theory-based (Austin 1962; Searle 1969) test methods,

typically pursued via the discourse completion task (or DCT; e.g., Brown 2001; Hudson et al. 1995; Roever 2001; Rose 1992; Schegloff 1988; Yamashita 2001), elicit results that are demonstrably *meta*-pragmatic in nature (Streek 1980; Golato 2003; Walters 2013). That is, since the DCT consists of a short, printed paragraph followed by a blank into which the test-taker is asked to write a response, basically test-takers' intuitions *about* conversation are assessed, not real-time oral proficiency. Thus, a teacher engaging in L2-test design or use should not simply employ measures based on intuitions about language, as these may not constitute valid evidence of student learning. One may therefore hypothesize that CA, with its fine-grained accounts of language behavior, would be a better alternative to intuition-driven, speech-act-theoretic models, as it would provide more accurate accounts of online interaction (Levinson 1983; Golato 2003; Kasper 2006) of both tester and examinee. Such accounts would then provide better bases for L2 test-development efforts and, hence, better backing for warrants for validity-claims. The following section will give an overview of one such L2 oral test-development project and present analyses of test-response data. These may inform our discussion of validity and epistemology from both CA and LT perspectives, and perhaps offer practical classroom test-construction principles.

6 A CA-Informed Test-Development Project

An oral-proficiency test of a limited domain of L2 pragmatic competence was constructed, its design based on CA methodology and findings. The test involved audio-recorded interactions between a tester and examinee, which were later evaluated by two CA-trained raters. To date there have been two separate CAIT studies, here labeled "Phase I" (Walters 2007, 2009, 2013) and "Phase II" (Walters 2019); the latter involved revisions to the original measure. This discussion will primarily deal with aspects of Phase II.

6.1 Overview of the Test Procedure

The test underwent development on a university campus in the United States. Participants consisted of graduate students enrolled on that campus and/or their spouses. Participants in Phase II consisted of 30 non-native speakers from a range of fields – e.g., business administration, computer science, education, accounting, nursing, physics. None were familiar with applied linguistics or CA. They were recruited by direct solicitation or by flyers posted in common areas of an apartment complex populated by international students. Anonymity was preserved; human-subjects consent procedures were followed for each participant. Data-collection settings consisted primarily of the campus office of the investigator but were sometimes the apartment living rooms or kitchens of participants.

An audiotaped test-session involved both tester-researcher and examinee as interlocutors and lasted, on average, 18 minutes. After a warm-up phase, during which a demographic questionnaire was filled out and jointly discussed, examinees were told that the session was *not* an interview and were encouraged to ask questions if they wished. It was intended that the tester and examinee fulfill roles as members of the same university community with enough in common to weaken the traditional social boundaries between interviewer and subject, thus avoiding pitfalls of the OPI and similar formats (Johnson and Tyler 1998). Beyond these general statements, the examinees were not instructed to respond to the tester in any particular way, nor were they told in advance what topics were to be discussed or which conversational actions were of interest.

The Phase II test was designed to assess the ability to produce, in English, responses to compliments and to assessments (see Pomerantz 1978, 1984), responses to pre-sequences (Schegloff 2007), and other-initiated repair moves (Wong and Waring 2010). Assessment and compliment responses were chosen because they are well documented in the CA literature and thus were considered to be reasonable candidates for the articulation of a test norm. Further, they had been addressed in the Phase I study and consistency between the two studies, given certain modifications to the Phase II protocol, was deemed important. Pre-sequences were included for the same reasons as the preceding two, and because the test-task targeting this action had failed to elicit responses in Phase I, requiring revisions (most of the delivered prompts failed to elicit responses). Finally, repair moves were included in this study as an attempt to expand the set of CA-informed tasks beyond the original test-task pool.

The recorded conversations involved three topics regarding ordinary life in a university community. Each topic provided a context for the tester's delivering three types of oral prompt: During a discussion of college life, an assessment was deployed; during moments focusing on an acculturative skill possessed by the examinee, a compliment; and during a discussion focused on a life-challenge, a pre-suggestion. The repair-prompt was not associated with any topic and could appear at any time. The conversation was unscripted, though broadly mandated in the test specifications. For space considerations, this paper will only draw on CAIT response-data pertaining to compliment responses.

The prompts designed to elicit compliment responses were derived from Pomerantz (1978), who describes three main categories of responses. The first employed in the measure were *acceptance tokens*, among which is "thank you" (as in Example 1, line 3):

Example 1

```
1.   A:   Why it's the loveliest record I ever heard.
2.        [And the organ-
3.   B:   [Well thank you.
```

The second consisted of *evaluative shifts*, in which the recipient of the compliment either scales down her agreement with the compliment-giver (as in Example 2, line 2, with "quite nice") or disagrees with the prior by qualifying the compliment via expressions such as "but," "yet," or "though" (as in Example 3, line 2):

Example 2

```
1.   A:   It was just beautiful.
2.   B:   Well thank you uh I thought it was quite nice,
```

Example 3

```
1.   A:   Good shot
2.   B:   Not very solid, though
```

A third category of response consists of *reference shifts*, in which the recipient of the compliment reassigns praise to someone or something aside from him/herself. This can be seen in Example 4 below, when speaker B diverts attention from the reference to himself ("you're…honey"), made by speaker A, to an inanimate object in line 2:

Example 4

```
1.   A:   You're a good rower, Honey.
2.   B:   These [oars] are very easy to row. Very light.
```

6.2 Rating Scale and Empirical Response-Data

Crucial to this project was the rating procedure, which incorporated a scale adapted from one devised by Bachman and Savignon (1986):

Overall, the examinee shows:
4 = evidence of control of compliment responses
3 = more evidence of control than evidence of no control of compliment responses
2 = more evidence of no control than evidence of control of compliment responses
1 = no evidence of control of compliment responses

As can be seen, a linear series of numbers ranges from 4 to 1. An L2 teacher using this scale might assign a higher number to a test-taker whose skill was judged to be near-native and a lower number to responses judged less native-like. The descriptors were vaguely worded, with phrasings such as "more evidence of [x] than evidence of no [x]." This vagueness was intentional, to allow the raters freedom to access their CA training, addressing oral interactions without preconceived categories, remaining close to the data.

Each of the following extracts of test-data will be complemented by a "dual analysis" – one, a descriptive, CA-style examination and the other, observations from an evaluative, LT perspective – somewhat in the spirit of the comparisons offered earlier concerning the validity and norms. The first is Extract 1:

Extract 1

```
Participant 9 (Chinese L1, M)
   1  T:  It seems to me that uh: (0.5) uh you're a very
   2      adaptable person.
   3      (0.5)
   4  E:  Oh. (.) uh: thank you. Adapt to the environment?
   5  T:  Yeah.
```

The topic concerns adaptation to US culture in the college town. The compliment is delivered by the tester (indicated in the transcript by "T") in lines 1 and 2. A response is expectable in line 3 but there is a half-second silence. The examinee (indicated by "E") responds with an "Oh", the meaning of which is uncertain, possibly a token of belated understanding after the half-second pause. There follows an acceptance token "thank you" preceded by a micropause and a delaying strategy, "uh:" with a sound stretch.

