Chapter 2
Learning Spaces and Practices for Participation in Primary School Lessons: A Focus on Classroom Interaction

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Abstract Learning in primary schools is typically located in the province of a classroom. Classrooms provide the cultural, linguistic, physical, and relational space for student learning. One way to understand the nature of this space – the learning space – is to reach beyond the boundaries of the four walls of the classroom (as a type of container object) to understand the practices and practice architectures in which students and teachers encounter one another in learning episodes or lessons each and every day as they step into their schools, step into their classrooms, and step into their lessons. This chapter directs us to the nature of these everyday learning spaces and the practices that enter and come to exist in primary school classrooms and the lessons that unfold there; lessons that unfold through language, in actions, and in relationships. In particular, we focus on the nature and influence of dialogue and its place in shaping these spaces and practices for learning as teachers and students encounter and make relevant and co-produce practices. The chapter makes use of actual classroom examples to exemplify the key ideas.

Learning in primary schools is inherently social and typically located in the province of a classroom. In classrooms, learning and teaching come alive as things happen. These *happenings* – as they occur in particular social and spatiotemporal realities – are ignited by the *in situ* actions (or nexuses of behaviours, after Schatzki 1996, p. 116) of those present. They occur only in the present as it unfolds, but they are always oriented towards the future and in response to the past (Kemmis et al. 2014). And so, as teachers and students engage with one another to do particular activities, they communicate with and relate to one another in particular ways that are more or less mutually intelligible or comprehensible (Schatzki 1996) to those in

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K. Mahon et al. (eds.), *Exploring Education and Professional Practice*,
DOI 10.1007/978-981-10-2219-7_2

the practice at the time. For students and teachers, their encounters with one another in lessons, in classrooms, and in schools form part of their everyday life experiences. The way of being in particular classrooms flows through the particularity of the practices they encounter *and* co-produce *and* make relevant. The chapter examines the ways of being in a classroom with a focus on classroom dialogues; and, as will be illustrated through the empirical examples, classroom dialogue calls into relevance particular practices, or sayings, doings, *and* relatings, that shape lessons in interconnected and distinctive ways. These practices cannot be understood as arbitrary, unitary, or ethereal notions but as constellations enabled and constrained by the practice architectures present in the site *in*-the-moment.

Let's step for a moment into a reading lesson occurring in Miss Lilly's Year 1 classroom. This classroom is situated in a small rural school in NSW, Australia. As things unfold in this reading lesson for the students in this space at this time, Miss Lilly makes particular sayings, doings, and relatings relevant. She does this through the activities and resources she and the students encounter and the ways she relates to the students or expects them to relate to one another – these are both orchestrated and mediated through language in their utterances and dialogues. In this, the students are co-producers of practices by virtue of their being there and participating in the moment (i.e., through co-presence), since it is their contributions (whether these be what they say or do, or how they relate to others) that influence what happens next in each and every moment of the lesson as it unfolds:

Miss Lilly:	Right, everyone sitting on the floor, move in, move in…Okay, okay, focusing here up the front, let's have a look at this picture here, up here on this page ((Points to the required page)). Here we have those naughty characters, and aren't they getting into an awful mess? …
Miss Lilly:	((Continues)) …Sitting down everyone, get in a spot where you can see ((Children shuffling around)); sitting up straight. You need to be listening to me, paying attention? Right, who are the characters in this story, those messy//
Mitchell:	//Pig, the duck
Miss Lilly:	Oh no, remember you don't call out when we're doing our reading Mitchell. We've got to what? Don't touch the computer Kelsey. Come on now what do we do? Carmon?
Carmon:	Hands up ((quietly))
Miss Lilly:	Speak up Carmon so we can hear what you are saying
Carmon:	We put our hands up
Miss Lilly:	Right, another, yes? ((Points to Jemma))
Jemma:	And don't touch each other/
Trae:	/don't talk to each other
Miss	Yes, what else? Elsa move out from behind the pegboard so I can see you. Think about it, yes? ((Points to Tia))
Tia:	Look at the pictures, nah, illustrations I mean
Miss Lilly:	Yes, a good one, but we are thinking about our rules. Jack, good boy hands up.
Jack:	Wait ya' turn
Miss Lilly:	Wait your turn, good Jack/

Fig. 2.1 Miss Lilly's Year 1 classroom

Lai:	/Don't call out
Miss L:	Good boy, yes, that's right when we're doing our reading groups please remember those important year one rules for our reading, up on our chart. No calling out, mm, hands up and ah, wait for your turn, hands off. Now, back to the picture, who are these messy characters here? Oh look here…….

