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Changing Practices, Changing Education

Springer

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Foreword

Few phenomena are as crucial to human life and as tricky to figure out as education. In recent years the world has witnessed a plethora of efforts to deal with the complexities of this enterprise by specifying common policies and standards as well as precise performance metrics for all schools located in particular, large-scale (often national) jurisdictions. The authors of this outstanding new book, *Changing Practices, Changing Education,* claim that this approach—which they call New Public Management—strips education of its proper goal, that of preparing students to live well in a world worth living in, and transforms education into standardized, factory-like schooling. The antidote to this baneful effort is the realization that education always transpires in particular sites and can achieve its promise if it and its transformation are conceptualized as such. The authors acknowledge that the idea that education always transpires in particular places and should be attended to as such is not new. What this book brilliantly provides is a new way to understand this truth and, thereby, a new conception of a path whereby education can fulfil its mission.

This new approach involves reconceptualizing education and the sites where it occurs through a type of social ontology that has recently been making waves in the social sciences: practice theory. Ontologies of this type advocate analyzing social phenomena as composed of practices. Applying the authors' version of this ontology to education and its transformation involves treating education as a complex—or ecology—of practices, the sites where it transpires as places where practices intersect and develop, and its transformation as a matter of reconfiguring practices, practice ecologies, and the conditions under which they transpire. The result of this reconceptualization is a new, insightful grasp of what must occur for education to realize its promise. Since the book marshals an original version of practice theory, it also makes an important contribution, not just to educational theory, but to practice theory itself.

The book well succeeds at its tasks. The elaborate theory exposition provides the reader with a compelling account of the nature of practices, the semantic, material, and social arrangements that support practices and prefigure their development, and the idea that practices form networks that can be likened to living entities. The authors very nicely conceptualize interdependencies among practices as a matter of practices providing resources for one another. They also stress the importance

of sites, the fact that practices always transpire in particular places: while practice architectures—sets of supporting arrangements—are always the arrangements that support particular practices at particular sites, it is in particular places that practices exist in ecological configurations. The book thereby adroitly depicts how practices concretely proceed and hang together.

The book's version of practice ontology proves its empirical chaps in being put to work analyzing what the authors call the education complex: learning, teaching, professional learning, leading, and researching (self-study on the part of teachers and administrators). These phenomena are analyzed as practices, a tack that sometimes yields original delineations, for example, professional learning treated as practices of developing practices. The authors explore ecological relations among practices of these five sorts, clairvoyantly revealing how practices of one sort provide resources for practices of other sorts—in particular classrooms, schools, and districts. Most intriguing among the many insights that result from treating the education complex thus is the authors' recasting of the venerable question about the effectiveness of teaching in inducing student learning as a matter of the interdependence, that is, the resource interdependence between particular teaching and learning practices. The book's version of the idea that learning is initiation into practices—in its hands, a Wittgensteinian becoming able go on in practices—is also most illuminating.

The book concludes with an eloquent elucidation of site based educational development, the idea that the realization of education as preparation for living well in a worthwhile world must be taken up site by site in response to the particular practices, architectures, and ecologies present in them. Having already traced the complex architectures of and entanglements among practices in particular classes and schools, the authors cogently argue that reforming education requires changing practices class by class, school by school, and that doing this in each case requires altering the arrangements that support practices in a class or school and transforming the practice ecologies located there. No doubt a tall order, but a necessary one.

The significance of this exceptional book lies not just in delivering a novel alternative to opponents of the standards and curriculum establishment. It also lies in demonstrating the value of attending to ontology in empirical research and policymaking. The book provides insightful analyses of schools while also offering new ways to fill out ideas about education and its path forward. It thereby provides guidance for education and a lesson for other researchers throughout the social disciplines.

University of Kentucky Theodore R. Schatzki

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Chapter 1
Education: The Need for Revitalisation

Introduction

Around the world, urgent efforts are being made to transform education for the globalised cultures, economies and politics of the twenty-first century. International comparisons of student learning outcomes drive anxious national education systems towards the transformation of schools, national curricula, pedagogies, assessment and evaluation. Policy for and administration of these intended transformations is couched in the language of the New Public Management: targets, key performance indicators and outcomes. Still captured by the nineteenth century view that the institution of schooling is an elaborate machine, managers of educational systems have aimed to facilitate transformations in the outcomes of schooling by changing the content of curricula, teaching methods and what is assessed. They have made these changes across whole nation-states or provinces, which is to say, across the entire territories over which they have jurisdiction. On the twenty-first century view that the world has been changed by globalised and globalising information and communications technologies, they have also invested heavily in ICT resources for schools. Given these changes, education system managers have invested in the continuing professional development of teachers to inform them about the changes under way and to ready them for new ways of managing students, classrooms, resources, schools and school systems for the globalised, digital era.

Despite these transformational aspirations, however, classrooms and schools have remained strikingly stable as social forms, still clearly recognisable as the progeny of the late nineteenth century multi-classroom, multi-teacher schools created in the industrial era and transported around the globe in the late nineteenth century spate of nation building. In that era, the process of education and the institutions of schooling played indispensible roles—as civilising aspiration, in the case of education, and as an instrument of state discipline, in the case of schooling. To a dispassionate observer, life in today's schools and school systems remains uncannily aligned with the cultural, economic and political imperatives of the late nineteenth century, when mass compulsory schooling emerged throughout the Western world—better aligned with that era, perhaps, than with life in a digital age and a time of globalised cultural, economic and political imperatives. As social forms,

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schools and schooling are obstinately stuck in the nineteenth century. They remain stuck there because people doggedly remake them as 'school'—that peculiar form of life familiar to almost everyone in the developed world, remote though it may be from the ways life is lived in other parts of contemporary societies, and in other parts of the days of schoolchildren, their teachers, their parents, their communities and the organisations in which the children will one day work.

As David Hamilton (1989) eloquently demonstrated, the social form of the contemporary multi-classroom, multi-teacher school and the state-administered school system arose in and for a particular period: from the mid-nineteenth century to the early twentieth. The earlier forms that schools existed in, and the earlier forms of public administration, were re-invented and transformed for the rapidly maturing industrial-mercantile economic systems of the mid- to late nineteenth century and for the economic and military competition between powerful new European nation-states that were then consolidating domestic sovereignty over newly urbanising populations at home and imperial sovereignty over colonies abroad. Nineteenth century nation building was fuelled and funded by industrial and imperial revenues.

The contemporary multi-classroom, multi-teacher school is not just bricks and mortar, however. A social form like schooling is held in place by the combined effect of social practices—the billions of individual, human memories, desires, actions and interactions that each day reproduce and reconstruct the social patterns that make our lives recognisable as the same lives being lived in the same world as the life and the world of the day before. This *collective* reproduction of the world as we know it is one of the most remarkable achievements of our species. It is an achievement that depends upon our orienting ourselves and one another to a shared *culture* through shared language and symbols, orienting ourselves and one another to the same salient features of the *material space-time* we inhabit, and orienting ourselves and one another within *social and political arrangements* that contain and control conflict, secure social solidarities, and give us our selfhood and identities as members of families, communities and organisations. It is an achievement secured by human social *practices*—the practices by which we secure and stabilise the world of today as continuous with the world of yesterday, and as the precursor of the world of tomorrow. Tomorrow's world will pick up where today's left off, with the chairs in the places in the classroom where we left them yesterday, with the next chapter of the book from yesterday's lesson awaiting us, and with the football teams at the same place in the league table as when we went to bed last night. It will pick up where today's left off, with the same stocks on the leader board (though with prices changed in global trading overnight), with the same armies still deployed against each other in dozens of war zones around the world, and with families gathered in hope around new babies beginning human journeys into the ever-changing world.

In this ever-changing world, things do not stand still, frozen in social tableaux. As we are equally well aware, change is happening all the time—in a dance between identity and otherness, a dance between the reproduction of some things alongside the transformation of others. Each day brings new beginnings despite the solidity of what yesterday *seemed* to guarantee: what we remember, what we desire, what words mean, the reliability of language, the weight and place of objects, the self-

evident-ness of our own places in space and time, the security of legitimate social orders, the dependability of family and friends, the otherness of strangers. Each day brings new beginnings despite the seeming solidity of these things and their place in our reconstitution of today's world from the world of yesterday. Among other things, circumstances change as new ideas emerge from new conversations, and as new aspirations arise. They change with shifts in the weather, and as people and things move from one place to another; and they change with shifts in the relationships between people and with tilts in the power-relations of the social orders we inhabit.

The transformation of schools and schooling for the twenty-first century entails the same kind of dance between reproduction and transformation. Education and schooling cannot be other than what they were yesterday and what they are today unless there are some significant transformations of the *practices* that reproduce and reconstitute schooling as we now know it. Education and schooling will not be equal to the new historical challenges of the twenty-first century, that is, if we cannot discover, develop and sustain changed and new practices of education. As we shall see in Chap. 2, new practices of education will be composed and constituted in new forms of understanding (*sayings*), new modes of action (*doings*) and new ways in which people will relate to one another and the world (*relatings*), all 'bundled together' in new *projects*—in this case, new purposes and tasks for education and schooling. And if these new sayings, doings, relatings and projects are to be secured and to survive over time, they will require to support them, respectively, new languages and discourses that express new ways of thinking; new material and economic arrangements that support different ways of doing things; and new social and political arrangements that support different kinds of relationships between the people involved.

A New View of Practices

Various kinds of research literatures have recognised that transforming the world requires changing practices. In the literature of organisational learning, the notion of 'communities of practice' described initially by Lave and Wenger (1991) is one example (see also Wenger 1998). Advocates for the development of 'communities of practice' and 'professional learning communities' in schools also share the insight that practice is inherently interactional, involving communities as well as individuals.

This book builds on that insight. It builds on it, however, from a different and perhaps disruptive perspective. Lave and Wenger and others who have followed them have seen the world of practices through the eyes of individual practitioners who encounter *one another* in their practice, and who learn to adapt themselves and their actions to collective interactional requirements. The world seen by these theorists of 'communities of practice' is a world composed of sovereign individuals—aggregates of individuals—who learn to enter the interactional dances already

available in organisations. They do so by encountering and learning from the other sovereign individuals who also inhabit what Schatzki (2005) calls the sites of organisations.

The theory that informs this book is different. It asserts that individual human beings do not encounter one another in unmediated ways. The people in 'communities of practice' do not interpret each other simply on the basis of their sense impressions, nor do they understand one another only via cognitive information processing. On the contrary, people understand one another in terms acquired in a lifetime of inhabiting the social world. To understand one another, they engage in sophisticated processes of interpretation also acquired over a lifetime. They use different kinds of acquired languages that make the world mutually comprehensible to speakers with those languages in common. These languages help them to enter the physical and social dance of the interactions that make up a practice like teaching or learning or leading, to give just three examples.

Our claim is that participants in a 'community of practice' encounter one another in *intersubjective spaces*. These intersubjective spaces are always already arranged in particular ways, so that people receive one another in these spaces in ways already shaped for them by the arrangements that are already to be found there—and sometimes by new objects that are brought there. These intersubjective spaces 'lie between' people. They are not mysterious; they are palpable and even tangible. They are the meat and drink of our lives as human beings. We encounter these intersubjective spaces, first, in *language*; second, in *space-time in the material world*; and third, in *social relationships*. We discuss them in this book as three kinds of *arrangements* that always already exist in some form (and that can be transformed) in any social situation; and in three *dimensions*, which are, in turn, associated with three distinctive types of *media* in which human beings find and express their sociality and through which they participate, substantively, in society:

1. cultural-discursive arrangements that exist in the dimension of *semantic space*, and that enable and constrain how we can express ourselves in the social medium of language (and symbols)—for example, a shared language like English or Swedish, or shared specialist discourses like knowledge of a discipline like physics or a profession like education;
2. material-economic arrangements that exist in the dimension of *physical space-time*, and that enable and constrain how we can do things in the medium of *work* and *activity*—for example, a room, a home, a workplace, a town, a building or a local region; and
3. *social-political* arrangements that exist in the dimension of *social space*, and that enable and constrain how we can connect and contest with one another in the social medium of *power* and *solidarity*—for example, the relationships between people in a family, a sports team, a club or a work organisation or a political entity like a municipality or nation, or between people and other living and non-living things in an ecosystem or a factory or a digitally-mediated social network.

These three kinds of arrangements 'hang together' in places, in practices, in human lives, and in practice landscapes and practice traditions of various kinds.

We describe and interpret particular *places* as distinctive because they are composed of more or less distinctive configurations that cohere (with or without confusion, lack of coordination, or conflict) across these dimensions. We think of 'home', for example, in terms of shared *language* and shared (and sometimes contested and confused or contradictory) ways of thinking about things. We also think of 'home' in terms of shared interlocking *spaces* (rooms, favourite chairs) and the various activities (showers, dressing, meals, cleaning) that compose its (sometimes contested and ill-coordinated) daily rhythms. And we think of home in terms of a range of interconnected (and sometimes contesting and conflictual) *relationships* between family members and friends. 'Work' or 'school' similarly appears as some kind of whole, composed of a more or less distinctive and overlapping semantic space, place in physical space-time, and social space.

Our lives are also composed of dozens—thousands—of practices on various scales and durations, from cleaning our teeth to playing a sport to practising a profession or occupation. They are not just what we do as lone individuals, however: we encounter one another in practices—whether sharing a meal, falling in love, shopping, going to school, getting an education, or electing a government.

How we act is also shaped in large part by the *practice landscape* of a neighbourhood or a school (for example) that enables and constrains how life can be conducted there, and the *practice traditions* of a particular society or profession (for example) that similarly enable and constrain the ways people conduct themselves. Cultural-discursive, material-economic and social-political arrangements also change and evolve over time, through human intervention and in response to various kinds of social and natural forces. We live our lives amid the arrangements constructed and bequeathed to us by people who have gone before us—from centuries or seconds before—and from our own pasts, both our individual pasts as persons and our collective pasts as participants in such arenas as the families and neighbourhoods we inhabit, and the organisations, occupations and professions in which we work.

Practices as Formed in Intersubjective Spaces: Semantic, Material and Social

Our approach in this book differs from other writings on 'communities of practice' or 'professional learning communities' in how we articulate the ways in which people's practices are already pre-shaped and prefigured (but not pre-determined) in the intersubjective spaces in which we encounter one another: we are not just shaped by one another, by other *people*—as a manager might want to shape a worker, or as a teacher might want to shape a student. As the saying goes, "it's not just about us". There are other, not so invisible 'players' in our social world apart from the people, and they are right under our noses. In terms of the dimensions just outlined, they are the social media of *language*, *work* or *activity*, and *power* and *solidarity*. These, and not just the people we encounter, shape us in their own ways, as well as by the ways we encounter others in them. We are (not deterministically but indeterminately)

both the products and the producers of language, both the products and the producers of work, and both the products and the producers of power.

In this book, we will show how practices are always already shaped (not deterministically but indeterminately) in the dimensions of semantic space, physical space-time and social space. Our actions and interactions (and our knowledge and skills and values, and our memories and desires, and our identities) are always enabled and constrained in, among and by the particular arrangements we encounter as we go through life, at every scale from the micro to the macro, and the local to the global, and on scales of time that range between the instant and the infinite. In these three dimensions, cultural-discursive, material-economic and social-political arrangements do not occur separately from one another; they are always bundled together in practice and in places. Bundled together, they give social life—and our consciousness of it—its apparent solidity, its palpability, its *reality* and its *actuality*. Together, they give what we ordinarily refer to as our social world, its 'taken-for-granted-ness' as the world we live in.

Our intention in this book is not 'just' (one might say) *theoretical* in the sense that we aim to articulate a theoretical language that can be used to describe and interpret the world. Our aim is also *practical*. We have a message that we believe is crucial for the development of education in and for the twenty-first century. It is simple, but it has far-reaching consequences. It is this: *We cannot transform practices without transforming existing arrangements in the intersubjective spaces that support practices*. That is, we cannot transform practices without composing new ways of understanding the world, making it comprehensible in new discourses; without constructing new ways of doing things, produced out of new material and economic arrangements; and without new ways of relating to one another, connecting people and things in new social and political arrangements—all 'bundled together' in new projects of schooling for education.

Our aim in writing the book is also *critical*. We want to identify ways in which our current practices are confused or irrational in the ways they inhabit semantic space, so they unreasonably constrain our individual and collective *self-expression*. We want to identify ways in which our current practices are harmful, wasteful, inefficient, unproductive or unsustainable in the ways they induce us to inhabit physical space-time, so they unreasonably constrain our individual and collective *self-development*. And we want to identify ways in which our current practices lead to injustice or violence in the ways they induce us to inhabit social space, so they unreasonably constrain our individual and collective *self-determination*[1]. Once we have identified such unreasonable constraints, it becomes possible to think about how they might be overcome—the other part of the critical task. This is the task of transformation. Social forms are the products of social practices, and social prac-

[1] Iris Marion Young (1990) describes justice in terms of these three ideas: self-expression, self-development and self-determination. She says that the injustice of *oppression* occurs through practices and structures that unreasonably constrain self-expression and self-development; the injustice of domination occurs through practices and structures that unreasonably constrain individual and collective self-determination.

tices are the products of social forms. Transforming a social form like the school or a curriculum or a particular kind of pedagogy requires transforming the practices that produce and reproduce it. Transforming a social practice, in turn, requires transforming the social forms that produce and reproduce it—including the social forms hidden in the intersubjective spaces by which people comprehend one another, coordinate with one another in interaction, and connect with one another in social relationships.

Most practical people already have a shrewd understanding that transforming practices requires transforming arrangements in the intersubjective spaces in which people connect with one another. We think that it would be helpful, however, if more people could develop a more complex understanding of these intersubjective spaces and how they enable and constrain practices. Developers of a new national curriculum[2], for example, are ordinarily aware that a great deal of professional development will be needed to prepare teachers and students with the new knowledge—in semantic space—to work through that curriculum. Not only will teachers and students need new texts using this new knowledge, however, they will also need to do new things—in physical space-time—if they are to inhabit the new teaching practices that will be required for this new curriculum content, and the new assessment regimes—in social space—that will be needed to determine what students learn from the new curricula in each school subject. To some extent then, people are ordinarily aware that to have new kinds of practices, like the new practices of a new national curriculum, it is also necessary to provide new ideas, new resources and new kinds of relational support to make those practices possible.

Changing Practices Requires Transforming Intersubjective Spaces

The usual way of understanding how to support a transformation like the 'roll-out' of a new national curriculum, however, focuses the effort of the roll-out on sovereign individuals. The usual approach concerns itself primarily with the different kinds of *people* who need different kinds of new ideas, different kinds of resources, and different ways of relating to one another. We want to show that, as well as addressing individuals, making new practices possible also requires creating new *arrangements* so the people involved encounter one another in *new kinds of intersubjective spaces*. In the case of the new national curriculum, for example, it means establishing *new languages* appropriate to the national curriculum. It also means constructing *new spaces and times and physical and financial resources* appropriate to the projected activities of the curriculum. And it means connecting the people involved—students, teachers, leaders, professional developers, managers, students' families and communities—in *new and highly elaborated networks of relationships* that will connect them to the myriad others who also help bring the

[2] At the time of writing, Australia was implementing a new national curriculum. There had been some controversy about whether it was needed and the form it should take.

national curriculum to life in actuality. These others constitute a network of roles and relationships that spreads far beyond the horizons of the lifeworld of the local geographical community, and beyond the school as the local face of the vast administrative and economic systems that support and may (or may not) sustain a national curriculum.

In this book, we explore the process of changing the arrangements to be found in these three different kinds of intersubjective spaces (semantic space, physical space-time, and social space). To make our argument practical and concrete, we draw on examples of educational transformations that have occurred in the schools and school districts we have been studying—examples of transformations in educational discourses, in the provision and use of resources, and in patterns of relationships—that have taken root and reproduced themselves in and through new kinds of practices, some of which have endured over years and decades.

Perhaps surprisingly, given our view that practices cannot be adequately understood from the perspective of the sovereign individual, we conclude that the transformation of intersubjective spaces will endure and be sustained only when people do it for themselves, individually and collectively, both as members of shared social worlds and, for teachers, as members of the education profession. Major changes like the implementation of a new national curriculum cannot be imposed on people without paying a very high price in illegitimacy for those imposing the change, paid for in the resentment and resistance of those on whom the change is imposed. Some say that such impositions, that have now become routine as 'New Public Management', have now colonised every sphere of public administration in much of the world. They have so de-legitimised the authority of governments and their departments that many professionals now experience a substantial portion of their working lives as persons who live out the roles of *operatives* of the systems in which they work, rather than as persons who are moral and professional *agents* with the collective moral and professional agency, autonomy and responsibility to practise their professions (Kemmis and Smith 2008a, p. 5). In the education profession, it is a threat to the life and practice of *education*, which is everywhere beset and harried by the endlessly-administered and institutionalised process of *schooling*.

On our view that changing professional practice in the end requires the assent and commitment of the practitioners of the profession, any school or school system wanting to change its teachers, for example, must create very specific kinds of conditions under which teachers can change. Those responsible for leading change must join teachers—enter the arena with them—not just as operatives in a social or administrative system but also as persons who share the lifeworld challenges of learning new languages, learning to do things differently with different resources, and building new solidarities with each other and with the school or system in which they work. On our view of the evidence, it is not too much to say that, if they want to be successful in the work of systems transformation, educational policy-makers and administrators must foreswear *imposition* and instead embrace *conversation* with those affected. Here 'conversation' should not be taken to include the worn-out formulae and rituals of so-called 'consultation' that today routinely accompany New Public Management 're-engineering' of organisations and procedures—rituals

that listen without hearing to the ideas and concerns of those on whom the re-engineering is imposed.

In making change happen, charismatic leaders sometimes help people shift views, act in new ways, and relate differently to others. But charisma only softens resistance in the process of changing people and changing the intersubjective arrangements that hold people together in practices like the practices of educational work, for example. Real transformational leaders—that is, leaders *throughout* a school system that aims to transform itself—in fact work with others to construct new semantic spaces and ways of understanding one another and the world, find new ways to use new resources in physical space time, and establish new and more solidary ways that people can live together and relate to one another. Reaching this goal requires *communicative action*—the kind of action that happens when people aim to reach intersubjective agreement about how to understand their world, mutual understanding of others' positions and perspectives, and uncoerced, unforced consensus about what to do (Habermas 1987a, b).

In this book, we hope to show why this work of transformation must be done, and how it can be done, to achieve any substantive, sustainable and significant change in practices.

Through the book, we draw principally on empirical material from our research in two Australian school districts, although we also refer, when appropriate, to other relevant research literature. We try to give life to our narrative and our analyses by bringing in the voices of teachers, students, school principals, district consultants and support staff, and senior district managers. As has been conceded by some researchers into leading and learning (for example, Lingard et al. 2003), the voices of students have often been absent in the research literatures on teacher learning and teacher leading. Our research helps to remedy this situation: we are able to show how students' voices, observations and insights are especially valuable in throwing light on how educational practices 'work' and how they learn. No picture of educational practice would be complete without their insider knowledge of how the game of schooling is played. Our research thus helps, in a small way, to fill a significant gap in the contemporary educational research literatures on educational leadership and on professional development and professional learning: namely, how leading and professional learning influence and shape not only teachers and teaching but also students and student learning. Much research on leadership and on professional learning shows effects on teachers, but not how those effects flow on (or do not flow on) to students and student learning.

A Guiding Question

The big question that has guided us as we have written this book is this:

How are schools, teachers, students, leaders and communities responding to the current conditions of education—that is, as they experience education today?

In our late modern or post-modern age, a time of the triumph of neoliberalism in public administration, our answer is not as black and white as we initially expected or supposed it might be. We have long thought that, *in general*, education is being de-professionalised with the rise of a more virulent and instrumental[3] form of schooling, more anxious than ever to domesticate students to the imperatives of the economy and state administration. As the evidence of our study has taught us, however, the story is more complex. *In particular*, we find examples of teachers, students, teacher leaders, formal leaders, professional developers and system managers, all of whom have powerful moral, social and professional commitments to education and the practice of education. They do not live their lives in the moral vacuum presupposed by the discourse, the performative procedures, and the sterilised and relentlessly hierarchical relationships of the New Public Management. They live their lives in an ordinary, practical world luxuriant in critical moral, economic, social, political and environmental issues—a world that constantly calls forth their best efforts as they rise to meet its challenges. It is a world very different from the technical arrangements envisaged by the New Public Management, which seems to presuppose that ends can always be predetermined, key indicators can always be identified, and performance can always be managed by incentives and punishments that always work to steer systems and the people who work in them. One is a world of humans; the other, a world of machines. In Milan Kundera's novel *The Farewell Party* (1984, p.75), the character Jakub describes the tension between these worlds in terms of 'the longing for order' which, he thinks, is

> … a desire to turn the human world into an inorganic one, where everything would function perfectly and work on schedule, subordinated to a suprapersonal system. The longing for order is at the same time a longing for death because life is an incessant disruption of order. Or to put it the other way around: the desire for order is a virtuous pretext, an excuse for virulent misanthropy.

Life in the schools and school districts we have been studying is orderly enough, of course, but we also find there the 'incessant disruption of order' that erupts whenever things become too predictable or stale, and especially when people—teachers, students, leaders, care-givers—encounter something new, whether in a classroom, a staff meeting or a parent-teacher encounter.

This life as an incessant disruption of order continues to express itself in the unruliness that eludes the rules of functionalist management systems. But it does not have only a negative valence. It also has a strong positive valence: the commitment to doing *education* in a world of *schooling*. Schooling—at every level from early childhood to adult and higher education—is the name of an organised institutional process that may or may not be educational. In fact, it may sometimes be non-educational or even anti-educational (like Fagin training pickpockets in *Oliver Twist*).

In the schools and school districts we have been studying, we see not only schooling going on, but also education. In an era of neo-liberalism and the New Public Management, education is not dead. Sometimes obliged to carry an unreasonable burden in terms of performative requirements imposed on teachers (teaching to

[3] Or 'technical'; achieving or aiming to achieve predetermined ends through standardised means.

numberless over-specified objectives, being required to perform in accordance with dozens of professional standards, being assessed through the outcomes of their students on standardised national assessment tests), most of the teachers and leaders we observed nevertheless have a profound commitment to the education of their students. Our knowledge that this is so is one of the "resources for a journey of hope" (Williams, 1983, p.241) that we take with us on the journey that is this book. The book's genesis, our empirical research, our analysis and interpretation, our writing, and our invitation to you, our reader, is to enter the theoretical, practical and critical tasks implied by our guiding question: How are schools, teachers, students, leaders and communities responding to the current conditions of education—that is, as they experience education today?

The Organisation of the Book

The book is organised in three broad parts. In this first part, we outline the general problems to which the book is a response and briefly describe the study from which our data and interpretations are drawn (Chap. 1). In Chap. 2, we outline our theory of practice architectures—how practices are composed, and how they are made possible by different kinds of arrangements that hold them in place—real and concrete arrangements that exist at different sites. In Chap. 3, we briefly describe our theory of ecologies of practices, to show how practices are interdependent—in the case of education, particularly practices of (1) student learning, (2) teaching, (3) professional learning, (4) leading, and (5) researching.

After reading the first three chapters, some readers may wish to turn to the Appendix at the end of the book, in which we present an example of an analysis of a transcript of a single lesson—Sarah's lesson—to show how the theories of practice architectures and ecologies of practices allow us to see how practices are composed in relation to arrangements that exist around them, and how practices relate to one another. Other readers may wish to skip this detour, and perhaps read the Appendix later.

Chapters 4–8 constitute the second part of the book. They present arguments and evidence to show how the five practices of student learning, teaching, professional learning, leading, and researching can be understood through the lenses of the theories of practice architectures and ecologies of practices, and how each is shaped by arrangements that exist in local sites—so that changing the practice at those sites necessarily entails changing the practices architectures and ecologies of practice that hold them in place. Chapter 4 examines the practice of learning, especially student learning; Chap. 5 examines teaching; Chap. 6 examines professional learning, especially teachers' professional learning; Chap. 7 examines leading (at many levels, from a school district to school principals and school executive teams, as well as leading by teachers and by students); and Chap. 8 examines practices of researching.

The third part of the book consists of the final chapter, Chap. 9. It aims to show how the theories of practice architectures and ecologies of practices allow us to see educational practices more clearly as shaped by conditions that actually pertain in diverse local sites: how practices unfold depends on arrangements that exist at those sites, and how particular practices found in those sites are interdependent with other practices that are also found there in their local peculiarity. Through the theories of practice architectures and ecologies of practices, we see practices as shaped and formed at *sites*—not just in general or in the abstract. In Chap. 9, we argue that changing education thus always involves changing not just the practices of teachers or students or leaders or administrators or researchers: it always also involves changing the practice architectures found in particular sites and the ecologies of practices that hold together the different practices that co-exist there in interdependent relationships with one another. When we come to this view, we come to the realisation that changing education is not just a matter, then, of having a national curriculum, national professional standards for teachers and teaching, or national assessments that monitor how schools, teachers and students are going. Changing education is also a matter of having professional educators at every educational site who can interpret, adapt and enliven education so that it reaches out to embrace and include the people who live and work there: students, teachers, leaders, and students' families and communities. To have education and not just schooling at every local site, we conclude, depends profoundly on those people's efforts in their own sites. Revitalising education in the twenty-first century, we believe, depends not just on better curriculum, teaching or assessment ideas or programs, it depends on engaging the people at each site, in each school or school district—or in any other educational institution—in a process of *site based education development*.

Our theoretical work in this book aims to demonstrate a way of understanding education—through educational practices—that will encourage teachers and school leaders, among others, to grasp the opportunity the new millennium offers: the opportunity to renew and develop the work of schools through site based education development. It is our hope as authors that you too will conclude that this work—site based education development—is as essential to the education of students as the work of teaching, and as essential to the profession as implementing national curricula, meeting national teaching standards, or monitoring student learning outcomes via national assessment programs. This work, necessarily a collective enterprise for professional educators at every educational site, is what makes the occupation of teaching a profession. Grasping this way of understanding the work of the profession, we believe, will prepare professional educators for the most important challenge for education in our time, as in every time in the history of education: the challenge of *revitalising education*, not just in the abstract, not just in general, but at every site where the practice of education is conducted. Grasping the task of site based education development will allow the profession to recover and restore the practice of education so that what schools do is education, not just schooling.

The Study

We describe our research approach as *philosophical-empirical inquiry*. We will briefly describe what we mean by this term. We will then outline the empirical material on which we have drawn in the study, from case studies of schools in two distinctive regions in Australia. In one, research was undertaken in three primary schools in a regional/rural area in New South Wales; in another, research was undertaken in a case study school in a metropolitan district in Queensland.

Philosophical Empirical Inquiry

Building on preliminary work undertaken in 2009, in 2010–2012, the authors conducted an Australian Research Council-funded research study 'Leading and Learning: Developing ecologies of educational practice'[4]. The project explored the relationships between the learning practices of students, the teaching practices of their teachers, teachers' professional learning practices, and practices of leadership in classrooms, schools and school districts. The project drew on the resources of contemporary practice theory to interpret these practices and their relationships.

The research approach adopted for this study, what we call *philosophical-empirical inquiry*, involved, on the empirical side, making observations and eliciting descriptions of practices (particularly about the talk, actions and relationships which characterise these practices). On the philosophical side, it involved engaging with topics and issues in contemporary practice theory and philosophy to explore how practice theory helped us to interpret the empirical circumstances we encountered, and how our interpretations could also prompt development in practice theory. An example of how empirical observations prompt theoretical development was when Kemmis and Mutton (2012) in a previous study entitled 'Sustaining practice'[5], noticed that different practices formed constellations in which different practices depend upon one another (for example, at one site, revegetating degraded landscapes depended on growing seedlings which in turn depended on collecting seed and on the prior building of a shade house for the seedlings to be germinated in). Recognising the interdependence of kinds of different practices prompted the development of our theory of *ecologies of practices*.

On the empirical side, we analyse the descriptions of practices we collect, along with our observations of the practices, to identify the specific 'sayings', 'doings' and 'relatings' that constitute these practices and to identify how these sayings, doings and relatings are made possible by cultural-discursive, material-economic and

[4] The authors gratefully acknowledge the support of the Australian Research Council for the 2010–2012 Discovery Project (DP1096275) 'Leading and Learning: Developing ecologies of educational practice', and also gratefully acknowledge the support of Charles Sturt University.

[5] Stephen Kemmis is grateful to the Australian Research Council for its support for the Discovery Project *Sustaining Practice* (DP0773951) and also to Charles Sturt University for its support for the project.

social-political arrangements that are found in or brought to the sites (or arrays of sites) where the practices happen. We aim to identify what Schatzki (2012, p. 14) describes as "practice-arrangement bundles", or what we describe as practices that are enmeshed in *practice architectures*. Like Schatzki (2002), we have observed that practices and practice architectures "hang together" in what he describes as "teleoaffective structures" and what we call the *project* of a practice. For us, the project of a practice is whatever people sincerely say in answer to the question "what are you doing?" (which could be truthfully answered in several ways concerning what a person is doing at any time, like "making sandwiches" and simultaneously "speaking on the phone"). The notion of the project of the practice refers, in part, to the intentions of those involved in the practice, but it also refers to things taken for granted by participants (that we are speaking English at the moment, for example) and things that exist in the *intersubjective spaces* in which we encounter one another in any particular site (in language in semantic space; in activities and work in the material world of physical space-time; and in relationships of power and solidarity in social space). If I am speaking on the phone, for example, I depend on the language I share with my interlocutor (and possibly shared situational or specialist knowledge); on the existence of the telephone network and our concurrent availability in different locations at the same time; and on a relationship between us that is at the least a reciprocal relationship of speakers-hearers but perhaps also a relationship of friends, and also a relationship of each of us with a telephone and such things as the floor we stand on in our different locations.

One of our aims in the 'Leading and Learning: Developing ecologies of educational practices' project has been to identify and characterise the nature and transformations of the practice-arrangement bundles we observe and that our informants describe. In doing so, we are not so much interested in generalised *social structures* that may or may not exist and that may or may not shape the practices we observe. On the contrary, we are especially interested in what people actually say and do and how they relate to other people and things in the course of their practising, and in the actual cultural-discursive, material-economic and social-political arrangements found in the sites where they practise, and that make these sayings, doings and relatings possible. That is, we take the *site* seriously, not just as a surrounding 'context' or 'container' where a practice occurs, but as *a set of conditions* that make the practice possible, even though these conditions do not determine the practice (they may be necessary but not sufficient conditions for the practice to occur). The site is a particular place which simultaneously opens and closes (limits) the intersubjective space in which people (and things) can encounter one another: semantic space, physical space-time, and social space. Our focus on *arrangements* as conditions for practice is influenced by Schatzki's (2003, 2005) conception of "site ontologies" as the nexuses of arrangements that make practices possible at particular sites. Beyond this, we also identify how different practices (like teaching and student learning and teacher professional learning and different people's leading) form what we call *ecologies of practices* in which different practices are interdependent, and develop in relation to one another.

So: we have adopted the approach of philosophical-empirical inquiry in order to explore developments in contemporary practice philosophy and theory (following Schatzki 1996, 2002, 2010, for example), on the one hand. On the other hand, we have adopted this approach to explore the ways that practices develop and are held in place both in terms of the agency and actions of individuals, and in terms of the cultural-discursive, material-economic and social-political enabling preconditions that make these practices possible.

Schatzki (2010) captures a similar intention to our notion of philosophical-empirical inquiry when he describes the approach he adopted in his (2010) research as aimed at producing

> … a type of account that (1) articulates or appropriates a conceptual framework that contains resources for capturing the actual multiplicity of human life and (2) formulates a variety of significant propositions that hold universally, generally or of particular collections of lives (p.xvi).

Thus, he says, his (2010) investigation of the concept of 'activity timespace'

> … aims to articulate an abstract, general framework about activity, society and history that both captures universal and general truths about actual human existence and can inform investigations of particular activities, social formations, and historical phenomena (pp. xvi–xvii).

Kemmis and Mutton (2012) adopted the approach of philosophical-empirical inquiry when, in 2007–2008, they explored the emerging practice of Education for Sustainability (EfS) in ten sites, including schools, colleges, universities and in informal adult education in community settings. They characterised EfS in terms of the kinds of *projects* it encompassed, the kinds of *domains* in which EfS occurred (like saving energy or enhancing biodiversity), and the kinds of characteristic *discourses*, *activities* and *webs of social relationships* in which EfS was manifested. At the same time, the researchers used the resources of contemporary practice theory as prompts that allowed practices to be described and interpreted in new ways. In the same way, our enquiries in the 'Leading and learning' project have led us to some new insights into practices.

So: the overall approach we have taken to research in the study reported here is philosophical-empirical inquiry, in which we aim to create a 'conversation' between topics and issues in practice theory and philosophy, on the one hand, and topics and issues concerning the educational practices we have observed and discussed with our informants. Our empirical material gives us new understandings and interpretations of the topics and issues in practice theory and philosophy, and our engagement with practice theory and philosophy gives us new ways of understanding and interpreting topics and issues concerning the constellation of practices that constitute education today—including not only practices of teaching and student learning, but also professional learning, leading, and researching.

The Case Studies

As indicated, the Leading and Learning project gathered empirical material about practices in two regions of Australia, one in the state of New South Wales and one in Queensland: 'Wattletree District' in New South Wales, and 'Figtree District' in Queensland. We have used pseudonyms for the names of the districts, schools and case study participants discussed in the book. In each location, some material was gathered about the school districts in which the case study schools were located. The material collected from the school districts included policy documents and interviews with leaders, senior administrators and consultants who worked routinely with schools. Although the material gathered from school district personnel became part of the 'case record' (Stenhouse, 1978) for the project as a whole, we did not prepare case studies of the school districts or district offices. We focussed instead on schools, using the material from the district offices to inform our understanding of how various kinds of practices in the schools were also shaped by extra-school cultural-discursive, material-economic and social-political arrangements.

Schools were purposively selected in conjunction with key district personnel from the two district offices who worked closely with schools and teachers on an ongoing basis and who had a clear sense of schools in which teachers and leaders were engaging in exemplary leadership and professional learning practices. Schools were also selected on the basis that they had higher performance than like-schools of similar socio-economic status on standardised measures of academic achievement such as The National Assessment Program—Literacy and Numeracy (NAPLAN). The selection process involved further triangulation against relevant documents, such as school plans, which provided evidence of the leadership and professional learning practices of the schools.

As it turned out, neither districts nor schools were written up as 'cases'; in this book, the cases are *practices*. In Chap. 4–8, we will describe cases of practices of (1) student learning, (2) teaching, (3) professional learning, (4) leading, and (5) researching—as we encountered them in the schools and districts we studied, and as they were enacted by the different people who participated in them. As will become clear, we have made our analyses with special attention to how the sayings, doings and relatings that compose these practices, for the different people who participate in them in different ways and from different perspectives, were shaped by (and shape) the practice architectures that hold them in place: that is, the particular cultural-discursive, material-economic and social-political arrangements that pertain in the sites where the practices were carried out.