Viewing the interaction from an evaluative, LT perspective, taking the data in Pomerantz (1978) as the provisional norm, the acceptance token "thank you" seems to indicate a normative response. However, the preceding micropause and a delaying strategy do not appear in Pomerantz. One might then conclude that the response is NNS-like and award a score lower than the putative NS-reflecting 4, perhaps a 3. However, there is the possibility that the examinee had simply not understood the key compliment-word "adaptable," a hypothesis that is supported by the repair move initiated in line 4, "Adapt to the environment?" Thus, the half-second of silence, the delaying micropause and the "uh:" may well be signs of misunderstanding, rather than a non-native response.

In Extract 2, discussion focuses on the examinee's volunteering at his local church:

Extract 2

```
Participant 3 (Chinese L1, M)
   1  T:  you're a good man.
   2  E:  yeah. I- yeah I- because I'm retired. I retired
   3      so I volunteered.
          ((Approximately 20 lines of talk omitted))
  23  T:  I have a feeling that you're- you have a very kind
  24      heart.
  25  E:  Right. Right I like a children.
```

Analyzing the above in a purely emic mode, there are two compliments, the first delivered by the tester in line 1. The examinee's response in the next turn includes a direct agreement, "yeah," followed by two false starts and by an account representing a downgrade away from his person toward his overall situation at his stage in life: "because I'm retired. I retired so I volunteered."

Viewed from an evaluative (and etic) LT perspective, one can state, referencing the operational norm, that the abovementioned downgrade is evidence of native-like pragmatic competence. However, the direct agreement "yeah" in line 2 is neither indicated in the operational norm, nor is it a reference shift or a downgrade and therefore possibly a non-native practice. To test the idea that the use of a direct agreement to a compliment was a mark of non-native proficiency, the tester, per the test specifications and according to the tester's reflections on the course of the interaction (herewith the etic input), delivered another compliment (lines 23 and 24), and the examinee's response pattern was the same – a direct agreement ("right") followed by an account that deflects attention away from the examinee's own character and toward another topic ("I like a children"), somewhat like a reference shift. Thus, while the speaker may have some understanding of mitigated agreements, given the unusual deployment of linguistic forms, one might conclude that this participant seems to have a somewhat non-native competence with compliment responses.

In Extract 3, the topic is international travels taken by the examinee:

Extract 3

```
Participant 24 (Chinese L1, F)
   1  T:  that's a lot of travelling.
   2  E:  but is uh- uh for me is challenging [and
   3  T:                                      [mhm
   4  E:  interesting.
   5  T:  you're a strong woman=
   6  E:  =yes.  I I I want to try to the- the (look around)
```

Emically: The tester delivers an assessment in line 1, to which the examinee produces a partial disagreement ("but … is challenging and interesting") with

apparently a word search ("uh- uh"), after which in line 5 the tester delivers a compliment, "you're a strong woman." This is immediately and directly agreed with in line 6 with a latched yes." Also, from an LT perspective, a non-native pattern similar to that in Extract 2 can be argued for, noting the direct agreement, with no attempted mitigation in the form of a shift, in line 6 when compared with the provisional norm.

In Extract 4 the general topic is ability to adapt to the college-town culture.

Extract 4

```
Participant 17 (Indonesian L1, F)
   1  T:  I guess: you:- I could call you uh: very (.)
   2      adaptable intelligent international person.
   3  E:  Thank you. (0.2) trying my be(h)st. (([laughs))
   4  T:                                      [((laughs))
   5      Yeah we-we can only- uh: d- do our best here.
   6  E:  ((lau[gh))
   7  T:       [and ((gestures toward E's handbag))oh that's
   8      a- that's a big bag. That's a great bag.
   9  E:  ((laugh)) tha(h)nk you.
```

Here, the compliment in lines 1 and 2 elicits an acceptance token, "thank you," in line 3. Following this after a short silence, there is a sort of downgrade, "trying my be(h)st," where the examinee shifts the focus of the compliment from personal qualities of adaptability or intelligence to efforts toward achievement. The shift is spoken with laughter. A second compliment is delivered in line 8, "That's a great bag," which elicits a second acceptance token-with-laughter. The responses do not seem associated with humor, as the compliments were delivered non-ironically. (For the record, the above account of the tester gesturing toward the handbag is an instance of recalled ethnographic data and was not collected in a video-recording).

Looking through an LT lens, one could hypothesize that the laughter indicated in the analysis above is non-native, since it does not appear as a response-type in Pomerantz (1978) or Golato (2003) but appears with a certain frequency in the Phase II data. This does not mean that laughter itself makes a given utterance inherently "non-native," or that laughter can have no interactional function. As Jefferson (e.g., 1979, 1983) points out in her analyses of (presumably) native English-speaker utterances, laughter is not necessarily a phenomenon that "happens to" a speaker, but is something that "can be manageable and managed as an interactional resource" (1983: 15). Thus, it is conceivable the examinee's laughter displays some interactive function. However, is it a native one? Since the compliments in the above extract were delivered without humorous intent, and since the provisional NS test norm does not indicate laughter as a type of compliment-response downgrade, the hypothesis of non-normativity in Extract 4 can (for the moment) be entertained. Naturally, the collection of further data may challenge this interpretation.

7 Discussion

Using the non-native oral responses above in relation to the rating scale as starting points, this paper now will address the conceptual issues discussed earlier, which may illuminate possibilities for crafting CA-informed oral assessments in the classroom.

To review, the wording of the rating scale was somewhat vague, so as to avoid imposing an external, "etic" language model upon a CA-trained rater and instead take advantage of the rater's expertise in "emic-level" analysis. However, such vagueness might give L2 classroom teachers pause, since they would likely wish a clearer framework for assessing learners. Fortunately, given the apparent existence of non-native, L2 oral pragmatic behavior, as described in the "LT" portions of the analyses of the extracts, this discovery might be applied to a helpful scale-revision:

Overall, the examinee shows:
4 = evidence of control of compliment responses (acceptance tokens, accounts, reference shifts, and/or downgrades)
3 = more evidence of control than evidence of no control of compliment responses (some of the above but accompanied by laughter and/or pauses and/or direct agreements)

The revised scale still includes a linear series of numerical values, but numbers are not obligatory; one could as easily replace them with words such as "native-like proficiency" or "developing proficiency." Regardless, given the parenthetical additions, we now have a tentative, data-driven, assessment-framework based on a norm (Pomerantz 1978). However, only half of the original scale's score-range is given in the revision; descriptors such as the following are lacking:

2 = more evidence of no control than evidence of control of compliment responses (few of the phenomena in [4] and mostly phenomena in [3])
1 = no evidence of control of compliment responses (none of the phenomena in [4] and some or all of the phenomena described in [3])

However, use of such would be unjustified since only the two upper-level descriptors are empirically grounded; the lower two are hypothetical. Accordingly, this revision, while potentially helpful, is as yet a rather compact one.