In this classroom, the reading lesson takes shape and is made comprehensible through the practices of those present at the time – Miss Lilly and her students. If we closely examine the turns of talk in the interaction, their words (*or sayings*, for instance, what is said, the language, the discourse as it flows sequentially and discursively) bring into focus (or make hearable) what counts as relevant in the moment. If we study the photograph above (Fig. 2.1), it is evident what activities people are engaging in (or their *doings*) and the objects and materials noticeably present at the time. As we will show, these students are not simply sitting on the floor facing the teacher, "learning to read"; they are participating in a number of interconnected practices.

For some practice theorists such as Schatzki (2002), sayings and doings are positioned as central to understanding the nature and sociality of practices. However, their rendering neglects (although it might imply) the ways in which the sayings and doings make evident or possible particular relationships between people in the practice and between people and the world around them. For Miss Lilly and her Year 1

students, as they participate in the reading lesson (evident in both the transcript and photo), they relate to one another and to their immediate world in ways that illustrate the necessity to overtly theorise the relationships that enable and constrain their practices. For them, their *relatings* are inextricably enmeshed in their learning experiences; therefore the connection of the relational dimension of practice to their sayings and doings cannot be reduced to any one of these actions independently of the other. Each of these dimensions of practice influences and is influenced by the existence of the other in the *happeningness* of learning to read in Miss Lilly's Year 1 classroom. (Happeningness refers to actual real-time practices as in the 'doing' of something in a here-and-now). Even more specifically, in the reading lesson, the particularity of what makes this a reading lesson is how the sayings, doings, and relatings (at the time) 'hang together' and are distinctly recognisable as, and relevant for, participating in a reading lesson. So, in the practice of learning to read, the sayings, doings, and relatings are always bundled together; this is implied when Miss Lilly announces, "when we're doing our reading groups please remember those important Year 1 rules for our reading". That is, to participate in the doing of reading groups in this classroom, the students need to think about particular things, contribute to the discussion using particular language, and relate in ways governed by the rules that are particular to this site; these hang together to constitute the reading lesson.

In other words, practices in classrooms both constitute and are constituted by the particular words used, the particular things done, and the particular relationships which exist in the interactions between the people and things involved. To participate also requires coherence through the demonstration of comprehensibility; the students (for example) show their comprehensibility by complying with Miss Lilly's demands (by looking at the picture), requests (by moving from behind the pegboard), or questions (by answering). From this, the theory of practices architectures (Kemmis and Grootenboer 2008; Kemmis et al. 2014) offers an analytic mechanism for understanding and articulating the particularity of 'everyday' social practices as they are constituted in particular sites in particular projects (like learning to read in Miss Lilly's Year 1 classroom). It also makes it possible to describe in fine-grained ways the arrangements that influence and shape practices that not only 'hang together' coherently and comprehensibility in the sayings, doings, and relatings found there, but that make participating possible.

Participating in Practices: The Practice Architectures

Participating in practices is inherently social. The transcript above reveals that, as the lesson is evolving to be a reading lesson in this Year 1 classroom, particular social transactions are encountered; in this, the particular kinds of sayings are shaped by distinctive *cultural-discursive arrangements* (like pronouncing the word 'your' correctly; using the word 'characters' or 'illustrations'; or requirements to take turns, think, listen, or speak audibly). At the same time, learning to read in Miss Lilly's classroom is influenced by the *material-economic arrangements* present like

the material resources (books, charts, boards, computers, chairs) and physical set-ups (computers placed in the technology centre, book cases in the library corner, desks arranged in pods, students sitting on the floor in a cluster, the teacher sitting on a chair facing the students). These material resources and physical set-ups arrange the doing of reading in Miss Lilly's classroom (like sitting on the floor in a particular way, looking at the picture, not touching the computer, putting hands up to indicate a ready-response). Simultaneously, in this classroom, particular ways of relating with one another and to non-material objects are being shaped by the *social-political arrangements* that exist or evolve there (like following Year 1 rules for reading, keeping hands off one another, not touching the computer, listening to the teacher, not talking to each other, looking up at the teacher as she reads, or even complying with the teacher question-answer routines).

To do reading on this occasion, Miss Lilly's sayings call into relevance and mutually shape particular material-economic arrangements (although some objects and materials are present but not relevant to the practice at the time; for example, the board behind the teacher or the pin board near the students are not drawn into use in this lesson) and particular social-political arrangements. Practices, therefore, come into being through

1. the cultural-discursive arrangements found in (or brought to) a site; for instance, the technical language of reading books, literacy, language and English curriculum, which have particular meanings attributed to them in reading instruction;
2. the material-economic arrangements found in (or brought to) a site; for instance, how the set-ups of material objects such as desks, resources, and computers are differently arranged in the English lesson to enable particular activities to be 'done'; and,
3. the social-political arrangements found in (or brought to) a site; for instance, how teachers relate to their students as the authority figure or how students relate to their peers and to the objects and resources in the site (Kemmis et al. 2014).