We collected evidence about these five kinds of practices in a number of ways. Most important were *observations* of the practices we were interested in, for example, teaching and learning practices in classrooms, and of professional development and professional learning practices in staff rooms and other settings. After these observations, we usually had *debriefing interviews* with key participants in these classes (teachers, focus groups of students) or meetings (teachers, leaders). We also had substantial *orienting interviews* with school district and school personnel that

Table 1.1 Ecologies of practice and practice architectures

	Practices and practice architectures		
Ecologies of practices (All of the practices below are in ecological relationships with one another)	The 'sayings' of practices shaped by (and shaping) cultural-discursive arrangements at the site	The 'doings' of practices shaped by (and shaping) material-economic arrangements at the site	The 'relatings' of practices shaped by (and shaping) social-political arrangements at the site
Educational research and evaluation practices			
Educational leadership practices			
Initial and continuing teacher education practices			
Educational practices (planning, teaching, assessing)			
Students' academic (learning) and social practices			
Cultural, material and social practices in the society			

we used to identify shared foci for our investigations. In these interviews, we tried to find practices that were of conscious interest to the people involved—for example, new teaching practices, or important practices through which teachers, students and leaders aimed to form 'learning communities'. These orienting interviews usually lasted about an hour (some were ninety minutes or more), and were semi-structured, although interviewers and interviewees were guided by a version of this overarching framework (the interviewers gave copies of a less elaborate version of Table 1.1 to interviewees as an orientation to the focus of the study):

We followed up these orienting interviews with other interviews during the life of the study, often with teachers and leaders (inside and outside schools) who became principal informants. These were often people who had some kind of 'big picture' about what they were attempting to do and how they wanted education to develop at their site. The Director of a School District might be one such informant; another might be a teacher helping colleagues to use the *First Steps Writing*™ program effectively in their primary school classes, for example. Students in our focus groups were often key informants, but our relationships with them were mostly short. Our relationships with some of the teachers and school and district leaders who were our principal informants lasted over four years. We often observed or had substantial interviews with principal informants in schools six or more times in a year.

We are immensely grateful to all of these participants in the research, many of whom have become friends as well as colleagues with whom we have worked through the course of our research. While it is true that we started the research as rather unfamiliar 'external' researchers coming into the districts and their schools and classrooms, and into the lives of the people who inhabited them, it is also true

that we became familiar visitors and co-researchers with a number of the teachers and leaders we encountered at each site. We think this shift is not only human but also theoretically significant. As we became co-participants in the research (though not, in a direct sense, co-participants in the practices we were investigating), we gained a greater appreciation of what the practices we were studying looked like *from within*. In other words, we gained an appreciation of the lifeworlds of the people with whom we worked—the insiders' dispositions (knowledge, skills and values) that were in play as they practised, and the culture and discourses of the sites, their layouts in time and space, and the social relationships and politics (both in terms of solidarities and in terms of power) to be found there.

Three Schools in Wattletree District, New South Wales

In the Wattletree District of New South Wales, we worked with three schools in total: two rural primary schools[6]—Westville and Northton—comprising approximately 150 students each; and one regional primary school—Hillview—comprising approximately 250 students. The students at all three schools were from a varying mix of low and middle socioeconomic backgrounds. Both Northton and Hillview students were largely of Anglocentric origin, but Westville comprised a significant number of families from Language Backgrounds Other than English (LBOTE). We explored the work and learning of Westville, Northton and Hillview's students, teachers, and school-based administrators as they—along with Wattletree District's system based administrators—sought to engage in numerous national, regional and local educational reforms. At the national level, for example, school and district personnel were responding to an Australian national testing regime—the National Assessment Program—Literacy and Numeracy (NAPLAN)—a standardised testing regime that sought to ensure minimum level literacy and numeracy standards for all students throughout Australia, regardless of context.

An example of a District policy was Wattletree's six *Communities of Practice Principles* which people in the District and its schools were intended to enact. These principles were described as: collaboration, self-responsibility, human development, communication, meaningful learning and inquiry. The principles were rolled out from the mid-1990s through specific professional development initiatives in the region. These included '*Communities of Practice Institutes*,' which aimed to improve teachers' collaborative learning practices, and a literacy-focused program, '*Pedagogies for Literacy*.'

The *Communities of Practice Institutes* were the starting point of a deliberate district-wide focus on collaborative learning amongst teachers as a vehicle to enhance student collaboration on the view that this would enhance student engagement and thus student learning. There was a particularly strong emphasis upon teachers learning together. Apparently, this was not something which had charac-

[6] In Australia, the term 'primary' school refers to schools which students attend between the approximate age of 5–12 years.

terised educational practices in this district in the past. Rather, teachers tended to operate individually, and the learning practices in the past tended to be focused around Key Learning Areas (KLAs)—Maths, English and Science. The *Communities of Practice Institutes* sought to encourage and promote a more holistic sense of learning. This entailed working across and breaking down these more traditional boundaries. The focus was upon encouraging strategies which could be employed across a variety of disciplines, rather than being discipline-specific.

These Institutes focused upon developing practices of highly effective learning communities both within individual schools, and across the system. The principles of these highly effective learning communities were encapsulated within a policy document which was circulated widely within the District—*Our Children, Our Future*. This document distilled these principles into what became known as six practices of highly effective learning communities. This document encapsulated a District-wide initiative that had currency for over a decade.

Our Children, Our Future became a blueprint for educational action and influenced the development of other programs within the District. In some schools, this included what became known as the *Pedagogies for Literacy* program—which focused upon cultivating classroom talk as a means of improving students' literacy practices. For example, the aphorism adopted in the program, *"Writing Floats on a Sea of Talk*", encapsulated an initial focus for the writing component of the program. This was later varied to "learning floats on a sea of talk" to encapsulate a commitment amongst some schools (including at least one of our case study schools) to developing students' language as a basis for all their learning.

Our research also focused on teacher learning of other kinds. Much of this work was in keeping with a regional focus on 'deprivatisation of classroom practice', and the establishment of schools as learning communities more generally. In particular, Wattletree District personnel were especially influential in facilitating the change from more traditional, privatised practices to a more open approach to teachers' learning. Furthermore, these officers helped facilitate the implementation of particular regional foci—such as a particular literacy program, *First Steps Reading*™—within the District.

Our research gave us many insights into the professionalism and capacity of teachers in the District, as well as how teachers worked closely with District consultants in collegial professional learning, to improve their teaching practices, and their students' learning. This work involved professional negotiation on the part of the consultants who were required to implement particular initiatives and programs at particular points in time by the District, and not necessarily always in ways which would contribute productively to teacher and student learning. However, these consultants also endeavoured to encourage teachers to meet together on an ongoing basis and to undertake their work in ways which would actively challenge taken-for-granted assumptions about their work, in a supportive and encouraging fashion.

Through this collective work, teachers from Northton, Hillview and Westville Primary Schools endeavoured to improve the literacy capacities of students (written and oral, as well as multi-media focused) by providing teaching experiences that developed students' oral skills and capacity. This was not just a technical approach to

enhancing language skills, but was seen as a holistic pedagogic approach designed to improve students' inquiry capacities more generally. Teachers sought to challenge their students, as well as to provide opportunities to ensure adequate learning progress amongst those students who struggled to express themselves verbally and textually. The success of various initiatives in specific school sites was reflected in students' capacities to express themselves more fluently and accurately than had previously been the case, and to recognise that they were active participants in their own learning who could recognise that these improvements had taken place.

A School in the Figtree District, Queensland

Our research also explored the work and learning of teachers, community liaison officers and students in a small-to-medium sized primary school, Southwood Primary School, in a metropolitan region, Figtree District, in the large urban conurbation in south-east Queensland. Approximately 130 students attended the school, which had 21 teachers and 17 non-teaching staff. The school served a diverse community, with approximately 60 % of students speaking a language-other-than-English. A significant number of students were refugees from war-torn and strife-ridden countries. Twenty-three cultures were represented in the school, with 26 languages spoken at home.

While the school had long been associated with serving the needs of marginalised youth, these needs had increased and diversified over time. In 2003, and in response to concerns about the circumstances surrounding disaffected young people in the region, Figtree District Office commissioned an experienced researcher in the area of marginalised youth to conduct surveys into the circumstances of students in each of the region's schools. This revealed much higher rates of homelessness, marginalisation and disengagement from school than had previously been thought to be the case.

One response to this situation was the establishment of the *Working Together* project which involved members of reference team (including District, school and community representatives) working together to build a case for additional funding to support students and families associated with the school. This project arose from concerns about poverty, family isolation, a limited understanding of and capacity to access professional and support services, and a distrust of government agencies (including those associated with schooling). Consequently, in 2006, the Southwood School *Working Together* project was implemented.

Funding was provided by the District to the school to employ one Community Liaison Officer to work closely with teachers, and a second Community Liaison Officer, who would liaise between various community agencies and the school. A review and external evaluation undertaken in 2008 by a neighbouring university recommended the program be continued for a further five years. A number of school officers were also employed on a part-time basis. This included a bilingual school officer to serve as an important link between families and the school.

The Community Liaison Officers encouraged improved interactions and relationships between students within the school as a means of promoting the school's

role within the community. Relationships of respect and reciprocity undergird this work. The Community Liaison Officers' role involved collectively seeking ways to engage diverse students in learning, including in relation to their physical and social environment. By working closely together, these Officers sought to draw upon various cultural experiences, including the arts, environment-based education, and other culturally relevant experiences to engage students with learning within and beyond the school.

A key, ongoing program was the school-community garden project. The garden project comprised communal spaces which allowed family members of students, other members of the local community associated with the school in some way, and students, to develop their own garden plots. Within the school, the garden was considered an important resource which fostered students learning about the principles of permaculture, biodiversity, agricultural systems; how to provide for their own food needs; as well as providing a vehicle for improving students' social interactions. For family members of school students, the garden provided a space to meet members of their own culture, as well as to engage with members of other cultures, and to assist in providing for some of their own families' food needs. For members of the wider community, the garden represented an educational space within which members could meet to learn about principles of permaculture, and as a vehicle for self empowerment as they became more involved within the wider Southwood community. The Community Liaison Officer worked closely with teachers and students to help make connections between the formal school curriculum, the local community, and the garden.

Relatedly, the *Reading to Learn* project within the school also served as a useful vehicle for community development, as well as the growth and learning of students and teachers at the school. This initiative grew out of concerns that parents of students from refugee backgrounds were not in a position to assist their children to access the dominant curriculum of schooling, and included practices such as reading with their children. Consequently, members of the local community came together to assist parents to learn English, as well as to listen to students reading. In this way, students and their parents benefited from the good will of members of the broader Southwood community. Equally, the broader community benefited from these interactions as they built increased knowledge and understandings of the Southwood School students and their families.

Analysis

As we have indicated, our analyses of the empirical evidence we collected are in a dynamic reciprocal relationship with the theories we have developed in the course of our research: the theory of practice architectures as a theory about what practices are composed of, and the theory of ecologies of practices which is a theory about how some practices relate to one another interdependently. Our general approach to the research is, as we have said, philosophical-empirical inquiry. Some readers might expect us to say a little more about 'methodology' than we will say. Throughout the book, we try to give examples drawn from our research to illustrate our key

points. As a reader, you will *see* the kind of evidence we have used to arrive at our interpretations and conclusions about the life of practices in the practice architectures and ecologies of practices they inhabit—and especially about the entwined lives of the practices of student learning, teaching, professional learning, leading and researching.

In order to be transparent about the kind of analyses we make, we have included an Appendix to the book presenting a detailed analysis of a single lesson: Sarah's lesson about expository texts. In Chap. 2 and 3, we respectively present the theories of practice architectures and practices of ecologies on the basis of which we have made our analyses. Also, as we say in the Appendix, the *analysis* is intended to be the example, not the *lesson*. We have included this analysis in order to show how we use the theories of practice architectures and ecologies of practices as analytic tools. Some readers may want to refer to the Appendix after reading about those theories in Chap. 2 and 3, others may want to skim or skip the Appendix.

Conclusion

By exploring the educational practices—(1) student learning, (2) teaching, (3) professional learning, (4) leading, and (5) researching—in these two school districts and the case study schools, we hope to be able to throw light on the sorts of 'sayings', 'doings' and 'relatings' that constitute contemporary educational practices at the sites we studied. We also hope to throw light on the practice architectures—the particular cultural-discursive, material economic and social-political arrangements—at the sites that hold each of those kinds of educational practices in place, and in the particular forms they happen to take in the sites we studied. Those are the principal tasks we begin in Chap. 2, and pursue in Chap. 4–8. We also hope to show how the five educational practices relate to one another in ecologies of practices. This is the task begun in Chap. 3, and also pursued in Chap. 4–8. We think that our analyses show, through the exploration of specific instances of changed practices, how practices are transformed not just by changing the sayings, doings and relatings of those involved, but also by changing the practice architectures that enable and constrain their practice. Moreover, we think our analyses show how transformations of practice are secured not just by working on teaching, student learning, professional learning, leading or researching practices alone, but by transforming each of these practices in relation to the others—in ecologies of practices. Understanding how practices are embedded in practice architectures and in ecologies of practices, we think, provides new resources for transforming education. Rather than succumbing to the mechanistic, industrial view of schooling promulgated by advocates of the New Public Management in educational policy and administration, we hope to provide insights into educational practices that will stimulate new beginnings for education in and against an era of schooling.

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Chapter 2
Praxis, Practice and Practice Architectures

Introduction

The aim of this chapter is to outline a view of praxis and practice that allows us to re-imagine the work of teaching, learning and leading. It does so, first, by reconnecting with a lifeworld—human and humanistic—perspective on practice as a human and social activity with indissoluble moral, political and historical dimensions. Practice always forms and transforms the one who practices, along with those who are also involved in and affected by the practice. Moreover, practice transforms the world in which the practice is carried out; by doing so, practice makes history. This perspective is approached through the concept of *praxis*.

After a brief discussion of *praxis*, the chapter elaborates an 'outsider' perspective on practice that takes account of the dimensions of *intersubjective space* discussed in Chap. 1. It does this by outlining a theory of practice and practice architectures.

Finally, the chapter shows how the theory of practice architectures offers a way of theorising Education. By doing so, it reconnects practice with individual and collective *praxis* as a way of expressing the double purpose of Education: to help people live well in a world worth living in.

Praxis and Education: Educational Praxis

There is a tendency in our times to imagine that processes like Education and schooling are technical processes concerned with the production of things—the production of people of a certain kind, for example, or the production of 'learning outcomes'. On this technical view, some understand teachers as technicians who are responsible for producing such learning outcomes in the knowledge, skills and values of the students they teach—as if it were the teachers alone, working with the pliant or resistant 'raw materials' that are the students themselves, and with the tools and resources available, who 'produce' the outcomes. Such a view overlooks the agency of the students; at every age (though with less responsibility when they are very young), they too are responsible for what they learn or do not learn—for their

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own self-formation. Schwab (1969), Gadamer (1975, 1983), Grundy (1987), Dunne (1993) and Kemmis and Smith (2008b) have written extensively on the limits of this technical view. These authors draw attention to another kind of action: practical action taken in response to the particular circumstances surrounding "uncertain practical questions" (Reid 1978, p 42), that is, questions that are answered only by *doing* something (even if that means *not* doing anything other than what one is already doing; Gauthier 1963). It turns out that we confront uncertain practical questions more or less constantly, in the form "what should I do now/next?" The kind of action we take in these circumstances is not a kind of rule-following, or producing an outcome of a kind that is known in advance (both characteristic of technical action) but rather action whose consequences are more or less indeterminate, but that can only be evaluated only in the light of their consequences—in terms of how things actually turn out. This kind of action is 'praxis'.

There are two related views on what 'praxis' is: first, a view that reaches back to Aristotle, according to which praxis might be understood as "action that is *morally-committed, and oriented and informed by traditions in a field*" (Kemmis and Smith, 2008a. p 4), that is, action that aims for the good of those involved and for the good for humankind. A second view of praxis, following the usage of Hegel and Marx, understands praxis as 'history-making action,' that is, as action with moral, social and political consequences—good or bad—for those involved in and affected by it. In *The German Ideology* (1845/1970) Marx and Engels articulated their historical materialism, arguing that social formations, ideas, theories and consciousness emerge from human and collective social praxis, and that social action (praxis) makes history. In much Anglophone usage today, the term 'praxis' is used in the Aristotelian sense; in much of Europe, by contrast, 'praxis' is used in the post-Hegelian, post-Marxian sense. 'Educational praxis,' therefore, may be understood in two ways: first, as *educational* action that is morally committed and informed by traditions in a field ('right conduct'), and second, as 'history-making *educational* action'.

The term 'education' also needs clarification, especially in a European context. In Chap. 1, we noted the distinction between 'education' and 'schooling'. We believe much Anglophone usage of the term 'education' is much corrupted today because, in Anglophone usage, we too often use the term 'education' when we really mean 'schooling' (the activities that routinely go on in different kinds of 'educational' institutions that *may or may not* be educational). Common usage obscures and threatens to erase the important distinction between education and schooling, with the consequence that the philosophical and pedagogical origins and competing intellectual traditions of education as a discipline, field and profession begin to become invisible. Here is our definition of education:

In our view, *education, properly speaking, is the process by which children, young people and adults are initiated into forms of understanding, modes of action, and ways of relating to one another and the world, that foster (respectively) individual and collective self-expression, individual and collective self-development and individual and collective self-determination, and that are, in these senses, oriented towards the good for each person and the good for humankind.*

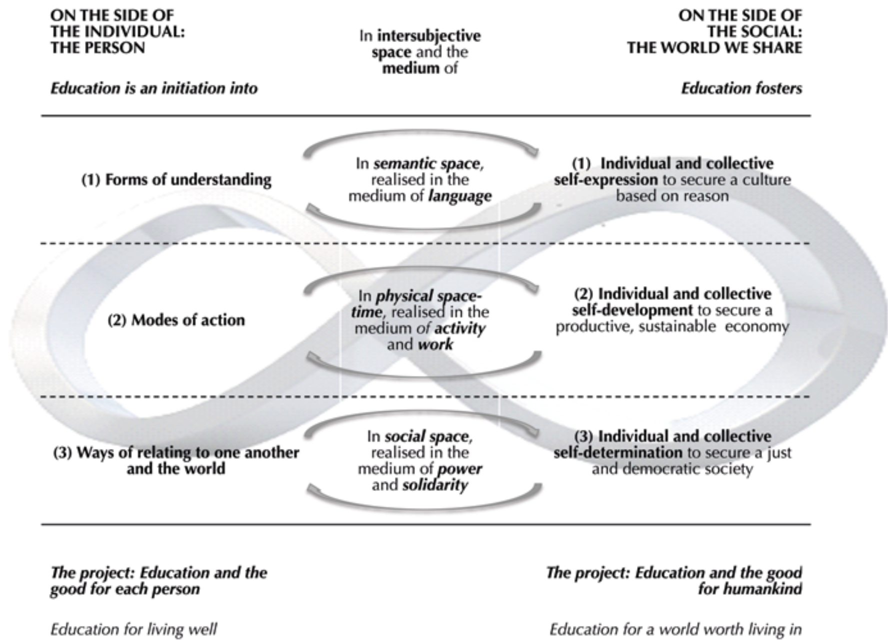

Fig. 2.1 A theory of education

This definition of education, schematically presented in Fig. 2.1, shows the double purpose of education: to prepare people to live well in a world worth living in. On the side of the individual, it concerns the formation of persons; on the side of the social, it concerns the formation of communities and societies. It thus takes a view about how people should live in the world, and about the kind of world they should aim to establish.

To achieve this double purpose of the good life for each person and the good life for humankind, education must be conducted in ways that model and foster the good life for humankind—what it means to live well in a world worth living in. Yet ‘what the good life for humankind *is*’ is permanently contested. In *After Virtue* (1983. p 204), Alasdair MacIntyre concluded that

> … the good life for man [*sic*] is the life spent in seeking for the good life for man, and the virtues necessary for the seeking are those which enable us to understand what more and what else the good life for man is.

This is the journey on which everyone concerned with the discipline, the field and the profession of education is embarked: the task of unravelling, for some particular time and place, what the good life for humankind consists of. Inevitably, however, given our different standpoints and life experiences, people will disagree about what the good life for humankind is. What counts as the good life for humankind, individually and collectively, must always be determined anew for changing times and circumstances. Similarly, what it is good for any person or group to do at any particular historical moment is always a matter for practical deliberation.

On this view of education and its double purpose, the practice of education, properly speaking, must always be conducted as praxis in both the neo-Aristotelian and the post-Hegelian, post-Marxist senses. It is praxis in the neo-Aristotelian sense because it aims to be 'right conduct' aiming at the good for persons and the good for humankind. It is praxis in the post-Hegelian, post-Marxian sense because it aims at the formation of rising generations of children, young people and adults into modes of personal and moral life and modes of social and political life that are oriented towards the good for each and for the good for all.

Practice

The view of practice we advance in this chapter draws on recent developments in practice theory and philosophy (for example, Gherardi 2000, 2008, 2009; Green 2009; Kemmis 2009; Reckwitz 2002; Sandberg and Dall'Alba 2009; Schatzki et al. 2001; Shotter 1996). In particular, we have been greatly influenced by the practice theory and philosophy of Theodore Schatzki (1996, 2001, 2002, 2003, 2005, 2006, 2010). As will become clear, however, our theory of practice diverges from Schatzki's in a number of ways.

Language Games, Activities and Practices

To begin, we distinguish language games, activities, ways of relating and practices adopting a broadly Schatzkian perspective. A *language game* (Wittgenstein 1958, 1975) 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. The theory of language games, by contrast, sees language and meaning as a shared achievement among speakers and hearers, authors and readers, and as something dynamic and interactive. It is to see language not as a lexicon but as an interlocutory activity of meaning making. In turn, this process of meaning making, both on the side of the individual person using the language, and on the side of the history of words, languages and language communities, occurs only through language use—people entering and using language. On this view, learning or mastering language is not a solitary, cognitive achievement; on the contrary, like language itself, learning or mastering a language is a shared, collective, *intersubjective* achievement.

An *activity*, according to Schatzki (2010, p 171), is a "temporalspatial event". The temporal nature of an activity is evident in what we might call the 'happeningness' of activities in that they occur only in the present, although they are oriented towards the future and in response to the past. Activities are also spatial events in the sense that they occur somewhere—in particular places or sites, and of course this is also symbiotically related to their temporal nature. "The anchoring of places at particular objects is grounded both in the prescriptions, acceptabilities, and regularities of practices and in the motivations, projects, and ends that determine people's actions" (Schatzki 2010, p 171). Thus, *practices* are distinct from *activities*; they are, "the site of the social" (2002, pp 146–147). According to Schatzki (2002, p. xi):

> The social site is a specific context of human coexistence: the place where, and as part of which, social life inherently occurs. To theorize sociality through the concept of a social site is to hold that the character and transformation of social life are both intrinsically and decisively rooted in the site where it takes place. In turn, this site-context … is composed of a mesh of orders and practices. Orders are arrangements of entities (for example, people, artifacts, things), whereas practices are organized activities. Human coexistence thus transpires as and amid an elaborate, constantly evolving nexus of arranged things and organized activities.

This idea of a "nexus of arranged things and organised activities" is central to Schatzki's view of the social world. It is an ontological view in which "arrangements" play a role in enabling and constraining human action and human coexistence. His ontological emphasis helps us to see, first, the *material* "things" (like doors and walls, gravity and colour) that enable and constrain action, but we can readily add to these the *semantic* things that likewise enable and constrain action: the languages and specialist discourses that shape the ways we interpret the world. And to these we can add the *social* things that enable and constrain what we can do: most obviously, other people, but also social groups and relationships that shape the ways we act in relation to others. These three dimensions of sociality will be important in the view of practices we take in this book, which is a little different from Schatzki's. Shortly, we will show some of the ways our thinking differs in our respective notions of 'practices'.

Schatzki (2010. p 51) defines practices thus:

> By a "social practice" I mean an open, organized array of doings and sayings. Examples include political practices, horse breeding practices, training practices, cooking practices, religious practices, trading practices and teaching practices. Practices of any of these sorts can vary historically and geographically, the variation consisting in different practices of a given sort comprising different doings and sayings, organized differently, with a different history. The doings and sayings that compose a practice are organized by phenomena of four types: (1) action understandings, which combine knowing how to perform an action that helps compose the practice, knowing how to recognize this action, and knowing how to respond to it; (2) rules, by which I mean formulated directives, admonishments, orders, and instructions to perform or leave off certain actions; (3) a teleoaffective structure, which comprises acceptable or prescribed ends, acceptable or enjoined projects to carry out those ends, acceptable or prescribed actions to perform as part of those projects—thus acceptable or prescribed end-project-action combinations—as well as, possibly, accepted or prescribed emotions and even moods; and (4) general understandings about matters germane to the practice. The ends, projects and actions that form a teleoaffective structure can be enjoined of and acceptable for either all participants in a practice or those participants enjoying certain statuses, for example, certain roles or identities.

As will be seen, our research program is informed by our engagement with Schatzki's theorizing of practice. His conceptualization of practices focuses on the '*doings*' and '*sayings*' of practices. While it is clear, in his (2002) *The Site of the Social* that these doings and sayings imply relationships between people and things that are 'organized' and arranged in time and space, and it is clear in his (2010) *The Timespace of Human Activity* that he sees sayings and doings as temporally and spatially arranged, we believe that the 'relatings' aspect of practices needs to be made explicit. Making 'relatings' explicit brings the social-political dimension of practice into the light, draws attention to the medium of power and solidarity which always attends practice, and invites us to consider what social-political arrangements in a site help to hold a practice in place. We thus include *sayings, doings* and *relatings* in our conceptualization of practices, and understand practices as enabled and constrained by three kinds of arrangements that occur at sites, namely, *cultural-discursive*, *material-economic*, and *social-political arrangements* (respectively). These three dimensions of human sociality have ancient roots. Hadot (1995), for example, refers to the ancient Greek distinction between three parts of philosophy—(a) *dialectic* or *logic*, (b) *physics*, and (c) *ethics*—which were regarded as separate only for pedagogical purposes, that is, only to help people learn what it means to 'live a philosophical life' and thus (a) to speak and think well (logic), (b) to act well in the world (physics) and (c) to relate well to others (ethics)[1]. In more recent social theory, similar dimensions are identified by such theorists as Habermas (1972) who discusses the three social media of (a) language, (b) work and (c) power; and Bourdieu (for example, 1990, 1998) who discusses (a) cultural and symbolic capitals and fields, (b) economic capital and fields, and (c) social and political capitals and fields. Of course we do not want to assert that these categories are identically conceptualized by these very different theorists. In the light of these considerations, we want to speak not only of *sayings* and *doings* but also of *relatings*.

At the same time, we have also been influenced by MacIntyre's (1981. p 175) very different view, according to which a practice is

> … any coherent and complex form of socially established cooperative human activity through which goods internal to that activity are realized, in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended.

There is not space here to elaborate, but there are resonances between the role played by the 'internal goods' of a practice in MacIntyre's definition (for example, the goods of history that can be realized only by the practice of history, the goods of chess that can be realized only by the practice of chess) and the role played by the notion of 'teleoaffective structure' in Schatzki's—and by the role of teleology

[1] In a different order, but with the same force, Marcus Aurelius (121–180AD, Stoic philosopher and Roman Emperor (161–180AD), said that [the human soul, freed of everything foreign to it,] "does what is just, wills the events which happen, and tells the truth" (*Meditations*, XII, 3,3; in Pierre Hadot, 2001. p 237). Ordered as in the text above, they would be (a) "tells the truth", (b) "wills the events which happen", and (c) "does what is just".

in his more recent (2010) characterization of activity timespace. These notions of internal goods and teleology give practices their distinctive character as practices of a particular kind (for example, farming, chess, herbal medicine production, horse racing). We are inclined to believe that both these ideas are captured in the notion of the *project* of a practice—what the practice 'hangs together' in. Simply put, the project of a practice is what people say when they sincerely answer the question "what are you doing?"

In arriving at our working definition of practice, we focused most particularly on the relationship between participants (or practitioners) and a particular practice as being a relationship in which participants speak language characteristic of the practice (*sayings*), engage in activities of the practice in set-ups characteristic of the practice (*doings*), and enter relationships with other people and objects characteristic of the practice (*relatings*), all oriented by the distinctive kind of project characteristic of the practice. Therefore, as a guide to our empirical observation, we focussed on how participants in a practice take up and use the *sayings*, *doings* and *relatings* that the organization of the practice 'offers' them. Shortly, we will describe this organization in terms of *practice architectures*. Thus, taking a lead from MacIntyre and Schatzki, our working definition of a practice is this:

A practice is a form of socially established cooperative human activity in which characteristic arrangements of actions and activities (doings) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (sayings), and when the people and objects involved are distributed in characteristic arrangements of relationships (relatings), and when this complex of sayings, doings and relatings 'hangs together' in a distinctive project.

This quality of 'hanging together' in a project is crucial for identifying what makes particular kinds of practices distinctive. *Sayings*, *doings* and *relatings*, and *cultural-discursive*, *material-economic* and *social-political arrangements* can and do exist independently of practices. All are galvanised into action in more or less coherent ways in relation to one another, however, when they hang together in the conduct of distinctive practices (even if they sometimes include contradictory ideas or contrary impulses or relationships of conflict or contestation between participants).

The Theory of Practice Architectures

On our view of practices, (a) individual and collective *practice* shapes and is shaped by (b) what we will describe as *practice architectures*, so that (c) the *sayings*, *doings* and *relatings* characteristic of the practice hang together in *projects* that in turn shape and are shaped by (d) *practice traditions* that encapsulate the history of the happenings of the practice, allow it to be reproduced, and act as a kind of collective 'memory' of the practice. The practice architectures that enable and constrain practices exist in three dimensions parallel to the activities of *saying*, *doing* and *relating*. They constitute enabling and constraining preconditions for the conduct of practices. They appear in the form of:

- *cultural-discursive arrangements* (in the medium of language and in the dimension of *semantic space*) that are the resources that make possible the *language and discourses* used in and about this practice; these arrangements enable and constrain the *sayings* characteristic of the practice (for example, constraining what it is relevant to say, or—especially—what language or specialist discourse is appropriate for describing, interpreting and justifying the practice);
- *material-economic arrangements* (in the medium of *activity and work*, in the dimension of *physical space-time*) that are the resources that make possible the *activities* undertaken in the course of the practice; these arrangements enable and constrain the *doings* characteristic of the practice (for example, by constraining what can be done amid the physical set-ups of various kinds of rooms and indoor and outdoor spaces in a school); and
- *social-political arrangements* (in the medium of *power and solidarity* and in the dimension of *social space*) that are the resources that make possible *the relationships between people and non-human objects* that occur in the practice; these arrangements enable and constrain the *relatings* of the practice (for example, by the organizational functions, rules and roles in an organisation, or by the communicative requirements of the lifeworld processes of reaching shared understandings, practical agreements about what to do, and social solidarities; Habermas, 1987a).

Our conceptions of *practice architectures* and *practice traditions* have a resemblance to Schatzki's (2010, pp 104–105) felicitous notion of "*practice memory*", although we take a different view of how such memories are stored. In our view, social memories are not only stored in participants' individual memories, they are also hidden right under our noses, in plain sight. In the semantic dimension, they are stored in the *logos* of shared language used by people in a particular site. In the dimension of physical space-time, social memories are stored in physical set-ups and the activity structures of work and life at the site. In the dimension of social space, social memories are stored in such arrangements as organizational-institutional roles, rules and functions or the inclusive and exclusive relationships characteristic of the different lifeworlds people inhabit in the site. We reject the view of collective memory that hypostatizes some version of 'collective mind'; however, our formulation does not require us to posit social memory as stored entirely in the individual memories and interactional capacities *of actors*. We view practice memories as sedimented into the architectures of practice settings in terms of the languages spoken and discourses used there (for example, the discourses teachers use in justifying the structure of a mathematics lesson for Year 3 students), the physical set-ups and activity systems to be found there (the set-up of the Year 3 classroom, the timetable, and the rhythms of classes and school days), and the organisational arrangements that pertain there (for example, the reciprocal role relationships between the teacher and the students in the class).

On the one hand, according to our theory of practice architectures, practices come into being because people, acting not alone but collectively, *bring* them into being. In practices, individual will, individual understanding and individual action are *orchestrated* in collective social-relational *projects* like teaching children to read or theorising and researching professional practices. On the other hand, people's

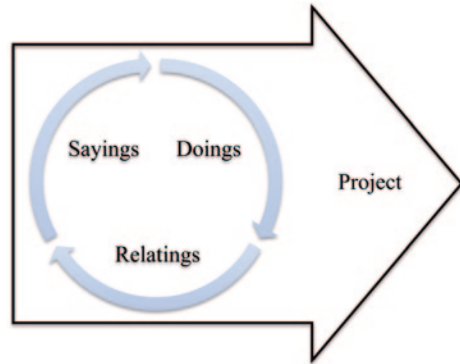

Fig. 2.2 Practices are composed of sayings, doings and relatings that hang together in projects

individual and collective participation in practices is prefigured and shaped by the *practice architectures* characteristic of the practice, that is, the cultural-discursive, material-economic and social-political arrangements present in or brought to a site. As suggested earlier, in our view, these sayings, doings and relatings hang together intersubjectively in the *project* of a practice, as depicted in Fig. 2.2.

These practices, which constitute a project of one kind or another, occur in the present, although they are oriented towards the future and in response to the past.

Site Ontologies

Schatzki's theory is an *ontological* theory of practices. It insists on the reality of practices as things that are always *situated* in time and space, and that unfold and happen in *site ontologies* (Schatzki 2005). While of course it addresses practices in general, Schatzki's theory requires us to understand that, as they occur in reality, practices are always located in particular sites and particular times. Practices are not performed from predetermined scripts; the way a practice unfolds or happens is always shaped by the conditions that pertain in a particular site at a particular time. The practices that we observe in real life are not abstractions with an ideal form of their own; they are composed *in* the site where they happen, and they are composed *of* resources found in or brought to the site: cultural-discursive resources, material-economic resources, and social-political resources.

Practices unfold or happen in what Schatzki (2010) describes as *activity timespace*, in which an activity unfolds in time, and in which objects in physical space are linked together and arranged by a particular activity. The notions of site ontologies and activity timespace lead us to the insight that *practices are not merely set in, but always already shaped by, the particular historical and material conditions that exist in particular localities or sites at particular moments*—that is, sites are not a container-like 'context' for practices; rather, practices take on shapes at least partly prefigured by the particular, historically-given *contents* and *conditions* pertaining at a particular site at a particular moment. In particular, the sayings, doings and relatings of a practice take up and express (a) particular cultural-discursive contents and conditions that exist in the

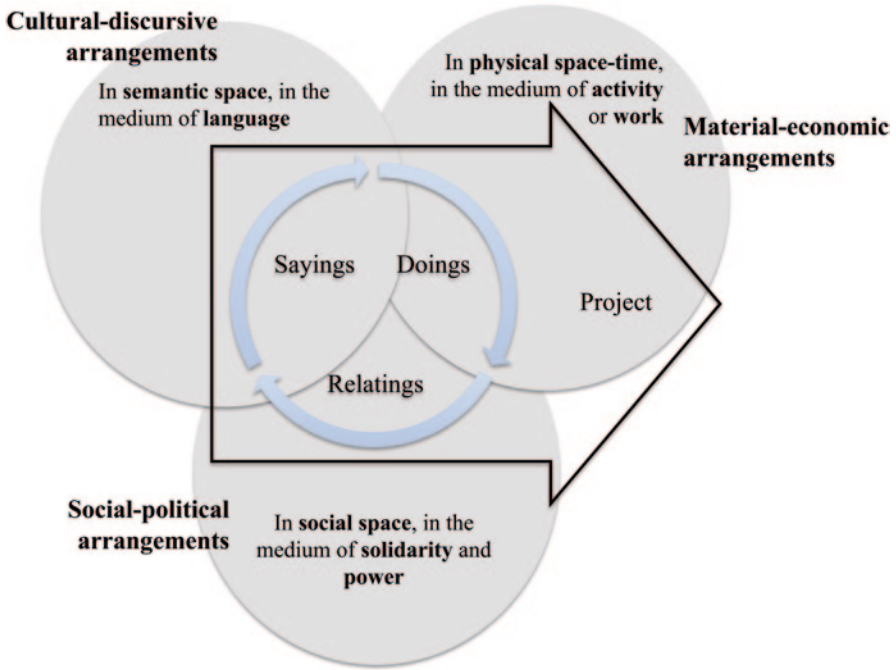

Fig. 2.3 The media and spaces in which sayings, doings and relatings exist

site (in the dimension of *semantic space* and in the medium of *language*), (b) particular material-economic contents and conditions in the site (in the dimension of *physical space-time* and in the medium of *work/activity*) and (c) particular social-political contents and conditions obtaining in the site (in the dimension of *social space* and in the medium of *solidarity* and *power*). Figure 2.3 aims to depict this embeddedness.

The relationships depicted in Fig. 2.3 are not just abstract. *As it happens* (Schatzki, 2006), a living practice becomes part of the *happening* that unfolds in a particular place, part of the happening *of* that place, part of its existence and being in time. The practice takes up sayings, doings and relatings already to be found in the site, *orchestrates* and engages with them, and leaves behind in the setting particular kinds of discursive, physical and social traces or residues of *what happened* through the unfolding of the practice. These traces or residues are left not only in participants' memories and interactional capacities but also in the practice itself as a site for sociality. Some of these residues become part of the practice architectures of the setting and are newly encountered by others who subsequently inhabit it—for example, when tomorrow's class discovers where the chairs were left in the classroom by today's students, or when new contributors to a debate in the research literature of a field find that the field has 'moved on' from the debates of earlier years.

To give an example of a practice happening as part of the place it happens in: we observed a kindergarten class in which the children were making and experimenting with 'garden ornaments'. The kindergarten curriculum required that children should

learn the 'properties' of different kinds of 'materials'. The teachers wanted to find interesting ways in which students could encounter different kinds of 'materials', identify some of their 'properties', and see how the materials and their properties changed under different kinds of 'forces'. Thus, they arranged to have the children make different kinds of garden ornaments, from a variety of materials like wood, metal, plastic, wire, string and cloth, and subject them to 'rain' (sprinkling from a hose) to see how the 'properties' of these different kinds of 'materials' were affected. The classroom, the school and the curriculum functioned together as a site for the teachers; they took up the ideas and artefacts (desks, floor, string, scissors and many other things) present in the site (some brought to school from home by the students) and found an orchestrated way to harness them in a classroom discovery learning activity (a distinctive kind of teaching with a distinctive tradition).

Once the teachers had designed the activity, the students found themselves in a classroom site in which certain *ideas* or *sayings* ('materials', 'properties', 'experiment') were present, and they took up relevant sayings, doings and relatings associated with those ideas. The classroom is also a place where certain kinds of *activities*, or characteristic arrangements of *doings*, were also already present—for example, attending and listening while teachers introduce lessons, engaging in activities directed towards discovering things, reflecting on what happened, and behaving appropriately. And, in terms of *relatings*, it was also a place where participants were expected to relate to one another in already established ways—politely to everyone, obediently to teachers, and so on. The teachers and students in the class followed generally established arrangements for (enabling preconditions for) saying, doing and relating in the classroom, but they also took up and engaged with the particular sayings, doings and relatings associated with the particular orchestrated *project* of making and testing the students' garden ornaments. Making these garden ornaments was a new and distinctive project, but it was also connected with the pre-existing language games, activities and practices characteristic of the broader projects of schooling and education.