To investigate whether the use of this revised rubric would be valid, we borrow Kane's (2011) inference-scheme, with its focus on Data, Claim, Warrant, Backing, and Exceptions, and draft the following interpretive argument: "The use of the direct agreements and laughter appearing in multiple instances in this interaction (D) allows us to infer (C) that the examinee has non-native competence with compliment responses. Backing (B) for this claim is that direct agreements and laughter are not in the current CA-derived norm. This inference may later be called into question (E) upon receipt of (a) additional, CA-gleaned data on English-L1 behavior that includes laughter and direct agreements; or (b) evidence from the test-data

revealing something in the compliment-interaction that the examinee reasonably found awkward, embarrassing, or humorous which did not therefore involve his/her L2 pragmatic competence. Also, generalizations about the learner's real-world interactive ability might be questioned since (E) the test-interaction is an example of institutional talk and may not be an authentic conversational setting. On the other hand, the relatively informal nature of the test setting (B) arguably ameliorates the traditional tester-examinee power relationship; thus, the test setting could be a reasonable approximation of real-world interaction (C)." Note that this type of test-validation model can be useful even if the inferences/claims (C) are superseded by new evidence/data.

The Kane-style exception (E) pertaining to the tentative nature of the norm is important. When crafting descriptors, there is a danger that they might constitute an intuition-driven, etic-style imposition, distorting the rating process. As Stivers (2015) puts it with relevance to characterizing variables in interactions, "any sort of formal coding risks a massive reduction and flattening of complex human behavior" (p. 1). Any warrants for the use of a given L2 oral-performance rubric, therefore, would have to be grounded in actual CA data. Likewise, any oral prompts delivered by a tester during a test session must conform, as much as possible, to a CA-based norm.

However, as mentioned earlier, the very crafting of a norm via CA findings is not simple, as the following observations by Schegloff (1993) will suggest. While Schegloff is here drawing comparisons between CA and quantitative sociological research, he makes three points that may be applied to norm-building. First, in order to quantitatively analyze instances of a specific practice of talk-in-interaction, the analyst (or the L2 teacher) must define all the potential "environments of possible *relevant* occurrence" of the practice (p. 103; italics in original); "environments" in this instance means sequences of speaker-turns. Noting such is important since conversational actions are not de-contextualizable entities that may be listed in a "reduced and flattened" taxonomy (cf. Stivers 2015); rather, they occur (or may not occur) organically in specific, sequential contexts as the joint-product of interlocutors.

Second, the analyst (or test designer) must also carefully describe what "counts as an occurrence of whatever it is" the test is being used to test (Schegloff 1993: 107), that is, what the *range* of practices is; e.g., in *what various ways* does an L1 English speaker respond to compliments? One caveat: speakers may actually employ practices that are not outwardly similar to one another. For example, as Schegloff indicates, one may engage in person-reference by using a pronoun, noun phrase, or an entire sentence; here the practice entails essentially "slot-filling" of alternate forms. A speaker may employ a question format, for example, a pre-sequence turn – e.g., "Do you know who X was?" – or may circumlocute person-reference entirely. Thus, there may not just be a single range of practices, but a *range of ranges* of practices that a speaker may use, depending on the sequential context. Moreover, defining or describing *all* the countable ranges will also necessitate defining *all* the environments of possible relevant occurrence for *each* of the manifold forms.

A third issue that Schegloff raises is the *domain* from which language-use data are drawn, domains such as "ordinary conversation, interviews, meetings, courtroom proceedings," in each of which "interactants conduct themselves differently, are oriented to different sets of relevancies, and therefore produce and understand the conduct [or "practice"] differently in these different domains" (p. 111). This third issue, of course, has relevance to the area of institutional talk (Drew and Heritage 1992), including talk that is elicited by L2 classroom assessments.

These three considerations discussed by Schegloff (1993) may be understood as constituting general requirements for crafting a language norm. Fulfilling these is obviously a tall order. What L2 teachers who are still skeptical of CA-LT methodological overlap should note, however, is that these norm-crafting constraints are in fact not alien to LT. As testing researchers Bachman and Palmer (1996) state:

> Because language use, by its very nature, is embedded in particular situations, each of which may vary in numerous ways, *each instance of language use is virtually unique*, making it *impossible* to list *all* the possible instances (p. 44; italics added).

This observation is akin to the CA perspective on the single, unique nature of interaction. As Schegloff (1993) states, "*one* is also a number, the single case is also a quantity" (p. 101; italics in original). We may further underscore the methodological overlap between CA and LT regarding norms, by juxtaposing Bachman and Palmer's (1996) passage with snippets from Schegloff (1993): "Because language use [or, in CA terms, a set of practices], by its very nature, is embedded in particular situations [or, environments of possible relevant occurrence], each of which may vary in numerous ways [or, manifest a range of practices and trajectories depending on the context], each instance of language use is virtually unique, making it impossible to list all the possible instances" (p. 44).

Here, both CA and LT acknowledge the difficulty of comprehensively describing L2 behavior, whether under a scientific-descriptive or scientific-evaluative mandate: There will inevitably be gaps between a CA-informed norm/framework and the L2-interactive reality. Further, domain-descriptions might consist of analytical abstractions – "definitions, criteria, class membership, and the like" (Schegloff 1993: 118) – which would be at variance with the CA approach of staying close to empirical data. Yet alignment of L2 test-task authenticity with norms rooted in data is *already* a major issue with which L2 testers and L2-testing teachers have continually struggled.

It is suggested that validity (validation) itself can help bridge these gaps: Systematic LT recourse to CA data, via structured validity arguments, can suggest where an inferential leap from examinee-turn is warranted, so the classroom teacher can have greater confidence in using a particular L2 oral measure. What we may call "CA-in-validation" can also suggest when an inference is *in*appropriate because the oral practices on record are at variance with what the test-task instantiates; the teacher will then know to revise the measure. To paraphrase Markee (2006) – whose comment pertains to SLA research but is relevant here – CA-in-validation can "take on the … epistemological function of *confirming* … hypotheses" regarding whether or not a particular test-inference is appropriate (p. 151; italics in original).