These arrangements occur as intertwined dimensions of practice, enabling and constraining particular kinds of sayings, doings, and relatings that exist or come to exist in classroom lessons. Therefore, to participate in Miss Lilly's reading lesson (as the project of the practice), the practices encountered through saying particular things, doing particular things, and relating with one another in particular ways are shaped by practice architectures, and these practice architectures are, in turn, shaped by practices as they happen. For instance, Miss Lilly's words (as talk-in-interaction) assemble particular ways of being or behaving (Schatzki 1996, p. 116) or acting (through interconnected sayings, doings, and relatings). These are mutually constitutive and co-produced.

Enabling and Constraining Participation

If we zoom in for an even closer examination of the following segment of transcript from the Year 1 reading lesson, we notice how the cultural-discursive arrangements, orchestrated through Miss Lilly's instructions, enable and constrain the students' experience of learning to read:

Miss Lilly:	Sitting down everyone, get in a spot where you can see ((Children shuffling around)); sitting up straight. You need to be listening to me, paying attention? Right, who are the characters in this story, those messy//
Mitchell:	//Pig, the duck
Miss Lilly:	Oh no, remember you don't call out when we're doing our reading Mitchell. We've got to what? Don't touch the computer Kelsey. Come on now what do we do? Carmon?
Carmon:	Hands up ((quietly))

This exchange illustrates the ways in which Miss Lilly's instructions create particular conditions for participation. Miss Lilly brings into the site (in this particular reading lesson with this particular group of students) particular language; this language simultaneously shapes the discursive flow of what happens in the lesson. For instance, the language noticeably influences the sayings (what students say, think, and talk about, like talking about behaving, illustrations, or characters in the story); the doings (what students can or can't do in this reading lesson, like answering questions, looking at the page, sitting up straight, or not touching the computer); and the relatings (how students relate to her, to each other and to the objects in the room like paying attention to the teacher, putting hands up to speak, or waiting to be nominated to answer). The cultural-discursive arrangements in this example therefore shape the practices encountered in this phase of the lesson and shape the classroom dialogue to be more about behaving and following Year 1 rules for reading, at the same time constraining students' opportunities for actually reading or learning more about reading (through identifying the characters in the story, for example). What is enabled in this case is a clarity about the rules for participating (who can respond and when, for instance, the teacher nominating Carmon to contribute an answer) and who is in a position of power (the teacher giving directives and mediating the actions of the students).

At the same time, the cultural-discursive arrangements both assemble and are influenced by the material-economic arrangements. This is signalled by Miss Lilly's requests for students to sit at the feet of the teacher, to face the front, or to not sit behind the pegboard, for example. In this, particular social-political arrangements characterise the relational realm, for instance, that the teacher has the power and agency whilst the students comply and obey. These arrangements occur as intertwined – or enmeshed – dimensions of the practice, enabling and constraining particular kinds of sayings, doings, and relatings that exist or come to exist in classroom lessons. Therefore, to participate requires mutual understanding about the practice architectures that pertain in the site. Significantly, as the transcript excerpt illustrates, these are only made relevant through the dialogues or talk-in-interaction (Schegloff 2007) encountered in the space. This example illustrates that lessons in schools, reading or otherwise, are not solely about the field of curriculum (like the discipline of English lessons), highlighting that lessons are constituted through dialogue that simultaneously organises a semantic space, a place in physical-space-time, and a social space.

Spaces for Learning: Intersubjectivity, Positioning, and Participation

In this chapter, we take an ontological approach (Schatzki 2002, 2010) to understand the nature of the learning spaces where lessons take place. This approach emphasises that practices like teaching and learning reading, for instance, always occur somewhere, in actual sites like classrooms. One way to understand the nature of the spaces is to reach beyond the boundaries of the four walls of the classroom (as a type of container object) to understand the practices and practice architectures in which students and teachers encounter one another locally; i.e., in particular lessons in particular classrooms in particular schools in particular communities. These are ontological considerations that demand attention be given to the actions of people in sites; i.e., in the practices and the circumstances in which they encounter one another; these are distinctive and particular to the accomplishment of practices. Therefore, the theory of practice architectures is a useful resource for understanding the ontological and existential composition of sayings, doings, and relatings that happen amid particular arrangements of entities in

- semantic space (whereby meanings are shared through language, and thought, in which mutual intelligibility and comprehensibility is possible);
- physical space-time (whereby things happen in locations in space and time and in which interactions in shared activities are possible); and
- social space (whereby shared encounters between people afford different kinds of roles and relationships, power, solidarity, and agency).