In general, then, practices take up characteristic arrangements of sayings, doings, relatings and the projects in which they hang together in particular sites; practices engage and enmesh with these arrangements; and practices leave behind distinctive traces in the ideas, activities, relationships, identities and capabilities of the participants, on the one hand, and, on the other, in the practice architectures of the sites—namely, the cultural-discursive, material-economic and social-political arrangements that pertain there.

In every practice, those involved enter, engage with and leave traces in the shared and overlapping semantic spaces, material spaces, and social spaces that always already exist in particular places. In Schatzki's terms, *the practice itself is the site* in which these shared spaces exist and overlap. That is, the practice is a site in which certain kinds of meaning are possible (in sayings, in the semantic space made relevant by the human social projects in this setting), in which certain kinds of things will be done (in doings, in the physical space-time relevant for the projects being conducted in the setting), and in which certain kinds of relationships will occur between people and objects (in relatings, in the kinds of social space created by the projects being conducted).

A practice, like another we observed, namely, helping children overcome reading difficulties following the specialised program called '*Reading Recovery*™'

(Schatzki 1993), does not merely 'pass over' or 'pass through' the place where *Reading Recovery™* practice happens; it engages with the place, and it is itself a site, in at least these three distinctive ways:

- Through its *sayings*, a practice unfolds using the language and discourses spoken (and thought) through which the site is comprehensible and can be understood as a site of a certain kind. For example, in the case of *Reading Recovery™* practice, the *Reading Recovery™* teachers and, increasingly, the children, employed a particular theoretical discourse about language and literacy to describe and interpret reading and reading difficulties and to justify certain sorts of interventions, and they read particular texts that are part of the program materials. The discourse they used was not something abstract or universal; *as it happened* in this particular place and time, it was site-specific. The language in which the practice was conducted left behind specific memories, interpretations and understandings about what happened; the site became a site for the use of this language and to be interpreted in these ways.
- Through its *doings*, a practice engages people and objects in activities, activity-systems and work that are part of the material 'happening' of the site. For example, in the case of *Reading Recovery™* practice, the teacher and a student met in a separate room and the teacher worked in particular ways in response to this particular student's particular reading and writing performances. Particular materials were present, such as magnetic letters and boards or levelled books, which enabled *Reading Recovery™* to be done. The practice left behind different physical traces and consequences (in the case of *Reading Recovery™* practices, in the form of particular reading resources and changed capabilities in the students and teachers at the site).
- Through its *relatings*, the practice connects people and objects in relationships that locate them as part of the site. For example, in a case of *Reading Recovery™* practice we observed, the teacher exhibited a particular kind of relationship with the students as they encountered one another in the one-to-one learning situation, and particular kinds of quadratic relationships were established between the *Reading Recovery™* teacher, the student, the student's regular classroom teacher and the student's parents. The practice left behind traces in the relationships between participants, like their incumbency of particular roles (*Reading Recovery™* teacher, student, classroom teacher, parents) and specific attachments to others (or resistance to or avoidance of them).

In these ways, a practice engages with and becomes enmeshed with the practice architectures in a site, becoming part of the living fabric of the place. Within the place, *the practice is itself a social site organizing what happens*: the practice is a site that meshes together a semantic space, a place existing in physical space-time, and a social space, so that these three 'hang together' as a practice in relation to a distinctive kind of human project. To use Schatzki's (1996, 2002) term, a practice is a *nexus* of sayings, doings and relatings.

We thus take the view that a practice is enmeshed with the cultural-discursive, material-economic and social-political arrangements—the practice architectures—that

make it possible, and that these arrangements are in this sense necessary to the practice, in the way that an ecological *niche* is necessary to a biological organism, making its life possible. We thus refer to these conditions of possibility that exist at the site as the *niche* for a practice. The *site* is an actual place located in the three dimensions of intersubjective space (semantic space, physical space-time, and social space; populated respectively by cultural-discursive, material-economic and social-political arrangements that pertain there), while the conditions of possibility are the *niche*.

Schatzki (2012) describes the relationship between practices and arrangements as *practice-arrangement bundles*. He describes (2012, p 16) the way practices are "bound up" with "materialities" so that practices and arrangements "bundle together":

> Because the relationship between practices and material entities is so intimate, I believe that the notion of a bundle of practices and material arrangements is fundamental to analyzing human life …. To say that practices and arrangements bundle is to say (1) that practices effect, use, give meaning to, and are inseparable from arrangements while (2) arrangements channel, prefigure, facilitate, and are essential to practices.

By becoming enmeshed with a site, a practice is laid down like a *path* that future participants can follow—ways we do things in this classroom, for example, or ways of relating politely to others, or ways of thinking about properties of material objects, or ways of performing as a *Reading Recovery*™ teacher or student. And the path laid down becomes part of a way of being—a form of life—in the site for those who inhabit it by participating in the practice. This theory of practice and practice architectures, described here, is summarised diagrammatically in Fig. 2.4.

The theory of practice architectures has profoundly shaped the way we have looked for evidence about practices in the research we report in this book (see also Kemmis & Heikkinen, 2012). Table 2.1 presents a 'table of invention' (a notion that comes from the notion of *topoi* or arrangements of topics in Aristotle's,1924, *Rhetoric*) that guides us as we observe and analyse practices. It is a version of Fig. 2.4, but the cells in the Figure have been expanded to show what we focus on in our analyses of practices. In each cell, there is a brief outline of the key terms in the theory of practice architectures. Extended examples of the use of this Table in analyses of episodes in a lesson about expository texts can be found in the Appendix.

Conclusion

We think that the theory of practice architectures contributes a new way of understanding the doubleness of educational practices, and the particular cultural-discursive, material-economic and social-political arrangements that hold particular educational practices in place—that is, education as it happens in actual local sites.

In the light of our theory of practice architectures, we can now further elaborate our definition of education. We may now say that education, properly speaking, is the practice by which children, young people and adults are initiated into other practices.

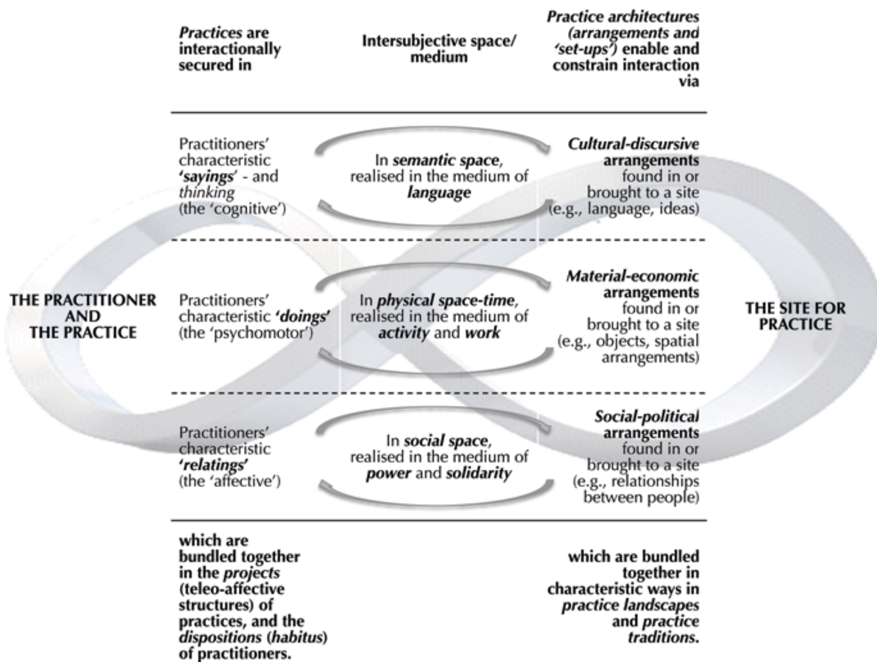

Fig. 2.4 The theory of practice and practice architectures

On the one hand, we can also say that people learn the *dispositions* appropriate to the practices into which they are being initiated: (1) forms of understanding (*sayings*; what people often describe as cognitive knowledge), (2) modes of action (*doings*; what people describe as skills and capabilities), and (3) ways of relating to one another and the world (*relatings*; what people describe as norms and values).

On the other hand, we may also say that, in the process of being initiated into a practice, learners engage with and draw upon the practice architectures in a particular site. These are the practice architectures that enable and constrain and thus support the practice: (1) relevant cultural-discursive arrangements (in semantic space, in the medium of language), (2) relevant material-economic arrangements (in physical space-time, in the medium of activity or work), and (3) relevant social-political arrangements (in social space, in the medium of power and solidarity), found in or brought to the site. Through their practising, as they are initiated into practices, learners thus become *enmeshed* with these practice architectures, as they present themselves in the kinds of arrangements found in or brought to the site. They learn how to inhabit the site as a site for a particular kind of practice.

There are different kinds of 'products' of educational practices, then: the dispositions (knowledge, skills, values) learners develop; the practices they have learned how to do; and what they have learned about how to inhabit the intersubjective space created by the practice—how to inhabit a particular kind of site. These different

Table 2.1 Table of invention for analysing practices

<table>
<tr><th colspan="2">Elements of practices</th><th colspan="2">Practice architectures in the site</th></tr>
<tr><td colspan="2">Project
In this cell, we describe what we take to be the project(or telosor purpose) of the practice we are studying, based on the evidence available (for example, the content of a transcript and other related observational, interview or documentary evidence available). When a participant sincerely answers the question ‘What are you doing?’, they describe the project of the practice (from their perspective).</td><td colspan="2">Practice landscape
In this cell, we describe how people and objects are differently enmeshed in the interactions (that is, in the activity-timespace) of the practice being studied. Different people and objects may be involved at different stages or in different episodes or in different aspects of the practice, and they may participate in different roles or from different perspectives. Some objects not apparently relevant to the activities (the ceiling, for example) may in fact play a role in enabling or constraining the practice and in this way be enmeshed in the activity-timespace of the practice.</td></tr>
<tr><td>Sayings</td><td colspan="2" rowspan="3">In the cells on the left, we identify the principal sayings, doings and relatings that compose and ‘hang together in’ the practices under study; alongside these, on the right, we identify (respectively) the principal cultural-discursive, material-economic and social-political arrangements that are resources that make possible (prefigure) the sayings, doings and relatings we observe. In the analysis, we aim to identify at least the most significant proximal arrangements that shape the sayings, doings and relatings observed (things present in the site), and, where relevant, more distal conditions (like more widespread languages of policy or theory, more extensive material layouts, or wider sets of social relationships in or beyond organisations) that are significantly enmeshed in the practices under study. Together, the cells on the left describe the practice in terms of what is said and done and how people relate in it; together, the cells on the right describe the practice architectures that form the niche (on the model of an ecological niche) that permits the practice to survive in the site.</td><td>Cultural-discursive arrangements</td></tr>
<tr><td>Doings</td><td>Material-economic arrangements</td></tr>
<tr><td>Relatings</td><td>Social-political arrangements</td></tr>
<tr><td colspan="2">Dispositions (habitus)
In this cell, we describe what we take to be the most significant dispositions (or habitus) called on or developed in the principal participants as they participate in the practice. Bourdieu (1990) describes the habitus as a set of dispositions developed by a participant enacting a practice in cultural, material and social fields (for example); these dispositions are what give the participant the ‘feel for the game’ that makes it possible for them to act appropriately in the field. In our view, dispositions include knowledge, skills and values. Knowledge relates chiefly to the sayings and cultural-discursive resources (in language, in semantic space) present in or brought to the site; skills relate chiefly to the doings and material-economic resources (in activity and work, in physical space-time) at the site; and values relate chiefly to the relatings and social-political resources (in power and solidarity, in social space) at the site.</td><td colspan="2">Practice traditions
In this part of the table, we comment on the practice traditions that appear to be in play, reproduced, or transformed in the practice. This sets the interactions that compose the practice against a longer history of practice, including at least the history of practice in the local site (for example, in terms of how the participants have acted and interacted as part of the practice in the site over previous days, months or years).Where relevant, we also comment on the practice interpreted against a broader history of this kind of practice (for example, how practice in a particular classroom might be an expression of a practice tradition like progressive education or a particular approach to literacy education).</td></tr>
</table>

kinds of products include not only that students learn how to live well, but also that they have a role to play in constructing, locally and globally, a world worth living in. In this way, educational practice, properly speaking, initiates learners into forms of knowledge that foster individual and collective self-expression, modes of action that foster individual and collective self-development, and ways of relating to others and the world that foster individual and collective self-determination, and that are, by virtue of these things, oriented towards the good for each person (individually) and (collectively) the good for humankind.

In the next chapter, we will show that practices, in particular educational practices, relate interdependently to one another 'ecologies of practices' in which

a. knowledge is distributed among participants and in different discourses (in semantic space);
b. activities are distributed among participants and in activity systems or networks (in physical space-time, and, activity timespace);
c. participants and participation are distributed in particular kinds of relationships to one another (and to other objects) in social space; and in which
d. these distributions 'hang together' (Schatzki ,1996, ,2002) and are orchestrated the project of the practice—projects of many different kinds and levels, that range from simple activities like 'going to school' to major life tasks like 'getting an education'.

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Chapter 3
Ecologies of Practices

Introduction

In this chapter we will establish the case that there are connections between practices, and that these connections are developed in particular sites, and in specific relationships between different practices. In Chap. 2, the nature of practices and the theory of *practice architectures* were discussed, and now we want to show that practices are established and exist in sites in ecological arrangements. These ecological arrangements are characterised by interdependence among practices and among the practice architectures that hold different practices in place.

We have developed our theory of ecologies of practices in response to our observations of cases in which the *sayings, doings* and *relatings* that come into being as one practice unfolds become practice architectures that enable and constrain another practice. Thus, for example, the practice of teaching can become a practice architecture for the practice of student learning. In this case, the *sayings*, *doings* and *relatings* that constitute a particular practice of teaching become part of the practice architecture that supports the practice of learning; the teacher's sayings, doings and relatings become practice architectures for the students' learning. To put it more precisely, the specific *cultural-discursive, material-economic and social-political arrangements*) that come into being and are materialised in the unfolding of a particular practice of teaching (teacher's sayings, doings and relatings) in a particular site enable and constrain the way the practice of learning can unfold for the students in the site.

We do not think of these relationships between practices only in abstract or general terms—like the generalisation that teaching can influence learning. Our theory of ecologies of practices makes us carefully attentive to how the particulars of one practice, as it unfolds, creates practice architectures for other practices that are also found in particular sites. Our attention is not on how different participants co-inhabit a site, but on how different practices co-inhabit and co-exist in a site, sometimes leaving residues or creating affordances that enable and constrain how other practices can unfold. We think that the strength of the ontological perspective on practices we take in this book lies in its challenge to *general* and *abstract* ways of thinking about practices, and its insistence on seeing how practices and practice architectures

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exist *in reality*. We are not so much interested in saying that, *in general*, practices and practice architectures of *professional learning* shape practices and practice architectures of *teaching*, for example, as in showing how *in practice*, the particular practices and practice architectures of one practice come to shape or be shaped by the practices and practice architectures of another practice. This perspective might once have been described in terms of the 'natural history' of practices, but might nowadays be thought of in terms of ecologies and ecological relationships.

As we will show, the relationships between some practices can be understood using the notion of *ecologies of practices* (note that we say 'ecologies of practices', in the plural, not 'ecologies of practice'). In particular, we want to say that the five practices that are the focus of our interest in this book—(1) student learning, (2) teaching, (3) professional learning, (4) leading, and (5) researching—are frequently in relationships of ecological interdependence—but that we need to study how these practices appear in actual sites to know *how* they are or are not in fact ecologically interdependent.

We begin this chapter by critiquing some earlier uses of the term 'ecologies of practice' (note that the 'practice' here is in the singular). We also make reference to Fritjof Capra's theory of living systems that provides some concepts that we find helpful for describing how practices can sometimes be in relationships of interdependence. Then, based on our empirical and theoretical work, we present our theory of ecologies of practices. In Chap. 4–8, we present detailed evidence from our observations in the *Leading and Learning* project to show how some particular practices of (1) student learning, (2) teaching, (3) professional learning, (4) leading and (5) researching are sometimes dependent on one another.

Critiquing the Notion of 'Ecologies of Practice'

The notion of 'ecologies of practice' (note that the 'practice' here is in the singular) is not new. Others have used the term in different ways. An early and striking usage is that of Stronach et al. (2002) (subsequently taken up by Fisher and Owen 2008). According to Stronach et al. (2002), 'ecologies of practice' refer to the sorts of individual and collective experiences, beliefs and practices that professionals accumulate in learning and performing their roles. They relate mainly to 'craft knowledge', and may be intuitive, tacit or explicit. They go on to suggest that the 'ecologies of practice' they identified in empirical studies of professionalism and professional identities in nursing and teaching

> … comprised the accumulation of individual and collective experiences of teaching or nursing through which people laid claim to being 'professional'—personal experience in the classroom/ clinic/ ward, commonly held staff beliefs and institutional policies based upon these, commitments to 'child-centred' or 'care-centred' ideologies, convictions about what constituted 'good practice', and so on. These generated a *tension* for professionals, and it seemed to us that it was in living this tension, with its contradictions, dilemmas, compromises, etc., that they experienced themselves as professionals. The job of understanding professional 'work' and 'belief', accordingly, involved reading these tensions, and locating 'professional' experiences betwixt and between these affiliations. (p. 122, emphasis in original)

This definition of 'ecologies of practice' seems to us to lack clarity and precision. Stronach et al. also indicate that 'ecologies of practice' have both individual and collective aspects. They say: "ecologies did not relate solely to the past, present and future of individual professionals. They were also *collectively experienced*…" (p. 124, emphasis original). Stronach et al. do not significantly elaborate the notion of 'ecologies of practice' in more theoretical detail, and their usage of the term remains metaphorical, and part of a "poetics" (Shotter 1996, p. 293). In fact, Stronach et al. introduced the term 'ecologies of practice' to make a deliberate (and poetic) contrast with the 'economies of performance' they observed in professional work settings. Their use of the notion of 'ecologies of practice,' however, remains under-theorised, and outside the kinds of contemporary practice theory that might give it more weight and clarity.

Another usage is the notion of 'ecology of practice' (note that in this usage, both the 'ecology' and the 'practices' are in the singular) discussed by Stengers (2005), subsequently taken up by Potter (2008). Stengers (2005) similarly seems to avoid clearly stating what ecologies of practice are, but at one point she says:

> … each achievement in the ecology of practice, that is, each (always partial) relation between practices as such, as they diverge, must be celebrated as a 'cosmic event', a mutation which does not depend on humans only, but on humans as belonging, which means they are obliged and exposed by their obligations. Such an event is not something that can be produced at will. (p. 192)

Commenting on Stengers's (2005) conceptualisation of the 'ecology of practice', Potter (2008) clarifies some of Stengers's (2005) esoteric discussion of the relationships between practices, belonging and obligation. She writes:

> Stengers' response to [the] defensive relationship between different disciplinary practices is to advocate an 'ecology of practices' as an innovative 'tool for thinking through' what concerns us (p. 185)… The ecology of practices model is an alternative approach to the 'warring' of knowledges around a given topic: its view is that no single practice can claim authority in its access to reality, and proceeds by the demand 'that no practice can be defined as "like any other", just as no living species is like any other'. That is, the divergence of practices is a point of engagement. (p. 184)

Within this ecology, disciplinary boundaries signal the space of relations *between* practices as active and meaningful rather than as sites of irreconcilable difference. An ecology of practice insists that reality will not be revealed by a single knowledge: what is real appears incrementally as knowledges /practices cluster and brew. These knowledges/ practices are situated and contingent, informed by local conditions, both material and discursive, that make an omniscient viewpoint impossible. By recognizing what attaches practitioners to their particular interests and methods, the fantasy of the nomadic scholar, "free to go everywhere, to enter any practical territory, to judge, deconstruct or disqualify…" (Potter, p. 191) is fundamentally challenged.

While Stengers (2005) and Potter (2008) do not clearly elaborate their theory of the ecology of practice, Weaver-Hightower (2008) does offer a theoretical account of ecology. Weaver-Hightower uses ecology as a metaphor to orient the analysis of policy formation and implementation. He presents a more elaborate theorisation of the elements of an ecosystem and relates these notions to the social ecologies within

which policy are formed and implemented. For him, the ecology metaphor makes it possible to write about ‘policy ecologies’. He is critical of previous “thin” uses of the term ‘ecology’ where it was synonymous with ‘context’ or ‘environment’. He outlines the characteristics of policy ecologies in some detail, drawing on the definition of ‘ecology’ used in the life and physical sciences (that is, referring to a system of relationships among organisms and between organisms and their environments). In ecological science, each factor and organism has influence on the others, and many complex inter-relationships between them are required to sustain an ecological system. Weaver-Hightower aims to show that a *policy* ecology works in similar ways; as with any metaphor, however, he concedes that there are divergences (not all biological processes correspond to human social processes, and vice versa). He says:

> A policy ecology centers on a particular policy or related group of policies, both as texts and as discourses, situated within the environment of their creation and implementation. In other words, a policy ecology consists of the policy itself along with all of the texts, histories, people, places, groups, traditions, economic and political conditions, institutions, and relationships that affect it or that it affects. For every contextual factor and person contributing to or influenced by a policy in any capacity, both before and after its creation and implementation, is part of a complex ecology. (p. 155)

Weaver-Hightower (2008) makes a contribution to understanding what an ‘ecology’ is and might be in the case of social fields and, in particular, the field of policy. He usefully elaborates a number of concepts which he takes to be crucial to an ecological perspective, including *actors*, *relationships*, *environments and structures*, and *processes* to be found in an ecology. However, he remains clear that his use of the term ‘ecology’ is *metaphorical*—which suggests that he does not expect his elaboration of the interrelations between the categories and elements he identifies to describe actual (non-metaphorical) entities and relationships in the world. Furthermore, several things seem to be missing from his view of ecological relationships, especially when we adopt Schatzki’s (2003) perspective of a ‘site ontology’. We aim to show how the notion of ‘site ontology’ helps to give a better *grounding* for an ecological conception of the creation and implementation of a policy in a specific place, and a greater sense of the *concreteness* of actual social relations, as distinct from kinds of the *universalistic* or *generalising* ambitions of Weaver-Hightower’s account of policy ecologies. These universalising ambitions are contrary to the more modest ambitions of social description adopted by Schatzki which focus on the *local and situated*, though they may also still hold out the promise of universal understandings of the nature of social life.

Thus, in our view, Weaver-Hightower’s (2008) use of the ecological metaphor is instructive, but remains at a general, rather abstract level. While the conception of ‘ecology of practice’ offered by Stengers (2005) offers some useful insights, it remains theoretically vague. In the case of Stronach et al., the term seems to be used merely as a felicitous phrase rather than a theory of the interdependent and interconnected nature of practices.

In this chapter, we make a case for a theory of ecologies of practices which goes beyond earlier notions. In subsequent chapters, we will provide detailed illustrations of how practices sometimes relate to one another ‘ecologically’.

Ecologies of Practices as 'Living' Systems

Can we regard a practice *as* a living thing, or as *like* a living thing? We are not sure we can answer this question definitively. Certainly, however, practices *depend* on one key kind of living thing: the people who enact them. We are aware, however, that practices are also shaped by many non-living and non-human things—like a roof that shelters practitioners from sun or rain, the gravity that holds people in place, or the interactive whiteboard that a teacher uses in a lesson. Practitioners—people–might in one sense thus be 'motors' for practices, so practices might be 'living' because they have this organic connection with practitioners.

We want to say more than this, however. We want to say that practices also 'feed' one another, as we hope teaching sometimes 'feeds' learning. In such cases, we want to say that the 'outputs' of teaching might be the 'inputs' of learning, or, better, that the practice of teaching in such a case is among the conditions that shape the practice of learning. Perhaps not only what is learned in such a case is also *dependent* on what is taught, but also the conduct of learning is *conditioned*—shaped—by the conduct of teaching, in a kind of reciprocal 'dance' between the practices of teaching and learning. We might note, too, that the conduct of the practice of teaching may also be dependent on the conduct of the practice of learning—how students conduct themselves also directs, to some extent, how the teacher conducts herself.

And we want to say still a little more than this. We want to say that, in reality, in places and situations like the ones we have studied, we can see webs of connections between the five practices of student learning, teaching, professional learning, leading and researching. Sometimes not all practices are present (it might not be evident how practices of researching have shaped practices of teaching, for example), and sometimes the relationships may not be as strong (for example if we cannot see a strong influence of practices of researching on practices of student learning in the site). But we have been able to see interconnections between these practices in many cases, and often, in the schools and classrooms we have observed, we can see strong traces of the interconnection and interdependence of practices on one another.

We see these interconnections in the sayings, doings and relatings of practices, and how they are shaped by the practice architectures (cultural-discursive, material-economic and social-political arrangements) that make them possible. In particular, we see how the sayings, doings and relatings of one practice are shaped by the sayings, doings and relatings of *another* practice—thus, for example, the words of the teacher, expressed in her teaching, may become the words of the students, assimilated in their learning. Thus, also, the words assimilated by a teacher in her professional learning become the words she uses in her teaching—and on into the words used by the students assimilated in *their* learning. These are the kinds of chains that lead us to think in terms of interdependencies, ecologies and eco-systems.

Thus we begin to ask what practices and practice architectures persist or endure or disappear over time; what new practices travel into a site or into the capabilities of the practitioners (and from where); and what practices and practice architectures

vary and change in relation to other practices and practice architectures, and so become transformed or even 'evolve' into other variant forms or even into different practices.

In short, we begin to ask about how different kinds of practices in the Education Complex—student learning, teaching, professional learning, leading, researching—relate to each other, and whether they do so in a way that might be described *as* (or as *like*) a living system. We might ask, for example, whether we see evidence that practices are *interdependent* (that each depends on the other to persist or to be reproduced) and whether this interdependence is can be seen in the form of a *network* of interrelationships. The work of Capra (for example 2005) is useful here for exploring the extent to which the relationships between practices can be described as living systems. It might be sufficient for us to say, on the basis of our thinking so far, only that practices relate to one another in ways that are *like* living systems (that is, living systems may be a metaphor for the way practices relate to one another), rather than that practices and/or their interrelationships *are* living systems. Nevertheless, we can explore the extent to which practices can relate to one another in ways that are like living systems using ideas like Capra's.

Capra (2005) lists a number of key features of living systems. He writes:

> First, *every living organism*, from the smallest bacterium to all the varieties of plants and animals, including humans, is a living system. Second, *the parts of living systems* are themselves living systems. A leaf is a living system. A muscle is a living system. Every cell in our bodies is a living system. Third, *communities of organisms*, including both ecosystems and human social systems such as families, schools and other human communities, are living systems. (p. 19; emphases in original)

He then lists a number of the key concepts which, he believes, provide "principles of ecology, principles of sustainability, principles of community, or even the basic facts of life" (p. 23). These key concepts or principles are:

> *Networks*: "[M]embers of ecological communities derive their essential properties, and in fact their very existence, from their relationships"; "sustainability is not an individual property but a property of an entire network" (p. 23).
> *Nested systems*: "At all scales of nature, we find living systems nested within other living systems—networks within networks. Although the same basic principles of organisation operate at each scale, the different systems represent levels of differing complexity" (pp. 23–4); life is to be found at different levels, for example, in cells within organisms, and organisms within communities of organisms.
> *Interdependence*: "The sustainability of individual populations and the sustainability of the entire ecosystem are interdependent"; "The exchanges of energy and resources in an ecosystem are sustained by pervasive cooperation" (p. 24).
> *Diversity*: "A diverse ecosystem will be resilient because it contains many species with overlapping functions that can partially replace one another"; "The more complex the network's patterns of interconnections are, the more resilient it will be" (p. 25); different kinds of organisms are necessary to one another in an ecosystem; such a view implies not only difference but also distribution of entities in time and space.
> *Cycles*: "Matter cycles continually through the web of life" (p. 25), for example, in food chains, and "An ecosystem generates no waste" (p. 26).
> *Flows*: "All living systems, from organisms to ecosystems, are open systems. Solar energy, transformed into chemical energy by the photosynthesis of green plants, drives most ecological cycles, but energy itself does not cycle" (p. 26); ecological systems are "dependent on a constant inflow of energy" (p. 26).

Table. 3.1 Capra's principles of ecology as criteria for determining whether practices and ecologies of practices are living systems in ecological relationships

Concept	If ecologies of practices are living systems, then
Networks	Different practices would derive their essential properties and their existence from their relationships with other practices
Nested systems	Different levels and networks of practices would be nested within one another
Interdependence	The sustainability of different practices (understood as different species of practice, manifested in reality in particular individual instances of that practice) would be dependent on one another in ecologies of practices (understood as an ecosystem), and the sustainability of an ecology of practices would be dependent upon its relationships with other ecologies
Diversity	An ecology of practices would include many different practices with partially overlapping ecological functions that can partially replace one another
Cycles	It would be possible to observe some kind of matter cycling through practices—for example, as in a food chain
Flows	Energy would flow through the ecology of practices and the practices within it, being transformed from one kind of energy to another (in the way that solar energy is converted into chemical energy by photosynthesis) and eventually dissipated (as heat is lost from the bodies of living creatures)
Development	Practices would develop through stages, and an ecology of practices would also develop through stages
Dynamic balance	An ecology of practices would regulate itself through processes of self-organisation, and would (up to some breaking point) maintain its continuity in relation to internal and outside pressures

Development: "All living systems develop, and all development invokes learning" (p. 27); development occurs through stages, each one sustainable in its own right although it may then be superseded.
Dynamic balance: "All ecological cycles act as feedback loops, so that the ecological community continually regulates and organises itself" (p. 28); living systems adapt to changes within and to external pressures.

Capra's principles invited us to explore whether and how practices relate to one another in 'ecological' ways, and whether whole ecologies of practices might also relate to one another. Table 3.1 sets out Capra's principles as criteria for investigating whether it is plausible to believe that practices and ecologies of practices relate to other practices and other ecologies of practices in ecological ways.

As we consider the relationships between practices in the table for analysing ecologies of practices (Table 3.1), then, we can also ask ourselves whether the relationships between the practices we observe display any of the features listed in Capra's principles of ecology. With some exceptions, we have not used these principles explicitly as we discuss the ecological relationships between practices in the examples that appear in Chap. 4–8. They have been in the background of our analyses, nonetheless. For examples of explicit analytic use of the principles, we invite readers to refer to some of our previous work (for example, Kemmis et al. 2012; Edwards-

Groves and Rönnerman 2013), where we have described how practices of student learning, teaching, teacher learning, leading and research appear to interrelate in ecologies of practices in ways that show evidence of the features listed by Capra.

Ecologies of Practices in the Education Complex

As indicated earlier, we use the term ‘ecologies of practices’ in a way different way from the way ‘ecologies of practice’ has previously been employed in the literature, and with an eye to Capra’s understanding of the intrinsically interrelated nature of specific ‘living’ systems. Our notion of ‘ecologies of practices’ encompasses the ideas that the form and content of one practice may change the form and content of another and that practices can travel from site to site. The evidence from our study of practices shows that the form and contents of one practice can become part of the practice architecture of another, so the second practice is differently supported and can thus be transformed. This notion may help to elucidate what Lingard and Rawolle (2004) have described as “cross-field effects”, that is, how connections between different autonomous fields (such as the media and education) can be thought about. The notion of ‘travelling practices’ might suggest *how* cross-field effects can occur.

Not only do we see practices as ecologically arranged because we have observed that in particular cases and under particular conditions, practices are interdependent and interrelated; we have also observed that practices sometimes arise in relation to one another in a particular site.

Defining ‘ecologies of practice’, Kemmis and Mutton (2012, p 15) wrote:

> By ecologies of practice we mean distinctive interconnected webs of human social activities (characteristic arrangements of sayings, doings and relatings) that are mutually-necessary to order and sustain a practice as a practice of a particular kind and complexity (for example, a progressive educational practice).

Note that since the Kemmis and Mutton (2012) definition above, we have begun to use the plural ‘practices’ to emphasise that an ecology of practices involves various different kinds of practices that co-exist in a site. Nevertheless, the Kemmis and Mutton definition clearly posits that practices shape, and are shaped, by one another in particular ways—the sayings, doings, and relatings of practices shape and are shaped by the sayings, doings, and relatings of other practices in the site. Furthermore, practices can sustain (that is, symbiotically and interdependently) or suffocate other practices, and different ‘ecologies of practices’ may be hospitable to some practices and not to others.

As we have indicated, we are especially interested in how five different kinds of educational practices relate to one another—or do not relate to one another—in specific sites. In general, these five kinds of practices have existed in *some* kind of relationship to one another since the rise of compulsory schooling (although some of the interrelationships were also evident prior to this time). The rapid rise of mass schooling in the twentieth century required the formation and development of a range of concurrent educational practices that have continued to develop in more or less loosely coupled ways, with different practices often influencing one another

unidirectionally or reciprocally. In a real sense, the rise of mass schooling stimulated the range of related and inter-connected practices that we have described as together constituting the 'Education Complex':

- *student learning*;
- *teaching*;
- initial and continuing teacher education and continuing professional development—described here as *professional learning*;
- educational leadership and administration—described here as *leading*; and,
- educational research, critical evaluation and evaluation—described here as *researching*.

All of these practices, especially student learning and teaching, existed in one form or another before the rise of compulsory mass schooling. Once mass schooling emerged as a nation building project for the nation-states in the West, however, the relationships between them became more elaborate, more organised and more orchestrated. Once mass schooling emerged, these five kinds of practices began to be regarded as mutually necessary within a single, coordinated project. Student learning was thought to depend on teaching; teaching was thought to depend on the initial and continuing professional development and professional learning of teachers; schools and school systems needed to be regulated by educational policy and administration and by various kinds of practices of leading; and all of these practices needed to be brought under the distinctively Enlightenment, modern eye of research and evaluation—so each could be improved in its connections with the others. Thus, it seems to us, the connections between these practices arose rapidly and simultaneously with the advent of mass schooling. From this moment, they were *designed* to be interdependent. And they still are: if change in education is to be wrought, then all five of these practices need to be changed in relation to one another. History indicates the resilience of the nature of the practices of teaching, learning, teacher education and continuing professional development, educational leadership and administration, and educational research, and their resistance to major reform. We contend that if educational change is to be realised, then the transformation agenda needs to address these practices not just one at a time; it seems to us that transformation of each requires the transformation of all five, in all their ecological interdependence.

On a smaller scale and in a simpler form, the way one practice shapes another and is shaped by other practices can be seen at a local level. Teachers may engage in a professional development program in response to some pedagogical need that arose in their classrooms, and they then change their pedagogy in response to their learning. In this case, the broad practices of teaching and professional development are symbiotically related, with each practice shaping and being shaped by the other; in this case, we might thus describe professional development as 'nested' within the Education Complex—the complex formed by the interdependence of these five educational practices. These general connections are illustrated in Fig. 3.1. As we will show in the sections to come, however, the interdependent relationships between these five kinds of practices were clearly evident in the practices and sites we studied in the *Leading and Learning* project.

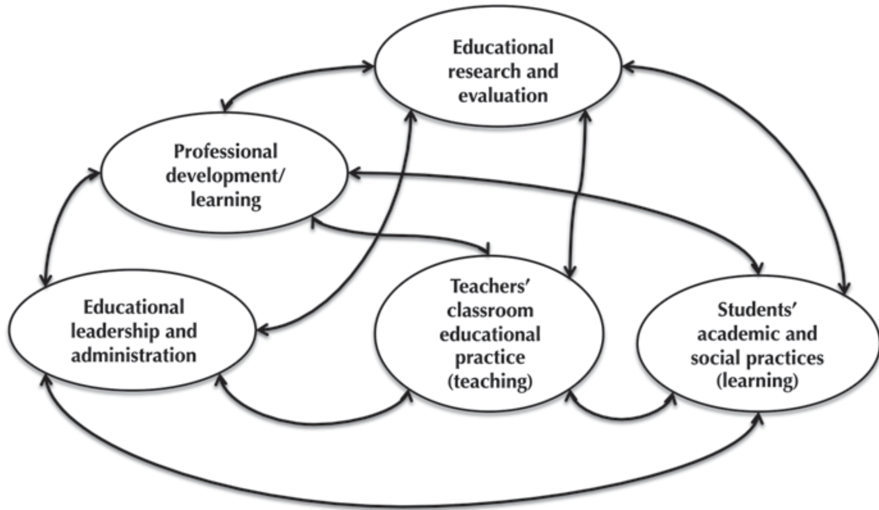

Fig. 3.1 The theory of ecologies of practices

Concluding Comments

The broad program of education is made up of many practices including student learning, teaching, professional learning, leading, and researching. These practices emerged as key interrelated practices within the Educational Complex of practices which emerged with the rise of mass compulsory schooling in the mid-nineteenth century. These practices have existed in a complex set of interdependencies with one another ever since.

In this chapter, we have aimed to show that these five kinds of practices of education are intimately interrelated. We have suggested, but not yet shown, how they are ecologically arranged, not just in general, but in particular kinds of practices we observed at particular sites. (They do not always and everywhere connect with one another so constructively, however.). We will show how practices are sometimes ecologically arranged in Chap. 4–8, as we examine each of the practices in the Education Complex in turn—as we observed them in the schools we studied. In these chapters, we will show how the outputs of one practice in the Education Complex are sometimes inputs into other practices. One consequence of the ecological interdependence of practices in the Education Complex is that, if educational change is to be realised and secured, then change needs to occur in all practices in this ecology of practices, not just in one or another of them alone.

In this book we seek to show how the interdependent practices in the Education Complex are not vast 'social structures' that order the world uniformly throughout a classroom, school, School District or national jurisdiction. On the contrary, they are realised in everyday interactions between people, and between people and other objects, in millions of diverse sites around the world. They occur at particular times

and under particular conditions and circumstances that pertain at each particular site, involving particular people in particular kinds of sayings, doings and relatings made possible by the cultural-discursive, material-economic and social-political arrangements that pertain at the site. They occur, that is, *in and through practice*—they are realised and secured in real, everyday interactions between people, and between people and things in the world. These practices are typically nested within one another, and provide evidence of flows of energy and expertise between specific elements of regional and local sites.

Our practice theory view of practices sees them relentlessly as material, and as enacted by real participants and in relation to other people and things distributed in real space and in real time. Part of our task in our observations in our *Leading and Learning* project was to discern, as best we could, what ends participants acted towards in their practices, what motivated them to act, and the places and paths they travelled through as they practised. On this ontological view of practices, then, transforming schools and transforming education thus not only requires more than just changing teachers' pedagogical practices and the practice architectures that support their teaching, it also requires changing *the ecologies of practices* that exist in particular sites, including particular practices of student learning, particular practices of teaching, and particular practices of professional learning, leading, and researching. In each of the chapters that follows—in which we address these five practices in turn—we also see how each is shaped in ecologies of practices in which it co-exists interdependently with the others.

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Chapter 4
Student Learning: Learning Practices

Introduction

The phrase ‘learning practices’ has two meanings: on the one hand, it can refer to people learning some (other) practices; on the other, it can refer to practices of learning. We have retained this ambiguity in the title of this chapter because we want to talk about both. On the one hand, we want to argue that learning is a process of initiation into other practices (what we will call ‘substantive practices’); on the other, we want to draw attention to the practices by which people learn.