8 Pedagogical Implications

This chapter has highlighted certain overlap (and limits) between CA and LT in the areas of language norms and validity. At this point, it might be useful to extract from the above discussion a set of working principles for L2 oral-test development, which teachers could employ in the construction, use, and evaluation of their own L2 oral assessments.

- Empirical data from CA research can be used to construct test frameworks and norms, which can provide potential warrants and backing for test-inferences. Resources for such empirical data are available. Places to start can be Sidnell (2010), Wong and Waring (2010), and Schegloff (2007).
- While both CA and LT recognize that a *complete* description of a norm of L2 oral proficiency is unlikely, workable norms can be constructed by referring to existing CA studies, which can in turn provide warrants and backing for inferences from learners' L2 oral performance to contexts outside the test setting.
- Once a provisional framework/norm is derived from CA studies, explicit criteria should be crafted in the form of a sufficiently detailed rubric (and/or scoring guide) that incorporates relevant examples from those CA studies for evaluation of specific L2 oral performances. The Discussion section above and the earlier subsection titled "Rating scale and empirical response data" provide one possible example for crafting a CA-informed, data-driven rubric: That is, a provisional norm was articulated, a test was designed and piloted, and then validation of the results was attempted through post hoc CA-style analysis of L2 examinees' oral-test production, the validity study being made with reference to that norm. A somewhat improved rating scale was then derived from the results, based on CA studies and on test-derived, empirical evidence of non-native practices.
- Caveat to statement immediately above: What may seem "wrong" according to an operational norm may well be a warrantable interactional practice in specific conversational contexts. That is to say, sometimes an utterance by a learner will make perfect sense in the particular interaction a teacher is evaluating even though it seems to violate the provisional norm in the rubric. Hence:
- Norms/frameworks are always subject to modification – and thus test results deemed "wrong" may be rendered "correct" – with the advance of knowledge gleaned through CA-style research and LT-style validity studies. Thus, continual triangulation of interpretations of test-response data with an empirically *evolving* norm is required for validity.
- CA data cannot (directly) count as construct-related evidence for validity since CA is agnostic to mental phenomena. However:
- CA data can inform interpretation of learners' test-responses via its scientific-descriptive approach to language; that is, CA data can be used as models in crafting oral test prompts. Nonetheless, a caveat:
- If the instructional goal is to facilitate learners' general L2 conversational ability, the specifications (or "blueprints") for oral-interview and role-play test methods

need to prescribe procedures that ameliorate traditionally unequal power-relations between tester and examinee(s) and which therefore approximate, as much as possible, authentic interaction (as reflected in CA data) to allow for reasonable extrapolations from test results to contexts beyond the test setting. (Guidance on writing test-specifications can be found in Davidson and Lynch 2001.)

- Ethnographic information about the test setting should be used cautiously in interpreting L2 oral-test performances. However, etic knowledge (belonging to the teachers/testers/interviewers/facilitators) of real-time, individual oral-test administrations may be taken into account when emically analyzing (in the CA-mode) and interpreting (in the LT mode) oral test data. Etic testing procedures (to be) effected by testers/interviewers/facilitators (e.g., the option to deliver additional oral prompts to "push" to the limits of examinee ability) must be carefully spelled out in the test specifications and should be included in *post-hoc* reports by the testers/teachers themselves, for the sake of consistency of measurement, fairness, and validity.

It is suggested that these guidelines be subjected to critical scrutiny – informing specific L2 oral-proficiency test-development research questions, as appropriate – as efforts to apply CA principles to L2 classroom tests continue.

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Part V
Concluding Remarks

Between Researchers and Practitioners: Possibilities and Challenges for Applied Conversation Analysis

Junko Mori

Abstract Over the last quarter of a century, conversation analysis (CA) has steadily gained recognition in applied linguistics, as a rigorous, empirical approach to the study of social interaction of various kinds, including classroom discourse. However, it is questionable to what extent the findings of these CA studies have been effectively communicated to a broader audience and have made significant and sustainable impacts on language education. The current chapter reviews the studies featured in this edited volume by focusing on the issue of researcher-practitioner interface. It identifies common themes explored in these studies—CA for reflection on pedagogical practices and CA for reconsideration of objects of teaching and assessment, and discusses areas of consideration for bridging the gap between researchers and practitioners.

Keywords Conversation analysis · Ethnography · Language classroom · Researcher-practitioner interface

1 Introduction

Over the last quarter of a century, conversation analysis (CA) has steadily gained recognition in applied linguistics, as a rigorous, empirical approach to the study of social interaction of various kinds. The current volume showcases the results of this notable development by featuring studies that examine manifold aspects of classroom discourse and interaction, conducted in diverse languages and world regions and involving different age-groups and subject matters. Further, what sets this volume apart from its predecessors is the concerted effort to articulate pedagogical

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_20

implications. Given that the growing gap between researchers and practitioners has come to the forefront in recent discussions in applied linguistics (e.g., Kramsch 2015; Marsden and Kasprowicz 2017; Toth and Moranski 2018), the publication of this volume is timely and highly appreciated. This also coincides with the emerging interest in CA's potential for making changes in institutional talk (e.g., Antaki 2011; Stokoe 2014; Stokoe et al. 2016).

As demonstrated throughout the chapters, there is no doubt that CA studies have contributed to the development of renewed understanding of the nature of language in use as a vehicle to carry out social actions. From this perspective, these studies have illuminated the moment-by-moment co-construction of classroom activities, achieved through the coordination of talk and other semiotic resources, situated in a particular local ecology. However, as pointed out by several authors, there is still a long journey ahead for these CA findings to be effectively communicated to a broader audience, and to make significant and sustainable impacts on language education. In fact, types of pedagogical implications made by the chapter authors vary from fairly abstract philosophical aspirations (see Huth this volume; Majlesi this volume; Walters this volume) to very concrete step-by-step recommendations (see Kunitz this volume; Kääntä this volume; Sert this volume; Waring this volume). The different types and styles of pedagogical implications appear to reflect in part how respective authors situate their work in the intersection of CA, applied linguistics, language pedagogy, and teacher education (see Markee et al. this volume).

I approach this concluding chapter from the perspective of one whose institutional responsibilities include conducting research in the areas of CA and applied linguistics, as well as teaching Japanese language courses for undergraduates and training graduate teaching assistants. The reading of this volume has provided me with an opportunity to reflect on challenges that I have encountered moving between the two worlds of researchers and practitioners.