Together, these spaces form an *intersubjective space* such that teachers and students encounter one another in practices as interlocutors or co-participants in dialogues as they engage in interaction, and in interrelationships (Edwards-Groves et al. 2014; Kemmis et al. 2012). To understand participation as it relates to intersubjectivity, we leave Miss Lilly's classroom, and move into Mrs Andre's Social Studies lesson about Antarctica with her Year 5 students. The classroom where the lesson takes place is situated in a medium sized regional school in NSW, Australia.

At the beginning of the learning episode that unfolded (in real time), Mrs Andre arranged the students into "an inside-outside circle" where the inner circle of students rotated clockwise around the concentric circle. This is depicted in the photograph below (Fig. 2.2). As students moved to face another student, each new pair shared what they had learnt in their inquiry research about the issues facing Antarctica.

Figure 2.2 shows the ways in which Mrs Andre and the Year 5 students encountered one another in the practices of being in this particular lesson about issues facing Antarctica. These practices were shaped by Mrs Andre's actions. Her actions created a particular physical space; this space in turn influenced the kinds of interactions possible at the time, *in*-the-moment of their lesson. Through their positioning in the physical space, the Year 5 students were afforded the opportunity to talk directly with one another about what they had learned. In this, therefore, the physi-

Fig. 2.2 Antarctica lesson: inside-outside circle

cal arrangement of the students being configured as the "inside-outside circle" (visible in the photograph taken before the students came together for the whole class discussion represented in the transcript below) illustrates the way space in the dimension of physical space-time influences both the social space (where the students interacted with one another) and the semantic space (where the students could discuss and share what they had learnt through dialogue). This particular configuration of the physical set up in the classroom provided each student equal time for contributing to the classroom dialogue. After this sharing activity was completed, students came together to sit on the floor in a circle that included the teacher to engage in a classroom discussion; their dialogue is presented in this next transcript excerpt:

Mrs Andre:	Okay, by wandering around listening to what you were discussing in your groups, we've got a couple of things to consider as we were thinking about our big question//
Tom:	//What is the biggest issue facing the future of Antarctica?
Mrs Andre:	Right, good Tom… ((Continues))…thanks for reminding us of that, is Antarctica in danger of devastation? What are the issues? Are they going to destroy Antarctica?
Jamaal:	They could.
Mrs Andre:	'Could'? Why Jamaal? What do you mean by that? Can you go a bit deeper for us?
Jamaal:	Because people do go there to try to stop it ((0.4))
Mrs Andre:	Stop what?
Bray:	Stop global warming and stop tourists, like stop people coming to Antarctica.

Mrs Andre:	Hold on to your thoughts Bray. Let Jamaal finish his thought first, you know that's how we do it here.
Jamaal:	Well, some people go out to Antarctica and fish, fish everything out and so it might become more overfished.
Mrs Andre:	That's interesting Jamaal. Can you say more about that idea? What are the implications of that, of overfishing?
Jamaal:	So like the penguins and whales are dying. When the people like went there, to fish, like and they take too many fish, and the penguins have no food then. And like the Japanese whaling boats, they take too many, more than they need and they are becoming, um extinct.
Mrs Andre:	Jamaal, where did you learn that? Where's your evidence?
Jamaal:	Well, we went to lots of websites first and found out some of it, researching information.
Mrs Andre:	Oh right, so you researched some other things did you?
Jamaal:	And Mariana said she saw something on National Geographic channel too, what did you say again Mariana?
Mariana:	Yeah, well there was a show on about the fishing and whaling in Antarctica; and the Japanese wanting whales for food too, and the scientists have been studying and saying that the fish stocks are running low.
Mrs Andre:	Okay interesting facts here Mariana. O:oh, studying 'fish stocks', that's a technical term, good one, thanks for adding that Mariana. Anyone else want to add to Mariana's idea?
Bella:	Well Antarctica is used as a research station for scientists and experiments. They are studying, going there to find out more about the numbers of fish and how it has affected the penguins, especially the Emperor penguins I think they are.
Archie:	I didn't know that.
Mrs Andre:	Neither did I, Archie; yes, important facts for us all Bella, good to remember to add the detail so we get it right.

(Note: Transcript from Edwards-Groves et al. 2014).