In very many cases, learning as an initiation into other practices occurs without any ‘teacher’ being present: a person simply ‘learns’ by participating in and often by reflecting on the practice they are learning. In such cases, the distinction between learning and practising may be blurred: the part we call ‘learning’ seems rather like an early stage in a progress towards facility in practising this or that particular practice. For example, if a person switches from PC to Mac as the computer they use for writing, they are at first a little clumsy in using the Mac, but they are soon practising with the facility they had with the PC—in such a case, the person went through a process of learning that was a progress from lesser to greater facility with the practice of writing using a Mac.

On the other hand, we will also suggest that learning is also a distinctive practice, especially in formal educational settings where people occupy the role of ‘student’. In such cases, learners often engage in familiar routines and rituals that are distinctive as learning practices (like annotating a set reading for a class, or memorising items using a mnemonic, or asking clarifying questions of a teacher, or some routines of assessment that follow different kinds of episodes of teaching and learning). We hope to show that in both kinds of cases, what learners learn is how to go on in language games, activities, ways of relating to others and the world, and the practices that hold these things together.

We are grateful to our colleague Annemaree Lloyd who was a member of the writing team for our joint (unpublished) paper ‘On being stirred in to practices.’ That paper formed the basis for the first two parts of this chapter.

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In the first section of this chapter, we try to challenge some taken-for-granted views of learning as a process by which people come to possess concepts or skills or values as things that exist in their own right ('in the head', as it were). We portray learning, instead, as a process of initiation into practices. In the second section, we explore how learning, like other practices, is held in place by practice architectures: arrangements that enable and constrain what happens in practices of learning. Third, we explore how practices of learning exist in ecologies of practices that nurture and support practices of learning, and in which practices of learning also nurture and support other kinds of practices (like teaching, teacher professional learning, leading and researching). Finally, we explore how practices of learning are realised in particular sites, and how they are and can be developed through practices of site based education development.

Learning as Initiation Into Practices

Following the definition of practice we gave in Chapter Two, in this chapter we aim to show that, *as a distinctive practice, learning is a form of socially established cooperative human activity in which characteristic arrangements of actions and activities (doings) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (sayings), and when the people and objects involved are distributed in characteristic arrangements of relationships (relatings), and when this complex of sayings, doings and relatings 'hangs together' in a distinctive project.* Among the distinctive *doings* of learning practices are things like 'attending', 'reading', 'studying', and 'being assessed'; among the distinctive *sayings* are things like ideas of 'knowing' and 'not knowing', for example, and theoretical ideas like 'reinforcement' and 'scaffolding'; and among the distinctive *relatings* of learning practices are things like the roles of teacher and student, and 'set-ups' for learning to be found in places like classrooms and schools. These sayings, doings and relatings hang together in the distinctive *project* of coming to know or to be able to do something.

Learning is also an initiation into other practices in which the 'learning' may be more or less inseparable from the practising of the practice being learned. What we call 'learning' in such cases is simply an early stage of facility in practising the practice—an early stage of facility in the sayings, doings and relatings that occur as part of the language games, the activities and the ways of relating to others and the world, that constitute a particular practice. In a local park in his neighbourhood, a boy learned to play football by playing it, not by passing through formal exercises or activities designed to prepare him for the game. There was no teacher or coach, just other players, some more experienced than he, and, like the other boys in the neighbourhood, he learned the rules and the skills by 'inhabiting' the game.

Encounters with the psychology of learning have made us familiar with 'learning' as something that happens 'in the head' and in the bodies of learners. We hope to show, by contrast, that learning is not only the accomplishment of the learner but also a *social* accomplishment, as Vygotsky (1978, 1986), for example, showed. In

our terms, it is also an *intersubjective* and *interactional* accomplishment in which a learner becomes a co-participant in and co-producer of a particular kind of semantic space, a particular set of arrangements in physical space-time, and a particular kind of social space that together constitute a practice. Through this participation, the learner becomes a co-inhabitant of the practice; someone who exists in the practice in the way a species exists in an ecological niche—she or he becomes a distinctive, agentic participant in the 'ecosystem' of the practice, nurturing and nurtured by the practice through the act of participation. Thus, for example, the tennis player becomes a co-inhabitant in the practice of tennis, playing amid a vast array of arrangements that ripple out from the *practice architectures* of this particular game of tennis to the practice architectures of tennis around the world. These practice architectures include such things as opponents, this court, my racquet, these tennis balls, the rules, umpires, spectators, the builders of tennis courts, the makers of racquets, balls and nets, clothing and shoe manufacturers, the markers of lines, the Grand Slam competitions, the All England Lawn Tennis and Croquet Club in Wimbledon and those who maintain its website.

As indicated in Chapter One, in our research, we have adopted the research approach we call *philosophical-empirical inquiry* as a way to investigate practices. Thus, to disrupt some taken-for-granted views of learning as a kind of 'transmission' of 'concepts' or 'skills' (for example), we briefly introduce Ludwig Wittgenstein's (1958) notion of *knowing how to go on* as a way to understand learning from a particular philosophical perspective. Then, drawing on our empirical observations, we describe a process that we observed in a variety of classrooms—what we observed as a process of learners being *stirred in* to practices by participating in them, often with the guidance or prompting of a teacher. Together, these perspectives led us to the view that learning can be understood as a process of *initiation into practices*. In fact, we will suggest that learning is a process of initiation into *language games* (sayings), *activities* (doings), and *ways of relating to others and the world* (relatings), and into how these hang together in the projects of practices. Thus, to put it more concisely, learning is *initiation into practices*.

Learning How to Go on in Practices: A Wittgensteinian View of Learning

Our view of learning is informed by Wittgenstein's (1958, § 151, § 179) notion of learning *how to go on* in language games. Wittgenstein (1958, § 241) located *meaning* not in words or ideas nor in their correspondences with (or 'pointing to') objects, states of affairs or events in the world, but in *language games* in which people use language in ways that orient them in common to the world. In Wittgenstein's view, we learn language by using it, and discovering through our use of words and ideas how to make sense for others and for ourselves. In turn, Wittgenstein located these language games in shared *forms of life* (ways of living in the world) that make language games interpretable to those participating in them, and impenetrable to those who do not participate in them.

Just as Wittgenstein located meaning in language games and forms of life, we have come to the conclusion that all of what is conventionally called 'knowledge' (in which we include not only cognitive knowledge but also skills and capabilities, and norms and values) arises from, recalls, anticipates, and returns to, its use in the forms of life characteristic of different language games, activities, ways of relating, and practices. To reiterate, a little more pithily: *all of what is conventionally called 'knowledge' arises from, recalls, anticipates, and returns to, its use in practices*. Meaning and knowledge, that is, are not somehow based on 'internal' cross-referencing from one word to other words in the language in which the word is used, nor are they based on 'external' cross-referencing from a word to some thing or state in the world to which they 'correspond' or 'point'. Rather, meaning and knowledge are to be found in the temporally- and historically-located 'happening' (cf. Schatzki 2010, on 'activity timespace') of language games, activities, ways of relating, and practices in which particular words are used, particular things are done, and particular relationships exist in the interactions between the people and things involved. These interactions take place simultaneously in overlapping intersubjective spaces: semantic space (realised in language), physical space-time (realised in activities and 'set-ups' of material objects), and social space (realised in relationships of power and solidarity). When we learn to practice, we learn how to move in this 'three-dimensional' space (semantic space plus physical space-time plus social space)—like learning a dance by joining in to it.

It seems to us, then, that what is said to be 'learned' is always participation in a language game, an activity, a way of relating, or a practice. It seems to us that what counts as 'learning' these things is always moving from stage to stage in developing facility in it, especially when one is new to the practice or when one is practising in new and different circumstances. On this view, one is always simply at an earlier or later stage of efficacy and virtuosity in the conduct of the practice; always at a more superficial or profound level of initiation into the practice. Later in this chapter, we will present an example of how a Year 5 student, Annie, reached a more profound level of accomplishment in practices associated with producing a moving diagram in a *PowerPoint*™ presentation.

Learning as Being 'Stirred in' to Practices

'Learning' a practice entails entering—joining in—the *projects* and the kinds of *sayings, doings and relatings* characteristic of that particular practice. Peters (1964) long ago spoke of education as 'initiation' into *forms of knowledge*. More recently, Smeyers and Burbules (2006) have written of education as initiation into *practices*. When people learn practices that are new *for them*, it might be said that they are initiated into these practices, or that they initiate themselves into the practices, with the co-participation of others, for example through what Lave and Wenger (1991, p. 27) called "legitimate peripheral participation" in the practice.

In our observations of teachers and students learning, we see learners more or less tentatively *entering* new practices that already exist (for example, as a practice

already known by a teacher or fellow-learner) and being more or less gently '*stirred in'* to the practice. We think, for example, of the ordinary yet extraordinary process in which a child first learns a language in the family setting, using words and approximations of them, almost always without anyone formally designated as a teacher in sight; surely this is the case *par excellence* of being stirred in—being stirred in to language. The metaphor of being stirred in seems to us to be very apt, as we watch learners participating in classroom projects and activities. As we see people (teachers and students and leaders, for example) encountering and engaging a new topic or field of practice (sometimes tentatively and with difficulty), we see them being stirred in to the practice not only by a teacher or leader but on their own volition and by others with whom they participate—learning is in this sense a co-production that occurs through co-participation with others and the world in the course of the practice. Learners are stirred in to what makes a language game or activity or way of relating or practice coherent as a project of a particular kind under varying kinds of conditions and circumstances. In this way (to use Ryle's (1946, 1949), distinction between 'knowing how' and 'knowing that'), people find out *how* to do a practice; as an indirect or after effect they also come to understand *that* they can do it (inasmuch as they can avow something about it (Winch 2009); and *that* certain 'facts', 'concepts' or 'knowledge' may be associated with it, and 'in play' when this practice is being practised.

In classrooms we observed, we saw skilful teachers using questions and directions (for example) to involve children, sometimes individually and sometimes collectively as a class, in participating actively in language games about topics like *rainforest ecologies*. The teachers stirred the children in to the *language games* that allow us to understand such things as 'ecologies', 'biodegradability' and 'the Greenhouse Effect': they created settings in which the children could speak and use the words in sentences in answer to questions or directions, or in conversations with one another about tasks in which these ideas are relevant. They invited the children to envisage and to think their way into the *activities* of the class, for example, the activity of making a *PowerPoint*™ presentation to explain an idea to other students. They invited the children to enter *ways of relating* to others and to things (to teachers, other students, visitors in the classroom, parent helpers; and to materials and equipment found in the classroom). Where these language games (sayings), activities (doings) and ways of relating to others and the world (relatings) hang together in the project of a *practice*, and together *compose* the practice, we might reasonably say that learning is a process of *initiation into practices*.

On this view, then, we conclude that learning is the process through which people, perhaps tentatively or as novices, enter the sayings, doings and relatings that hang together in the project of a practice and, by practising, explore the enablements of and constraints on interaction characteristic of that practice, and become more adept in interacting with others and with objects in the world through it.

To put this more controversially, in our view, learning is *always* and *only* a process of being stirred in to practices, even when a learner is learning alone or from participation with others in shared activities. We learn not only knowledge, embodied in our minds, bodies and feelings, but how to interact with others and the world;

our learning is not only epistemologically secured (as cognitive knowledge) but also *interactionally secured* in sayings, doings and relatings that take place amid the cultural-discursive, material-economic and social-political arrangements that pertain in the settings we inhabit. Our learning is bigger than us; it always positions and orients us in a shared, three-dimensional—semantic, material and social—world.

As participants are stirred in to a practice, they discover how, in practice, the sayings, doings and relatings constituting that practice 'hang together' as a project. They learn the 'paths' and 'nodes' and maybe the 'edges' or 'boundaries' of a practice, in the way that Indigenous peoples long ago discovered how to live in particular 'country' and landscapes, as co-inhabitants of a living world shared with other creatures and things that have their own lines of persistence and cycles of reproduction. In a similar way, Lloyd (2010) writes about 'information landscapes' that exist as a dialectic between the information that a landscape offers and the information literacy of a person able (or not able) to read that information. Lloyd follows Bateson (1972, p. 459) who says "the elementary unit of information is any difference that makes a difference"; the person who can read an information landscape is thus one who can see both the difference (some sign in the landscape, for example a fruit) and the difference that it makes (for example, that this fruit, from this vine, is poisonous). The traditional ways of life of Indigenous peoples were and are immensely rich in literacies about how to live in particular kinds of country and how to co-inhabit the world with the other things and creatures found there.

Participants being stirred in to new practices may develop the 'feel for the game' of the experienced player (Wacquant 1989)—the moment-by-moment sense of how a passage of play is likely to unfold. Bourdieu (1990) wrote about participants forming a *habitus* or set of *dispositions* that enable them to operate in a *field* (a cultural, economic or social field, for example). Similarly, we take the view that what a learner learns is *dispositions* that include 'knowledge', 'skills' and 'values' that hang together always and only in the practising of a some practice to which they are relevant and in which they play a part. We should remember, too, that different people learn particular dispositions differently: their dispositions are formed by the ways they are stirred in to the language games, activities and ways of relating that hang together in practices—as different students experience a classroom lesson from their different perspectives and locations, for example. As Bourdieu (in Wacquant 1989) noted, 'the feel for the game' does not develop equally for all people; people do not develop it at the same time; nor is the process uncontested. In fact, the feel for the game is differently distributed, differently experienced, and contested. Moreover, when teachers and students don't have the same feel for the game, they can get into the kind of trouble connecting with one another in practice that Freebody and Freiberg (1995) describe as 'relational trouble,' epistemological trouble' or 'ideational trouble.'

In the process of being 'stirred in', the students we have observed not only try things out by *doing* things; they are also led by a teacher or fellow students to *notice* things or they notice things for themselves. Generally, they are given *names* for things they notice, and sometimes they are invited to name things for themselves. They observe patterns and, by doing so, *reframe* the things they have noticed and named in ways that "bring [them] forth for closer examination" (Smith 2008, p. 77). Smith (2008) described this process of "noticing, naming and reframing" (p. 77) as

the construction of "narratives" and "storied knowledge" (p. 76) that are essential to reflection and inquiry-based practice (p.77). She described noticing, naming and re-framing among student teachers and teachers; we see the same thing among primary school children in their interactions with teachers and with one another.

In the process of noticing, naming and reframing things about the world, we see these students positioning and locating themselves in relation to other people and objects—finding patterns of *relating* that hang together with the patterns of *doing* and *saying* appropriate to the practice they are entering. They are 'stirred in' by *participating* in the practice so *the practice takes shape for them in a way that is inextricable from their participation in it*. Although, like a dance—the Tango, for example—the practice may have been there, waiting for them to enter it, it comes into existence for them not as an external object to be apprehended, but as a way of interacting in the world (a way of being in the world, a way of saying and doing and relating in the world) amid the arrangements that enable and constrain that way of saying and doing and relating. (A member of our research team once asked children *how* they learned to read. On more than one occasion, a student answered this 'how' question with 'By sitting on the floor'. Children learn to 'do school' by doing what teachers ask them to. They notice, too, that it is an embodied process!)

Practice Architectures and the Practice of Learning

In this section, we present two examples aiming to show how practices of learning are enabled and constrained by practice architectures—by particular kinds of cultural-discursive, material-economic and social-political arrangements *that support and provide resources for those practices. The first example is Sarah's* lesson which is analysed in detail in the Appendix to this book. Some readers may prefer to read the Appendix before continuing with this chapter, but we have tried to include sufficient empirical material in this chapter to make it comprehensible without prior reading of the Appendix. The second example is *Annie's moving diagram*. In this example, we unravel the learning journey of Year 5 student 'Annie' who learned how to insert a moving diagram into a *PowerPoint*™ presentation. In this section, we show how practices are shaped by practice architectures, and also (especially in the case of Annie's moving diagram) how practices shape practice architectures by producing new or different arrangements that furnish resources for new or different ways of practising.

Sarah's Lesson: What Did the Students Learn About and Through Writing Expository Texts?

In the Appendix, we present a detailed analysis of Northton School teacher Sarah's Year 5–6 lesson about writing expository texts. In this Reading and Writing lesson, the students were learning to write these kinds of texts so they would later be able

to write an exposition arguing the case for a position they would take on an issue concerning rainforests (for example, sustainable growing of cocoa for chocolate, or the threatened extinction of species). They were studying the topic *Rainforests* in a unit of work in Science. In her Reading and Writing curriculum, Sarah was thus spending time helping the students to develop relevant skills like note-taking and explaining key words, expanding their vocabulary in directions that would allow them to argue logically and cogently, and give them opportunities to 'publish' various pieces of work that they did along the way in preparation for the expository text they were to produce for their assessment at the end of the unit of work in Science. At the commencement of this unit of work, Sarah had done a pre-assessment of the students' skills in expository writing. Around the time of the lesson we observed, she was concentrating in particular on helping the students to develop skills like sequencing arguments, elaborating ideas, and taking and arguing for a position. These skills are important for writing effective expository texts.

While it might be usual to say that the students were learning particular knowledge (or concepts) about rainforests or ecology or sustainability, for example), and that they were learning particular skills (how to write an expository text, for example), and that they were learning certain values (how human beings should relate to the rainforest, for example), we want to say something rather different. We want to say that the students in Sarah's class were being initiated into particular practices of two general kinds. Firstly, the students were being initiated into practices of engaging in educated ways with other people and things in the world relevant to rainforests. We call this kind of thing to be learned—a practice to be learned—a *substantive practice*. In this case, the substantive practice to be learned was the practice of writing an expository text about an issue to do with rainforests. Secondly, the students were being initiated into practices of learning—*learning practices*—that is, practices whose project or purpose is *to come to know* how to go on in the substantive practice of writing an expository text. In the case of learning practices, the practice is more consciously and deliberately about the *becoming* (that is, becoming a practitioner of the substantive practice) rather than the *doing* of the expository text writing. Sometimes, these two different things overlap to the extent that the difference between them seems to disappear—that is, learning is done solely by repetition of the 'target' substantive practice. The students in Sarah's classroom brought these learning practices with them to the class (as people always do), from experience in other classrooms in other places and other years (and from learning in a great variety of other places including at home, in the community, and on the internet). They have also brought with them, to the lesson we observed, learning practices formed through their experience of being in Sarah's classroom, that year, and in a reciprocal response to Sarah's particular repertoire of ways of teaching.

Sarah's lesson developed in five main episodes. Each episode had a distinct purpose that was orchestrated to achieve the overall project of the lesson: in Episode 1, Sarah asked the students to review ideas from previous lessons; in Episode 2, she introduced students to relevant language features and vocabulary of exposition; in Episode 3, she introduced the group task; in Episode 4, students worked in groups

on the task Sarah had set, preparing a draft text of an exposition; and, in Episode 5, representatives from each small group read aloud their draft texts to the whole class. In relation to both substantive and learning practices, we see, in the following lesson transcript, the students coming to know *how to go on* in language games, activities, ways of relating to others and the world, and how these hang together in practices. (Note that the transcript excerpts which follow give a condensed version of the whole lesson presented in full in the Appendix. Readers are encouraged to read the Appendix version; it shows how we analysed the lesson using the theories of practice architectures and ecologies of practices.)

Excerpt 1 from Episode 1: Review of Ideas from Previous Lesson

Sarah: Okay so, this morning we've actually made up some guidelines for what we believe would be effective expositions…. I've gone and actually put them onto a PowerPoint. Okay so, you said an exposition needed a strong effective title, which… has emotive language, is topic specific, and catchy (reading from the whiteboard). Is that right?

Student(s): Yes (in chorus)

Sarah: Tell me if you disagree with what I've written. It uses openers like, firstly… secondly… thirdly… in the end… The opinion of the author is clearly stated in the first paragraph and the last paragraph.

Student(s): Yes (in chorus)

Sarah: Arguments are discussed in order of importance; most important to least important. (The talk sequence continues on in this vein as Sarah reads the 13 criteria which were co–produced with the students in the previous lesson. Each time students respond in unison)… Okay. So, what else have you been, particularly more effective in using though? Leon?

Leon: Note taking.

Sarah: Maybe note taking has helped. What have you used more effectively, though, do you think? I know what *I* think you used more effectively…. Ricky?

Ricky: Our vocabulary.

Sarah: I think that there's actually been a massive increase in vocabulary.

Excerpt 2 from Episode 2: Introduction to Relevant Vocabulary and Language Features of Exposition

Sarah: Okay so, today where we're leading to—the purpose of today is for you to actually take some positions on topics. And at the end of today, what I want you to have done is to have started to write your own exposition….. First, I need you to take a position on some different things. I don't want you to talk about it. I'm not going to

ask you to justify your opinion…. All I want you to do is to decide whether you agree or disagree with the statement that I put up…. Okay I am now going to ask you to either, just to look at the top statement: 'Homework is a valuable tool for learning'. I want you to see whether you are going to move to the affirmative or the negative. (Students physically move to either the 'No' position for disagreement on one side of the room or the 'Yes' position for agreement on the other side of the room). So, if you go into the affirmative, what are you saying?

Student(s): Yes (in chorus)

Sarah: Yes, what?

Student(s): Yes, homework is a valuable tool for learning (in chorus).

Sarah: What if you go into the negative?

Student(s): No, homework is not a valuable tool for learning (in chorus).

Sarah: Okay make a decision. Okay, isn't that interesting, I just had a comment: "It's boring but it's valuable". (The lesson continues as Sarah reads out a number of issues)…

Sarah: (At the conclusion of the episode). So, (in the activity) I was asking you to take a position. Okay, I didn't ask you to justify it. I didn't ask for you to elaborate on why you were there. There was no opportunity for you to sit on the fence. You had to decide. And that's what exposition's all about, isn't it, taking a position…

Excerpt 3 from Episode 3: Introduction of the Group Task to Produce an Expository Text and Taking an Affirmative or Negative Position on an Instance/Issue Arising from a Known Fairy Story

Sarah: … I'll put you into some groups…. I'm going to assign your group to a fairy tale…. I then assigned you also, a point of view…. So, you need to be really strong about convincing us of your point of view…. I want you then, on the format, like I showed you before, the one that I started taking notes on, I want you to start to outline your arguments on there. So, we've got it in the top part, stating your opinion… Now, this is drafting we're looking at, putting our ideas together, trying to get really good, strong ideas together using what we know. It's getting the ideas… elaborating on them… justifying and you're making sure that you are going to persuade your audience… The idea is for you to be having really good discussions and getting ideas from each other, looking at your use of vocab, and looking at the order of your arguments, so you've got your strongest, most important one, first.

Excerpt 4 from Episode 5: Representatives Present Draft Texts to Whole Class

Sarah: … Okay, I'll just go around and ask a couple of people if they would be willing, now I'm aware that this is a draft,..a work in progress, and thank you to those people who have agreed to share, … very supportive of you. Okay, would you like to start Harry?

Harry: Yes.

Sarah: So nice clear voice. Please put those down so we're not fiddling with things, so that we show Harry the respect he deserves.

Harry: (Reading aloud) The wolf was a lonely animal who followed the stuck up and unfriendly three pigs around, trying to make friends with them. My first supporting argument was, the pigs were too (mean)… (Background noise) to be the lonesome wolf's friend, who was in a time of need and was hapless in catching… (inaudible) My second argument was, the wolf was exploited by the pigs and was inquisitive about their unfriendly nature. My third argument was, he was an adventurous wolf who was unfortunate and … when he tried to make friends, and was forced to try and blow their houses down, but was misfortunate in trying to blow the last house down and landing in boiling water. And my concluding statement of opinion was, the wolf should not of been punished or hated for blowing down pigs' houses and ruining their tea that was cooking in the pot he landed in.

In relation to the *substantive practice* of constructing expository texts, the students come to know how to go on, first, in the *language game* of describing and using expository texts. As we can see in the transcript, this included such things as "taking a position", "ordering arguments from most to least important", "affirmative or negative", using emotive vocabulary such as "exploited", "inquisitive", "misfortune" and the like, all in relation to the substantive practice of constructing an expository text. Second, we see the students coming to know how to go on in the relevant *activities*, for example, constructing an expository text following an outline in which they state their position, present a sequence of arguments, and draw conclusions which may include suggestions for action. Third, we see them coming to know how to go on in relevant *ways of relating to others and the world*, for example, a relationship between an author and readers. These three things all hang together in the *project*—persuading an audience—of *the practice of writing expository texts*.

In relation to the *learning practices* employed in the lesson, the students learn how to go on in the *language game* of group work, for example (including such ideas as "dividing into groups", "collaborating" in a "task", and "reporting" outcomes to the whole class); the *activities* of group work (including the activities that are described by the ideas in the language game of group work, writing a draft); and relevant *ways of relating to others and the world* (including following teachers' instructions to divide into groups, and collaborating with peers in groups, showing respect, and being a spokesperson giving an account of the group's work to the

whole class). These things all hang together in the *project* of coming to know how to go on (or knowing how to go on) in *the practice of learning*.

In each case, the students have been stirred in, first, to the *substantive practice* of coming to know how to go on in constructing expository texts, and second, to the *learning practice* of group work. In each case, the teacher (especially) increasingly stirs the students in to participation in the language games, activities and ways of relating to others and the world relevant to the practices. For example, we see teacher Sarah gently asking students, “Please put those down so we’re not fiddling with things, so that we show Harry the respect he deserves” at the beginning of Episode 5 in the transcript of the lesson so the students will recognise that not fiddling when others are reading is showing respect. Similarly, in Episode 2, where Sarah is wanting the students to stand under a ‘Yes’ or ‘No’ sign in the classroom to indicate their agreement (or not) with a statement of position that Sarah reads to the class, she tells student Jack, “Don’t talk about it, just do it” when Jack starts discussing the position with other nearby students; she prompts Jack to enter the game of moving to the ‘Yes’ or ‘No’ position rather than a possible alternative game of discussing whether the students agree with the position Sarah states.

In such ways (coming to know how to go on, and being stirred in), we see the students in the class *being initiated into* substantive practices like the practice of writing expository texts (a new practice for the students) and learning practices like participating in group work (a well-rehearsed practice for this group of students).

The question then arises of what *dispositions* the students have developed in the lesson. These dispositions—ways of inhabiting practices—are conventionally described in terms of learned ‘knowledge’ (or ‘concepts’), ‘skills’ and ‘values’. As indicated earlier, we find these terms rather passive and inert: they suggest that people learn images or cognitive representations that are in some way cognitive copies corresponding to things in the world. By contrast, we see students learning something far more active: ways of participating in language games, activities, ways of relating to others and the world, and practices. These things, if they are ‘stored’ in memory as representations at all, are surely stored in more active and dynamic forms: not just as narratives or stories, but also as knowing how to go on in practices, or as a feel for the game, or some kind of mimesis (imitation or mimicry).

Students’ Substantive Learning About Expository Texts

There is little doubt that, in Sarah’s lesson, the students learned some things about expository texts. In the lesson before this one (before the morning recess, which this lesson followed), the students looked at examples of expository texts. From these, they induced some features of effective expositions. The students and Sarah co-developed a list of these features as a set of guidelines for writing effective expository texts. We did not observe that earlier lesson. It is clear from Episode 1 of the lesson we did observe (in which the class reviewed the ideas developed in the previous lesson), however, that they endorsed their collective authorship (with Sarah) of the ‘guidelines’ for effective expository texts.

In Episode 2, Sarah and the students were introduced to vocabulary of exposition and a language structure for such texts, in preparation for the later task of writing an exposition. In Episode 3, Sarah introduced the group task of writing an expository text. Through the lesson, the students clearly engaged with developing vocabulary relevant to the specialist discourse of expository texts (like taking 'affirmative' and 'negative' 'positions' on 'topics').

To demonstrate their learning, in Episode 4 the students worked in groups to produce an expository text taking an affirmative or negative position on a character in a fairy story. The groups did so, although they may not have finished the task before the beginning of Episode 5 in which representatives of several groups presented their draft texts to the whole class.

It is not clear from the transcript how much the students have learned, or precisely what it is that they learned in this lesson, although it is clear from the transcript that the students are using terms (sayings) relevant to the topic of expository texts (that is, the cultural-discursive resources of a language describing expository texts). The draft texts that the students developed in Episode 5 of the lesson clearly demonstrate some of the qualities of effective expositions the students listed in the guidelines or criteria for effective expositions. It is also clear in the text drafted by Harry's group (see Episode 5 excerpt above) that the students were stirred into taking on some of the emotive language modelled by Sarah previously (for example, "hapless", "exploited", "inquisitive", "adventurous"); the text structure of exposition (for example, "supporting argument", "third argument", "concluding statement of opinion"); and the use of high modal language for effective exposition (for example, "should not", "forced into"). However, it is not clear to what extent students have internalised the language, or the guidelines, or the structure of an effective exposition, although it was clear that they were being stirred into particular substantive and learning practices.

Since Sarah distributed a 'format' sheet to the groups which the students used as a guide or template for constructing their draft expository texts, the crux of their learning might have been (a) coming to know how to go on in following a template to construct an expository text. (This, along with using particular vocabulary and incorporating relevant criteria for exposition texts, seems to us to have been the principal learnings from what happened in the lesson.) Things might have been different if, for example, in this lesson Sarah had distributed the 'guidelines' for effective expository texts produced in the previous lesson (before the morning recess), in which case the students' learning might have been (b) coming to know how to go on in using a list of guidelines to construct a draft expository text. And things might have been different again had Sarah distributed neither the 'format' nor the 'guidelines', in which case the students learning might have been (c) coming to know how to go on in creating an expository text based on internalised knowledge of the form and content of effective expository texts. In any of these three cases, however, students were being initiated into the broader substantive practice of identifying, describing, understanding and constructing expository texts.

Students' Learning About Practices of Learning Practices

Less evident—perhaps because more taken for granted—from the transcript of this lesson is what the students learned or did not learn about *practices of learning and teaching* in the lesson. It seemed to us that the lesson flowed fluently: the students were well rehearsed in what this kind of lesson required of them. In terms of what they did *not* learn about learning and teaching in this lesson, it seems to us that the students did not learn anything very new about how Sarah would teach or about how they would do their learning in the lesson. This lesson was apparently very much like many other lessons they had experienced. In terms of what they *did* learn, then, it seems to us that the students learned that this was an occasion when it was appropriate *to reproduce* the practices of learning they had employed in those previous lessons. To put it another way, they learned that today's lesson was much like many others; it was not surprising.

In terms of practice architectures, to say that students reproduced their practices from earlier lessons is to say that the students had already been stirred in to the language games, activities, ways of relating to others and the world, and the practices of learning that occurred in the lesson. They understood and used the language of group work; they participated fluently in the activities of group work; they related and collaborated with their peers in the groups; and most groups successfully completed the task the group had been set. In short, the students participated fluently in the practice of group work because they had already been initiated into the practice of group work.

The students employed other learning practices as well as the practice of group work, however. They employed a variety of practices from *a repertoire of learning practices* they had developed in Sarah's classes and in others. These included: listening attentively; responding appropriately (by answering individually when nominated by Sarah or by chorusing responses as a class); dividing into small groups when assigned to do so; working collaboratively on assigned tasks; identifying a scribe to write a response on behalf of the group; and reading group texts to the whole class when asked to do so by Sarah. Taken individually, each of these is a learning practice into which the students have been initiated. Taken together, these kinds of practices form a kind of *practice tradition* that complements, and that is enmeshed with, practice traditions of teaching that occur in Sarah's classroom (though we should also note that the practice traditions we observed in this lesson may not be typical of Sarah's teaching).

In Sarah's lesson, then, the students learned a substantive practice—about writing—and they also learned about learning practices—in this case, that they should reproduce practices of learning they had learned previously.

Annie's Moving Diagram: Tracing a Learning Journey over Time

In this section, we give an example of how a learning practice can be seen not just in a single site or activity, but also as part of a long sequence of activities that may occur at a variety of different sites. The theory of practice architectures invites us to

explore not only how the sayings, doings and relatings of a practice are made possible by (respectively) cultural-discursive, material-economic and social-political arrangements that are present in particular sites at particular moments, but also over time and across successions of activities and sites that are successively inhabited by participants in the practice. Anthropologist Tim Ingold (2007, 2011) talks about social life in terms of *lines*, *movement* and *being alive*. Following Ingold's insight, we might say that to give an account of learning, it may be necessary to trace participants' journeys through successions of activities and sites—not just the happenings of a single session like Sarah's Year 5–6 lesson about expository texts. (We saw, in analysing Sarah's lesson, how it related to her current unit of work on Science about 'Rainforests', and how the activities of the class were based on previous lessons about 'text types' in general and 'effective expository texts' in the lesson before the one we observed.) Particular 'ah-hah' moments occur on particular days, at particular moments, no doubt, but the learning we observe in life takes place in journeys that reach back into participants' life histories and also into the histories of sites and the objects found in them. Many of those histories, in turn, are the products of participants' previous actions and learning, the products of other people's actions in constructing the arrangements that appear in the sites where learning takes place (including an indeterminate number of people like the architects of schools, the authors of text books, the framers of policies, and the teachers of the students in previous years, as well as the past experience of the teacher).

Our research team visited teacher Kendra Clarke's Year 5 class at Hillview School. The class was studying the topic *Forces Changing the Earth*. Some time before the lesson we visited, Mrs Clarke had stuck slips of paper to a board to display some of the key words that had emerged in the class's discussions of the topic so far. They are a good example of a set of specialist cultural-discursive arrangements (specialist discourse)—in this case, cultural-discursive arrangements that support the students' *sayings* in the practices of writing an explanatory text about an issue concerning 'Forces Changing the Earth'. The vocabulary list is shown in Fig. 4.1.

The slips of paper stuck to the board displaying the vocabulary list are not only *cultural-discursive arrangements*; they are material entities: 'stuff'. We can see from the photograph that some of the slips are arranged in alphabetical order: at some point, Kendra and the students had compiled a list of words; some time later, Kendra had written the words on the slips of paper; and she had then stuck the list to the board with the words arranged alphabetically. We can also see that other words, towards the bottom and at the top of the board, have been added, on some subsequent occasion, without rearranging all the words to maintain alphabetical order. On the right hand side, we also see some instructions about how to treat new words and "words you nearly know". At the bottom, we see word lists of cues for writing an explanatory text: words related to 'contrasting' (like 'except', 'however', 'in contrast to'), 'adding', 'cause and effect', 'manner', 'place' and 'time' that are discussed in the *First Steps Writing*™ materials (that Kendra and the Wattletree School District are using to inform their teaching) as what are called *top level structures* for student writing and reading.

The words on the board are also parts of the *material-economic arrangements* of the classroom, along with the desks and chairs and the Smart Board (for example).

Fig. 4.1 A vocabulary list on a board in Kendra's Year 5 classroom

And they are also addressed to the students in the classrooms in a relationship between an author (Kendra, who co-constructed the word slips and the lists with the students) and a group of readers (the students in the class): they are thus part of the *social-political arrangements* of the classroom. The practice of making and using vocabulary lists hung together as part of the practice and project of learning the vocabulary appropriate to the topic; it was also a practice which was enmeshed with the practice of learning about (in this case) *Forces changing the Earth*.

In the weeks ahead, the students would write their explanatory text about an issue related to 'Forces Changing the Earth' text as an assessment task for the unit of work. The activities in the lesson we observed were part of a diverse sequence of activities that would culminate in writing the explanatory text.

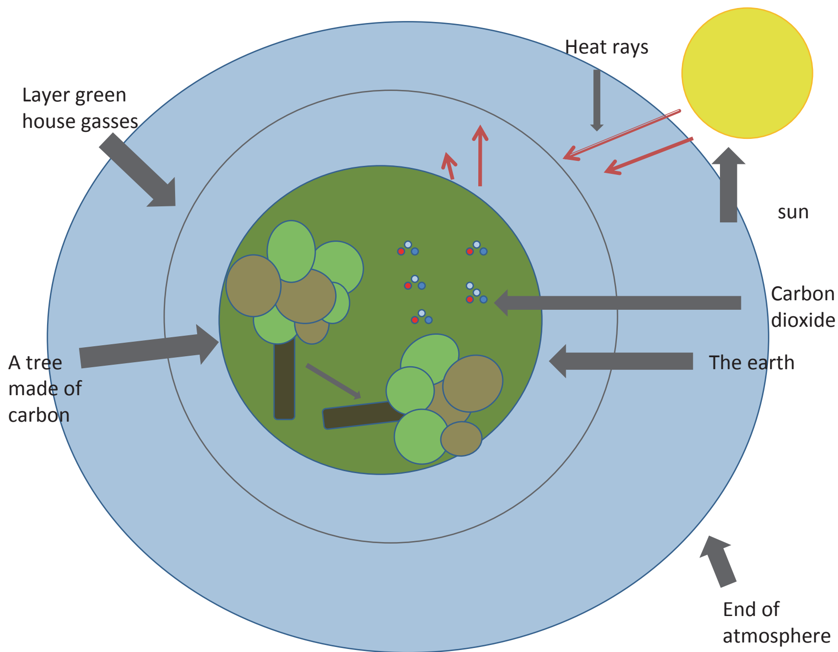

Fig. 4.2 Annie's moving diagram 1: Initial state

The lesson we observed was an intermediate way station in the journey towards producing that explanatory text; the Year 5 students were preparing a presentation to give to groups of Kindergarten-Year 1 students. The Year 5s were partnered with this Kindergarten-Year 1 class as part of a 'buddy' system operating in the school, pairing junior students with older ones. (At the start of the lesson, discussing the foreshadowed development of another version of the presentation to be presented to their parents, the students also discussed with Kendra the problem of managing the different versions of their presentation.) Their presentation would be an oral presentation accompanied by a *PowerPoint*™ presentation that the students were working on in the lesson we observed. The aim of the presentation was to teach the Kindergarten-Year 1 students something about 'Forces Changing the Earth'. Teachers at Hillview had established these 'buddy' class arrangements partly for pastoral reasons (to support junior students in the school) but also so the Kindergarten-Year 1 students could be an audience for presentations by the Year 5s. During small group work in the Year 5 lesson we observed, we happened to come across Year 5 student Annie working with other students on how to construct their *PowerPoint*™ presentations. She was demonstrating how her *PowerPoint*™ presentation—including a 'moving diagram'—worked, so the others could consider whether they wanted to try something similar. Annie's moving diagram went through five stages to show how the Greenhouse Effect works, and, in particular, to show how deforestation releases carbon dioxide that accumulates in the atmosphere trapping heat. Figs. 4.2 and 4.3 show the initial and final states of Annie's diagram.