1.1 CA for Reflection on Pedagogical Practices

One recurring theme in this volume is how CA can facilitate in-service and pre-service teachers and teacher trainers to examine the real-time unfolding of classroom activities. The sequential and multimodal analysis of video-recorded interactions aided by CA can offer richer materials for this reflective practice than field notes, that is, the observers' accounts of events, likely affected by their bias. CA's insistence in taking the *emic* perspective demands that observers undertake repeated viewing of recordings to attain an understanding of how the participants themselves engage in an analysis of each other's conduct in situ. This process requires close attention to talk, gaze, gesture, which are situated in a particular spatial arrangement and connected with artifacts such as a black/whiteboard, computer, and various documents used for the ongoing activity.

Following CA's principles and procedures, the authors guide the readers to see how students and teachers topicalize and objectivize an object of learning (Majlesi this volume), how students engage in a daily classroom routine led by teachers (Eskildsen this volume), or how students participate in collaborative tasks (Evnitskaya this volume; Musk this volume). Various aspects of ongoing calibration of teacher talk are also elucidated: giving instructions at activity transitions (Kunitz this volume); teaching target concepts through definition practices (Kääntä this volume); sequencing lessons (Lee this volume); managing language alternation between students' first and second languages (Sert this volume); attending to individual voices in a whole-class setting while maintaining the pedagogical focus (Waring this volume); and conducting informal formative assessments (Can Daşkın this volume). In addition to these facets of classroom interaction, Kim and Silver's (this volume) unique contribution examines post-observation conversations, paying specific attention to how teachers manage their dual roles as feedback providers and reflection facilitators.

The basic assumption behind pedagogical implications discussed under this theme is that the exposure to such detailed analysis of interaction can raise teachers' awareness as to what different options are available in designing and instructing tasks, as well as in responding to particular moments of actual classroom interaction, which lead to different consequences. Such awareness, in turn, is believed to inform their exploration of ways to improve their execution of particular pedagogical practices. The question here is whether or not presenting these detailed observations of classroom interaction in academic publications is sufficient for making a difference in praxis. Lee (this volume) offers guidance for how practitioners should read CA studies to "derive pedagogically useful points from CA findings" and "make independent and reasoned decisions regarding what to do in their own teaching" (p. 248). It is indeed sensible to empower practitioners by respecting their independence and ability to digest research findings for their purposes. To this extent, Antaki (2011) reminds us that "the analyst generally has no powers, him or herself, actually to make changes" (p. 9). However, given the rather bleak picture of foreign language educators' exposure to research (Marsden and Kasprowicz 2017), additional steps seem necessary to draw practitioners' attention to CA research, or to reach out to them.

Among the authors, Sert (this volume) and Waring (this volume) are the ones who most extensively discuss possible strategies in this regard, but they present different pathways. Sert's (this volume) emphasis is on the identification of pedagogical practices that "display commonalities across different contexts" and the pursuit of "a comparative research agenda" (p. 259). In contrast, Waring (this volume) considers the most useful recordings to be "one made of an expert teacher in the specific context for which a teacher candidate is being trained for" (p. 292). In other words, Waring foregrounds the context-specific nature of classroom operation in her proposal of a five-stage framework, conceived to assist teachers' awareness development. The two approaches are complementary, and likely yield different breadth and depth of outcomes. Sert's (this volume) grand project aimed for a broader reach requires a considerable amount of time and resources, but the resulting materials

could still be perceived as too general and not responding to immediate concerns of a specific institutional context. In the meantime, it appears prudent to take actions "one conversation analyst, one teacher-trainer, one recording, one transcript, one issue, and one practice" (p. 299) at a time, as suggested by Waring, situating a problem identified by practitioners in their respective contexts.

1.2 CA for Reconsideration of Objects of Teaching and Assessment

The majority of chapters discussed above take learning targets set for the observed classroom as given, and recommend ways to reevaluate particular practices within the existing methods of teaching. Some authors, however, take a step further and discuss how CA's detailed descriptions of language as action in real-life interaction can or should be introduced into the classroom as objects of teaching and assessment.

As Huth (this volume) points out, "curricula do not exist in conceptual voids" (p. 359). Often times, what is taught and valued in the classroom reflects various institutional constraints and demands, including widely adopted curricular standards, teaching materials, and assessment tools, which commonly endorse the notion of language and communication that was developed with a focus on individuals' performance and without empirical substantiation. Walters (this volume) also expresses similar concerns in regard to existing methods of oral proficiency assessment, which tend to generate behaviors specific to the institutional context of test-taking under the power dynamics between the tester and testee. Accordingly, he proposes an alternative format, informed by CA research, in order to tap into second language learners' interactional practices that approximate their conduct in naturally occurring interaction. Further, Eskildsen (this volume), following Waring (2018), also advocates for the conceptualization of interactional practices such as taking turns at talk, opening and disengaging from classroom talk, disagreeing, story-telling and so on, as *teachable objects* that can be introduced into the curriculum.

To make a convincing case for change in what is to be taught and assessed, however, a number of issues must be resolved. Huth (this volume), for instance, points out that, despite a growing number of CA studies of languages other than English seen over the last several decades, our understanding of how a wide variety of interactional practices are carried out in different languages and cultures is still limited (see also Waring 2018). As is the case with the development of materials for teacher training, the development of language teaching materials grounded in the systematic and meticulous analysis of sizable data inevitably takes time.

Further, that something is *teacheable* does not necessarily mean that it needs to be taught (see Markee, Kunitz and Sert this volume). For teachers and curriculum developers, a constant struggle is to identify priorities for a particular group of students and for particular social and institutional contexts. What must be taught in the classroom, and what can be more effectively learned outside of the classroom?

What are teachers' responsibilities, and what can be left up to individual learners? How should the development of literacy be balanced with the development of oral language? (see also Pekarek Doehler this volume).

While the current volume focuses on what goes on in the classroom, a growing body of CA studies have also documented how language learning happens *in the wild* (e.g., Eskildsen and Theodórsdóttir 2017; Kasper and Burch 2016; Hellermann et al. 2019; Wagner 2015), and how participants make particular aspects of language *learnables*, i.e., objects of incipient learning, in and through interaction (e.g., Eskildsen and Majlesi 2018; Majlesi this volume). These studies also provide practitioners with critical information concerning learners' experience outside of the classroom, and prompt them to consider what constitutes an ideal relationship between instructed classroom learning and learning in the wild, and between objects of teaching judiciously articulated by teachers and objects of learning contingently identified by learners. This consideration could lead some practitioners to explore "*principled ways* of incorporating people's everyday interaction into L2 teaching" (Eskildsen 2018, p. 58, emphasis added), but others to reaffirm their belief that they must teach what learners cannot easily pick up in the wild.