The image and transcript illustrate forms of participation. In fact, to participate in this lesson, Mrs Andre and the Year 5 students created a space where, together through interactions and dialogue, meanings were shared and activities were conducted in their physical space (*in*-the-moment) as they related to one another in particular ways. This is an intersubjective space. Furthermore, for the 'lesson' to occur in this intersubjective space, the teacher-student or student-students' interactions necessitated a shared language that was mutually comprehensible; i.e., they had to come to shared forms of understanding. This notion of mutual comprehensibility in interactions is described by Kemmis and colleagues (2014) "as an interlocutory activity of meaning making" (p. 28). So, participation meant that Mrs Andre and her Year 5 students needed to come to mutual understandings about what language and shared meanings are necessary for participation in the conversations about the issues facing Antarctica; i.e., these students and their teacher created and participated in a semantic space as they encountered one another in their classroom interactions. Participation required knowing – and coming to know – how to do what was necessary to do the activities needed to find information about Antarctica and to engage in a class discussion; i.e., these students and their teacher created and participated in-the-moment in physical space-time. In this lesson, Mrs Andre and the Year 5 students also required knowing about how to 'be' a

social entity as they conducted their discussion and they waited for their turn to speak, acknowledged each other's contributions, and deferred to each other to extend their thinking; i.e., they created and participated in social space.

Therefore, in the *semantic space* of this lesson, we can hear a variety of conceptualisations of the issues facing Antarctica when Mrs Andre and the Year 5 students share talk about what they have learnt. A fine-grained examination of the talk produced in their interaction reveals the way that Mrs Andre and the students had developed a 'shared' knowledge through using specific language that was relevant and appropriate to learning about the issues facing Antarctica. In this space, the students shared information, to come to mutual understandings about content knowledge. They did this through using specific technical language such as 'fish stocks', 'research', 'study', and 'experiments', *as* they discussed the particular activities they engaged in to research information about Antarctica (like using websites, or watching the TV program National Geographic). To accomplish mutual understanding, Mrs Andre and the students used language to arrange, explain, and describe the content (what is this lesson about, what technical language makes it possible?). For example, when Mrs Andre asked Jamaal "What do you mean by that?" she overtly oriented the students to sharing their meanings with the view that understanding each other *and* the content is a priority. Further, they demonstrated mutual understanding of how they conduct a class discussion; i.e., they shared and demonstrated relational knowledge.

In *physical space-time*, we observe (empirically) different activities taking place in their Year 5 Social Studies lesson; these different activities influence the different ways of *doing* or accomplishing the lesson. Mrs Andre deliberately influenced how the students, the discussion structure, the resources and materials – as entities which co-inhabit the space of the classroom – would work and interconnect with one another. Specific physical set-ups (like the "inside-outside circle" depicted in the image, or having the students working in pairs, small groups, or in a whole class group arrangement), resources and materials (like websites, TV programs) were required (noting that at different times, on different days in different lessons with different purposes, different physical set-ups or arrangements will be required).

In their *social space* Mrs Andre and the Year 5 students experienced different kinds of social arrangements, participation rights, routines, and 'rituals' that shaped the roles and relationships between them. For example, when Mrs Andre asked Bray to "hold on to your thoughts to let Jamaal finish his thought first because that's how we do it here", she was signalling that all participants are entitled to finish their turn and that is how the relationship will work. In another way she is *stirring* them in to practices associated with participation and positioning (Kemmis et al. 2014). Interestingly, later in the discussion Mrs Andre returned to Bray (who interrupted another student's turn earlier) to ask him to make the point he raised previously:

Mrs Andre:	Now before we move on, back to you Bray, what was your point?
Bray:	Well, I was just going to say about the fishing, if you stop tourists from going there, stop them fishing all the food away from the penguins.

This "dialogic" move or action of returning to Bray to elicit his point created a social encounter that explicitly indicated to the students in this classroom that, although Bray's calling out was dispreferred initially, his contribution was important to the discussion. The teacher's talk practices (at this point in the sequence) overtly positioned him as an equally valuable participant in spite of the earlier discrepancy. This positioning is important in classroom interactions. Even further to this, as the exchange unfolded, it became evident that the students in this classroom also recognised, respected, and valued each other, their knowledge and contributions. This is exemplified when Archie acknowledged Bella's contribution that Antarctica is used as a research station for scientists to conduct experiments on fish numbers and the effects on the Emperor penguins, and when Jamaal recognised the facts that Mariana had seen on the National Geographic channel that he followed with an invitation to contribute her knowledge. These types of classroom exchanges create particular social-political arrangements that influence the roles and relationships encountered in classrooms, positioning participants in very particular ways; and in fact, positioning the students and the teacher as co-producers of lessons and knowledge.