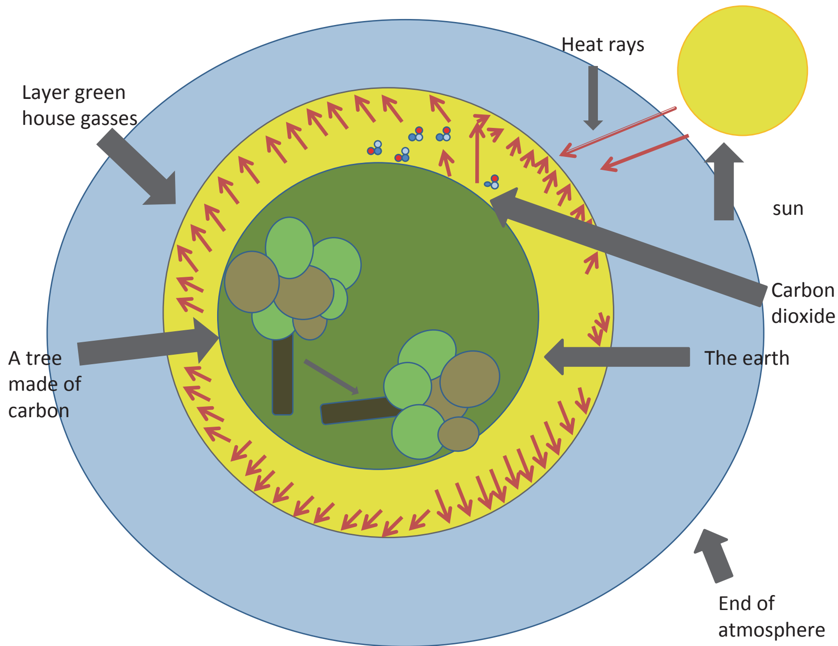

Fig. 4.3 Annie's moving diagram 2: Final state

At a convenient moment, while other members of the small group worked on their presentations, two of the visiting researchers talked with Annie individually to find out more about her moving diagram: how it worked and how she had developed the skills to construct it.

Researcher 1: And so … can you tell us about what you did and what sort of presentation you used?

Annie: I used *Publisher*™ and what it is, it's, like, it's for our main topic and it's a moving diagram on how deforestation adds to global warming.

Researcher 1: Oh okay, so you did all this?

Annie: Yes, I did all this. And it's got arrows everywhere.

Researcher 1: Okay, so this is what they call a moving diagram, is that correct?

Annie: Yes, … and then the trees fall and carbon-dioxide goes into the air-And heat rays are released from the sun, and then they bounce off there, and then due to more heat rays ….

Researcher 1: And how did you learn how to do that?

Annie: Well we got taught a little bit by one of the teachers before, but I just played around at home with it, and got it to work.

Researcher 1: I'd like to know how to get these little things moving. Would you just show me again please?

Annie: Yeah. … and then carbon-dioxide released from this thing, and more heat rays are released from the sun, and they bounce off the earth, and some get through and some don't, and due to more heat rays the earth becomes a hotter place.

Researcher 1: That's one of the best explanations of global warming I've heard; you did well.

Researcher 2: So these little bubbles that we've started in there, did you, how did you, did you get those to animate the icon, like, when you put the thing in?

Annie: I was in 'Custom animations'.

Researcher 2: 'Custom animations'-

Annie: And this, looks quite confusing now- You can make it, you just have to go in this one up here [the 'Slide Show' menu in *PowerPoint*™], you have 'motion parts'- And you can draw your own or get lines and you can make them move.

Researcher 1: Okay, that's brilliant. Which teacher did you say taught you that?

Annie: Mrs Martin, she used to teach here, and then she taught us a little bit, she came in one day and we sort of just played around with it, and then I just sort of did the rest at home, I just played around at home and-…

Researcher 2: Yes. So being able to do this, how does that help you with your learning, like, how does that help you understand, like you were doing the process of, what's your's called?

Annie: Deforestation.

Researcher 2: Deforestation, okay, so how does actually doing this, like creating this slide, help you know more about deforestation?

Annie: Well it's just a way to put all your information together, in a way, and it sort of helps things, instead of just talking about it, with who you're presenting … you can actually show them, which is sort of helpful as well, because you know, sometimes they don't all the time understand it when you're just talking.

Researcher 1: So Annie, if you think back to a couple of years ago, and if you were asked to do a project on deforestation, what would have been some of the things that you would have done?

Annie: I actually sort of didn't know anything about deforestation until this unit, so I would have just, I probably wouldn't have even thought of doing a moving diagram or anything. This time we got asked to do it, but I wouldn't have thought of-

Researcher 1: So you also might have been, how else would you have presented information, like now you're presenting it like this, with an interactive … (Talking over each other)?

Annie: I probably would have just drawn a plain diagram and just talked, that's probably what I would have done…

At the end of the lesson, one of these two visiting researchers asked Annie to describe the elements of her diagram to the third visiting researcher. Here is what Annie said on this occasion:

> It's a moving diagram to show how deforestation adds to global warming. … It's got arrows everywhere to show that when the trees fall and carbon-dioxide is released from them and goes into the air, then heat rays are released from the sun, and then they bounce off the earth, and some get through and some don't. Then due to more heat rays coming through the atmosphere the earth becomes a hotter place. … We're playing with trying to match your oral to your [*PowerPoint*™] presentation. … I am learning the process of Deforestation. And I created this slide show as a way to put all your information together, in a way, and it sort of helps things, instead of just talking about it, with who you're presenting. … You can actually show them, which is sort of helpful as well, because, you know, sometimes they don't all the time understand it when you're just talking. One of the key things about this is your audience: involving the audience with yourself. … You need to think about how your audience will react. You can ask them if they have any questions, yeah. "Anyone else got something else to add?" You know like that…. You feel like you've sort of achieved something because all of your hard work has come finally come down to this, like your presentation and you've sort of, like, done it all. You feel like you've done it right. You sort of feel proud because you've accomplished enough to get them interested in what you're doing and I always go away going, 'Oh, gee, I think I actually learned something too'.

This second explanation gives evidence of what is often described as 'deep learning'. Annie had learnt a substantive practice and demonstrated this as she used different words to explain what the moving diagram depicted (how deforestation contributes to global warming), and what the presentation would be used for (to reach a specific audience by showing the process in the moving diagram as well as by telling them about it). Her description of her feelings of accomplishment about what she has done provided further evidence of the substantive nature of Annie's learning—her clear sense that she had constructed a moving diagram that achieved what she intended. In our view, by contrast, the different versions of Annie's description of the diagram demonstrated that Annie was not a novice but an expert in a specific practice: the practice of describing the moving diagram and its components and purpose—and also constructing, describing, explaining, presenting ideas to do with deforestation.

The table below summarises the way the sayings, doings and relatings of Annie's practice in developing her moving diagram are made possible (respectively) by a range of cultural-discursive, material-economic and social-political arrangements that were found in a series of sites relevant at different times to Annie's construction of the moving diagram. It was in this succession of sites that she developed the knowledge, skills and values that made it possible for her to construct the diagram.

Analysis: Annie's Moving Diagram

Elements of practices	Practice architectures
Project	*Practice landscape*
Year 5 student Annie's project was to produce a moving diagram to illustrate the Greenhouse Effect, in order to help her to teach Kindergarten/Year 1 students about it.	Annie was in a Year 5 class. The focus of interest in this analysis, however, is a moving diagram created by Year 5 student Annie. The practice landscape that surrounds the creation of the diagram reaches out to enmesh a series of events over some months, involving a diverse group of people (teachers and others) that Annie has encountered. Without these contacts, Annie could not have created the diagram.
Sayings	*Cultural-discursive arrangements*
Some ideas Annie uses are associated with the topic the students are studying, for example, "deforestation", "global warming", "carbon dioxide", "heat rays released by the sun", and "the Greenhouse Effect". These ideas come into play in language games relevant to the substantive practice of discussing the topic for the unit of work the class was studying: *Forces changing the Earth.*	The lesson is conducted in spoken, technical and written English. Specialist discourse for the lesson is drawn from four domains: the technical languages of the Science curriculum, of literacy, of technology, and the *Habits of Mind*™ program. The principal and school executive team (including Annie's teacher Kendra Clarke) brought the language of *Habits of Mind*™ into the school via professional development and visits to schools in other districts; Kendra, in turn, brought this discourse to the classroom and to the students. She is especially familiar with this discourse, since she was a member of the leadership team in the school that leads the school's professional development initiative to implement *Habits of Mind*™.
Other ideas are connected with the moving diagram Annie created, for example, "moving diagram", "arrows", "custom animations", and "motion parts". These are substantive ideas that come into play in language games relevant to the software Annie and the class were using (*Publisher*™ and *PowerPoint*™).	Kendra Clarke uses specialist discourse for the lesson, drawn from a language of text types—explanations—that appears in the *First Steps Writing*™ books. She has brought this discourse to the classroom and to the students. She is especially familiar with this discourse, since she was a facilitator of this program in her previous school district. She has also participated in Wattletree School District's *Pedagogies for Literacy* initiative.
Still other ideas referred to the nature and purpose of the presentation: ideas that come into play in language games relevant to the substantive practice of doing presentations. They included things like the diagram as "a way of putting information together" to help an audience understand because "sometimes they don't understand it when you're just talking".	

Elements of practices	Practice architectures
Finally, Annie uses ideas that refer to her learning practices—for example, how she learned to make this moving diagram: like "Mrs Martin … taught us a little bit", "we played around with it", "I did the rest at home". These ideas come into play in language games relevant to Annie's learning practices.	
Doings	*Material-economic arrangements*
Annie participated in a range of activities to learn about the technology, the content and the literacy to produce her moving diagram. She engaged in: *Technology activities*: Whole class discussions/learning episodes with Mrs Martin; practising independently at home—Annie described this as 'playing with'; Web searching (information about 'deforestation'); custom animations, paired 'teaching', *Content-related activities*: reading library books, whole class discussions, group discussions, whole class discussions/learning episodes with Mrs Clarke—students sitting on floor facing the Smart Board at side of room; and *Literacy-based activities*: whole class discussions on presentation skills, application of elements of design (changing colours for impact), summarising, 'knee to-knee' (paired discussions), writing the draft report, explaining how to work the models, make a flow chart, make palm cards with summary points, 'practise oral presentation', complete a Y chart (a graphic organiser of information).	To achieve this, Annie participated in a range of different kinds of groups—whole class, small group, and pairs—as well as independent work. The material-economic arrangements in the classroom during the lesson we observed included, among other things: the board with the vocabulary list, the Smart Board, chairs, desks (arranged in pods), classroom furniture, laptops and PCs around the room, and bodies in space—children on the floor during this episode and Kendra at the Smart Board. The teacher had the students sit on the floor, and orchestrated activities via dialogic pedagogies/questioning. Other practice architectures relevant to the Annie's practice of constructing her moving diagram were not apparent to us visiting researchers until Annie spoke about the variety of people and settings that had been part of the process of constructing her moving diagram: they included work in the class, at home and elsewhere. Some of these are mentioned in the cell 'Relatings' below.

Elements of practices	Practice architectures
Relatings	*Social-political arrangements*
In order to produce her diagram Annie has been helped by her classroom teacher, Kendra Clarke, who is also Annie's mother. She also learned about creating moving diagrams from Mrs Martin, a previous teacher. Mrs Martin, in turn, learned these skills from Wattletree District consultant Gabrielle Kemp who had learned skills of this kind at the local Institute of Technical and Further Education (TAFE). For part of the time, Annie worked on the diagram with other Year 5 students in the class. She also taught some of the other Year 5 students to do custom animations. The purpose of producing this particular moving diagram, however, was to assist Annie in teaching students in a buddy Kindergarten/Year 1 class, the audience for an oral presentation that the *PowerPoint*™ moving diagram will complement.	The construction of Annie's moving diagram depended on a web of relationships between Annie and other people. These relationships were not just radial (all reaching from Annie to the others), but clustered in relationships between others that Annie was not necessarily aware of. Among the relationships in the web of relationships we identified were: class teachers to Annie; Annie with peers; Annie to peers; Annie to Kindergarten/Year 1s. Outside these immediate relationships, there is also a wider web of other supporting relationships that supported Annie's creation of her moving diagram: for example, Mrs Martin to Gabrielle Kemp (a school district technology consultant), and Gabrielle Kemp to the local TAFE Institute. The *Pedagogies for Literacy* program offered by the Wattletree School District from 2000 to 2006 also influenced Kendra Clarke's teaching, including specific elements of the literacy teaching in this lesson. Kendra was also influenced by the school principal, Bronwyn Harper and the school executive team who championed the kind of inquiry teaching exemplified in Kendra's lesson, along with the use of technology by teachers and students, and the *Habits of Mind*™ program that suffuses this lesson (like most lessons Kendra teaches). In general, interpersonal relationships at Hillview School also conform to the *Communities of Practice Principles* developed by Wattletree School District over more than fifteen years, and evident in relational practice in many of the schools, and many of the classrooms, in the District.

Elements of practices	Practice architectures
Dispositions (habitus)	*Practice traditions*
For Annie and the other students in the class: learning to present, learning about text types and how to write texts of different types. The lesson is part of a series of learning episodes that will give them an opportunity to write and present an explanation text. The students clearly enact a variety of the sixteen *Habits of Mind*™ adopted by Hillview School, such as, for example, Annie's persisting, striving for accuracy and gathering data through all senses.	The overall approach that Kendra Clarke employs includes, at different times, explicit instruction, various kinds of social constructivist approaches, and the inquiry approach that has been central to Hillview School's practice in recent years. The *First Steps Writing*™ program frames Kendra's teaching; this program was being adopted across Wattletree School District as a guide to the practice of teaching writing. (Kendra was a facilitator of *First Steps Writing*™ in-service education in her previous school district.) Her teaching was also clearly informed by the *Habits of Mind*™ program adopted by Hillview School. As mentioned earlier, the practices of teaching and learning in the lesson we observed, and in the unit of work Kendra and the students were involved with, are explicitly shaped by the Wattletree School District *Communities of Practice Principles* which place special emphasis on *meaningful learning, inquiry, collaboration and relational trust, communication and reflective dialogue, self-responsibility* and *human development*. These practice traditions shaped the way Annie developed her moving diagram—as did her own practice traditions of learning at school, at home, and elsewhere.

Evidence of Annie's Learning

Annie learned several kinds of things as she produced her moving diagram. Each of these things might be described in terms of 'knowledge' (or 'concepts') or 'skills' or 'values', but, as indicated earlier, we believe it is more properly described in terms of learning how to go on in (a) language games, (b) activities, (c) ways of relating to others and other things in the world, and (d) how these things hang together in the common project and practice of coming to know how to go on in a practice. We also indicated that we believed that learners learn by participating in practices—both substantive practices and learning practices, and especially by being stirred in to the language games, activities and ways of relating that compose practices. In general, we argued, learning is thus a process of initiation into practices.

About 'Forces changing the Earth' and the Greenhouse Effect. Like other students in her class, Annie entered various language games about the topic for the unit of work, *Forces Changing the Earth*. Some of the ideas at play in those language games were listed in Fig. 4.1 (the photograph of the vocabulary list) and the analysis table above; they include such ideas as "the Greenhouse Effect", "global

warming" and "deforestation". Annie's deep learning was evident in her description and retelling of how she made the moving diagram and how she would use it in her presentation to the Kindergarten-Year 1 children[1]. She had mastered particular substantive practices or doings (making *PowerPoint™* presentations that included moving diagrams, making presentations to audiences) relevant to practices of discussing topics concerned with *Forces changing the Earth*; and she had also mastered particular learning practices in ways of relating to others and the world (including collaborative relationships in which she helped other students who were creating *PowerPoint™* presentations, learning from expert others like Mrs Martin, and following instructions from her teacher).

It is clear that Annie came to know how to go on in the *substantive practice* of discussing the Greenhouse Effect. She had been stirred into this substantive practice amid practice architectures that had made this substantive practice possible—the kinds of cultural-discursive, material-economic and social-political arrangements identified in the analysis table above. We might reasonably conclude, then, that Annie's learning was an initiation into the substantive practice of explaining the Greenhouse Effect, and that her initiation into this practice was enabled and constrained by different practice architectures in a variety of sites she traversed in her learning journey—including encounters with Mrs Martin the year before, doing things at home, and work done in the Year 5 classroom on different occasions. (We might note, too, that Annie's relative autonomy as a learner, demonstrated in the creation of the moving diagram, might have been at least partly shaped by her mother being a teacher and, in fact, her Year 5 teacher at the time we met Annie.)

Annie's learning about technology, and about making oral and visual presentations to an audience. Annie taught some of her peers to use 'Custom animations' and 'Moving parts' in *PowerPoint™*; it was evident that she had been initiated into practices of using the technology appropriately for her purposes. As Figs. 4.2 and 4.3 show, Annie had also learnt about the elements of design as she used visual devices of colour and line and space to depict movement and change from one slide to another. Equally, the excerpts of the transcript show that she had been initiated into practices of making and doing presentations for audiences[2]. Annie had been initiated into these practices amid practice architectures that enabled and constrained her participation in the relevant language games, activities, ways of relating to others and the world, and practices. Some of these practice architectures had come to Annie's Year 5 class from outside, like the affordances built into the

[1] Annie rephrased her explanation of her moving diagram in subsequent retellings. In the first excerpt of transcript above, she said, "I used *Publisher™* presentations and what it is, it's like, it's for our main topic … and it's a moving diagram on how deforestation adds to global warming… then the trees fall and carbon-dioxide goes into the air. And heat rays are released from the sun, and then they bounce off there, and then due to more heat rays." In the second, she said, "then carbon-dioxide released from thing, and more heat rays are released from the sun, and they bounce off the earth, and some get through and some don't, and due to more heat rays the earth becomes a hotter place".

[2] The way Annie worked on her moving diagram demonstrated her sense of audience awareness: for example, when she said: "It's just a way to put all your information together, in a way, and it sort of helps things, instead of just talking about it, with who you're presenting … you can actually show them, which is sort of helpful as well".

way *PowerPoint*™ software operates. Others were constructed near, in or for the site, like the arrangements made by Annie's teacher, Kendra Clarke as she prepared the unit of work and the pedagogies she would employ to teach it. We will consider these kinds of practice architectures further in Chapter Five 'Teaching as initiating people into practices'.

Annie's learning about learning practices. In our observations of Annie and her classmates participating in lessons about *Forces changing the Earth* and the Greenhouse Effect, it was evident that the students had been initiated into particular learning practices that enabled them to go on in the practices of their lesson. Their teacher Kendra Clarke, along with the other teachers they had encountered before her, had orchestrated thousands of past learning episodes amid practice architectures that enabled and constrained their participation in the relevant language games, activities, ways of relating to others and the world, and practices. Through those many episodes, the students learned practices of learning that Annie and her classmates demonstrated–with varying levels of proficiency—as they participated in their lessons. For instance, it was evident that Annie had been stirred into practices of *collaborating with peers* as she assisted them create their moving diagrams. She had also been stirred into practices which *utilised and integrated technology* to search for information about *Forces changing the Earth* and to produce digital texts. And she had been stirred into practices which reflected and valued *inquiry learning* and *student agency and autonomy* as she exercised choice in topic selection and presentation mode. Learning to create the 'moving diagram' was enabled by practices which provided *time for practising* in the 'here and now' of the lesson—in physical space-time—and over historical time as a journey of learning.

When Kendra Clarke, Annie's teacher, asked the class "What do you mean by that?" or "Do you want to explain that a bit more?", "Why is that necessary?", or "Tell us why you've chosen to do it that way" (as evident in the lesson excerpt below), she stirred the students into learning practices which led them to engage in *substantive learning-focused dialogues* through justifying responses and extending or sustaining their thinking. And when, at the end of the lesson, Kendra asked the students to think about what they had learnt and how they learnt it, she was drawing them into the practice of *reflecting on learning*:

Kendra: Yeah. Would it be a bit like, you know when we wrote our text, you had to have an introduction, yeah? Yeah. So, when you're actually presenting your diagram, you might need to have a bit of an introduction. *Why is that necessary*?

Harvey: So, they can see what you're going to talk about and like, not get into it straight away and not just/

April: /Introduce the topic…(faint).

Kendra: Yeah, so that they'll know what they're going to hear. They know what they're going to be listening to. Okay let's have a think. I've got a couple of key questions for you. *Can you knee to knee someone*? (Students turning to face another student, knees facing towards each other). Okay first one. What will be the challenges for you to do this? What will be the hard things about doing [your presentations]?

Rhianna: Explaining-…(Students in pairs talking to each other)
Kendra: Okay turn back this way, quickly. Okay what do you think the challenges will be, Amelia?
Amelia: Trying to word it right.
Kendra: *Do you* want *to explain that a bit more*?
Amelia: Like, if we were doing it, like presenting it to all the people, older kids, we'd be able to say your technical words and explain it more. But with younger kids it's kind of hard to word it right.
Kendra: Okay so, you have to be very aware of how you say it. Because the audience that you're using there is Kindergarten, but then, as Shane said, our parents are going to come too, and your parents will be invited, so your next audience might be adults.
Shane: So, we'll have to do two, so one's like/
Rhett: /If you wanted to have an introduction you could probably write an introduction for kids… an introduction/
Annie: /you don't really have to write what you're doing, you could just have, like one palm card that has a bit of information, like mention this and this, or something, but you don't have to, like write it out/
Georgia: /Well you can have a key word/
Kendra: /So, you would have a key word with your palm card, so that you know.
Bella: Or could you have, like one, just like the adults and make it, like the technical words, so the Kindies can understand from that.
Kendra: *What do* you *mean*?
Bella: So, like, if you want a really technical word for the adults, and you're doing the Kindies, do you go, like make it for the meaning to have, like a less difficult word for them to understand?
Kendra: Yeah, because you have to adjust what you're saying to your audience/
Liam: /So, people notice that/
Kendra: /Sorry—Liam?
Liam: If you're doing tsunamis, you could say a tsunami—a big wave instead of tsunami.
Kendra: Come on in, Evan.
Evan: You could say tsunami and say, a tsunami is a really massive wave and//
Kendra: //So, one of the challenges will be the language that you use. What's another challenge? Madison?

This excerpt shows how particular learning practices (like collaborating with peers, inquiry learning, substantive learning-focused dialogues) are practised in physical space-time. It also shows that, over time, Annie and her classmates were initiated into practices that required them to *participate in a range of grouping arrangements* that afforded different ways of relating to each other. (Such arrangements are common: they are orchestrated by teachers and appear as the material effects of teaching practices; they are thus practice architectures for learning formed by teaching practices.) For example, the students moved seamlessly from the whole class teacher-led group to participating in discussions in paired arrangements (through

the ‘knee to knee’ structure) to individual arrangements. It is clear that these learning practices hung together in a common project (the lesson on *Forces changing the Earth*) and that the students, through their participation, both co-produced the learning practices encountered in the lesson, *and*, came to know how to go on in them.

Practices of Learning in Ecologies of Practices

In terms of our theory of ecologies of practices, our observations also make it clear that the practice of learning in formal educational settings is ecologically dependent on other practices in what we have called the Education Complex. The influence of *teaching* on learning is the most obvious, but not the only one. Practices of *professional learning* also influence learning by influencing how teachers teach, for example. Practices of *leading*, at every level from the classroom and school to the educational institution, system and nation, influence learning by establishing policies and procedures for curriculum, teaching and assessment, and by providing the vast array of resources that support learning (for example, schools, learning and teaching materials, computers, interactive whiteboards, desks). Practices of *researching* also influence learning. Researching does so by such means as determining what learning outcomes will be assessed in national testing programs, and by evaluating the relative efficacy of different teaching approaches for different students and then making recommendations for teaching practice. Reflecting does so when students and teachers in classrooms reflect at the end of a lesson on what they have been doing and whether the lesson seemed successful from their point of view. In our observations, we see these ecological connections across the Education Complex not just as broad generalities, but also in the concrete particularity of practices of learning that have been influenced in specific ways by the particular content and form of those other practices.

In the sections that follow, we draw on Annie’s moving diagram and return to Sarah’s lesson, analysed in detail in the Appendix, to note some of the interconnections between practices observable in the lessons we observed.

Student Learning and Teaching

As educators, we are trained to question whether and to what extent learning depends on teaching, and whether and to what extent teaching produces learning. We hope and expect that they will be interdependent in education but we know that learning can occur independently of (intentional) teaching and that, perhaps more frequently than we like to admit, teaching results in little or no new learning. Nevertheless, the work of formal educational institutions proceeds in the faith that teachers’ teaching will have its harvest in learners’ learning. Increasingly over the time we conducted fieldwork in the school, teachers at Northton, for example,

were exploring the interconnections and interdependencies between their teaching practices and students' learning practices through individual and collective self-reflection on their teaching. It turned out, as we discovered in our focus group interviews with some of Sarah's Year 5-6 students, that the students also had critical understandings about such learning practices as group work and the use of digital technologies like the *SMART Board*™ in the classroom. Both teachers and students at Northton, then, asked critical questions about whether and how their practices of learning and practices of teaching were interdependent in the life of their classrooms and the school. In addition, Annie's moving diagram didn't appear as the result of one lesson on one day, it was made possible by a web of interconnected teaching experiences (formal and informal) Annie and her classmates encountered over an extended period of time.

In our observations of Sarah's lesson on expository texts and in the case of the production of Annie's moving diagram, we found evidence of interconnections between particular learning practices and particular teaching practices. As noted in the ecologies of practices table in the Appendix, we observed that the students in Sarah's class were well rehearsed in the learning practices that Sarah's teaching practices invoked—her repeated use of the IRE (invitation, response, evaluation) sequence, for example. The students almost always responded as Sarah directed or suggested—there are very few miscues in students' responses. They, like Annie and her peers, knew how to go on in the language games, activities, ways of relating, and practices in Sarah's classroom, and, because Sarah kept the action moving briskly, changing from activity to activity (in Episode 2 of the lesson especially), they maintained their attentive engagement in the interactions of the classroom.

In terms of Capra's (2005, p. 23) "principles of ecology", we see clear evidence of *interdependence* in the reciprocity between the students' learning practices and teaching practices (cf. Capra 2005, p. 24: "The exchanges of energy and resources in an ecosystem are sustained by pervasive cooperation"—in this case, in the reciprocal interconnections between learning and teaching practices). Similarly, we see evidence of *diversity* in the variety of learning practices and teaching practices that the students and teachers (in both cases) employed in the lessons—for example, the difference between the teacher-directed, whole-class questioning producing student responses (in Episodes 1, 2, 3 and 5 of Sarah's lesson), and the small group work (in Episode 4 of the lesson); and in the quick succession of different activities in Episode 2 of the lesson (cf. Capra 2005, p. 25: "A diverse ecosystem will be resilient because it contains many species with overlapping functions that can partially replace one another"). We also see evidence of *cycles* in the way knowledge, skills and values pass from the teacher to the rising generation of students, in these lessons, in the form of language games, activities, ways of relating, and practices concerned with writing expository texts to persuade readers, or producing a digital text to inform an audience (cf. Capra 2005, p. 25: "Matter cycles continually through the web of life"). In the relationship between the students' learning practices and teaching practices, we also see some evidence of *development* in both Sarah's lesson and in the case of Annie's moving diagram: the students were developing their capacities to write or produce texts of particular kinds (expository texts or digital

texts), although we did not see much evidence of their learning practices developing through the lesson; their learning practices were generally being reproduced rather than transformed in the lesson. We could see, however, that in both cases, the students' learning practices had previously been developed by the particular style of teaching they had encountered: the students were fluent in their responses to Sarah's direction (cf. Capra 2005, p. 27: "All living systems develop, and all development invokes learning").

In such ways, we see evidence not only of ecological connections between the *participants* in the lesson (the teacher and the students), but also between *practices of learning* and *practices of teaching*. Moreover, we conclude that these connections are, or are very like, *ecological connections* between different parts of living systems: they show how practices of learning and practices of teaching can be (although they are not always) interconnected in an ecology of practices.

Student Learning and Professional Learning

The ecological connection between the students' learning practices and professional development practices (teacher learning practices) may seem more indirect than the connection between the students' learning practices and Sarah's and Kendra's teaching practices. There is a clear connection, however. Sarah's and Kendra's teaching practices have been shaped by their initial teacher education, and by their continuing professional education as teachers. Both teachers participated in Wattletree School District's *Pedagogies for Literacy* program over several years, as participants and as lead teachers for the program in their respective schools. During the final year of our *Leading and learning* project fieldwork, Sarah was participating in the District's program of in-service education in the *First Steps Writing*™ program. She was being trained to be a facilitator in District-level in-service meetings and as the facilitator of school-based in-service education at Northton School. The relationship between students' learning practices and their teachers' professional learning practices is mediated by the teachers' teaching, which enables and constrains students' learning practices in ways that are to be expected on the basis of the teachers' professional learning.

Sarah and Kendra had been stirred in to, know how to go on in, and have been initiated into the (language games, activities, ways of relating, and) particular kinds of teaching practices enabled and constrained by the practice architectures of such programs as *Pedagogies for Literacy* and *First Steps Writing*™. Of course these were a very small part of the professional learning that Sarah and Kendra had undergone in the whole of their initial and continuing education to that time. Nevertheless, these specific professional learning activities had left clear traces in different aspects of their teaching practice, and thus helped to shape the learning and the learning practices of their students. The programs had also shaped the practice of all the other teachers in the schools as well, so the students had also encountered similar teaching practices in earlier years of their schooling.

Most evident in the lesson we observed in Sarah's classroom was the direct influence of the *First Steps Writing*™ program on the students' learning and learning practices. The language of "text types", "exposition", and "taking a position" that was "affirmative" or "negative", for example, travelled to Sarah's classroom from the *First Steps Writing*™ materials and the District's extensive professional learning program to support teachers using the program. Sarah conducted the activities for the lesson in her own way, but she followed the structure set out in the *First Steps Writing*™ materials for the key activity of drafting an expository text as the culmination of the lesson. The relationships in the lesson were also governed by the view of teaching found in the *First Steps Writing*™ texts: for example, ideas about explicit teaching and about the role of language in learning (for example, the need for metacognitive awareness of text features like "text types" that would allow students to construct effective expository texts). These ideas, activities and ways of relating operated as practice architectures for the students' learning practices, enabling and constraining how they could act and interact in the classroom.

In such ways, we see how teacher learning practices—practices of teacher *professional learning*—shape *student learning*.

Learning and Leading

In both of the cases presented in this chapter (Sarah's lesson and Annie's moving diagram), teaching practices have also been shaped by the District-wide *Communities of Practice Principles* which had been developed and refined by District leaders over fifteen years or more. District leaders intended that these principles would be realised in the relationships between District staff, between District staff and staff in schools, between school staff (for example, in staff professional learning), and between teachers and students, and between students, in classrooms across the District. The principles express six key ideas concerning *meaningful learning*, *inquiry*, *collaboration*, *communication*, *self-responsibility* and *human development*. Teachers from Hillview and Northton Schools (including Sarah and Kendra) were deeply committed to realising the principles in their practice.

Wattletree School District leaders expected that students, teachers and leaders at every level in the District would develop the key *dispositions* named in the *Principles*—dispositions like collaboration and self-responsibility. The District expected that students, teachers and leaders would develop these dispositions by participating in life in the District in ways specifically designed to realise them—that is, amid cultural-discursive, material-economic and social-political arrangements specifically designed to enable the form of life the *Principles* envisage. In effect, the District asked teachers and leaders, especially, to consider how they could, in their turn, construct practice architectures in their schools and classrooms that would accord with the dispositions advocated in the *Principles*. They were asked to conduct themselves in accordance with the *Principles* in their practices of leading, their practices of teaching, their practices of teacher professional learning, and their practices of

researching in their schools. In particular, though, teachers were asked to construct their teaching in ways that would realise the *Principles* in their practice so that their practice would become a practice architecture that would enable and constrain their students' learning practices in ways that would accord with the *Principles*.

The *Principles* are a highly refined expression of the aspirations and expectations of Wattletree School District's leaders. They expected to see the *Principles* cascading through the practices of leaders, teachers and students throughout the District. We saw clear evidence that this was being achieved in the teaching and learning practices we observed in Sarah's lesson on expository texts and in Kendra's lesson on creating and presenting digital texts. Especially in small group work where the students collaboratively constructed their expository texts and taught each other what they knew about creating moving diagrams, we saw evidence of ideas advocated in the *Principles*—like *meaningful learning*, *collaboration*, *communication* and *self-responsibility*. The students' respectful and inclusive ways of working together seemed to be realising the District's aspiration that their learning practices would be of the kind expected in a 'community of practice'. In this, we saw evidence of one of the ways that the students' learning practices were shaped by practices of leading in the District, in Northton and Hillview Schools, and in Kendra's and Sarah's classrooms.

Although we will not discuss them in detail here, there is also evidence of other leading practices that had shaped the students' learning practices in the lessons: students' practices of leading one another in the small group work, Annie leading her peers in teaching them about custom animations, Kendra's practice of leading the professional learning agenda for the other staff at Hillview, and Sarah's practices of leading in Northton School's implementation of the *First Steps Writing*™ program, for example.

In such ways, practices of *student learning* encountered in both Sarah's lesson and in the production of Annie's moving diagram have been shaped by practices of *leading*.

Student Learning and Researching

As indicated in the ecologies of practices table in the Appendix, the students' practices of learning in Sarah's lesson have been shaped by practices of research and reflection beyond Northton School as well as within it.

The *First Steps Writing*™ program, employed by both Sarah at Northton and Kendra at Hillview, is based on a reading of literacy research and a tradition of research into language and learning reaching back to the 1960s and 1970s (for example, Britton 1970). The research practices that produced the findings that shaped the *First Steps Writing*™ program also shaped Sarah's and Kendra's teaching practices, and thus also shaped the students' learning practices in the lessons on writing and producing texts (expository texts in the case of Sarah's lesson, and a digital information text in the case of Annie's moving diagram).

Our research practices, the ones that led to the writing of this book, also shaped the students' learning practices on the day we observed their classes. The teachers prepared for and taught their lessons conscious that members of the research team would be present in the room observing their teaching. Our presence thus altered—perhaps not very significantly—the practice architectures of the classroom for the lessons. In our analysis of the transcript of the lesson (in the Appendix), we infer that Sarah produced a 'demonstration' lesson for the day. If so, this altered the learning conditions for the students, and may have evoked from them learning practices in which they were well rehearsed rather than other learning practices.

Both Sarah and Kendra also engaged in researching practices. They are veteran teachers-as-researchers, who routinely reflect critically on their own teaching practices. Sarah's longstanding practice of critically reflecting on her own teaching and with colleagues through a range of researching practices, including action research projects that sometimes lasted for months at a time, also shaped her teaching of the lesson we observed, and thus the learning practices of the students in the classroom that day.

Both Sarah and Kendra also habitually finished each of their lessons with a short self-reflection with the class about their learning. These long established processes of self-reflection no doubt heightened the students' understandings about their own learning and their learning practices. This was evident to us in our focus group interviews with students from each of the classes who were clearly aware of the kinds of dispositions expected of them in (for example) whole class learning activities, in small group work, and in learning using digital technologies. Thus, in addition to language and literacy research, our research, and the teachers' own research, the students' practices of reflection also shaped the ways they participated in learning practices in the lesson we observed.

Practices of Learning and Site Based Education Development

The kind of practice theory perspective that we advocate in this book focuses on how a practice is constituted in actuality, at a particular place (site) at and through particular times and durations. We are interested in what Schatzki calls *site ontologies*—the arrangements that pertain at particular sites and that enable and constrain practices of particular kinds. Learners engage in learning in particular sites. Teachers decide what to teach in particular sites; they teach in particular sites. They take into account the particularities of the site they work in: particular students, particular resources, particular locations, particular others with whom to interact. The site has particular affordances: conditions at the site both enable and constrain (without determining) what can happen there. Within these sites, learners like Annie in her classroom at Hillview or Sarah with her students at Northton, are initiated into practices as inhabitants of the practices they co-produce.

For us, the practice of learning is not an abstract, general or uniform process that occurs in the same way everywhere. It always happens *intersubjectively* and *interactionally* in some particular place and time, in a specific semantic space, location in physical space-time, and social space inhabited by particular others—in relation to specific practice architectures in a particular practice landscape. Learning also enacts particular practice traditions: it is itself a form of practice that is intersubjectively and interactionally secured with different participants over time. Traces of practices from other times and other places can frequently be found in their enactment (as in the case of the learning that lay behind the construction of Annie's moving diagram, which bore traces of Mrs Martin's teaching from months before, for example). Learning is always embodied, and it always occurs in interaction between the learner and the cultural-discursive, material-economic and social-political arrangements that pertain in a particular place: a material reality as palpable to the learner as his or her own body. We take pains to emphasise this actuality because we understand practices as action and interaction in history—locked in the particularity of interactions in history, embodied in particular people and situated in particular places, but unfolding with the irreversibility of history and time. Practices arise from history and project people and things forward into history, with particular consequences for all concerned. Practices unfold like stories; they make history.

When a learner enters practices of learning, not only is he or she initiated into the practice, he or she is changed in the process. Learning is a process of self-formation and transformation. In most cases, moreover, learning is not a solitary process: it is a process of self-formation and transformation that occurs in the real or virtual or implied presence of others. Others—other students, other teachers, families, friends—who also participate in the interactions of learning practices are also transformed by them. The student who learned to read at school once again secures the professional identity of the teacher who facilitated the learning. Another student who learned to read more quickly or more slowly was also affected, perhaps deeply, by their relationship with the first. The learner who now reads becomes a different resource, a different interlocutor, a different fellow being from the person they were before. They are different in the classroom, the home, the community. And the particular things they go on to read change them more and further, and through the things they read, they become a changed person—changed by what they have read in specific and particular ways. They thus live a different life than the life they might have led had they not learned to read, and inhabit a different world – they inhabit different semantic spaces, different spaces in physical space-time, different social spaces. They change the world by their changed being – they change the world by their learning and its effects. When Annie entered the practice of learning to produce moving diagrams (with Mrs Martin and with Kendra Clarke and with her classmates) she was changed in the process. Encountering this practice changed what activities she participated in at home (as she practised creating moving diagrams in 'custom animations' at home). As a result, she became a different resource for her peers as she taught them how to animate *PowerPoint*™ presentations, a different interlocutor as she now facilitated the learning of others with a different level

of facility; in the process, Annie was transformed, a different fellow being from the person she had been before.

On our practice theory, we view learning as a distinctive practice and as a phase in developing facility in practising other practices. This view focuses our attention on practices as they are realised in the particular sayings, doings, relatings and the projects that hold them together in a dialectical relationship with particular practice architectures that exist in particular places. Because local practices – like local practices of learning in this or that particular classroom or school, for example – are historically-formed, however, understanding a local practice also requires taking into account how the practice has been prefigured by arrangements that pertained in the past – for example, how a practice of learning was formed by a learner's particular life experiences, especially life experiences of learning here and in other settings. For the students in Sarah's classroom, the series of lessons focused on learning to write expository texts were constituted in a particular site – a Year 5 classroom at Northton School. While recognising that this project bears traces of other writing lessons from other times and places, it is the site 'in the actuality of the here and now' nevertheless – along with the participants and circumstances in the site – which enabled and constrained how the lessons were orchestrated locally. In a similar vein, Annie's journey of learning how to create and present a moving diagram involved participating – with changing levels of facility—in the particularity of a sequence of sites in which she found herself. In both examples, it is the practice architectures which shape the sayings, doings and relatings which constitute the practices encountered there on any given day.

And so it is with all learning, perhaps: it changes not only the one who learns but also, through how their learning changes their practices, the world they live in and the histories that unfold there.