1.3 The Multilayered Ecology of the Classroom

As touched upon in the previous sections, how to account for context is a critical matter both for conducting research and for providing pedagogical implications. CA shines in explicating "how the context of teaching and learning is shaped interactively, and by various resources and multimodal actions and practices" (Majlesi this volume, p. 60). But when applied to the study of institutional talk and activity, it cannot dismiss the multilayered ecology within which the given interaction is situated. According to Antaki (2011),

> The fact that participants will be bringing off some recordable institutional achievement means that the analyst will have to get a grip on what the institution counts as an achievement and as a record. Only ethnographic background – gleaned from documents, interviews, and observation of the site will provide that (p. 12).

Maynard (2006) also acknowledges ethnography as an ineluctable resource for institutional CA, while simultaneously suggesting that the use of ethnography should remain at the level of what he calls "limited affinity" in order to preserve analytic control over the interpretive statements and prevent data loss that derives from premature decisions.

CA studies typically describe some ethnographic information prior to the presentation of data excerpts, but the chapters vary in the extent to which they provide information regarding the nature of content materials, students' language proficiency and other backgrounds, learning outcomes specified for the particular course and lesson, and sociocultural contexts of the regions where the given classroom is situated. Chapters on Content and Language Integrated Learning (CLIL)

classrooms (Evnitskaya this volume; Lee this volume; Käänta this volume), for instance, tend to introduce more ethnographic background than some other chapters, where the operation of second or foreign language classrooms is presented with limited ethnographic information and hence treated as something generic and familiar to the reader. Reading studies that offer relatively short background descriptions, I often wonder what is counted as an achievement by the institution where the data was collected, and whether or not teachers and students demonstrate any orientation towards it through their conduct. While not all CA studies of classroom discourse and interaction aim to explore context-specific aspects, practitioners are likely interested in the relationship between learning goals and lesson designs planned by the teacher, on one hand, and actual interactions and student learning that transpired as a result, on the other.

In a recent publication, the Douglas Fir Group (2016), consisting of 15 applied linguists, discusses a transdisciplinary framework for second language acquisition (SLA) by introducing a model illustrating the multifaceted nature of language learning and teaching. While referring to the micro level of social activity, the meso level of sociocultural institutions and communities, and the macro level of ideological structures, the authors emphasize that "each [level] exists only through constant interaction with the others, such that each gives shape to and is shaped by the next, and all are considered essential to understanding SLA" (p. 25). Although CA tends to be misunderstood as just focusing on minute details, it is capable of explicating the reflexive relationship between micro- and macro-phenomena (e.g., Boden and Zimmerman 1991; Heritage and Clayman 2011; Wooffitt 2005). How to present and account for the multilayered ecology of the classroom in data analysis and pedagogical implications, I believe, requires further thinking on the part of CA researchers of classroom interaction if the goal is to have CA's potential understood by practitioners, as well as applied linguists outside of the CA circle.

1.4 Translating Research: The Work of Applied Linguists and the Work of Language Teachers

Reading Waring's plea that we desperately need "CA translators," I feel guilty. Haven't I been in a position to take the responsibility, considering that I am expected to serve at once as a CA researcher, teacher trainer, and language teacher? I attempted to bridge the gap (e.g., Mori 2002, 2012; Mori and Matsunaga 2017), but I am not sure how successful I have been. The exposure to and familiarity with the two worlds does not guarantee that one can be a successful translator. The term "translation" indeed suggests the perpetual existence of a gap between the two and a possibility of something getting lost in translation due to irreconcilable differences. Today, academic institutions (at least in the U.S.) commonly maintain a two-tier system where the achievement by researchers and practitioners is evaluated differently (Kramsch 2015). Researchers expected to produce "scholarly" work

may be inclined to leave the work of interpreting research for pedagogical purposes up to practitioners, given the unfortunate, unfair, but common perception of practice-oriented educational research as having a lower status (Shuy 2015). This institutional structure creates an obstacle for productive collaboration and communication between researchers and practitioners.

The notion of "translating research" also implies one-way communication from researchers to practitioners, and thus the hierarchy between the two. However, I strongly believe that researchers also need to have the ability and willingness to listen to practitioners' concerns and incorporate them into their research. The chapters in the current book all address issues concerning language pedagogy, but it is not always apparent from whose perspectives these issues have been identified, and if practitioners can see them as issues as well. Regardless, I found this volume to be a right step forward, questioning our practices as researchers and as practitioners and exploring ways to establish necessary alignment between the two.

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L2 Interactional Competence and L2 Education

Simona Pekarek Doehler

Abstract I have been invited, in this discussion piece, to offer my view on the opportunities and challenges that arise, for L2 education, from empirical studies on L2 acquisition. In this chapter, I therefore lay out what I see as central conditions for L2 education to move toward a more systematic concern with L2 learners' abilities to participate in social interactions, specifically stressing the need for clarifying epistemological and conceptual differences in the way language learning is understood by different stakeholders in the field.

Keywords L2 interactional comptence · Epistemology of language learning · Teaching and testing · From research to practice

1 Introduction

I have been invited, in this discussion piece, to offer my view,[1] as a researcher in the field of conversation analytic SLA (CA-SLA), on the opportunities and challenges that arise from empirical studies on L2 acquisition for L2 education. By L2 education I refer to the larger context of second and foreign language teaching and testing, teacher training, as well as frameworks for curriculum design such as the CEFR. I am happy to accept this invitation, which I see as an opportunity to participate in a

[1] I thank Ufuk Balaman, Carmen Konzett-Firth, and Clément Zürn for the inspiration they provided in a brain-storming meeting on the topic of 'IC and L2 education', which has contributed to shaping the way I report on the issue in this paper. I am also grateful to Ufuk Balaman for comments on a previous version of this paper.

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© Springer Nature Switzerland AG 2021

S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*,
Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6_21

currently soaring debate, the richness and complexity of which is reflected in the many papers collected in this volume.

The contributions to the present volume provide numerous illustrations of how findings from CA research on L2 learning and use can have important implications for language education and teacher training. Thereby, they open avenues for potential collaborations between researchers and practitioners and contribute to bridge the gap between theory and practice. In this discussion piece, I particularly wish to stress the urgent need for clarifying epistemological and conceptual differences in the way language learning is understood by different stakeholders in the field.

I would like to start by outlining two limitations of the discussion that I can offer. First, for the sake of clarity and depth (given the limited space for the argument), I will focus on the issue of L2 interactional competence (IC) as one of the historically most under-analyzed objects of SLA research and – arguably – a major stumbling block for current educational policies, curriculum design, teaching and testing, as well as L2 learning in instructional settings. Second, I would like from the onset to alert the reader to the fact that he/she will not find, on the pages that follow, suggestions for concrete teaching practices (for recent developments in this regard see the papers in Salaberry and Kunitz 2019): I will not venture down that path, simply because I am not qualified to do so. What I feel my expertise allows me to do, however, is to outline current opportunities and challenges for L2 education based on an empirically grounded and epistemologically coherent understanding of what IC is – and more generally what L2 learning is – and how it develops (see Markee et al., chapter "Introduction", this volume). My argument is motivated by the conviction that (a) we need a chain of experts so as to cover the many intricacies that pave the way between research into the nitty-gritty details of L2 development on the one hand and the enormous complexity of implementing measures for teaching or testing on the other, and (b) that any dialogue between experts in the relevant fields, in order to lead to tangible results, needs to be grounded in a coherent and convergent epistemology of language learning (see also Wagner 2019).