Teachers, like Miss Lilly and Mrs Andre, and their students, use their knowledge and past experiences of learning spaces to generate appropriate behaviours, and the appropriateness of those behaviours, in turn, serves to define the context in which they interact (Edwards and Furlong 1979; Edwards-Groves et al. 2014). For example, when Miss Lilly asked the students to "remember" not to call out in reading, or when Mrs Andre stated that "it is good to remember to add detail", the teachers directly oriented their students to past experiences. These are mutually constitutive as students learn or come to learn the ways of participating by actually being present in the sayings, doings, and relatings at the time. To do this, they simultaneously bring forth what they know from past moments of participation to co-produce the present in interactions. It follows a Wittgensteinian view that learning is knowing how to go on or is an initiation into practices (Kemmis et al. 2014); i.e., that students are *stirred in* to the ways of learning in particular schools, in particular classrooms and in particular lessons from the moment they enter its boundaries.

The exchanges presented in the empirical material reveal the shape and dimensions of the intersubjective spaces created for learning and participating as the Year 5 students and their teacher Mrs Andre met one another in their lesson as interlocutors in their interactions. These interactions characterise learning as participating through interacting in the *cultural* (this is what we do here), the *linguistic* (this is what we are talking about and the language we use here), the *discursive* (these are the ways our interactions flow through the moments in time through socially organised sequences of turns), the *activity* (this is what we are doing here), the *physical* (these are objects and interaction arrangements we need here), and the *relational* (this is how we are positioned relationally and the ways we relate to one another here) space.

Lessons as Co-production: Students and Teachers as Co-learners and Co-creators of Knowledge

The practices that happen in classrooms are sites of "human coexistence" (Schatzki 2002, 2010) and as the empirical examples from Mrs Andre's and Miss Lilly's lessons show they are also moments of co-production (Edwards-Groves et al. 2014). The students are actors in the site and so, are co-participants in producing what happens there. What this means is that in the discursive sequential flow of the dialogue found in lessons, by responding to teachers' questions, by acting in particular ways, by inviting other students to give an answer, by choosing to use particular language, and by complying with the teachers' demands, the students (at the time) contribute to the unfolding of the lesson. Therefore, along with the teacher, students co-produce, through their part in the interactions, the lessons they are participating in. However, it is also true that in almost all cases where production and co-production are going on, reproduction accompanies them like a shadow – the act of production is also secondarily an act of reproducing or maintaining or reconstituting the practices of production for anyone who observes the production going on (Lundgren 1983). Schools, and so lessons in classrooms, are the most obvious contexts for reproduction since they are designed to reproduce the knowledge, skills, or values and norms appropriate for participation in society (Bourdieu and Passeron 1977). In Miss Lilly's lesson, for instance, the students are co-producing the interactive sequences that constitute a lesson at the same time as they are reproducing knowledge and norms about participation and reading.

In this vein, theorising classroom practices requires understanding what the practices and practice architectures encountered in classrooms are composed of in co-production and reproduction. However, of concern in this chapter is how teachers and students co-produce the practices of teaching and learning as they encounter one another in the sequential organisations of interactions in their particular lesson. Theorising learning practices as co-production positions students and teachers as co-learners and co-creators of knowledge; this requires understanding the sociality of practices. To illustrate we turn back to the empirical cases.

In Miss Lilly's reading lesson, students were involved in co-production when they responded to the teacher's questions and demands (which, in one way, are the practice architectures that shape the practice of reading in this classroom). They co-produced practices and practice architectures. For instance, they co-produced ways of relating to one another and to the Year 1 rules by actually doing these things; at the same time they co-created knowledge about how to behave by contributing information about "how we do reading". Additionally, co-production was evident in the students' and Miss Lilly's use of collective pronouns such as "we" and "our", for instance when Miss Lilly stated, "here **we** have those naughty characters", or reminded Mitchell "**we** don't call out when **we're** doing **our** reading", or when she proclaimed, "when **we're** doing **our** reading groups please remember those important Year 1 rules for **our** reading … [they are] up on **our** chart" or when Carmon responded "**we** put **our** hands up" to Miss Lilly's question. These examples illustrate

how lessons evolve through co-produced activities and practice architectures which are shaped by the language and dialogic practices encountered and enacted in-the-moment; these practices are firmly shaped by the social-political arrangements found there and influence participation and make possible particular ways of relating.

In Mrs Andre's Social Studies lesson, co-production of knowledge of content is exemplified in this transcript excerpt:

Mrs Andre:	Okay interesting facts here Mariana. O:oh, studying 'fish stocks', that's a technical term, good one, thanks for adding that Mariana. Anyone else want to add to Mariana's idea?
Bella:	Well Antarctica is used as a research station for scientists and experiments, they are studying, going there to find out more about the numbers of fish and how it has affected the penguins, especially the Emperor penguins I think they are.
Archie:	I didn't know that.
Mrs Andre:	Neither did I, Archie; yes, important facts for us all Bella, good to remember to add the detail so we get it right.