Conclusion

In this chapter, we have sought to question the commonsense usage of the term 'learning'. Our purpose has not simply been to engage in a series of language games about practice into which readers may or may not be stirred. On the contrary, our point is to raise questions about how and why different kinds of learners, for example, may be variously stirred into or not stirred into language games, activities, ways of relating to others and the world, and practices in different kinds of settings. Through our observations of learning in the *Leading and Learning* project, we have come to see the formation and transformation of learners as part of *the formation and transformation of practices*. The formation of learners' capacities to 'go on' in and to be the bearers of practices can best be understood as occurring in a lived dialectical relationship between participants' sayings, doings and relatings and the way they hang together in the project of a practice, on the one hand, and, on the other, their lived encounters and engagements with the practice architectures (cultural-discursive, material-economic and social-political arrangements) that are laid down

and developed in practice traditions. On this view, practices are *paths* for those who walk them, *ways of being* for those who inhabit them.

Myles Horton and Paulo Freire gave their (1990) book about community education the felicitous title *We Make the Road by Walking*. For us, the title captures the way practices make paths, on the one hand, and, on the other, how the practice of walking paths, whether paths already laid down or trails we blaze for ourselves, also makes us. We see practices as passages through time and space that people enter and that people make: they enable and constrain our movement in time and in semantic, physical and social space.

Being stirred in to a practice is a process of finding and then knowing how to go on in the characteristic and overlapping semantic, physical and social spaces that enable and constrain interactions between people and between people and the world. Along the way to discovering how to go on in practices, we may also discover how the range and scope of practices can be modified and extended for new participants, new times and new circumstances. As we discover this, in turn, we also discover that people are not only stirred in to practices but also that they are agents of practices in the way that Annie was agentic in the creation of her moving diagram—agents who, by their practising in relation to others and the world, create, adapt, vary and extend practices.

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Chapter 5
Teaching: Initiation Into Practices

Introduction

In Chap. 4, 'Student Learning: Learning Practices' we suggested that learning involves being stirred into practices. In many cases of school learning, it is teachers who do this 'stirring in'. We also suggested in Chap. 4 that learning involves being *initiated* into practices. Similarly, in many cases of school learning, it is teachers who do this initiating.

In most formal learning settings, teachers know what needs to be taught, and they aim to find ways to teach that students will find engaging. They may interpret a curriculum or syllabus materials, and adapt given curriculum ideas or materials, to make them more comprehensible and relevant and authentic for their own students in their own site. In doing this, they are reaching out towards the students, and inviting them to enter a new intersubjective space that the teachers, at least, hope will be a new space that the students can live in—or, better, a new practice for them to inhabit. As suggested in Chap. 4, many people think of the material to be taught in terms of 'concepts' or content—as if teaching were no more than a process of transmission. Most teachers nowadays reject that view, of course. Many today adopt a social constructivist stance that reflects their awareness that knowledge is constructed by the agency and activity of the learner, in concert with teachers, peers and others.

As we reflect on teaching as a practice in the introduction to this chapter, we want to say a little more about the notion that learning is being stirred in to practices, and the idea that it is often (but not only) teachers who are the ones responsible for doing this stirring in—for initiating students into practices. While we often think of content to be learned as *knowledge* (cognitive content) and/or *skills* (psychomotor content) and/or *values* (affective content), it is also possible to think about things to be learned in terms of *practices*. It will sometimes take a moment to make this transformation—to think not "I want to teach the distinction between expository texts and other types of texts" but rather "I want to teach my students how to go on in the practice of writing expository texts (and other kinds of texts)". If what is to be learned is a practice, then, on the view of practices presented in this book, it will be composed of *sayings*, *doings* and *relatings*, and these will hang together in the

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project of the practice. The practice of writing expository texts discussed in Chap. 4 and in the Appendix is an example: we saw how this practice involved particular kinds of *sayings* (like 'taking a position' and 'making an argument'), particular kinds of *doings* (like setting out an argument stepwise in a series of premises that lead to a persuasive conclusion), and particular kinds of *relatings* (like the relationship between author and reader), all hanging together in a *project* (like persuading the reader to accept the author's argument).

In Chap. 2, we gave this definition of practice:

> A practice is a form of socially established cooperative human activity in which characteristic arrangements of actions and activities (doings) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (sayings), and when the people and objects involved are distributed in characteristic arrangements of relationships (relatings), and when this complex of sayings, doings and relatings 'hangs together' in a distinctive project.

We think that many kinds of contents-to-be-taught—many kinds of curriculum content—could be reconstructed in these terms. In the case of Sarah's lesson presented in Chap. 4 and analysed in detail in the Appendix, we saw Sarah initiating her Year 5–6 students into the practice of writing expository texts. The *project* of this practice is to persuade a reader of something. In order to attain this project, Sarah designed a lesson—in five Episodes—in which the students would *do* (*doings*) different things. Each of these *doings* was accompanied by particular kinds of *sayings*: Sarah drew the students into using particular specialist discourses related to expository texts: ideas of "text types", "taking a position" that is "affirmative" or "negative", the use of "emotive language", and so on (see Appendix). In all of this, Sarah maintained particular kinds of relationships (*relatings*): in the learning practices in the class, Sarah was unequivocally the one directing activity while the students responded, though the students worked collaboratively with each other in Episode 4 of the lesson. In relation to the substantive practice that Sarah was teaching, however—the practice of *writing expository texts*—Sarah was initiating the students into the special relationship of being an author who is engaging in the practice of *persuading* a reader. In this way, Sarah helped the students to inhabit the practice of *being* an author who writes texts to persuade readers.

In this example, we saw Sarah creating a succession of particular kinds of *intersubjective spaces* in the different episodes of the class. In Episode 1, she reviewed material from the last class. In Episode 2, Sarah invited the students take a position on a topic (Activity 2.1), guided them towards understanding the key words "affirmative" and "negative" (Activity 2.2), helped them to identify whether arguments are affirmative or negative (Activity 2.3), invited them to analyse an example of expository text that she has written (Activity 2.4), had the class apply their previously prepared criteria for effective expository texts to her example text (Activity 2.5), and had them recognise that it possible to take, and argue for, an opposite position about a topic (Activity 2.6). She led the students through these activities in Episode 2 in order to prepare them for Episode 4 of the lesson, in which the students worked in groups to develop an effective exposition about a topic and position (affirmative or negative) that she assigned to each group later in the lesson. In Episode 3, Sarah

explained the group work task that students were asked to do in Episode 4– working together to draft an expository text taking an affirmative or negative position on the actions of a character in a fairy tale. In Episode 4, they worked on this task in their groups. Finally, in Episode 5 of the lesson, the students return to the whole-class arrangement, and representatives of the groups read out the draft expository texts they produced in their groups.

In each of these Episodes (and the different activities in Episode 2), Sarah created a different kind of intersubjective space that would enable and constrain what students could *say* and *do* and how they could *relate* to one another and objects around them—*semantic space* in which they used the specialist discourse of expository texts, *physical space-time* in which they answered questions or moved from place to place as Sarah directed, and *social space* in which the students oriented in particular ways to Sarah, to each other and to imagined readers of their draft expository texts. Sarah designed this sequence of spaces very deliberately, in order to orient the students towards and draw them into the practice of writing expository texts—to initiate them into writing expository texts as a distinctive practice. As we noted in the Appendix, Sarah's design for the lesson very strongly scaffolded what the students could *say* and *do* and how they would *relate* to others and the world around them in each episode. What Sarah did might be thought of as enclosing students in this succession of intersubjective spaces, but we think she was doing something much less suffocating than that: she was creating spaces in which she deliberately encouraged the students to *move*—to respond to her questions, to try out ideas, or to 'try out' the new practice of writing an expository text (especially in the group work Episode 4). That is, as many social constructivist teachers would do, Sarah aimed to engage students' *agency* so they could be *active* learners. She invited them to exercise agency to actively explore the intersubjective spaces she had constructed for them—the separate episodes and activities of the class. She prefigured but did not predetermine what they could do.

We want to say a little more about the prefigurement of practices. In his definition of practices, Schatzki (2010) draws attention to the socially constructed *action understandings*, *rules*, *teleoaffective structures* (like projects), and *general understandings* that orient a practice in its course. It seems to us that these key features of practice identified by Schatzki exist mostly in the *interactional capacities* of the people involved in a practice. In the case of Sarah's lesson on expository texts, for example, we might say that Sarah was initiating her Year 5–6 students into the interactive capacities that would allow them to practise expository text writing. On this view, we might say that Sarah aimed to have her students learn how to interact with one another in ways that demonstrated particular *action understandings* of what the practice involves—for example, knowledge about taking affirmative or negative positions in the writing of expository texts. She also wanted the students to learn to follow certain *rules*—for example, based on the view Sarah expressed in the lesson, the rule of structuring an argument so the strongest premises come first and the weaker ones afterwards. She also wanted the students to learn to inhabit a particular kind of *teleoaffective structure*—like positioning themselves as authors aiming to persuade readers of something. And, finally, she wanted them to develop

some *general understandings*—like the understanding that people can be persuaded to think or do things or relate to others and the world in particular ways.

These elements of Schatzki's view of practices could be read as retaining a kind of '*cognitivism*' that is in a dynamic tension with his (2003) 'societist ontology' which sees practices themselves as sites of the social (Schatzki 2002). It is also in dynamic tension with the position he later develops in his (2010) *The Timespace of Human Activity* in which "activity timespaces" are spaces opened up in time and space by people's activities, enmeshing people and their actions with material objects they encounter in these spaces. He says: "The timespace of human activity consists in acting towards ends departing from what motivates *at arrays of places and paths anchored at entities*" (2010, p. 38, 40; our emphasis). Moreover, in *The Timespace of Human Activity*, he also describes *practice landscapes* in which different particular parts of landscapes are relevant for different people involved in different practices in these settings[1]. (He gives the example of how the aspects of horse farms that are most important to the grooms who work in them differ from the aspects that are most important for the tourists who visit them; grooms and tourist inhabit overlapping and partly distinct practice landscapes.) By 'cognitivism', we mean that Schatzki's four features of practices—action understandings, rules, teleoaffective structures and general understandings—seem principally to reside in the embodied interactive capacities of the people involved in practices (if not only 'in their heads'). In other places, however, Schatzki (for example, 2003, 2005, 2006, 2010, 2012) also persuades us that practices and activities are enabled and constrained by things that present themselves in the *materiality* of a *site*—objects like kitchens and boiled eggs and telephones, or the arrangement of offices in a university department, or the layout of gardens and buildings and machinery for the production of herbal medicines in the Shaker village at New Lebanon, New York in the mid-1850s (Schatzki 2002), or the landscapes that tourist buses pass through when they carry people to Kentucky horse farms (Schatzki 2010). Indeed, Schatzki (2012) recently emphasised how practices are integrally "*bound up with*" material arrangements:

> The activities that compose practices are inevitably, and often essentially, bound up with material entities. Basic doings and sayings, for example, are carried out by embodied human beings. Just about every practice, moreover, deals with material entities (including human bodies) that people manipulate or react to. And most practices would not exist without materialities of the sorts they deal with, just as most material arrangements that practices

[1] "I will define a landscape … as a portion of the wider world around that can be taken in visually where human activity takes place" (Schatzki 2010, p. 98). In four notes to this definition, he also says: (1) "…a landscape is a portion of the world, not a view of it" (p. 98). (2) "[I]t encompasses … assemblages of land, water, built environment, activities and events" (pp. 98–99). (3) "[I]n speaking of the word 'around,' I indicate that the person who takes in a landscape is usually in it, even if off to one side" and this person "is in it as acting attuned to it, amid … the entities that compose it. Her activities, accordingly, are among those that make the landscape a site of human activity" (p. 99). (4) "I speak of the 'wider' world around to distinguish landscapes from more constricted settings such as rooms, subway cars, and Manhattan street corners" (p. 99); "Landscapes are a type of setting, namely, those that visually fall away expansively from people" (p. 99); and "The geometrical arrangement of the world around is a key determinant of possible landscapes" (p. 99).

> deal with would not exist in the absence of these practices. Because the relationship between practices and material entities is so intimate, I believe that the notion of a bundle of practices and material arrangements is fundamental to analysing human life. (p. 16)

We share this view. Indeed, we think that the three dimensions of practice emphasised in our definition of practices—*semantic space*, *physical space-time*, and *social space*—all present themselves *in material form* to people as they participate in practices[2]. People encounter words and language (*cultural-discursive arrangements*) as they occur in sites in material forms—for example, as text on pages visually perceived or as utterances transmitted as sound waves through air. They encounter objects and set-ups and arrangements of people and things in the materiality of physical space-time (*material-economic arrangements*). And they encounter each other and things in the world in the material form of other people and things that are present in or absent from a site—sometimes tellingly absent (*social-political arrangements*). By contrast with a cognitivist reading of practices as organised by people's interactive capacities, then, we regard people's practices as not only prefigured and shaped (enabled and constrained) by their *interactional capacities*, but also by *cultural-discursive*, *material-economic* and *social-political arrangements* present in or brought to a site. We want to say that, in material ways, *practice architectures* and *sites*—and not just the interactional capacities of the people involved—also have a kind of agency in shaping practices, enabling and constraining how practices unfold. This is also an important feature of the difference between our view of practices (and Schatzki's, we believe), on the one side, and, on the other, those social theorists who posit 'social structures' as the organisers of social life, including practices—structures like class or gender, for example. Rather than attributing the organisation of practices to these abstract and intangible entities (social structures), we think practices are organised *both* by people's interactional capacities *and* by material arrangements in the form of practice architectures and sites. Kemmis (2005) made a related distinction between the 'individual' and 'extra-individual' features that enable and constrain practices.

Our difference from Schatzki on the question of cognitivism and materialism is not dramatic, however. We concede that the people involved in a practice must also perceive and interpret practices and the different kinds of material arrangements in sites that are enmeshed with practices—that is, they must be able to *understand* what they are doing in practices (Schatzki's "action understandings" and "general understandings"), they must be able to act *as expected* (or against expectations) in the practices (Schatzki's "rules") and they must inhabit, enact and to some extent realise the commitments that Schatzki describes as the "teleoaffective structure" of the practice (what we describe in terms of projects). Nevertheless, we want to follow the more materialist view Schatzki (2012) offers in his more recent account of *practice-arrangement bundles*—a relationship we express in terms of the *enmeshing* of *practices* with *practice architectures*.

[2] Many theorists of social practice similarly emphasise the way social life is shaped by people's encounters with non-human things. Bruno Latour's (2007) Actor-Network Theory (ANT) is one; Ian Hodder's (2012) material archaeology is another.

To return to Sarah's lesson: we have argued that Sarah, as a very skilled teacher, has created *intersubjective spaces* for her students to inhabit in each of the episodes of the lesson analysed in detail the Appendix. She drew attention to particular *cultural-discursive arrangements* relevant for discussing expository texts, like the specialist discourse of "text types", or of "taking a position" that is "affirmative" or "negative". She also drew attention to particular *material-economic arrangements* in the classroom, like the *SMART Board*™ list of features of expository texts that the class had worked on in the previous lesson, the 'Yes' and 'No' signs on the wall that she asked the students to stand under to indicate agreement or disagreement with statements she made, and the 'template' sheet she distributed to the class to use when they began to set out the arguments of their own draft expository texts. And Sarah drew attention to particular *social-political arrangements* in the classroom, both in relation to her teaching (she as teacher, the students as compliant to her authority) and in the practice of writing expository texts—in particular in the relationship between author and the readers of expository texts, in which the author has the intention (project) of *persuading* readers.

In this way, by causing the students to 'notice, name and reframe' (Smith 2008, p. 77; see also our discussion of noticing, naming and reframing in Chap. 4) things in the classroom and in the practice of the particular kind of writing needed for this text type (expository texts), Sarah is *stirring them in to* and *initiating them into* the practice of writing expository texts. She is showing them *how to inhabit* semantic space, physical space-time and social space as a novice practitioner of the practice of *writing expository texts*. When Sarah was planning the lesson, then, she was designing a set of *practice architectures* that would enable and constrain, first, her students' learning practices and, second, in particular, their practices as novice practitioners of the practice of writing expository texts. (Here we are drawing once again on the distinction made in Chap. 4 between learning practices and 'substantive practices' that are the target of learning.) We understand the practice of teaching largely in these terms. In our view, *teaching is a practice of designing and enacting practice architectures that will enable and constrain the learning practices of students, in ways that initiate them into a substantive practice being taught*. We might add that 'designing' practice architectures will in some cases include assembling sets of already established practice architectures into new arrangements. In the case of Sarah's lesson, the substantive practice to be learned, was the practice of writing expository texts.

We have also emphasised the *materiality* of practices of teaching. A teacher like Sarah intentionally causes students to encounter *practice architectures* specifically designed to enable and constrain their *sayings*, *doings* and *relatings* in the practice to be learned, and specifically designed to help them inhabit the *project* of the practice in an authentic way. An experienced teacher like Sarah, in a highly scaffolded lesson like the one described in Chap. 4 (and analysed in the Appendix), can create staged and sequenced activities, like the five episodes of her lesson on expository texts, that gradually and deliberately stir students in to the practice, by causing them to notice, name and reframe what they do, moving developmentally from what they can already do (their existing practices) to doing something new—understanding

things in new ways, acting in new ways, and relating in new ways to others and the world, that is, to practising in new or transformed ways.

The view of teaching we have presented here—as a practice that constructs practice architectures to enable and constrain students' learning practices in ways that initiate them into substantive practices—might help some of our readers to notice, name and reframe practices of *teaching* rather differently. Instead of speaking of the transmission of content, we might speak of initiating students into practices. Instead of speaking about teaching as 'scaffolding' learning, we might speak of teaching as creating practice architectures for learning—that is, creating particular kinds of cultural-discursive, material-economic and social-political arrangements that will enable and constrain students' learning practices for the sake of their novice practising of the substantive practices we want them to learn. 'Scaffolding,' in such a case, becomes, firstly, a process of causing students to notice, name and reframe their own sayings, doings and relatings in their project of learning and in the project of the practice being learned. Secondly, and equally, 'scaffolding' is a process of causing students to notice, name and frame the practice architectures (in the learning setting and the wider world) that enable and constrain both students' practices of learning and the substantive practices to be learned.

We might similarly use this view of teaching as a practice to ask what particular *literary practices* or *mathematical practices* or *scientific practices* or *philosophical practices* or *research practices* we aim to teach in a particular class, or unit of work, or curriculum. We might see how the knowledge to be taught is realised in *sayings* in or about the practice, how skills to be taught are realised in the *doings* of the practice, how the relevant values to be taught are realised in the *relatings* of the practice, and how they all hang together in the *project* of the practice. We have already seen what these might look like in the case of a practice like writing expository texts. We also believe that we can use these ideas to describe what is to be taught on much larger scales—like learning literature, for example, or physics, or plumbing, or medicine, or philosophy, or how to do research. Thus, we might speak about the project of medicine in terms of securing health; about the many different kinds and levels of knowledge, skills and values needed by the medical doctor to pursue this project. We can readily see, for example, how the medical education of a clinician is a process of initiating the doctor-to-be into some part of an intricate range of diverse practices that compose the larger practice of medicine.

To think this way about education as initiation into practices is to begin to see the practice of education *ontologically* and not just *epistemologically*; that is, to see the practice of education in terms of learning to practise in the world, rather than just in terms of acquiring knowledge. Moreover, to take an ontological perspective on teaching of the kind we have taken in this book is to see how what is to be learned (the sayings, doings and relatings of a practice, hanging together in the project of the practice) is always a practice that happens in *sites* of practice, in which the practices depend upon the existence of *practice architectures* that make the practice possible. It is to see the practice, on the one hand, as embodied in the *practitioner* (whether a student or a teacher or some other person), and, on the other, as situated and enmeshed in some *practice architectures* and a *site*.

This ontological perspective on teaching treats teaching not only instrumentally, as a means to learning, but also as a practical, creative and critical practice—it treats teaching as a practice that brings practices of learning into being. In turn, bringing these practices of *learning* into being also brings into being the *substantive practices* that are the target of the learning—like practices of writing expository texts or practices of medicine, or (of special importance in this book) practices of student learning, teaching, professional learning, leading and researching. In a way, this ontological perspective was anticipated long ago—we still hear its echo when we notice and name the etymology of the word 'education', from the ancient Latin *educo: e-* (from, out of) and *duco* ('I lead', 'I conduct'); that is, to conduct a learner from what they can do already to the capability to do new things. Perhaps it also invites us to re-frame our contemporary understanding of teaching: to see teaching as a practice of initiating students into practices.

In this chapter, we explore further practices of teaching in two different cases, one at Hillview School in New South Wales, and one at Southwood, in Queensland. We see how two very different kinds of pedagogy—inquiry teaching at Hillview and co-teaching with others in a community garden at Southwood—have been composed with a view to initiating students into new practices.

Practice Architectures of Teaching at Hillview

Hillview is a medium-sized regional primary school located in Southern New South Wales. Its students are predominantly of Anglophone and middle-class origin. However, this demographic has been slowly altering with larger numbers of students enrolling in the school from lower socio-economic origins and an increase in challenging social behaviours and complex family backgrounds. Physically, there is little to distinguish Hillview from the other primary schools clustered in this suburb.

What makes Hillview stand out as a school is the principal and executive team members' long-standing and passionate commitment to Wattletree District's *Communities of Practice Principles*. This commitment is expressed in their whole school adoption of an inquiry approach to leadership, professional learning, researching and most markedly, their teaching and learning practices. This *telos* or guiding purpose has been a potent means by which Hillview has attempted to transform itself into an authentic learning community comprising teachers, students and the School's Executive Team. Indeed, Wattletree District's adoption of inquiry learning has provided a powerful discursive resource for Hillview's pedagogical practices. As Bronwyn Harper, the principal comments:

> I think as an Executive we will talk about our history … in the last five years and what we've tried to create in this school. Our starting point was deciding what our pedagogy was. Now whilst a few staff members had some understanding of learning community philosophy, we've spent five years really trying to depth that and build that. I would like to think that we're maybe sixty per cent there … in common understandings and agreed practices.

How this approach is reflected in teachers' pedagogical practices has been an ongoing challenge, however. As Kendra Clarke, a member of Hillview's Executive Team, explains:

> It's such a long process and I think if we talk about the inquiry one, it was the one that started it … in my second year here. Bronwyn … [the principal] … is very patient about … [the] … inquiry … (approach) … and said "Let's have an open day that demonstrates an inquiry". Honestly, most of the teachers totally freaked … and that's when we realised that they really didn't have the understanding to be able to do that. So we watered that task down a little bit so that they could cope … but then in the four years since … I would have run some staff meeting work and professional development days on our first days on inquiry in science, inquiry in everyday learning, inquiry in *Habits of Mind*.™

In *cultural-discursive* terms, Hillview teachers' understandings of an inquiry approach to teaching were challenged by Bronwyn's suggestion. In *material-economic* terms, the task of demonstrating inquiry practice caused classroom teachers to "totally freak". In *social-political* terms, the notion of an "open day" in which teachers' practices would be visible for parents and community appeared to threaten at least some teachers' assumptions about a privatised pedagogical space in which more traditional, didactic approaches to teaching and learning had continued to flourish (assumptions which the Executive Team clearly did not share).

In what follows, we trace how two Hillview teachers have attempted to transform the practice architectures of their Kindergarten[3] classrooms as part of a whole-school journey towards implementing an inquiry approach to pedagogy. As with the learning journey of Annie's moving diagram traced in Chap. 4, 'Learning Practices, Practising Learning', we locate the teaching sequences that we analyse within a succession of activities that have produced major changes to the practice architectures existing in Hillview over the past 5 years. These changes have in turn engendered transformed *sayings*, *doings* and *relatings* in the Kindergarten teachers' pedagogical practices as they began to live in the embodied interactive capacities of these teachers. In order to understand these transformations, this account of teaching practice is not only confined to the happenings of a single episode, but stretches back in time and into the history of Hillview as a site and, more broadly, the history of Wattletree District.

In the next section, we sketch the practice landscape of the two classrooms and give an overview of the overall lesson. In the following section, we analyse a small number of teaching episodes within the overall lesson in more detail. We then locate these teaching episodes and the project of an inquiry approach to teaching evident in the lesson, in the wider historical sequence of activities occurring at Hillview School as part of Wattletree District's philosophy and practice of learning communities.

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[3] In the New South Wales education system, Kindergarten is the first year of formal schooling. Children range from four and a half to six years of age at entry.

Practice Architectures of an Inquiry Approach to Teaching

Four years after the episode Kendra Clarke described above, our team of researchers visited Haley Coombes and Fran Thompson, experienced Kindergarten teachers who on this day were team teaching their classes in a double classroom whose concertina wall was open to make one larger classroom space. Haley's and Fran's shared practice of team teaching evidenced the collaborative *relatings* that were a familiar part of their ways of working; these were part of the established *social-political arrangements* which characterised life and work in their classrooms. The major focus of both classes' learning for the term was a unit entitled *Living Things*. The unit had been collaboratively planned and would be subsequently assessed and evaluated by both teachers. It encompassed a range of disciplines from the New South Wales curriculum, including English, Science, and Human Society and Its Environment (HSIE), and drew on specialist discourses from these Key Learning Areas (KLAs), specialist discourse about text types, and specialist discourse from the *Habits of Mind*™ program (Costa and Callick, 2000) that is prominent in the work of Hillview School. The previous week, as part of the exploratory component of an inquiry approach to teaching and learning, the students had gone on an excursion to the local botanical gardens. There they had explored the different kinds of habitats inhabited by various living creatures in the gardens. Their subsequent task was to *design* a habitat for an animal of their choice and once this was completed, to *construct* the habitat.

As the classes commenced, we noted that in *material-economic* terms, both rooms were bright, airy and spacious. A dividing concertina wall can separate the space into two classrooms, but according to both teachers, it was permanently left open, so the appearance was of one spacious classroom. The walls of both rooms were covered with charts, writing and students' pictures and stories, arranged in an orderly but aesthetically pleasing manner. The two classes consisted of 31 children (in total), supported by two full-time teachers and a part time teachers' aide—a comparatively luxurious student-staff ratio in Australia (Hillview's school based decision to have low student-staff ratios in the early years of schooling involved, as a trade-off, having much higher student-staff ratios in the most senior classes).

In Episode One, both classes commenced with the students seated on the floor in their 'own' classrooms. They engaged in a well-rehearsed whole class sequence of the learning practices of invitation, response and evaluation, as the teachers recapped what was required in terms of completing a retrieval chart of information recalled from their excursion (a 'retrieval chart' is one on which information about a number of 'remembered' categories or topics is organised so that comparisons can be made). The language used in this section of the lesson employed a range of *sayings* drawing from specialist discourses of the Science curriculum, such as "habitat" and "burrow", as well as the language of "text types", such as "retrieval charts". The dividing wall between the two classrooms remained open all morning and we heard the hum of conversation as the teachers and students engaged in similar activities in the two rooms.

In Episode Two, each student selected one animal from the retrieval chart and used the information from the chart to make a plan of a particular animal habitat. Each student was called up to the teacher to discuss their plan, and it was either approved or the teacher asked further questions in order to elicit improvements (questions like Was the diagram clearly constructed? Was the diagram on the plan labelled? Were labelled elements spelled correctly? Were arrows used to indicate components? Was the plan do-able? Were there enough resources to construct the model of the habitat? How could we find out more information?). Students then moved to various locations within the classroom in order to commence constructing their chosen habitat or to work on modifying the plan further. In *social-political terms,* a range of *relatings* between students and students, and students and teachers was evident. Some students worked as individuals on their habitat, others chose to work in groups. The teachers roamed the class, as did the teachers' aide, talking one-to-one with the students, and assisting them in their activities. Both teachers appeared to shift comfortably between traditional didactic roles (directing and instructing actions) to the more facilitative roles (guiding and negotiating actions) which an inquiry approach enabled, and students appeared to be at ease with these shifts, suggesting that these differing kinds of *relatings* were well-established within the two classrooms.

In Episode Three, students of both classes assembled in one classroom and engaged in a reflection on their learning, collaboratively led by the teachers, and drawing on a range of students for responses. In Episode Four, after a morning tea break, students gathered in their individual classrooms where each teacher modelled how to write the body of an "information report" about their animal and its habitat. In Episode Five, students returned to their tables (which were organised in clusters to accommodate groups of about four or five students) to commence writing the body of their report. Each teacher moved around her own classroom, working with individual students as they wrote. The lesson came to an end when the bell sounded for lunch.

There is nothing startling about these classrooms and this lesson. They are fairly typical scenes that would be recognised by teachers around the world. However, we have spent some time describing them in order to make two important points about the pedagogical practices hinted at above. Firstly, students and teachers appeared to be engaged, involved and enjoying their learning and teaching. Good humour and affectionate relations were notable in and between the various groups of children, and between the teachers and the children. Secondly, this appearance of engagement and mutual enjoyment in learning was neither accidental nor contrived. Rather it was the result of a planned and thoughtful whole school approach to pedagogical change that had characterised Hillview since Kendra Clarke recounted the staff's initial alarm when asked to hold an open day to demonstrate their inquiry approach. The lesson reveals how sustained transformations to Haley's and Fran's teaching practice were enacted through an active *stirring in* of teachers into the language games, activities and ways of relating that hung together in Hillview's school-wide project of learning about and cultivating teachers' (and leaders') disposition towards an inquiry approach to pedagogical practice. This, in part, overlapped

with the Hillview approach to the *Communities of Practice Principles*—which had travelled over historical time into the teaching practices of the teachers via sustained practices of professional learning at Hillview. As part of this stirring in, Haley and Fran began to "notice, name and reframe" (Smith, 2008, p. 77) their approaches to curriculum and assessment, and began to inhabit the semantic space, physical space-time and social space of their classrooms in new ways.

We now proceed to examine more closely the practice architectures of several episodes of teaching in Haley and Fran's Kindergarten classes to trace these transformations.

Practice Architectures of Teaching at Hillview: An Inquiry Approach in Kindergarten

As we see below, Fran's and Haley's initiation into an inquiry approach to pedagogical practice necessitated teachers and leaders at Hillview occupying the often uncomfortable space of 'student' in order to learn how to go on in the new language games, activities and ways of relating to other teachers, students and leaders that the inquiry approach entailed. Moreover, this learning did not constitute a process by which the concept of inquiry came to be possessed as a 'thing' in its own right in Fran's and Haley's heads, but rather was part of a whole school process of initiation in which teachers were both the co-inhabitants and co-producers of changed practices. In the *cultural-discursive* dimension, for instance, one of the major emphases at Hillview School has been the importance of building a shared knowledge and understanding of an inquiry approach to teaching through the development of a common language. This has been achieved via a range of strategies commencing with all staff members, including executive team members and teachers, sharing and discussing professional readings on the topic. As Haley and Olivia (a former Kindergarten teacher with whom Haley had previously team taught) noted in relation to this practice:

Haley: It used to be, she … [Bronwyn, the principal] … goes "I've got something for you to read" and you'd go, oh gosh.

Olivia: Your heart would sink.

Haley: Those magic words, "I've got some professional reading for you". And you go "Oh, what now?" But you know, it's all practical … It was usually during a staff meeting. But now that you look at the practical side of it, you see the benefits of it. So you know, you just think, "Oh God, more reading, more reading, more reading", but you know, it's become … more practical for me, and you think, "Oh yes, I can see the point of this now".

At the level of individual teaching practices, the building of this common language and understanding was manifested in a range of pedagogical *sayings* and *doings*. For example, in order to facilitate students' learning, both Fran and Haley modelled an inquiry approach through the discussions they had with children, rather than

employing a didactic approach by *telling* children the answers. This was evident in the kinds of discussions that transpired between teachers and students as the latter worked on their habitat construction. The following exchange between Fran and one of the students illustrates this process:

Fran: Good girl, make a box, so you've got what it is, *where does it live?* [student], *where does it live?*
Student: Ah …
Fran: *What's* your *animal*—guinea pig?
Student: Yep.
Fran: Guinea pig … okay, so *what does it eat?*
Student: Um, scraps.
Fran: Scraps … and hay.
Student: Hay, water.
Fran: Water.
Student: And a Milo tin.
Fran: *What are you using a Milo tin for?*
Student: To make the guinea pigs.
Fran: Oh, you're actually making the guinea pigs out of the Milo tin. Okay.
Student: And a coca-cola tin.
Fran: So you're making it out of cans, okay.
Fran: Tin, Milo tin—now you've got what it eats; *where does it live?*
Student: Hmmm …
Fran: Okay, *that's what you need to check.*

Fran surmised that the student did not know the answer to her initial question, "Where does the guinea pig live?" Rather than telling her the answer, she then asked a range of prompting questions to explore what the student did know and to check her progress. Having ascertained that the student was clear about what she is constructing, she then circled back to her initial question, "Where does it live?" The student's response revealed that she still was not clear about the answer. Fran again chose not to tell her the answer, but rather advised her, "that's what you need to check". Here Fran (like Sarah, the classroom teacher in Chap. 4, 'Learning practices, practising learning') was explicitly stirring the student in to a learning practice that invited her to engage in a more substantive, learning-focused dialogue in order to extend her thinking. To support this kind of thinking, Fran's and Haley's Kindergarten students had been initiated into a range of independent learning practices, such as using the classroom's interactive white board, referring to wall charts with vocabulary listed on them, reading books, and utilising one another as co-participants in their learning.

In the following exchange between one of the researchers and a student, the student was asked about what was depicted on his plan in relation to his selected animal—a guinea pig. The exchange went as follows:

Researcher: Okay … what else have you got here on your plan?
Student: They're covered in fur but I know they don't have a tail.

Researcher: Don't they?
Student: Yeah.
Researcher: Not even a tiny little one?
Student: Well, maybe they just have a little ball at the back, maybe.
Researcher: Okay, what can you do to find out whether they've got a tail?
Student: *Look up on the SMART Board™ maybe because it knows everything –*
Researcher: The SMART Board™ knows everything? *Where do you have to go to find it on the SMART Board™?*
Student: *Oh, you can go to* Google and then–
Researcher: Oh, what's Google?
Student*:* *It's like an* Internet *where you type, where you ask a question and then it gives you a lot of answers and then you click on it and then it gives you the answer.*

What is striking, although often taken-for-granted, is both the confidence with which this Kindergarten student explained how to use the various functions of the SMART Board™, and his employment of technical terms such as Google, which have entered the everyday lexicon. A further striking point was that the SMART Board™ appeared to have replaced or at least supplemented the teacher as the didactic figure, apparent in the student's faith that 'the SMART Board™ … knows everything'!

The student's response will come as no surprise to many teachers or parents. However, the crucial point here was that these kinds of *doings*–where students are expected to independently investigate other sources of knowledge (not solely limited to Google)—had been integrated into the everyday life of Fran's and Haley's classrooms. They were part of the overall project of an inquiry approach adopted in their teaching practices, rather than them employing ICT for technology's sake, or simply as games. Furthermore, underpinning these *doings* was a set of *social-political arrangements*, that is, a web of relationships as noted in Chap. 4, 'Student learning: Learning practices'. These included the relationships between this Kindergarten student and his Year Five/Six student 'buddies' who had helped to teach the class about ICT, and the input of Gabrielle Kemp, Wattletree District's technology consultant, to Fran's and Haley's teaching. For instance, in relation to the students' use of the SMART Board™, Fran commented:

> Some of them might need a bit of help but they know where to go to because they've seen us use it before so they will Google. They know what Google is and instead of just writing one word—they know they can ask specific questions and it will give them an answer.

The encouragement of a more independent approach to students' learning employed by Fran and Haley was one manifestation of a changed teaching approach in their classrooms. However, a second project of the teaching episode we examine here was the building of a specific common language amongst teachers and students in order for them to learn how to enter the language games and practices of an inquiry approach to learning. This was the lexicon made explicit in the *Habits of Mind*™ program embraced by Hillview. Its associated lexicon of inquiry learning included (amongst other terms): *thinking flexibly*, *persisting*, and *making links be-*

tween prior and current knowledge. This was illustrated by the following exchange between one of the researchers and a Kindergarten child, Riley, as the latter went about constructing his habitat:

Researcher: So … [what kinds of *Habits of Mind*™] … have you learnt all about?
Riley: *Past knowledge*, it's like, like you see that bridge over there, the purple bridge?
Researcher: Yes, I can see that.
Riley: Yeah, well, that's like past knowledge, that is past knowledge because they know one half of that city and they've never been on that half, so then, so it's past knowledge, so they know that bit, then they need to learn a little bit of that bit.
Researcher: Oh, okay, so it's something that they learn about?
Riley: Yeah.
Researcher: They know a little bit, but then they learn a little bit more about it?
Riley: Yeah.
Researcher: Okay, that's pretty hard isn't it?
Riley: Yep, and *thinking* flexible means we're thinking very good.
Researcher: Oh, okay.
Riley: Do you see the red one … [student pointing to an animal he has constructed in his habitat which had pipe cleaners coming out of its head]… that it has all the things in its head?
Researcher: Yep, I see that.
Riley: Well, that's thinking *flexibly* because it's thinking about a lot of stuff.

As Haley observed in regard to the explicit teaching of these skills with Kindergarten students:

> I say, "What sort of things did we have to do, what sort of things did you do today to be able to work as well as you did?"… "What did that look like?" … They're starting to learn to articulate, become aware and identify the particular skills and practices that we're using.

There was evidence that these kinds of pedagogical *sayings* and *doings* associated with *Habits of Mind*™, which were manifested in reflective questioning, were 'travelling' across the school. For example, in Stage Three—the most senior level of the school—Ronnie Kinross and Jeanette Maidment noted with some surprise the impact on students of this explicit teaching of reflection on their learning:

Ronnie: And it was surprising how the kids took it up really, because often you'd say … "What strategies are you going to need to do the task that you've just been given to do?", and you'd be thinking, … "Double and halve", and, you know, your different maths strategies … but they'd come out with the … [explicit learning] … strategies …
Jeanette: They really did connect with it … the two now, sort of come together, so they can give you both now, because … well they can see the connection between the two…

Another element in fostering an inquiry approach to teaching practice was the changed *material set-ups* the school executive had introduced as a means of encouraging a more collaborative approach to planning units of work. In the *material-economic* dimension, teachers were timetabled at each stage to be released together in order to encourage (but not dictate) shared planning, programming and evaluating. This arrangement appeared to establish a practice tradition of shared planning and evaluation, which commenced with Haley and Olivia (a previous Kindergarten teacher) and continued to shape Haley's and Fran's practices. To illustrate, Haley and Olivia commented in a previous interview that shared time for conversation and planning had led to them doing, "all their programming and assessment together… what the tasks will look like in the classroom". It also meant they collaborated in the evaluation of each unit:

> We always work together … obviously we do our own sort of … teaching style, so that the task is the same and then we get together … and we'll look at what the children achieved and maybe then where we need to go to from there with the children … well, that didn't work … it was either too difficult … too easy, we need to come up with another assessment task that we feel better suits the unit that we did or whatever it was…

The repetition of the word "we" signified that these changes to material set-ups had also fostered a shared set of *relatings* between Haley and Olivia in regard to teaching practices. These in turn, had extended into their commonplace practice of team teaching, a practice that had been sustained when Fran joined the Kindergarten team and Olivia shifted to another grade.

Another flow-on effect of this collaborative approach to planning and teaching was its impact on a significant *doing* shaping the Kindergarten teachers' pedagogy, namely, their assessment practices. The teachers were freed up to conduct more one-to-one assessments of students and carry out more diverse forms of assessment that did not privilege one form of thinking or learning. This is an important feature of an inquiry approach to teaching and learning. As Haley observed:

> [W]e've just used a different approach to it all. Because we're getting more out of these kids than just … doing a paper and pen test … You don't know what they know unless you sit there and ask them. So a lot of our release time … is spent assessing kids one-to-one … particularly for the children that aren't very good with their written work, to give them the opportunity to show their understanding through oral … rather than assuming they can't do it … to use ways other than just writing.