In another contribution to this volume (Pekarek Doehler, chapter "Toward a Coherent Understanding of L2 Interactional Competence: Epistemologies of Language Learning and Teaching", this volume), I have discussed the concept of IC and how it differs from the notion of communicative competence, and have outlined how results from developmental studies on L2 IC can enhance our understanding of the affordances of classroom interaction. In this discussion chapter, I lay out what I see as central implications for L2 education and its moving toward a more systematic concern with L2 learner's ability to participate in social interactions. Thereby, I touch upon issues related to reference frameworks (such as the CEFR), teacher training, teaching and testing.

2 Challenges for L2 Education: Epistemologies of Learning/Teaching and Their Implications

Enhancing L2 learners' ability to interact in a second language represents a central challenge for L2 education around the world. We know all too well about students who, after many years of instruction, are perfectly capable of writing up a report, or doing an oral presentation, but find themselves somewhat disabled when it comes to interacting spontaneously with others, specifically in multi-party interaction. Research has conceptualized the ability to interact in terms of interactional competence (IC; for discussions see Nguyen 2017; Pekarek Doehler 2018, 2019; see also Pekarek Doehler, chapter "Toward a Coherent Understanding of L2 Interactional Competence: Epistemologies of Language Learning and Teaching", this volume): IC consists of the ability to deploy routinized procedures for accomplishing social actions, such as taking turns, opening a conversation or closing down a storytelling. This understanding goes back to Garfinkel's (1967) ethnomethodological notion of member's 'methods', i.e., interactional procedures that are shared – and therefore mutually recognizable – among members of a given group. Empirical evidence from longitudinal CA studies supports an understanding of the development of L2 IC in terms of speakers' diversification of such procedures, allowing for conduct that is increasingly adapted to the situation at hand, and the precise others that are co-participants (Pekarek Doehler and Berger 2018). This understanding foregrounds the adaptive, collaborative, and situated nature of IC: IC is not simply a cognitive property, enclosed in the mind of the individual, and merely put to use in social interaction; rather, it is the ability to act conjointly with others, and is hence situated, contingent upon the occasions of its use, and emerging from social interaction.

The crucial point that I want to stress in light of the above is this: The dominant epistemology of many facets of L2 education (for earlier criticism see McNamara 1997; see also recently Wagner 2019), with its focus on the individual language learner and individual language production, is at odds with such a view of language and of competence as situated (i.e., locally contingent), distributed (i.e., object of mutual adaptation between participants) and ultimately locally accomplished in and through social interaction.

This exact contrast is highlighted in Huth's contribution to this volume, in which he argues for a respecification of the *reference frameworks* for L2 teaching centered on the notion of IC, rather than additive inclusion of an interactional perspective into existing frameworks. Consider, as a prominent example, the CEFR (Council of Europe 2001). The CEFR reduces interaction to one of the five sub-components of spoken language (along with range, accuracy, fluency and coherence), and the descriptors of that sub-component arguably lack precision. Given the CEFR's paramount impact on L2 education on the national and regional level within Europe and beyond, incorporating existing research on IC and its development into the CEFR should be a top priority. While in the short run this might realistically imply a re-specification of the descriptors for interaction, in the long run the CEFR and its underlying conceptualization of L2 learning will inevitably need to be aligned with

the shift, in the field of SLA research, toward a usage-based and interaction-oriented understanding of learning. While this is a particularly challenging endeavor, frameworks of reference for L2 education cannot for long stand in contrast to the increasing evidence that we have to date showing that linguistic constructions evolve through language use, that language learning is situated in social practice, and that becoming a competent interactant in the L2 means being able to engage in joint action in locally adaptive ways, as evidenced in several contributions to the present volume.

Conceptual clarification is also needed in *teacher training*. While the epistemology underlying the notion of communicative competence has had an important impact on language teaching and testing (going back to Canale and Swain 1980), it did not open avenues toward a less individualistic and more dynamic understanding of the resources and practices for social interaction. In this context, it is important to stress that communicative competence and IC represent alternative conceptualizations, with distinct epistemological groundings. Today, there is an urgent need to clarify the notion of IC, which is not to be understood as a sub-component of communicative competence, and how it differs from communicative competence (see Pekarek Doehler chapter "Toward a Coherent Understanding of L2 Interactional Competence: Epistemologies of Language Learning and Teaching", this volume). And there is a parallel need to raise teachers' awareness for IC and how it can be observed in social interaction (Balaman 2018; Sert 2015; Walsh 2006). This can be done by sharing with teachers the unique assets of the CA methodology, providing for the possibility of close observation of the details of social interaction, and how the actions of one party impact on the actions of the others and create opportunities for participation, interaction and, ultimately, learning. As suggested by Sert (chapter "Transforming CA Findings into Future L2 Teaching Practices: Challenges and Prospects for Teacher Education", this volume) and many others (Barraja-Rohan 2011; Huth and Taleghani-Nikazm 2006; Walsh 2006; Wong and Waring 2010; see also some of the papers in Salaberry and Kunitz 2019; Nguyen and Malabarba 2019), CA findings can be integrated into teacher education in the form of audiovisual materials, focusing on the interactional management of classroom discourse (cf. Seedhouse 2004; Sert 2015; Walsh 2011). This can be usefully designed to raise teacher awareness not only as to how interaction works (turn-taking, disagreeing story-opening, topic shift, responding to invitations, requests, etc.), but also as to how teacher talk affects opportunities for interaction, or how student-student interactions create such opportunities. Based on such video-data, Kunitz (chapter "Instruction-Giving Sequences in Italian as a Foreign Language Classes: An Ethnomethodological Conversation Analytic Perspective", this volume) provides an appealing illustration of mutual adaptation in the classroom, showing how over rounds of repetitions, the teacher's instructions become more and more reduced in ways to adapt to students' increased familiarity with the task at hand. An example of an awareness-raising tool that is being experimented with in teacher education is

VEO,[2] a video-enhanced-observation tool created at Newcastle (Hidson 2018) that allows for both real-time and post-hoc annotation of observed social interactions in the classroom and beyond (see also Sert, chapter "Transforming CA Findings into Future L2 Teaching Practices: Challenges and Prospects for Teacher Education", this volume).