The exchange in this excerpt shows two key dimensions of co-production: first, the students are responsible for co-creating knowledge – with and for each other – about the issues facing Antarctica by sharing details and facts; and second, Mrs Andre signals her role to be one of co-learner as she also agrees with Archie's comment that he "didn't know that". To explain, Mrs Andre makes it explicit that Bella's important facts and Mariana's use of interesting facts and technical terms is a valuable contribution to content development for the whole of the class, thereby positioning students as co-contributors or co-creators of knowledge. Then by inviting others to extend the points raised by Mariana, she explicates that learning in this class requires co-production: "these are important facts for us all… good to add the detail so we get it right". The use of the words "us" and "we" signal that learning is a collective endeavour in this class; she makes co-learning and co-creating knowledge count. Consequently, Mrs Andre's use of this type of language shapes the social-political arrangements found in this site. Furthermore, being a co-learner involves co-creating knowledge through the sharing of language, mutual involvement in class activities, and taking responsibility for recognising and valuing each other and each other's contributions; and the reciprocity between these dimensions of practices is clear.

Presence and Relevance in Practices

Through the empirical examples presented in the chapter, we have seen how practices are enmeshed in language, activities, and ways of relating, which evolve through particular social transactions encountered as 'lessons'. We have also seen how participating in practices depends on people (like teachers and students) being co-present and co-producers of the particular sayings, doings, and relatings required

to accomplish particular projects (like a reading lesson or a social studies lesson). Co-producing practices and practice architectures in lessons requires teachers and students responding to what is present at the time in-the-moment, but also to what already exists or enters the practice. However, we have also seen that some arrangements are present but not relevant at the time in the lesson (for instance, the Smartboard was not used in Mrs Andre's Social Studies lesson with the Year 5 students); language, resources, physical set-ups, and ways of relating are only made relevant if these are raised or oriented to through the talk-in-interaction or dialogic practices. The talk makes particular practices and material objects or resources count in the doing of the lesson.

The Classroom Interactions as the Machinery for Meaning Making

Lessons unfold interactively through sayings, doings, and relatings. As such, classroom interactions form the machinery in which teachers and students encounter one another as interlocutors, in interactions and in interrelationships in practices (Kemmis et al. 2012). Consequently, to understand learning practices means to understand how teachers and students – as co-participants in dialogues – engage in social transactions that co-produce spaces for sharing and developing. The examination of the transcripts above illustrated the distinctive ways that these are co-ordinated (and to some extent mediated) through dialogic practices (often orchestrated by the teacher). The dialogues, made visible in classroom interactions, form the mechanisms that make particular learning practices relevant at the moment. For instance, as the lessons unfolded, the talk between the teachers and students drew in shared meanings and mutual understandings about how to go on in the particular practice at the time. This aligns with Wittgenstein's (1958) suggestion that people are initiated into practices by coming to know "how to go on" in the practice. Wittgenstein located meaning in language games and forms of life. According to Wittgenstein (1958) a *language game*

> is an activity of a particular kind; it involves participating with others with whom one shares broad 'forms of life' in using language in ways (or arriving at ways) that orient speakers and hearers in common towards one another and the world. In language games, one or more interlocutors may be present, as in an ordinary conversation among people meeting face-to-face or on the telephone, or absent, as in the case of the 'conversation' one has with the dead author of a book one is reading. To understand language from the perspective of language games is to reject the view that language can be understood in terms of meanings that are 'read off' in the mind, on a kind of picture theory in which words and sentences somehow correspond with states of affairs in the world. (Wittgenstein 1958, as cited in Kemmis et al. 2014, p. 28)

In this chapter, we similarly locate meaning in the particular language games experienced by participating in the moment-by-moment classroom interactions that shape the way of life for being a student in a classroom. Language games in

classrooms, as represented in the transcripts, are characterised by particular the sayings, doings, and relatings made relevant for the lesson at the time. Language and meaning making come into being through mutually produced classroom exchanges; these form a shared endeavour between teachers and students as each speaker in the moment attempts to make sense of the other within the flow of interaction. Examining language in the turn-by-turn interactions represented in the transcripts "is to see language not as a lexicon but as an interlocutory activity of meaning making" (Kemmis et al. 2014, p. 28). In turn, meaning making occurs only through language use – through teachers and students entering and using language in their classroom interactions. On this view, learning is not a solitary, cognitive achievement; on the contrary, like language itself, learning or participating in learning practices is a shared, collective, intersubjective achievement, i.e., as teachers and students meet one another in interactions.