Another manifestation of this team approach to planning, programming and teaching was the clear *orchestration* and evident flow to the teaching practices we witnessed in this lesson, a flow designed to encourage a variety of forms of learning. It included a shift in *doings* (and accompanying *relatings*) from a whole class focus, where both teachers recapped the requirements for completing a retrieval chart to their respective classes—to paired discussions—where students were asked to sit knee-to-knee to share the first sentences of their information report. It also included a move to one-to-one or small group teaching, such as when the teachers worked with individual children or small groups to provide feedback on their retrieval chart or assist them with their habitat construction. These shifts in *doings*

and the subsequent *relatings* that ensued (such as the cooperation between students as they worked in small groups) were modelled by the teachers' own *relatings*, evidenced in the ease with which they team taught the classes and 'bounced off' one another (as we shall see shortly, in the episode below).

In drawing attention to the orchestration of teaching practices that supported the adoption of an inquiry approach to pedagogical practice, we are not suggesting a more technocratic or instrumentalist approach to teaching and learning. The opposite is true. Indeed, one of the main aims of the inquiry approach at Hillview (as it was informed by both the *Habits of Mind*™ and *Communities of Practice Principles* which were valorised in the school) was to nurture and encourage students' learning at their own pace. As Fran noted:

> [F]or discovery learning they're making a shelter—some are working together, some are working on their own—and then in our writing time we're doing an information report about that animal, and then in reading group time one group is on the computers and they're creating that habitat and printing it off as well … *Some of them are at different stages* … So *it depends on the pace of how they work* or some kids are doing really detailed plans which is okay too. That's why I've given them the 4 days to do it and then after that when we have our reflection, then they use that for their information report—like their writing …

In the careful attention to nurturing self-paced learning which Fran foregrounds in this quotation, we witness the ever-present *mindfulness* of her teaching disposition—a mindfulness which responded to the ontology of *this* particular Kindergarten site. As part of this mindful disposition, we also witness a constant 'dance' between what appeared to be an inherent *stability* in Fran's (and Haley's) pedagogical practices, while simultaneously they nurtured a pedagogical disposition towards *open-endedness*. This dance between the stability and open-endedness of their pedagogical *sayings, doings and relatings* was manifested in the teaching episodes we observed. These had a clear project, designed to nurture students' thinking and learning through a social constructivist approach to building knowledge, and had been well planned and programmed to achieve this end. On the other hand, a key part of the project of inquiry approach to teaching and learning requires constructing opportunities for critical thinking, spontaneity and flexibility in regard to fostering students' learning, that is, being open as pedagogues to grasping opportunities as they arise 'in the moment' of teaching practice. Hence, in terms of the site ontology, we see both the 'persisting structures' of Fran's and Haley's teaching practices, prefigured by the "enduring material arrangements" of classroom and teaching *set-ups* (Schatzki 2006, p. 1863). Simultaneously, we view these lessons unfolding in terms of the "happingness" of their practices and activities (Schatzki 2006). It is in this ongoing dance between stability and open-endedness of pedagogical practice, and the situatedness and particularity of *these* classrooms and *these* teaching practices at *this* time, that Fran's and Haley's teaching practice unfolded. It is in these moments that small but significant instances for *praxis*-oriented teaching practice were enabled, as we see below.

One means by which Fran and Haley had attempted to enact an inquiry approach to their pedagogical practices was through changing the *material set-ups* of the

classroom, through building in regular class time for shared reflection with children on their learning. (This dedicated time for reflection mirrored changes to the teachers' own *material set-ups*, as a result of all same-stage teachers being timetabled together for planning and programming). The two teachers utilised a range of material entities to stimulate students' reflections, such as employing flip-top cameras to video excerpts from the lesson, and replaying these to students. On the morning in which we were observing, the two classes sat in Haley's room as she recounted a story about a student's learning practices, which she had witnessed that morning:

Haley: Now … [Adam] … and I just had the most magnificent conversation. Adam's making a guinea pig …?

Adam: Box.

Haley: Habitat.

Adam: Yeah.

Haley: And he said to me, Adam said to me, "Mrs Coombes, I don't have a box but I'm going to try and make one". I said, "Go for it, Adam. What did you try and make it out of first?"

Adam: Paper.

Haley: He tried to make a guinea pig box, a guinea pig shelter out of paper. What happened?

Adam: It didn't work.

Haley: Why not?

Adam: Because it always goes flat.

Haley: It went flat, so he said to me, I said to him, *"What are you going to do?"*

Adam: And the guinea pig would die.

Haley: The guinea pig would die because, why would the guinea pig die, you tell everyone.

Adam: Because it doesn't have much space.

Haley: It wouldn't have enough space. So I said to Adam, *"Well, you tried to make a box out of paper, it didn't work, what are you going to do?"*

Adam: Mrs … gave a, what is it?

Haley: Was it a plastic box?

Adam: Yeah, and she gave me a plastic box and I put scissors through it and I'm trying to make a little hole for the side.

Haley: So Adam came to me and said "Mrs Coombes, I need to try something different because what I tried wasn't working". So what *Habit ... [of Mind]* … is he using?

Adam: Persisting. [Voices overlapping]

Haley: Persisting for one, *past knowledge* for another because he knew the paper wouldn't –

Riley: Thinking *flexible.*

Haley: Why Riley?

Riley: Because he's trying to think, to know what to make the guinea pig out of.

Haley: So he's thinking?

Riley: Flexibly. (Voices overlapping)

Haley: Which is thinking a?

Riley: *Different* way.
Haley: Brilliant, *three Habits of Mind*™ in one—champion.
Riley: And Adam, *I* think *I got an idea to come help you make a guinea pig!* We could just make a toilet roll for its body and two pieces of paper for its face and its bottom, and then you can like make a little bit of, if you have any black paper, and you could scrunch it into a little ball and sticky tape it onto the back of the guinea pig's tail, yeah, on the tail—[Voices overlapping]
Adam: Guinea pigs don't have tails.
Riley: But it's, I saw they had a little ball and on, a little, this thing, and then you could … just cut toilet rolls into halves to make them legs.
Haley: Oh so there's quite a few ideas there, Adam … If you run out of ideas, Adam, Riley's the man! Thank you Riley for helping him. He might go with that or he might choose something different and that's okay too isn't it?
Riley: Yep, well that was my idea—[Voices overlapping]
Haley: That was your planning. Mrs Thompson, you noticed someone today?

As Riley interrupted this chorus of teacher questioning and student response to take on a peer teaching role, we witnessed a powerful moment being played out in the micropolitics of the classroom. Riley had struggled academically and both teachers had earlier noted that he was one of the students benefiting from the more diverse approaches to teaching, learning and assessing implemented in the classroom. The fact that he felt able and willing to provide advice at the whole class level in a positive and constructive way was a major achievement for Riley. The sheer excitement in his voice as he shared his thoughts, "And Adam I think I got an idea to come help you make a guinea pig!" suggested the joy and pleasure of discovery, of having an original thought which could contribute to Adam's project and the students' learning.

In the *social-political* dimension of the classroom, a temporary and subtle shift in relatings between teacher and student, student and student was occurring. It was *Riley*—the child whose behaviour had proven challenging at times—who was taking charge in a positive and constructive manner, asserting his ideas and most importantly—clearly feeling comfortable and able to do so. Crucially, Haley honoured this moment. She momentarily acceded her authority, allowing Riley to take the floor and complete his suggestions. She provided Riley with positive feedback, "Oh, so there's quite a few ideas there, Adam … If you run out of ideas, Adam, Riley's the man!" She carefully and gently reminded both Riley and Adam that alternative ways of approaching this task were welcome but that Adam did not have to take these on board, "Thank you Riley for helping him. He might go with that or he might choose something different and that's okay too isn't it?" She then reclaimed the familiar terrain of teacher as authority figure, assuring Adam, "That was your planning". She deflected attention away from the boys when a potential argument was threatening, by moving on to the next reflection and thence to her team partner, "Mrs Thompson, you noticed someone today?"

In terms of *relatings*, the reflection time emphasised children's social as well as academic learning. Through these pedagogical practices of reflection, Riley was being invited to enter *a way of relating*—to other students, the teachers and the

world—and of being initiated into the practices of learning. It was an invitation he (at least temporarily) grasped. Riley's response was thus enabled by an overall Kindergarten teaching project, which was strongly committed not only to academic learning, but consciously to nurturing the *social-political arrangements* within the classroom through fostering communitarian values amongst children, and children and teachers. This observation was reinforced by some of the students, who—when asked what were the things that helped them learn in Kindergarten—initially observed, "Friends … they give you ideas … if you fall over … your friends learn to help you up".

The explicit building-in of reflection time on academic and social learning at a meta-cognitive level marked the next step in a gradual process of transformation by Fran and Haley in their teaching practices. The practice of class reflection had in turn arisen in response to increasing numbers of children with lower levels of social and academic skills entering Kindergarten; increasing numbers of children coming from families who had challenging personal circumstances; and the school's commitment to instituting democratic forums for children. As Haley and Olivia (a former Kindergarten teacher) put it in an earlier interview:

> [W]e started this term on "I" messages … in Kindergarten they find it too difficult to articulate their social behaviour other than how they're actually feeling… Bronwyn talked … about more class parliaments … I thought … what can we do in Kinder that's a similar sort of thing? … We decided that we would talk to the children each day about how things were going on the playground for them … it's this little group we've got … some of them are socially challenged … they find it hard to go up and say … [they want to join in to play] … or make good choices about what to play … if they can't work out these social issues, then their in-school time can be really difficult.

The practice of 'I' messages had continued into Fran's and Haley's classes. Importantly, as both teachers focused on how the *social-political arrangements* of the classroom could be reshaped through introducing the pedagogical practice of 'I' messages, they did so in ways that did not ignore or stifle social tensions and challenging behaviours. Rather, they constructively engaged children in a problem-solving process. Their understanding of the importance of nurturing these social skills highlights the critical role that teaching practices play in both cultivating the dispositions of individual pupils in terms of their *relatings* with one another and with their teachers, and in forming the *polity* of the classroom.

Practice Architectures of Teaching at Southwood: The Community Garden

The practice landscape at Southwood Primary School provides a number of contrasts to Hillview School. It is located in urban Queensland and serves an ethnically and linguistically diverse student population. As described in Chap. 1, 'Education: The need for revitalisation', many of the students are of refugee background and

have experienced highly challenging personal circumstances. Some students were significantly disengaged from learning or participating in the life of the school. Consequently, as a result of previous District Office research into the circumstances and needs of the community, an integrated school-community garden project was established at Southwood School. The community garden formed the space for both community engagement and new practice architectures for teaching. The garden was designed to be an authentic teaching space which enabled students to enter different kinds of substantive practices and different kinds of learning practices as they experienced a school life in, and because of, the garden. Changing the practice architectures at Southwood by creating the garden added a new repertoire to the teaching practices (the sayings, doings and relatings) which had previously existed there; that is, the garden created new *cultural-discursive*, the *material-economic* and the *social-political* arrangements for teaching.

Using the garden as both a teaching space and a resource for classroom teaching changed the *practice landscape* at Southwood as learning within and between formal classroom spaces and that of the garden flowed from one to the other. Different *sayings* entered the discourse as students drew on alternative language resources to interact with their peers and classroom teachers, and with other teachers and adults working in the garden. For instance, a focus group of Year One and Two students employed the discourse of “conservation” as they described their learning in the garden space, drawing on terms and concepts such as “compost”: “compost helps make the plants grow”, “plants need compost”; and “soil”: “worms make soil and helps you grow plants”. These *cultural-discursive* arrangements—enabled by the garden as both a teaching space and resource for teaching—formed and were reformed by the different activities orchestrated by teachers as they engaged in this alternative pedagogical space.

Simultaneously, the practices that formed as a consequence of the garden becoming a teaching space enabled a variety of distinctive activities or *doings* to enter the teaching practices at the school, because the garden was more closely connected to students’ cultural circumstances and experiences in their home countries. These doings transformed the *material-economic* arrangements of teaching practices as they provided opportunities for learning not typically associated with schooling practices in primary schools. They allowed students to engage in more practical, experiential and hands-on activities as they were initiated into different *substantive practices* and *learning practices.* For instance, students were involved in building and designing the garden, identifying plants and insects, composting, managing soil, using sugarcane for mulch, purchasing plants, growing vegetables, liaising with community members and making tomato sauce. Entwined with these different sayings and doings, different ways of relating developed between students, teachers and informal pedagogues including Southwood’s Community Development Officer, the Community Gardener, Cultural Development Officer, Conservation Group Member and community volunteers. New *social-political* arrangements were formed via the interactions that were enabled in the variety of projects connected to the garden. Beth Dysart, a Year 3 teacher at the school, captured the distinctiveness of the pedagogical practices thus engendered:

> I think it's another avenue for them to do their learning in a way—not just in a classroom setting. So it's also providing another area for them to learn real life, it's authentic, it's related to their own home life, things like that, their own culture as well. So I think they're learning how to learn about the garden I guess as well as growing things. So it's bringing all those other elements and aspects as well and a lot of them are better by 'doing'. So it's more practical for them, more hands on. So, following instructions with another person as well, not just with me. So they're working with another staff member in the school, so building that relationship, building those bonds.

The practice architectures characterised in Beth's description suggest how the use of the garden as a teaching space created a niche for distinctive *doings, sayings* and *relatings* to be enacted or enabled by both teachers and other members of the Southwood school community—another example of teaching as creating practice architectures for learning. As Beth explained, the garden provided an alternative yet "authentic" space for students "to learn real life", in ways that "related to their own home life" and "their own culture". These sayings existed alongside activities like "growing things" and "learning about the garden" and "building relationships" and "bonds" with a range of other people. These sayings, doings and relatings hung together in an overall project of facilitating engaged and engaging learning for students and their families within the Southwood community. In particular, we observed teachers, along with a variety of other community adults, bringing different practices of learning and teaching into being as they initiated students into particular practices associated with the garden. In turn, particular *learning practices* such as learning by doing, working in groups and working with a range of adults brought into being particular *substantive practices*. These included producing a class "big book" about different cultures, reading texts about insects, recording the life cycle of caterpillars, growing vegetables, and reading recipes. It also led to learning the practices of conservation and sustainability, and participating in related integrated projects such as a tree planting project where the students were responsible for planting and caring for 100 fruit trees in and around the school grounds. In the teachers' orchestration of substantive practices and learning practices (with each influencing and being influenced by the other), teachers initiated students into new forms of life, by changing the practice architectures encountered at Southwood School.

The community garden as a site for teaching both shaped—and was shaped by—specific *material-economic arrangements,* such as the physical lay-out of the garden, its raised beds, the physical placement of plants reflecting permaculture principles, and the use of easily available cartons, cases, buckets and other materials to create self-contained, and sometimes portable, 'planters'. These material-economic resources enabled the "more practical", "hands on" experiences to which teachers such as Beth accorded such value. Teaching practices utilised readily available materials such as buckets, cardboard boxes, newspaper and food scraps to assist students in learning how they could develop gardens of their own. As students participated in the activities in the garden they were simultaneously being *stirred in* to the practices of permaculture and sustainability. Dylan—a volunteer gardener and member of the local Burmese refugee community—captured the doings of these teaching practices as he described the resources he employed when teaching students about sustainability and permaculture practices:

> I buried some bucket, and the bucket is in a hole, about ten litre bucket in the hole, and I bury half full. Half way underground, I bury… and then I put kitchen scrap with some newspaper, because for the … some nitrogen and some… Bottom [of bucket] is cut off, yeah. And then in time, the bottom will break down. And then the nutrients are available for the plant, and the plant can take out the nutrients. And then you just keep putting food in, and maybe two weeks—2 months, maybe, it's full! Yeah, and you take this one and spread and put in other one. It's very easy.
> And you just do—normally you just do water only inside the bucket, you don't need too much watering, because this is in the bucket, in the lid. Also we can … [save] a lot of water for …, the water go down and then inside, not evaporate.

As Dylan engaged students in permaculture and water-saving activities connected to the garden, he enacted instances of teaching practice that enabled students to make particular connections between the language, the activities and the ways of relating to both other people in the garden and objects in the garden such as its equipment. Year Three teacher Beth's notion of "learning how to learn about the garden" was central to initiating students into this process, and reflected the considerable dialogue and activities—the *sayings* and *doings*—which characterised students' engagement with the garden. Through Dylan's description of how he used common tools and materials, "I buried some bucket", "I put kitchen scraps with some newspaper", and in conjunction with existing *cultural-discursive arrangements*—for example, existing shared language conventions with which all were at least partially aware—the garden became a teaching space of particular, and substantive, *sayings*. It was a physical activity space, which was simultaneously creating and being created, sustaining and being sustained, by the ongoing talk about the work occurring in the garden, and the practices and processes of sustainability, including permaculture.

Martha, a Sudanese School Officer of refugee background, spoke in a similar fashion to Dylan about initiating students into the particularities of the *sayings, doings* and *relatings* associated with the community garden:

> The kids learn a lot about how to grow vegetables… Cameron … [the Cultural Development Officer] … has been my role model here, because we kind of get together and we discuss what needs to be done in the garden, and then I go and apply those things in practical … [ways] … with the kids. So, every week we do different things. We do composting and we do preparing the garden beds, how to look after the plants. Last year we got involved with the group planting tree project, and the kids loved that. Every kid was given responsibility also, to look after those plants…Year Two and Three, and also the Four-Fives from last year, in the Six-Sevens. They get involved also, helping out to mark out the communal garden.

Through Dylan's and Martha's teaching, students were learning *how to go on* in using the language of sustainability (as they talked about composting, water saving and permaculture); the activities of sustainability (as they used kitchen scraps for composting, designed water saving devices and prepared the garden beds); and how to relate to others and the world in sustainable ways (as they took responsibility for looking after plants and worked with other students and adults in the tree planting project). Teaching these students was shaped by the responsiveness of Dylan, Martha, the classroom teachers, and community members to the needs and circumstances of the site.

The garden space was a conduit between the lived experiences of students in their community and those experienced in the school. Further, the recognition of the history, culture, and circumstances of this school and its community laid a foundation for the development of the practices of teaching we observed. Pedagogical practices were developed to build a bridge between the historical practices of the community and those of the school. These practices initiated students into different forms of language and discourse as they learned about each other's cultures. For example, as part of the English Curriculum, students co-produced a "class big book" which provided information about each of the students' cultural backgrounds. Year Three teacher Beth Dysart observed:

> Yes, so producing a class big book which will involve their cultures, so it's bringing that aspect as well of utilising the diversity that we have here at Southwood Primary. And also they're learning about each other, so learning about each other's cultures, what sorts of foods that they cook a lot with in those countries. And then being able to take home a copy that we've all created together as a whole class, and then bringing that to their homes.

The *doing* of "producing a class big book which involve[d]… their cultures" included researching and gathering additional information about the food-stuffs grown in the garden which were relevant to students' specific cultural experiences. This teaching was designed to bring into being a classroom environment that was characterised by respect for one another's cultures. These practices invited students to enter new intersubjective spaces that enabled them to go on in both *substantive practices*, such as reading, writing and researching; and in *learning practices*, such as collaborating to produce the class big book. These practices also reflected the *material-economic* resources including papers, pens, adhesives, technology, internet access, pictures and crops in the garden that were necessary to teach students to create recounts and present information through co-producing the "big book". It enabled them to be stirred into the learning practices of coming to know how to go on in practices such as peer collaboration and group work. These practices in turn, were enabled through *cultural-discursive arrangements*, such as the employment by teachers of common English language conventions, teachers gesturing to relevant objects, and speaking slowly and deliberately as students gained confidence with the English language. Additionally, the *relatings* established through the teaching moments experienced in the classroom, between teacher and students, and students and students, penetrated students' homes and ethnic communities, both through the *doing* of co-producing the big book, and via the act of "bringing that to their homes". These *relatings* were only possible through developing *social-political arrangements* of respect, sharing and reciprocity that came to characterise all aspects of work associated with the garden.

The ongoing involvement of a range of adults in various capacities as volunteers and school officers, also reconstituted the conduct of teaching at Southwood. Community members, teachers and students understood that the garden was a site for both community development *and* the education of students, a site which necessitated the generation of new teaching practices. As a result a web of relationships between teachers, community members, volunteers and school officers developed. The use, development and sustainability of the garden were dependent on this web

of relationships. Teaching practices changed as teachers encountered a range of co-teaching situations; that is, co-teaching practices facilitated the formation of new intersubjective spaces. Changed *social-political* arrangements entered Southwood, as teachers began to co-teach with other professional, community and volunteer adults such as Dylan, the volunteer member of the Burmese community, Martha, the School Officer, and Cameron, the school's Cultural Development Officer. For instance, Cameron's role was to assist teachers make explicit connections between classroom teaching and teaching in the garden, to develop teaching experiences which related to students' existing cultural experiences, and, at times, to co-teach with teachers:

> So, yeah, often I'll sort of co-plan with the—you know the Year 6 and 7 teachers are fairly common people that I work with, and we sort of suggest with Lisetta … [Year 6–7 teacher] … up there, I guess—well you know, and we've worked together over the last couple of years—you know, she's happy to work fairly—in a flexible way—not non-structured, but let go of term time and units, as such. And we'll do something over a year, if it's important.

Cameron's act of "do[ing] something over a year" was a reference to not only planning with teachers, but co-teaching with teachers; a teaching practice tradition which entered Southwood because of the garden. Co-teaching practices changed the ways teachers initiated students into substantive and learning practices. Co-teaching with adults other than teachers, such as Dylan and Martha, changed the pedagogical practice architectures for teachers and students for they created new *cultural-discursive* arrangements, new *material-economic* arrangements and new *social-political* arrangements.

Teaching practices at Southwood were about initiating students into different kinds of *cultural-discursive*, *material economic* and *social-political* arrangements so that they could *go on* in different kinds of substantive practices and different kinds of learning practices. As a physical space and material resource, the community garden was a particular kind of *material-economic* arrangement which provoked "stimulating" and "enabling" teaching experiences for students, changing the conditions for teachers' pedagogical practices. It provided a springboard for 'authentic' engagement in substantive learning across different curriculum areas such as Health (as students were stirred in to practices of cooking and growing nutritious food); Science (as students were stirred in to practices associated with growing vegetables and learning about the life cycle of insects); Social Studies (as students were stirred in to practices about the study of different cultural backgrounds); and English (as students were stirred in to practices of reading and writing information texts about different cultures, and deciphering recipes about how to make tomato sauce). The garden was a *material-economic* teaching space providing an alternative environment in which to teach students how to grow their own food to support themselves. Furthermore, it provided a vehicle for more immediate *social-political* empowerment—as a *praxis-oriented practice*—through the forging of new conditions for teaching practice. These new practice architectures constituted a genuine form of emancipatory *praxis*, that is, a means of transforming the lives of students, as well as members of the Southwood community more generally.

Teaching Practices in Ecologies of Practices

We now turn to an examination of the ecologies of practices enacted at Hillview and Southwood schools to explore how teaching practices were influenced by a range of other practices within the Education Complex. In particular, we will show how transformations of practices and practice architectures of teaching in these examples brought about transformations in other practices enacted in the classrooms, the schools and the communities involved.

There were clear interrelationships between the formal *leading* practices of Hillview School, the collective, planned and scaffolded manner in which *professional learning* was carried out, changes to *teaching* and *student learning* practices, and the *researching* practices of teachers and leaders. To illustrate, Bronwyn, the principal, and executive team members had been crucial in embedding a *telos* of inquiry learning and teaching as part of the school's philosophy of highly effective learning communities. This had been done in ways that modelled a learning community philosophy, that is, through dispersing the leadership of professional learning in ways that facilitated a shared responsibility for teacher learning. Haley and Olivia commented thus:

> I think because *we go beyond our comfort zones*, we're asked to do it, we're *challenged* to it, and "Yep, rightio, I can give that a go…"
> I can remember so many times when … [Brownyn would] … be starting … [something new] … I'd think "Oh gosh", but she takes you through things slowly … she really promotes it and then she has staff meetings and people get on board … it comes from her initially. She's the instigator of so many of these things and people going off to in-services. And then I think it's that flow-on effect … but then she doesn't leave the rest of us out who weren't involved in it, and then she has the staff meeting so *everyone's involved in it*.
> She doesn't just throw it out there and [say] "I want this done". It's a *real education* for us, and it's *ongoing* and it's *throughout the school*. And I think that's the reason people do take it on board is because it's not just thrown at you, "This is what we're going to do", it's always a work in progress. Things we work on together and at the very least, with … our stage partner and we're never expected to just go out on your own, get this done. It's sort of always *a team effort*, and I think that's why the team takes it on, because they know they're not on their own with this …

In these comments, Haley and Olivia make explicit that Bronwyn (the Principal) has a consistent approach to the practices of *professional learning*, *teaching*, and *students' learning*. The *sayings* that Haley and Olivia emphasised above, such as "challenge", "ongoing", a "work-in-progress", highlight some key ideas that underpin sustainable professional learning. Moreover, they highlight some of the *leading* practices employed by Bronwyn and the executive team members to bring about change. These include the practice of challenging teachers and setting high expectations, but always within a planned, supportive and collaborative approach to teacher learning. These kinds of *doings* of *professional learning* and *leading* were also echoed in the kinds of *teaching* practices we noted earlier in the chapter. For example, the Kindergarten teachers encouraged children to "check … out" information for themselves, rather than relying on teacher authority. In the case of the

Principal, staff were encouraged to "work on it together", rather than responding to directions from the Principal in the form "I want this done".

In *social-political* terms, the *relatings* which accompanied these discursive and material practices (such as the emphasis on "the team", "team effort") suggested that teachers were active and agentic participants in the process of change. As in many effective learning practices, it was a process that created discomfort and risk, because it "challenge[d]" teachers (and Kindergarten children using an inquiry approach to learning) to "go beyond" their "comfort zones". This approach was linked to Principal Bronwyn's view of leadership as a form of pedagogy (Lingard et al. 2003), as illustrated in her active co-participation with the teaching staff in Hillview's professional learning practices. As Haley and Olivia observed about Bronwyn, "She doesn't just throw it out there". In turn, these leading practices supported sustainable transformations to teaching practices because they were "ongoing and … throughout the school".

At Southwood, the establishment and development of the community garden was enabled by distinctive *leading practices* encountered beyond and within the school. Specifically, some years earlier, Figtree District Office made a crucial decision to investigate further how best to respond to concerns about student disengagement in some of the poorest school communities within the region. These connected directly to the *researching* practices of independent researchers who advised Figtree District on the basis of their study of youth disengagement in the District. As a consequence, extra services for schools such as Southwood were funded, such as the employment of Cameron, the Cultural Development Officer, and Martha, the School Officer. These services were a direct response to the needs of school communities like Southwood, in communities with high proportions of refugees and a wide variety of ethnic groups. These particular *leading* and *researching practices* led to the development and endorsement of a District partnership agreement—the *Working Together* initiative—to assist families and schools in the Southwood neighbourhood. These leadership and research initiatives directly influenced the ways in which Southwood's community garden emerged as both a teaching space and a teaching resource. For teachers such as Beth, *teaching* practices like the development of a big book whose focus was on representing students' various ethnic cultures and learning about permaculture through working in the garden, ecologically connected to *leading* and *researching* practices.

Some of the teaching practices that became established at Southwood were connected to teaching practices from other sites, including other schools in other countries. As Martha, the School Officer, explained, teaching in the community garden was a way to reconnect with traditional practices of working in community gardens in the Sudan:

> I get involved with the garden for a long, long time, anyway. I grew up on the farm … [in Sudan]… and when I come to Australia I was interested to grow my own food. I've been involved with other community gardens earlier, for a while, and then, in 2005 we start the garden at the Greenbank University … and, yeah, my love of the garden.

Together with Dylan, the volunteer from the local Burmese community, Martha took a lead in helping to establish the school-based community garden. Their lead-

ing practices influenced teaching practices at the school. Both sets of practices did not exist in isolation but evolved and involved practice architectures at school, community and District levels which could be traced over historical time and geographical space.

In terms of changes to *teaching* practices at Hillview, key shifts in practice architectures prefigured Haley's and Fran's evolving teaching. These transformations could be traced over time across a succession of previous activities and sites, inhabited by a variety of participants, including Haley's former Kindergarten partner, Olivia, and Geraldine Barry, a Wattletree District Curriculum Consultant. An illustration is presented in the first excerpt below, in which Haley and Olivia were discussing the process Hillview School had gone through in order to develop marking criteria, as part of the introduction of a highly controversial A-E grading system in New South Wales:

Haley: I got asked …[to work on a Mathematics committee to develop marking criteria]… one from every stage … with Geraldine Barry from … Wattletree District Office … she just came in and sat on all of our meetings that we had and gave us a bit of direction.

Olivia: It is with the introduction of the A to E. Like we had to justify why is this child a D, this is why, why is this child a B, you know? … [The development of the criteria took place] …over a couple of days and then … [they would] … come back to the group where everyone felt that they had a say … I felt it was very valuable what they had done because they'd put so much work into it and then as a group, we just came together to look at what they had done, and to make changes from this, so it wasn't really starting from scratch.

The dispersal of leadership as a shared responsibility for professional learning through a team approach appeared to have had a crucial flow-on effect for Haley and Olivia. In terms of the *doings* of the practice, an emphasis was placed on ensuring a teacher from each stage was represented on the committee. In *material-economic* terms, the input of Geraldine Barry, the Mathematics Education Officer from District Office, provided important but apparently unobtrusive scaffolding for teacher learning. The emphasis—at least as experienced by Haley and Olivia's—was on collaboration and a participatory process, where "everyone felt they had a say". This process also flowed into the democratic practices of "I" messages which the Kindergarten teachers had introduced to their classes.

In the next extract, Olivia and Haley reflected on the subsequent changes to their teaching practices as a result of the introduction of the A-E grading and Bloom's taxonomy:

Olivia: I think within the school we've done so much to work on that … it really has changed my teaching. Rather than just making sure that everyone knew what they were meant to know … It's about extending those children. You tend to do a fairly good job because you see the children who can't understand it, but it's extending those children on further to try to get

up into stage because they have the ability to do it rather than just teaching to … the 'norms', the average …

Haley: We've also introduced the Bloom's taxonomy on the levels of thinking, so every time we set up marking criteria, we've got a list of verbs for each Bloom's level that we use in the marking criteria …

Olivia: [W]e had to do A to E … and … Kendra … [the Deputy Principal] … had gone to a couple of in-services and … came back and said, "The A to E is really about levels of thinking, it's about the Bloom's". For me it was just like a light bulb, I went to her afterwards, and I said, "Oh my goodness, now I can see what they're talking about … It's not that they know more, it's that they have a higher level of thinking" … And Kendra had gone away and then she started to bring it in, and then she would do staff meetings and things like that … And … it makes so much sense because before it was that they knew more, not that they were thinking at a different level. I think for me that was the difference.

Olivia's "light bulb" moment as a learner bore similarities to the "light bulb" moment for Riley, the Kindergarten student. Both had been part of a collective investigation that had included *researching* and reflecting on *learning* and *teaching*. The students went to the local gardens to investigate habitats, and looked up books and the Internet to research their habitat. In this case of *professional learning*, the teachers read professional material, worked with Kendra and collectively in teams to discuss the *research* and its link to their *teaching* practice, and *reflected* together as part of this process of professional learning. Both teachers and students were constantly challenged and extended to think about their learning, in a manner that suggested a move beyond teaching to the "average"—to a "real education". Time for reflection and evaluation on pedagogy was explicitly built into staff meetings and teachers' planning meetings, in ways similar to the changed *material-economic architectures* of Kindergarten students' classroom reflections. We are not suggesting that Olivia's insights had been brought about solely by Bronwyn as a charismatic leader, nor that Riley's insights had been prompted solely by Haley's, Olivia's or Fran's practices as effective teachers. Instead, we highlight the *different kinds of work* that both teachers, the Principal and executive team members were producing through their *orchestration* of practices in classrooms and at a whole-school level.

Similarly, teaching practices at Southwood were ecologically connected to other practices in the Education Complex. *Teaching* existed in a dynamic balance with *leading* practices (both formal and informal) that laid down a foundation of support for the school-based community garden. These practices flowed to and from teachers' *professional learning* and their ongoing inquiry (*researching*) into their own practices. For instance, Dylan was able to access an inner-city farm to attend more formalized courses on permaculture; this *professional learning* directly cycled through and flowed into his *teaching* practices and the teaching practices of other people in the school, and into *student learning* practices. This 'new' *professional learning* complemented the *teaching* Dylan already provided through his experiences as a former refugee, his work with the Burmese refugee community, and his

work with some of the refugee students in the garden. Furthermore, his professional learning directly connected to the teaching practices of others at Southwood. As Cameron, the Cultural Development Officer, observed:

> I mean Dylan's one of those people that would talk pretty comfortably with us and talk to staff… he would… give us some insight into the Burmese community and the conflict there, just for staff,… he has worked with some of the Burmese kids in particular… they do gardening…
> We've also connected him up with people in … City Farm as well. So he's setting up little demonstration things up there for sustainable energy… So, I mean I like that connection through him from them, you know—that there's people with a lot of knowledge up there and the kinds of things that they're doing—he's now there and kind of embedded up there—they're really interested in him, so you know—and volunteers here as well. So we sort of have connection to that pool of knowledge, I think.

At Southwood, *teaching, leading* and *professional learning practices* existed in interdependent relationships with each other and these practices were nested together with the *student learning* practices that came to exist at the school. The various *teaching* practices associated with the principles of sustainability and permaculture resulted in a range of activities such as students participating in a school-wide recycling program by collecting food scraps from other students. These practices flowed into Year Three students' *sayings* as was evident, for example, when they talked about the use and development of compost, and their understandings about the role of chicken manure and newspapers as part of the development of soil within the garden:

Lexie: In compost, when you make compost, there's a lot of things you have to add to it.
Simon: We had to rip up some old newspaper.
Lexie: To put in the compost…
Lina: …the chicken poo makes soil and makes the-
Chris: …Help the plants grow higher.
Simon: When I first had my job to do the chickens, we had to collect all the food that people waste in the bins, so we used gloves and we just grabbed those wasted food and give it to the chickens. And I never knew what they can eat—they can eat anything!

At many points in this network, the practices of a great variety of participants—District education officers, teachers, school-based education officers, the school executive team, community members and students—were ecologically connected, with one practice shaping and being shaped by the other practices in relation to the broad project education of which they were a part.

In this section, we have drawn attention to ways in which they practice of *teaching* is in some cases ecologically connected to specific practices of *leading*, *professional learning*, *student learning*, and *researching*. Many of the transformations to teaching practices we observed came about through the effects of those other practices—when those other practices in the Education Complex acted as practice architectures that enabled and constrained practices of teaching.

Practices of Teaching and Site Based Education Development

In this chapter, we have witnessed teaching practices with very different practice architectures, which have responded to the distinctiveness of particular classrooms, particular schools and particular communities. In Hillview and Southwood, teachers developed particular pedagogical practices through interpreting and adapting state-wide curricula so their teaching would respond more sensitively to the needs, circumstances and opportunities of the learners in their site. As they devised units of work, they built a foundation of key learnings based on the lived cultural experiences of their students and their surrounds. In Hillview's case, this included a visit to the local botanical gardens and the construction of habitats from familiar objects such as Milo (powdered chocolate drink) tins; and in Southwood's case, the use of the school's community garden as a teaching space and resource. Teachers at both schools carefully paced learning, built in opportunities for "authentic" engagement through a range of classroom *set-ups* that honoured the different traditions and histories of learning of *these* students in *this* class in *this* community. In Hillview, teachers assessed students employing a range of strategies, which recognised and, like the practices at Southwood, built on their learners' knowledge and the individual histories they brought to the site.

At both Hillview and Southwood, changes to teaching practices did not occur principally because teachers, as isolated individuals, made unilateral changes to the *sayings, doings* and *relatings* of their classrooms—although teachers often do make such unilateral changes. Nor did they occur primarily as the result of the introduction of educational systems of "tough, intelligent accountability" (Cowie et al. 2007) like a national curriculum, national professional standards, or national assessments of students' learning outcomes—although these external forces were experienced by teachers and leaders at Hillview and Southwood schools. Rather, the transformations to teaching at Hillview and Southwood were brought about by whole-school transformations to the practice architectures that enabled and constrained teaching in the schools. These transformed practice architectures prefigured (but did not determine) the teaching practices that came into being in the schools. When Haley and Fran changed their classroom teaching practices to enact an inquiry approach, they did it in *their* way, as an agentic and *educative* process. Without fanfare, they were behaving as activist professionals. Changing their teaching practices was a history-making endeavour—it was rooted in and responsive to the ontology of Hillview as a site, and reshaped the conditions—the practice architectures—for student learning in their classrooms, Hillview school, and their community. They initiated students into practices of understanding habitats in a new and different way.

Southwood School also has lessons for understanding the nature of site based education development. It is an example which foregrounds the importance of responding to the needs, the circumstances and the histories of a site in a way that made a marked difference to the way education was enacted there. The students attending Southwood had a variety of special needs, and brought with them to school traces of family histories that, for some, included traumas of war and the struggles for survival they en-

dured as refugees. As students attending a school in a low socio-economic area, they were more likely to experience impoverished forms of teaching which had relatively little relevance to their lives, or to valued forms of capital within Western societies more generally. Southwood School's community garden afforded opportunities to initiate students into substantive practices and learning practices that more powerfully connected with their personal and cultural backgrounds.

Given the challenges of diversity that attend the life circumstances of many school communities, our studies of teaching practices at Hillview and Southwood demonstrate the importance of teaching that students experience as genuinely educational. Some of the teaching practices we observed at Hillview and Southwood enabled an increasingly diverse range of students to explore and develop their own practices—their ways of living and being in the world. In this sense, teaching at Hillview and Southwood seemed to be initiating students into ways to live well, and thus to helping to make a shared world worth living in.

Conclusion

In the cases examined in this chapter, we have attempted to draw attention to the differing ways in which educators in particular sites of practice (classrooms and a community garden) have deliberately designed and enacted practices of teaching that initiate students into new kinds of practices—practices of understanding the relationships between different creatures and the habitats that support them at Hillview, and practices associated with gardening and sustainability at Southwood. These changes to teaching practices were brought about by changes in other practices that connected to teaching in these two schools: practices of leading, professional learning, leading, researching, and, perhaps most importantly, student learning. These other practices became practice architectures that supported new forms of *teaching*. Specific practices of *leading* at school and District levels helped to transform the teaching of the teachers we observed and interviewed. They were also changed by school environments for, and collaborative practices of, *professional learning* that made them part of a professional community committed to renewing teaching for the sake of students' learning. One of the ways this happened was through shared practices of reflecting on teaching and learning—shared practices of *researching*. And the students' responses to changed ways of teaching, evident in their changed practices of *student learning*, became practice architectures that sustained changed ways of teaching. Together, this ecology of practices nurtured new practices of teaching, helping them to persist and endure.