As to *classroom interaction*, we now have a tangible set of CA-inspired proposals for language pedagogy designed to favor the development of IC (e.g., Wong and Waring 2010). Still, a central challenge currently lies in teasing apart what facets of IC can usefully be the subject to targeted exercises or practice within the classroom, and what facets lend themselves less to such practice (for a more elaborated discussion of this issue see Pekarek Doehler, chapter "Toward a Coherent Understanding of L2 Interactional Competence: Epistemologies of Language Learning and Teaching", this volume; Mori chapter "Between Researchers and Practitioners: Possibilities and Challenges for Applied Conversation Analysis", this volume). While, to date, research has not yet produced conclusive findings in this regard, current developments toward a better integration of classroom and out-of classroom experiences (see the notion 'in the wild', Hellermann et al. 2019) outline promising avenues for the teaching of L2 IC. These foresee not merely to complete, or complement, classroom experiences with out-of-classroom experiences, but rather to bring students' real-world experiences (such as task-based interactions that occur out of the classroom, Piirainen-Marsh and Lilja 2019, or interactions through digital media, Balaman and Sert 2017) back into the classroom for reflection and teaching purposes.

Given the wash-back effect of testing on teaching (see Wall 1996) the development of IC *testing* is a further crucial step on the way toward integrating IC both as a key concept and key objective of L2 education. McNamara called already in 1997 for assessment models that go beyond a focus on the individual's ability and recognize the co-constructed nature of IC. Since then, the ability for social interaction has increasingly gained attention in research on assessment and is today widely recognized as an integral part of the ability for speaking in the L2 (see above on the CEFR). Also, the co-constructed nature of IC is largely acknowledged in the field and has been evidenced by a range of empirical studies (e.g., Brown 2003; Galaczi 2013; Gan 2010). Yet, as discussed by Walters (chapter "Some Considerations Regarding Validation in CA-Informed Oral Testing for the L2 Classroom", this volume), there are important conceptual gaps yet to be overcome between CA research on L2 learning and L2 testing. Also, there is much debate as to how concretely to deal with the issue of co-constructibility (see recently Lam 2018), which seems to be at odds with the institutional need of assessing individual abilities (cf. McNamara and Roever 2006: 51). Most importantly, the field faces the challenge of operationalizing criteria for IC assessment (for recent research reviews see Sandlund et al. 2016 on oral proficiency tests; and Taguchi and Roever 2017 on assessing L2 pragmatics). Despite existing CA-based or CA-inspired research on the topic (e.g., Gan

[2] See https://www.veo-group.com/education/ and https://veoeuropa.com/

2010; Kasper and Ross 2007; Lazarton 2002; Roever and Kasper 2018; Young 2008; Youn 2015; see already He and Young 1998), testing still does not capture relevantly participants' IC (Taguchi and Roever 2017). Practicality represents a further major stumbling block, given the time-consuming nature of applying rating criteria to interactional conduct (cf. Youn 2015) and the complicated administration of test-situations that require the co-presence (physical or virtual) of interlocutors, such as role-plays or interviews (Roever and Kasper 2018). One of the major challenges for the field is hence to strike a balance between the real-life validity of assessing/testing IC and its practicality.

3 Conclusion

As argued in detail by Majlesi (chapter "The Intersubjective Objectivity of Learnables", this volume), an ethnomethodologically grounded conceptualization of language learning (see also Markee et al. this volume) has consequences far beyond issues of IC and reaches to the heart of how we conceive of language teaching. There is an urgent need for a coherent epistemology of language learning to allow for a fruitful dialogue between experts in the field of L2 acquisition research and of L2 instruction. In order for L2 education to embrace L2 IC more substantially, it appears vital for us L2 researchers to make our empirical findings more accessible for stakeholders at different levels of granularity, ranging from those involved in constructing frameworks of reference for curriculum design to those concerned with teaching (see for instance the papers in Nguyen and Malabarba 2019 and Salaberry and Kunitz 2019). In light of the current state of L2 research on IC, it appears equally vital, for the field of L2 education, to shift the focus of attention from the individual learner's production to what learners get accomplished jointly with others (the teacher; co-students) and to invert – at least to a certain extent – the logic according to which first you need to know a language and then you can interact in it. The dynamics of social interaction are simply too diverse and unpredictable to ever be successfully mastered with a cognitively stored inventory of pre-defined non-adaptive tools.

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CA Transcription Conventions (Based on Jefferson 2004)

Identity of speakers in the margin of the transcript	
Dan:	pseudonym of an identified participant
?:	unidentified participant
He Hua?:	probably He Hua
PP:	several or all participants talking simultaneously
Simultaneous utterances	
Dan: [yes He Hua: [yeh [yeh	simultaneous, overlapping talk by two speakers
Dan: [huh? [oh] I see] He Hua: [what] Feng Gang: [I dont get it]	simultaneous, overlapping talk by three (or more) speakers
Contiguous utterances	
=	a latch, which indicates that there is no gap between two turns
Intervals within and between turns	
(.)	a pause of one beat
(0.3)	a pause of 0.3 second
(1.0)	a pause of one second
Characteristics of speech delivery	
yes.	a period indicates falling (final) intonation
so,	a comma indicates low-rising intonation suggesting continuation

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S. Kunitz et al. (eds.), *Classroom-based Conversation Analytic Research*, Educational Linguistics 46, https://doi.org/10.1007/978-3-030-52193-6

?	rising intonation, not necessarily a question
¿	a rise stronger than a comma but weaker than question
!	strong emphasis, with falling intonation
descr↑iption↓	an upward arrow denotes marked rising shift in intonation, while a downward arrow denotes a marked falling shift in intonation
go:::d	one or more colons indicate lengthening of the preceding sound; each additional colon represents a lengthening of one beat
no-	a hyphen indicates an abrupt cut-off, with level pitch
because	underlined letters indicate marked stress
JOHN	capitals indicate loud volume
°john°	degree sign indicates decreased volume, often a whisper
·hhh/.hhh	in-drawn breaths
hhh	aspirations or laughter tokens
> the next thing<	>. . .< indicates speeded up delivery relative to the surrounding talk
< the next thing>	<. . .> indicates slowed down delivery relative to the surrounding talk
☺hi☺	smiley voice
no	creaky voice
@	animated voice

Commentary in the transcript

((coughs))	verbal description of actions noted in the transcript, including non-verbal actions
((unintelligible))	indicates a stretch of talk that is unintelligible to the analyst
(radio)	single parentheses indicate unclear or probable item
(xx)	unclear fragment: each cross corresponds to a syllable

Other transcription symbols

Co/l/al	slashes indicate phonetic transcription
→	an arrow in the margin of a transcript draws attention to a particular phenomenon the analyst wishes to discuss