The classroom interactions that occur in the everyday unfolding of teaching and learning form the glue that binds together the learning spaces and the practices in 'lessons'. Thus, learning in classrooms evolves intersubjectively as teachers and students co-produce (through their talk, their activities, and their relationships) the practices upon which they rely to support their learning and knowledge development. Conceptualising learning as a co-production of practices orients us to the sociality of classroom life, and, as our data show, orients us to considering learning to be about learning practices that rely on participating in language games. It also directs us to learning as being a shared culture developed through shared language and symbols; it orients us to the salient ontological and spatial-temporal features of *physical space-time*; and it orients us to the particular *social and political arrangements* that shape the ways teachers and students relate to one another (in interrelationships). In this way, to participate, students are *stirred in* to the particular semantic, physical, and social spaces of lessons through the particularity of the language games experienced as talk-in-interaction.

The Utility of the Theory of Practices Architectures for Theorising Classroom Learning and Teaching

In this chapter, to understand the *situatedness* and *happeningness* of participating in classroom learning episodes, we turned to the theory of practice architectures as a useful analytic mechanism that enabled deep conceptualisations of what constitutes learning practices as they happen *in*-the-moment in particular sites. And as we highlighted, learning spaces and practices for participation in primary school lessons, like classroom reading or social studies lessons, are always found to exist and unfold as sites of the social (Schatzki 2002) within the temporally located 'happenings' of the site (Schatzki 2010). These happenings were shaped by the sayings, doings, and relatings that formed the lessons we presented. The theory of practice architectures enabled us, as analysts, to "zoom in" (Nicolini 2012) to examine, in detail, the

moment-by-moment happenings or actions in classroom lessons as these were made visible in and relevant by the dialogic practices that were evident in the classroom. But, critically, it also enabled us to "zoom out" (Nicolini 2012) to see the ways in which the cultural-discursive, material-economic, and social-political arrangements simultaneously influence and are influenced by each other in semantic space, in physical space-time, and in social space. As the transcripts show, close attention to one of these dimensions on its own is not sufficient since each one is held in place by the presence of the others as interdependent, mutually informing resources for understanding the nature and conduct of practice.

Studying practice requires a methodological resource that allows the researcher to understand the cultural-discursive, material-economic, and social-political arrangements found in particular sites to offer a way to theorise the extent to which the practice architectures enable and constrain the enactment of practices. Our analysis of the particular empirical cases presented in this chapter, was strengthened by using the theory of practice architectures since it explicitly affords the possibility of a fuller description of practices by virtue of its making the relational dimension of practice explicit (in addition to the sayings and doings of practices). This feature of the theory of practice architectures enables the examination and critique of practices that the study of social life requires. In fact, it enables fine-grained attention to social practices that always encompass interaction and interrelationships through sayings, doings, *and* relatings. For us, it offered an analytic lens that enabled intense scrutiny of the moment-by-moment talk in interaction to explain how teachers and students, through co-production in dialogues, encountered one another in lessons through language constituted in activity, interactivity, and relationships.

At this point, however, we offer a caution to interpreting the three dimensions of practices that the theory of practice architectures identifies as a solid tripartite structure that always occurs as neatly uniform, seamless and evenly produced constructs. This is a misreading of the theory; rather, we must also explore how the sayings, doings, and relatings that compose practices, and practices themselves, are frequently contested. Understanding contestation allows us also to understand the dynamism of the sociality of practices. Therefore, for the theory to be a robust resource for studying practices like learning in classroom lessons there needs to be an acknowledgement of the uneven-ness and tensions that exist as people interact with one another in practices of one kind or another. Further to this, the theory of practice architectures is not an analytic method *per se*. Rather it provides the analyst with both a lexicon for describing practices as well as a theoretical lens to explore the nature and conduct of practices; it is a focusing research tool open to possibilities that enables a range of analytic techniques (such as the micro interaction analysis used in this chapter) for conducting philosophical-empirical inquiry.

To conclude, we turn to Badiou (2009) who once asked: "What does it mean to come to know a knot? Untying it is not enough, because it might be a matter of chance. It is also necessary to tie it" (p. 243). As a research object, *practice* is indeed a 'knotty' issue. To understand practices requires the researcher to unravel the knots of practices (like learning and teaching in classrooms) to discover the nuances and particularities of practices as they happen in particular sites. Retying these distinctive

pieces, in light of the cultural-discursive, material-economic, and social-political arrangements that make them possible, provides us with a rich and deep understanding of the complexities of learning spaces and the practices entering or already existing there.

Acknowledgements We gratefully acknowledge the teachers and students who are captured in the images in this chapter. Consent for use of images for publication was granted. Although all names are pseudonyms, the images makes identification of individuals possible.

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