A great deal of writing about teaching focuses on the person of the teacher—the attributes of teachers, their professional practice knowledge, their skills, their values, their personalities, their work. In this chapter, we have focussed not on teachers but on *teaching* as a practice. We have tried to show how teaching practices bring practices of learning into being, how teaching creates practice architectures for practices of student learning, how teaching initiates students into practices. We

have also tried to show that nurturing the practice of teaching requires seeing it not only in relation to student learning, but also in relation to practices of professional learning, leading and researching that can transform, nurture and sustain teaching. Nurturing the practice of teaching requires nurturing teachers, too—in the Districts and schools we studied, leaders aimed to create professional learning communities expressly committed to supporting teachers and teacher learning. We hope to have shifted the perspective that changing teaching mostly requires changing teachers. The perspective we have presented is that changing teaching requires not just changing teachers but also changing the ecology of practices that the practice of teaching exists in. Both bad teaching and good persist and endure because of the ecologies of practices that support them. To have better student learning, we need students to develop better practices of learning; better practices of teaching can help to achieve that. But achieving better practices of teaching also depends on achieving better practices of professional learning, better practices of leading, and better practices of researching. By saying this, we do not ask for new 'processes' of professional learning, leading and researching—in the abstract or in general. We mean that living practices of teaching—in their interconnection and interdependency with student learning, professional learning, leading, and researching–must be nurtured and sustained *in every local site*. The living practice of teaching—like all practices—only happens *in some site*, *at some time*, and it is enmeshed with the local and particular practice architectures of that site. Teaching might be changed *on the average* by measures like the development of national professional standards for teaching, but it can only be changed *in a site* by understanding and acting on the connections of teaching practices with the other practices that sustain it *at the site*. A national assessment program and sustained practices of –monitoring the results of national testing—school by school and teacher by teacher—might help to improve students' learning outcomes *on the average*, but improving students' learning outcomes *in a site* requires changing the ecology of practices that support students' learning practices, including teachers' teaching practices. The ontological perspective understands a practice like teaching not just in terms of the behaviour or the actions of teachers. It understands teaching as a living practice that survives—and can thrive—only in the living ecology of practices that exist around it *in a site*.

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Chapter 6
Professional Learning as Practice Development

Introduction

Professional learning is a priority for Wattletree School District. It is committed to the broad *project* of building highly effective learning communities at every level in the District: in the District Office, in the way District staff work with schools and school leaders, between Principals and staff in schools, between teachers and students, and among students in classrooms. The District developed a key policy document, the *Communities of Practice Principles,* underpinned by the *practice tradition* of communities of practice as advocated by such theorists as Lave and Wenger (1991). As described in previous chapters, the policy sets out six principles concerning *meaningful learning*, *inquiry*, *collaboration*, *communication*, *self-responsibility* and *human development* that are intended to guide the life and work of District Office and school staff, and students, in their work and relationships with one another. On the one hand, the *Principles* arose from the research of senior District Office staff into principles of highly effective learning communities to be found in the educational research literature; on the other hand, they were also informed by what were seen as exemplary practices to be found in some of the District's schools.

For more than 15 years before our research in the District, the *Communities of Practice Principles* had laid down a path which shaped the form, contour and texture of professional learning practices found in many schools; over time, it had become a powerful *practice tradition* shaping life and work in the Wattletree District. In this District, most schools and most individuals in them have responded positively to the broad educational project encapsulated in the *Principles*, although they have sometimes interpreted them in distinctive or unique ways. In general, however, the *Communities of Practice Principles* have fostered a shift of perspective from *professional development* to *professional learning*—a shift from the provider's view of what teachers (for example) need to do their work more effectively to the teachers' view of what they need.

This chapter describes how teachers in the District have re-imagined *professional development* as *practice development*. While many people in education see professional development and professional learning as the development of *people*—professionals in a variety of roles, including teachers—senior staff in Wattletree

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District have begun to see it as a practice of developing *practices*—a practice of *practice development*. We use examples from our observations and interviews to provide dynamic descriptions of the particular conditions which stimulate and support the practice development of teachers in their actual sites of practice.

The chapter is organised in four parts. First, we present empirical cases of professional learning that occur as particular projects in the sites we studied. Here we provide a brief 'snapshot' of these projects as they happened to show how practices are developed and sustained in them. Second, we develop the empirical work by giving a detailed account of the practice architectures that compose the practices in these projects, showing what these professional learning projects are composed of and how they are formed and transformed within the intersubjective spaces in which they are found. Here we give an account of the *cultural-discursive, material-economic* and *social-political* arrangements that enabled and constrained practice development in these cases. We show how for Wattletree District, the *Communities of Practice Principles* take teachers beyond notions of teachers working and learning together, sometimes in spaces described as 'communities of practice' or 'professional learning communities' (Lave and Wenger 1991; Nehring and Fitzsimmons 2011; Stoll et al. 2006), an idea not restricted to our own times (see Tönnies 1887). Third, we explore professional learning as part of the broader Education Complex, and show how practices of professional learning occur as interconnected and interdependent with other practices in ecologies of practices (Kemmis et al. 2012). Finally, we draw together the practical and theoretical dimensions of practice development explored in the previous sections. We show how practice development contributes to the distinctiveness of educational practice as it responds to the unique circumstances, needs and opportunities that exist at individual sites. We focus on how professional learning occurs in some of the sites we studied, and how it contributed to the development of educational practice in those sites.

Projects in Professional Learning for Practice Development

Principal Bronwyn Harper, says that professional learning at Hillview Primary School was "deliberately designed to be transformative". In fact, she indicated that for staff at Hillview, professional learning was about change that needed to be explicitly connected to "a change strategy" for the whole school. We observed Hillview staff in professional learning staff meetings organised as a deliberate part of this change strategy, and discussed the meetings with them in interviews. We learned that, arising from these meetings, staff were routinely participating in school based, school designed professional learning projects focused on such things as developing an inquiry approach for teaching and learning, or improving spelling through inquiry, or developing the *Habits of Mind*™ program throughout the school. These projects formed the collective enterprise for teacher learning at Hillview. Some teachers were also involved in individual classroom based projects with support from district personnel on developing their pedagogical use of technologies in the classroom. For other teachers, participating in externally designed projects

such as *First Steps Writing*™ and *Designing Assessment for Education* to learn how better to facilitate the learning of others was a part of the strategy for change; these teachers were also responsible for leading school professional learning in subject areas like Mathematics or Science teaching.

Teachers from Westville Primary School also participated in a range of collective and individual professional learning projects. These projects were either school based and/or school designed or externally designed and driven. For example teachers, as a collective, designed a yearlong school based project they named *Learning Floats on a Sea of Talk*; a program that derived its origins from the work of psycholinguist James Britton (1970). On the one hand, this project aimed to help teachers develop their own pedagogical practices to improve and extend the written and oral vocabulary of students in order to raise the level of "intellectual dialogue in the classroom among students" (Marg Thompson, Year 4 Teacher). On the other hand, the *Learning Floats on a Sea of Talk* project aimed to help teachers develop a shared language about aspects of language education practice, and to have them engage in critical and collaborative analytic dialogues (Edwards-Groves 2003) about their practices and change. Teachers co-produced the approaches and drew on their shared knowledge and expertise, but they also recognised the need to extend learning in their site by securing support from Wattletree District personnel where appropriate. One teacher participated in an externally-designed, locally-driven professional learning project to develop technology use in the classroom; and another participated in the *Reading Recovery*™[1] teacher training program. Both these teachers—interestingly, teachers in their first year after graduating from university—were responsible for sharing their learning and practices among the broader staff group, as there was an expectation at Westville that all teachers shared the responsibility to lead the learning of others through a range of professional learning arrangements negotiated among staff.

In Northton, teachers engaged in two externally designed but locally driven and focused professional learning projects: the *First Steps Writing*™ and the *Using Interactive Whiteboard Technology* programs. At the school, during staff meetings re-assigned for professional learning and sharing practice, selected teachers were responsible for leading the programs of change and designing the arrangements that would enable teacher practice development. For example, one teacher worked on *deprivatising practices* by instigating what she described as classroom walk-throughs where teachers were given time to visit each other's classrooms to observe, share, discuss and learn about particular aspects of their practice. As in other schools in the school districts we studied, professional learning practices and arrangements at Northton focused on developing and changing teaching and learning practices.

In each of these schools, it appeared that the particular focus of professional learning was distinctive and driven by site based circumstances, needs and opportunities. Interviews, document analysis and observation at the sites revealed, however, that the

[1] *Reading Recovery*™ is an intensive intervention program developed by Marie Clay (New Zealand) and associates, to support reading and writing development among children in their second year

practice architectures which enabled practice development were shaped by practice architectures observable at the sites—for example, the district policy about developing effective learning communities which had been brought into the sites in policy documents, and in the language of staff (teachers and principals) who had attended the *Communities of Practice Institutes* and *Pedagogies for Literacy* programs. In different ways, these different kinds of arrangements enabled and constrained the possibilities for professional learning for practice development in each school site.

The Practice Architectures of Professional Learning as Practice Development

This section examines particular practices and enabling conditions for practice development in the school sites we studied. For practice development to flourish, three main professional learning practices and the arrangements which supported them emerged. We observed practices that both created and emerged from (1) cultivating a culture of care and collaboration; (2) agentic collegial responsibility, and (3) deprivatising practice. At a fundamental level, these practices were held together by practice architectures that demonstrated a shared commitment to both a 'focus on improving student learning' and 'engaging in critically reflexive dialogues'. In one way, these practices are difficult to separate analytically (which came first, or which enabled which) as we found that they cohered around the three-dimensional intersubjectivity of the sayings, doings and relatings of the professional learning practices experienced in the 'happeningness' of life in these sites. These practices did not happen independently of each other; they influenced each other and were interconnected in teachers' lived experience. They flowed through the projects in each school and were pivotal for creating particular kinds of conditions for 'being' and 'learning' as a teacher.

Teachers—as participants in professional learning practices—also became stirred in to new practices of teaching and professional learning in their particular sites. To do this, they learned and so displayed particular professional *dispositions* which included knowledge, skills and values that hang together in the practising or enactment of a practice in which they play a part. They developed these dispositions by practising their professional learning amid particular practice architectures (*cultural-discursive*, *material-economic* and *social-political* arrangements) that enabled and constrained the development of their professional practice.

Cultivating a Culture of Care and Collaboration

Professional learning as practice development came to thrive in the schools we studied when the schools established a coherent professional learning culture. This coherence was achieved when teachers and leaders developed a shared team focus on improving student learning. Teachers and leaders in these schools recognised, experienced and understood this culture as pivotal for their own practice development and the practice development of others. We believe that this is evidence that, to

varying degrees, teachers and leaders in the school apprehended the inherent sociality of practices. That is, they were recognising, at some level, that their practices were not 'theirs' alone (as individuals), but rather that practices are distributed and orchestrated in time and space, and among participants, so that teaching or learning practice in one part of the schools would connect or collide with other practices (not only practices of teaching and learning) elsewhere in the schools.

Teachers and leaders in the schools described the professional learning culture in the schools as a culture of care and collaboration. Living this culture by practising care and collaboration gave them an authentic sense collegiality that in turn enabled transformation. At Westville, for example, Year 4 Teacher Marg Thompson described the genuine interest staff members have for each other as a fundamental condition for 'being' learning professionals:

> … it's just a case that you've got the whole staff who are genuinely interested in people but you've got to show it, … everyone is genuinely interested in how people are feeling, are concerned about supporting each other … and from early in the year, saying "How are you going? Do you need any help?" I mean you can't program for someone else but you can sit down and chat to them and just be there for them … I think it's just something we all do particularly well… that was so important, that just knowing and responding to each other's learning needs.

Being available to support and collaborate with each other laid down a particular cultural-discursive path which enabled learning to happen. The path laid down became part of a way of being—a form of life—for those who inhabited the sites, and further generating dispositions of care and collaboration in the staff. For Westville teacher Merilyn McCarthy "it just boils down to the way we all work together". Westville Principal Stephanie Marks described this as "building a culture of care" which, for teachers in this school, was a lived experience of an environment which valued communication, capacity building and connection: communication between staff and with Wattletree School District personnel; capacity building individually and collectively; and connection with each other, with students and with the community. The culture of care and collaboration became a practice architecture in which the *social-political* arrangements of the culture nourished *practices of care and collaboration*. This is evident in how the Deputy Principal Rose Armano, described relations between staff:

> … just having small meetings and catching up and sort of nourishing each other, everybody's just happy to be here and to help each other; and you know I mean you have your days and you have your moments obviously with the work load and those sorts of things, but just keeping the communication lines open and just that discussion…. And it's quite inspiring what some of us have come up with and that then filters through to the classroom… I find that very nourishing. I find the personalities and that acceptance and need, respect and you know just working together very nourishing for each other each day because you know obviously we all know how hard it is some days just to come in. Or if something happens in a day you can go and just have a chat with someone… and those are very important because it's a big part of who we are.

In this school, like others in our study, the development of the particular culture described by Rose above, was not a serendipitous occurrence—a happy accident. It was cultivated and nurtured over time in a journey (Ingold 2007) of professional learning, and not without contestation and resistance as new teachers came and

others left "because what we'd done is we'd upped the ante as far as education was concerned, and what we expected, and it wasn't what they wanted, and so they just moved on" (Marg Thompson, Year 4 Teacher). As a Part of cultivating the development of this culture of care, collaboration and professional learning explicitly connected to the particular practices which existed and were nurtured, or those which came to exist there; these were inextricably entwined. For instance, practices such as team teaching, reflecting together, informal group discussions, more formal focused professional dialogue groups, coaching conversations, mentoring conversations and staff meetings for professional learning simultaneously enabled the emergence of a culture and sustained its development. These professional learning practices shaped teachers as they "upped the ante", and played a critical and central part in the development of a professional learning culture at Westville.

Rose, and many others, described and demonstrated practices that showed that teachers at Westville were living out the humanitarian values articulated in the District's *Communities of Practice Principles*. In this site, the culture of care and collaboration was evident in relevant *sayings*, *doings*, *relatings,* and *projects* that hang together in such a culture. These, in turn, were made possible by practice architectures of a culture of care and collaboration that existed in the school. For instance,

- the language and *cultural-discursive* arrangements teachers used to describe their experiences (for example, "nourishing", "respectful", "inspiring", "genuine"), which hang together with
- the *material-economic* arrangements at Westville that afforded particular professional learning activities (for example, the discussion in small meetings, professional dialogue groups, coaching conversations, mentoring conversations, staff professional learning meetings), and with
- the *social-political* arrangements demonstrated in the ways teachers related to one another in their everyday realities (for example, knowing and responding to each other's learning needs, accepting one another, keeping communication lines open).

This practice architecture of the culture of care and collaboration at Westville had been constructed consciously and deliberately: the language teachers and leaders used to articulate their practices, the specific activities that enabled people to work together, and the ways people relate to one another in the school—described by teachers as "relational trust".

Relational trust and mutual respect—as particular *social-political* conditions—were consciously protected and preserved, and explicitly articulated in the sayings, doings and relatings of District staff. These features, arising from the culture of the site, were furnished by the practices experienced in the site and appeared as major conditions for enabling practice development at the District level through, for example, the District *Communities of Practice Institutes*, in which all teachers participated, and the practices with which District staff engaged with teachers and principals in schools. Senior staff in Wattletree School District Office described the emergence of relational trust and mutual respect as pivotal for practice development:

> An absolute core component of the way the group operates is that whole area of relational trust, and that relational trust exists within that professional community and largely holds it together. Any one of the *Communities of Practice Principles*, and the level to which any one of those things exists, affects the way in which every one of the other ones exist… So those, we would expect, well I believe it's perfectly appropriate, that what they do works within the life of a professional community, that the way in which they relate to each other, and relate to the people that they work with, in regard to how professional learning is done, in that it's deeply connected to what we acknowledge are the *Communities of Practice Principles* (Christopher Draper, Senior District Consultant).

> This Office has looked at the way in which professional learning practice takes place, because, we believe that unless transference is there, that professional practice can't change. So we've tried to model and promote communities where reflection is considered a vital aspect of teacher practice, and that's around the whole notion of learning from colleagues, and learning from one another, because, unless you've got a climate where relational trust is built, then, often teachers won't be open to a change in practice (Harry Masters, Senior District Consultant).

From our observations in schools in Wattletree School District these ideals about relational trust were not just rhetoric. They were living practices that were made possible by practice architectures designed to support them: specific *cultural-discursive*, *material-economic* and *social-political* arrangements for professional learning in the practices of the District staff and teachers and leaders in the schools. According to Principal Stephanie Marks, establishing a culture of care and collaboration that fostered openness and trust had enabled Westville School to move forward to make a difference to students' learning outcomes:

> I think what's special here is that openness and that trust, and going forward we wouldn't be able to do that unless we had that. Could you imagine sitting with someone having a conversation about an aspect of your practice that you want to improve, and you know that person is going to walk out that door and say, "You won't believe what she said". That is what is really special about this place. You know you could work with anyone and they would listen to you with no judgment, and they were there 100% to support you. It is a very special environment which doesn't come along every day. And that's how we can go forward to make a difference to students' learning outcomes.

At Westville, for instance, teachers not only demonstrably trusted each other, but entrusted their development to each other; these practices were mutually constitutive. They did this both formally and informally as they shared and critiqued their teaching practices in stage group planning meetings, in group discussions, in focused professional dialogue groups, in coaching conversations, in mentoring conversations and in staff meetings for professional learning. These *material-economic* arrangements enabled conditions for changed language, activities, and ways of relating. Dispositions of trust emerged as critical for their professional learning experiences as teachers worked in a climate of consensus; these conditions for practice enabled teachers to develop relational trust and to share responsibility for school reform, student learning and practice development at all levels. As Westville's Deputy Principal, Rose Armano, put it:

> Stephanie [the Principal] is always listening to us as well… we're respected that way and respect each other that way. That filters through to the children too—a real sense of keeping an eye out for each other, and understanding people's differences, and making everybody feel welcomed, and everybody having the ability to, you know, have something to say. In staff room conversations … nobody feels intimidated … respecting and valuing collegial wisdom.

From their accounts, teachers at Westville belonged to a community of learning professionals that nourished and had responsibility for developing all teachers' practices, which in turn cultivated a culture of care and collaboration as a pivotal practice architecture for professional learning. Year 1 Teacher Toni Braithwaite put it this way:

> I think it's through the professional dialogue that we've slowly built on. And that openness and trust in one another that this is actually isn't about us—this is about what we want for our school and that. And there's a real support behind, well, we each know that we will support one another, to understand things or to try things, or to—that reflection and admission that, actually, I could do better at this.

It seems to us, that professional practice development existed not only as traces in the language of what teachers and leaders in Westville described as relational trust, made possible by the *cultural-discursive* resources of a shared language describing their work, but also by the *material-economic* arrangements which shaped the settings in which people encountered one another, and also by the *social-political* arrangements that shaped how people met and related to one another in their shared *project* of professional learning. In short, the *sayings*, *doings* and *relatings* of the practice of relational trust were enmeshed with consciously developed practice architectures in the site that supported and sustained the *practice of trust*.

Wattletree District Senior Consultant Harry Masters described the District's commitment to developing the kind of culture of care and collaboration found in Westville. He emphasised the need to establish relationships in which there is a genuine recognition that each teacher brings particular strengths, expertise and qualities to a school. He also commented on how leaders have responsibilities for developing this culture of recognition, for nurturing others, and for giving others opportunities to lead:

> [In these schools that are working well]… you actually have a balance of expertise where all the different [kinds of] expertise are acknowledged, and actually selected to meet the needs of the context… So, [there are] people with different skills, depending on the needs of that context … So it's a shared role of people truly working together towards a common goal, but a shifting aspect, so that once you're in leadership it doesn't mean that you're staying there … You'd be playing your role because it had actually been sorted, and so, now what you're doing in your leadership role is actually different, watering and sustaining, and supporting but in a quieter level, but perhaps the needs have shifted into another domain and somebody else comes up and sort of starts there… So, it's not static.

Northton Year 3 Teacher Lawrie Gibbs echoed some of the sentiments expressed by Harry Masters. Like others at Northton, he recognised that his colleagues were resources for his professional learning as a teacher, and that all could be "going to each different teacher for having different strengths". Lawrie added that participating in the practice of professional learning together "just keeps us professionally developing each other…we feel confident to do that".

In these ways, a culture of care emerged as a part of a shared form of life at all levels which created generative practice architectures for practice development as part of the fabric of Wattletree District and the schools we studied, so practice development became a part of the *practice landscape* in the District and at least some of its schools.

In their accounts of collaborative professional learning, teachers experienced moments of significance beyond themselves, as they responded to and experienced something greater than their own intentions, their own perceptions and their own

perspectives on the world. Without exception, a shared *team focus* drove practice development projects forward in the Wattletree District schools we studied. In turn, teachers and leaders created practice architectures to support these collective efforts—they articulated a shared language of professional learning and a culture of care and collaboration, established shared activities for professional learning, and established shared ways of relating to each other and the world—ways of relating characterised by *relational trust*, *inclusion* and *solidarity*, for example. Westville Deputy Principal Rose Armano commented:

> It's really a whole team effort, staff meetings and the other staff activities are the same, so lots of—it's just sitting around the table and we talk about things and we discuss things. And everybody's opinion is really valued, and that's what you really sense here. There's the sense of we're all pulling in the same direction… a whole staff movement. We were all people who were not happy with mediocre, that we wanted to go that bit further; we wanted to make our classrooms dynamic learning places.

At Hillview School, participating in practices driven by a whole-school focus was also recognised as critical for professional learning and engagement. Deputy Principal Kendra Clarke recognised the need for this kind of solidarity when she said:

> The 'we' was just obviously a part and parcel of our everyday language, that it's never you or me, it's always a 'we': this is our responsibility as a school, and we'll work together to do it.

Kendra's recognition of the importance of the language of solidarity demonstrates, we believe, an awareness that (in terms of our theory of practice architectures) it is necessary to construct practice architectures to sustain a culture of care and collaboration for collective professional learning to thrive. Particular kinds of *cultural-discursive* arrangements are needed: relevant examples here are captured in language like "we as a team", "our everyday language", "our responsibility" and "a whole staff movement". Particular kinds of *material-economic* arrangements are also needed: staff meetings for professional learning, for example. And particular kinds of *social-political arrangements* are also needed: for example, relationships of *relational trust* and *co-participation*. These three kinds of arrangements also hung together in practices like the practice of *joint negotiation* that we observed in various sites: in staff meetings, between teachers in schools, between teachers and leaders in schools, and between District Office staff and school principals).

Professional learning is about change, and change agendas often unsettle what already exists, and so, by their very nature, interrupt established or preferred practices. Our observations and interviews showed that professional learning practices for some teachers in some sites were contested and, to a point, resisted. In fact, for some teachers, teacher agency and practice development was at times restricted and constrained by Executive Team decisions which limited wider access to external professional learning opportunities:

> Well, to be very honest with you, nowadays we don't go and have conferences or seminars any more—it's more all done like in a staff meeting—as a staff. Sometimes you have—like we have one at the moment, we're going through the *First Steps Maths*™ Program. So someone has been to the course and comes back and shares it out. Marjory shares the resources out with us, and does all the courses for us. So it's passed on that way. Which I find a bit frustrating, because you've got the same teachers doing all the courses…

> because you don't go and explore yourself,… meet other teachers and compare and swap notes and just to share ideas… an approach I find very worthwhile because I'm inspired more. I've got more enthusiasm, and that's one of the things I really miss here. (Hamish Paton, Teacher, Hillview)

Hamish's comments illustrated that the approach to professional learning adopted at Hillview also placed constraints on some teachers' opportunities for professional learning. All teachers did not always universally accept leaders' decisions about how professional learning is best provided; these often presented limits, tensions and polarities for some teachers. For Hamish, having Marjory as primarily responsible for "sharing the resources, and doing all the courses for them" was a source of tension—from Hamish's perspective, this approach to professional learning denied him the opportunity to participate directly in professional development programs offered outside the school or to visit other schools:

> Here, we kind of share our own ideas for work, we make informed decisions as a staff, and we got a lot of inspiration here from Bronwyn [the Principal]. She's really involved, wants to get us all involved and pushes us along a fair bit, which is good, it's good for us; but everything's got to be done yesterday type of thing… But I just think if you can share other people's views from other schools and getting other opinions, I personally think it's much better. (Hamish Paton, Teacher, Hillview)

Whilst many teachers shared the enthusiasm for Hillview's approach to professional learning in the first sentence of Hamish's comment above, a few also shared Hamish's frustration. Not all Hillview teachers felt as authentically and agentically involved in the School's broader leadership and professional learning agendas and the practices they created. Professional learning practices like organised presentations, dialogue and relationship building may foster staff cohesion, but at the same time also break down former professional learning practices valued by staff—that may also have played a part in maintaining earlier patterns of cohesion in the relationships between staff (in which different staff might have been valued as the local 'experts' in different subject areas, for example). Although Wattletree District's *Communities of Practice Principles* envisage that practice development in the District will proceed most effectively by having teachers work together in communities of practice, and what this might be interpreted to mean *especially* through shared co-participation in collective professional learning activities, Hamish's comments remind us that different people learn practices differently—and that diverse professional learners might need diverse professional learning opportunities.

Exercising Agentic Collegial Responsibility

In the schools we studied, most teachers positioned themselves as agents of change, responsible for their own and the development of others in their school. These practices enabled teachers to exert influence over practice development in their own schools, and perhaps to rethink themselves as what Judyth Sachs (2000, 2003) calls "activist democratic professionals". From the comments of Westville Year 4 teacher Marg Thompson below, we might conclude that teachers at Westville are the kind of people Sachs has in mind:

> …Here we have a freedom to initiate practices…. Teachers don't want to be forced to change. When I came here I was still working through the *Pedagogies for Literacy* program and they could see the work that I was implementing in my classroom. And one of the things that happened very soon after at staff meetings was, "Marg, can you teach us what you are learning?" So it actually came from the staff; it didn't come from somewhere else. And it was people like [teachers] Denyse and Bonnie saying, "We like how you're doing writing, we like what we see your children doing, we like the enthusiasm we see in your class". So they were coming to me and saying "We want to learn this from you". Actually the professional development didn't come from above, it came from the staff. And we went at it at our own pace.

In this instance, a willingness to provide particular professional learning practices enabled people to exercise agency about the professional learning they wanted to do. Through their common participation and common goals to initiate and drive their own professional learning agendas, teachers were entrusted—and so empowered—to create and co-create their own practice development. To a certain degree, this was an organic process as teachers had the 'freedom to initiate' a pathway for change which, for the whole school, was often maintained over the year as a focal point for development and, in most instances, sustained beyond that. Teachers acknowledged that the power of learning with and from each other contributed to their practice development. As Westville Year 6 teacher and Deputy Principal, Rose Armano, put it,

> We're all learning together and we're all sharing something that was very powerful and it's just that learning from each other. We've all got all new SMART Boards through the school, which was pretty new. And, you know, with the range of ages and technological abilities, as you know, we had somebody come in to teach us things. But the most powerful time I think was when we could come back a couple of weeks later and we all shared what we learnt ourselves.

Here, Rose recognised in her comments that 'learning together' was also sharing power with colleagues. She seems to recognise that 'learning together' is the creation of a special kind of space—the kind of space we describe as *intersubjective space*. In this kind of space, teachers connect with one another in shared language—opening up a shared *semantic space*. They connect with one another in shared occasions and shared activities—opening up a shared place in *physical space-time*. And they connect with one another in shared relationships—opening up a shared *social space*. Once they have opened this kind of shared intersubjective *space*, teachers and leaders are also coming to know how to go on in the space: it becomes familiar as a *place* (an *intersubjective place*). In the kind of place for sharing learning Rose Armano described above, teachers had opened a place for sharing, and they came to know how to go on in their sharing. They created a place for practising professional learning and for practising practice development.

In this case, too, we believe that teachers are sensing moments of significance beyond themselves: a mutual recognition of one another as members of a shared language community (sharing a *logos* that becomes expressible through their shared language); a sense of cooperation and collaboration in action; and a sense of solidarity as people who belong to one another, who are bound by obligations to one another.

In descriptions of the conditions influencing their professional learning, teachers frequently attested to teacher agency as a key condition for motivating individual

and collective development. Here is the observation of Lawrie Gibbs, Year 4 teacher at Northton:

> I like the way it's left to us and we work really well together as a team, it's very open, sharing ideas and bouncing off each other's teaching good ideas as well. [Francis, the Principal] is very open…so it's very much a buzz, for us as teachers, we're very excited about it, because we've seen the benefits, we can see how [the new technology practices] (a) complements our teaching, (b) how it can make our life so much easier as well…. I do say this is the best school I've taught in, as far as, just professionalism, relationships, the way we work together, the way we all work as a team basically in a climate of learning.

Teachers described this as a climate of professional learning where control to direct their own learning was handed over to them. Through the act of working together, discussing ("it's very much a buzz"), and taking responsibility for one another, new practice architectures supporting their teaching came into being. These alternative arrangements and architectures were evident in how teachers recognised that working in such environments, where there was power to pursue their own purposeful learning agendas, generated and strengthened staff solidarity for improved practice.

In another example, teachers from Hillview School inhabited their practice as agents for change. Teachers, enabled through particular practices of leadership, exercised agency as they initiated changed physical spaces for their practice development. They organised 'professional learning dialogue groups' to address particular aspects of concern in their own practice; these formed new *material-economic* arrangements for professional learning in that school. Participating teachers joined the group voluntarily, although there was strategic canvassing after time to ensure there were teachers there from each class level. In turn, the *social-political* arrangements were changed in that for these teachers, such practices of professional learning became *occasions* of sociality which come into being because teachers, acting not alone but collectively and with agency, *brought* them into being. In the practices we observed, individual dispositions, individual will and individual actions were *orchestrated* in collective enterprises as *projects*, for example, for improving teacher questioning of students or lifting student engagement in lessons, or integrating technology across subjects in the classroom, or, in the case described below, improving student achievement in the national test, NAPLAN. In the words of Hillview Deputy Principal Kendra Clarke:

> I just called them a NAPLAN Focus Group, anyone who wanted to join it, could join it. And on Thursday afternoons, we just met for half an hour… that was very enlightening… there was a lot of chat… we looked at parts of the results and what it really meant. We'd have a chat about something, like part of it was modelling a sentence, and that's where a sentence ends. And then we'd go back and try a few things, and then we'd come back and share how it went, and then we'd set another goal for the next week, and then go back and try something else. So it was just constant dialogue… We had the leading thinkers there,… to build on to what we knew…there was enough strength among us, strength…of people who knew what they were doing to ensure that the dialogue was professional, on task and learning orientated.

A corollary of this collective orchestration of focused change is that, from the perspective of those participating in the change, there was a moral responsibility for practice development. This shared sense of responsibility created a climate of

teacher agency, whereby people's individual responsibilities for their part in the conduct of the practice was recognised and strengthened. They initiated action among the staff for the purpose of practice development. The culture of collegial responsibility which came into existence in the site generated new *material-economic* arrangements for the teachers who worked there. As a consequence of the development of the NAPLAN Focus Group, for example, teachers at Hillview were enabled to take control of the development of other collegial activities by, for example, providing a professional reading for other staff which then shaped the conduct of other professional learning activities. As Kendra Clarke described it,

> Ronnie [a Year 6 classroom teacher] initiated that reading; she brought the reading in. She said to Bronwyn (the Principal), she said, "I came across this great reading that I read last night, and it was like, light bulb moment—aha!" So I asked her for a copy and so she gave Bronwyn and I a copy and we read through it, and went, "That's how simple it is." That helped us realise what people didn't know. And if Ronnie [an experienced teacher] really hadn't got the whole picture, then there'd be quite a few others there that didn't have the whole picture. And so, away we went with it, so that's where it all came from.

In this section, we have seen that teacher actions changed the course of professional learning experienced in their schools, as they legitimately and authentically activated professional learning. Furthermore, the leadership teams in these schools demonstrably valued staff contributions and so, in one sense, sensitised teachers to work with the continued interests of their colleagues' practice development in mind. We interpret the descriptions above as evidence of the development of the disposition to professional praxis, a disposition that was enabled as teachers were afforded the professional license to enact practices of collegial agency—that is, as they were enabled and constrained by practice architectures constructed deliberately to support collegial agency. In such circumstances, teachers in these sites demonstrated a moral responsibility for the development of their colleagues.

Critical Reflexive Dialogues as Collegial Agency:

Participating in professional learning conversations was a key 'driver' of practice development for the schools in our study. These conversations required teachers to go beyond reflecting, discussing and recounting practices, to challenge, and be challenged about, their practices. At Hillview, teachers recognised that participating in professional conversations required teachers to engage in critical questioning, inquiry, and focused reflection, and there was a planned move towards creating new material-economic arrangements to enable this to happen. The strategic development of the staff meetings for professional learning was a deliberate change to the practices already existing in the school. Hillview Deputy Principal Kendra Clarke said:

> The reflection and thinking and organising [of the spelling professional learning session] was very deliberate. Awareness raising hasn't made a huge difference, so Bronwyn [Harper, the Principal] and I talked about how to change things. Although we had done some staff meeting stuff on spelling last year, it really wasn't making a difference. What we did—just

> the straight dialogue—wasn't making a difference. I wanted to have lead thinkers in the groups: a leading thinker is someone whom you can suggest something to, or put forward an idea, or even offer some opinion. It was just constant dialogue… and so, you know, that you're going to get dialogue that's based on thought, rather than reaction..… There was enough strength among us, strength… of people who knew what they were doing to ensure that the dialogue was professional, on task and learning oriented.

The school strategy for change and practice development constituted particular practice architectures which the school's leaders supported for professional learning in that space. For members of the executive team, practice development in the school involved changing the physical set-ups or *material-economic* arrangements encountered by teachers. In particular they deliberately put in place *social-political* arrangements which would accomplish changed *relatings* or interactions among staff; they moved from whole staff group to smaller targeted group structures to enable dialogue which was more "thoughtful, professional, on task and learning oriented". It was observed that these dialogues as practices in and of themselves were critical and reflexive, and focused and analytic, and changed teaching practices over time.

At Hillview, focused professional learning conversations were encountered in changed material 'set-ups' such as team teaching, teaching stage group meetings (meetings of teachers who taught students in the same stages of primary education), focused professional dialogue groups and staff meetings for professional learning. These formed the foundation for the unfolding of particular whole school projects. Although the practice, for example, of engaging in professional learning conversations, may have been there waiting for teachers to enter it, as it were, these changed set-ups allowed it to emerge. Over time, such set-ups led to the development of more critical and reflexive dialogues, which continued to evolve, reflecting the demands of the sites. Such dialogues were a professional learning practice, and participating in the dialogues created conditions supporting practice development and a culture of care and collaboration. For these teachers, professional dialogues were a living practice that, in turn, expanded and refined their teaching practices to meet the needs, circumstances and opportunities of their students, their colleagues, the school and its community.

Deprivatising Practice

For senior staff in Wattletree District Office and for many of the teachers in our study, deprivatising teaching practices was a key to professional learning While teachers frequently practise 'privately,' behind the closed door of their own classrooms, District consultants encouraged teachers to 'de-privatise' their practice as a step towards opening up a collective and shared responsibility for teacher practice development. This shift was a challenge to the historical isolation of teaching inside (the material arrangements of) the four walls of the classroom which, for many, acted as barriers to sharing practices and ideas. Senior District Office leader Harry Masters said, "I feel really deeply about … the deprivatisation of practice, … that the … historical isolation—professional isolation—is … being gradually whittled down".

New professional learning practices and new teaching practices were gradually being made possible by changing the boundaries (the *material-economic* arrangements) of teaching practice, so it was no longer entirely confined to a teacher and students behind the classroom walls. Teaching became something to be seen and spoken about: the subject of new kinds of *sayings*, *doings* and *relatings* in the classrooms, corridors and staff rooms of Wattletree District schools. As teachers were stirred in to these new sayings, doings and relatings, they opened and inhabited new intersubjective spaces. As they did so, they created new practice architectures that enabled and constrained new forms of shared professional learning: new cultural-discursive, material-economic and social-political arrangements that accommodated a new openness about teaching practice and made possible new forms of shared practice development. Harry Masters commented:

> We've long seen and experienced teachers, who arrive at school, go into their classroom, close the door, and that's their little domain for the entire day, so other people are not invited in. Those people often through fear, or nervousness, or the other end of the scale, don't want to be seen as the tall poppy, won't share with other people about the good practice of what is happening in that room… So, we work on a model of trying to de-privatise those classrooms and actually have teachers learning from one another, sharing with one another. An example of that would be a model that we promote in all of our schools, which we see as developing as learning communities, is, for instance, rather than the principal running the staff meeting, and the teachers all just listening, we suggest methods like rotating the staff meetings around each of the different classrooms. And the teacher of that classroom chairs the meeting … so that those meeting times, can actually be used for substantive dialogue, around, what is our core purpose: "How do students in this school learn?" "What are we trying to do?" "What is our focus?"

For Wattletree School District, deprivatising professional practice was about creating new conditions for professional learning. This happened as schools responded to the District policy in their own ways. In our observations, it was evident that, with the guidance of principals and District personnel, teachers positively responded to these changed conditions. By doing this, they co-produced new practices together—for example rotating staff meetings in classrooms, as experienced at Hillview, or conducting classroom 'walk-throughs' as encountered by teachers at Northton, or opening doors between classrooms as experienced by teachers at Westville. Opening these physical spaces also opened new semantic spaces and new social spaces. It was *practices*, not just classrooms, that were deprivatised. At Westville, changing the physical set-ups or *material-economic* arrangements happened through opening the doors between classrooms to make new learning spaces:

> [Opening the doors between classrooms] reflects the way that we teach. Because I'm not a person to teach with the doors shut now. If you go upstairs, I mean those doors are generally just open. The kids also just got used to wandering into my room if they wanted something and wandering back into their room and it, it just flowed. And now the school's open: that's the way we teach. So it does reflect the way we're going (Marg Thompson, Year 4 Teacher).
> Yeah, talking about de-privatising learning and that's what makes a real difference that you know to get
> those people working together and get those doors down … [F]eeling that you're part of, you know, something bigger, they [the students] just, yeah, they enjoyed it. But to my way of thinking it was just that ability to—and I would listen with all my ears to Marg Thompson, Year 4 Teacher, up the other end. What's she doing: right, I will do that now because

> she's just you know, the way that she can ask questions just her practice is just, yeah, so just being able to not be on your own, to be able to pick up from other people (Stephanie Marks, Teaching Principal).

Kindergarten Teacher Olivia Lincoln at Hillview also talked about the nature and benefits of deprivatising practice:

> Teachers working with one another, and this sense of open teaching with the door open, team teaching in that sense of inquiry … and *not* a kind of privatised activity of teaching: that seems to be characteristic of these *Communities of Practice Principles* but also of the school very much living them.

Lawrie Gibbs, Year 4 Teacher at Northton, described the benefits of "classroom walk-throughs" (where one teacher visited another to learn about, critique and reflect on their own and others' practice) for his professional learning:

> When you get the opportunity to go into anyone else's classrooms, because we're not all sort of spruiking around, but Olivia's my partner teacher, she's got Year 3, so we work together, but we just keep professionally developing each other, you know. There's no pressure and that's the thing, and it's really important for teachers. You go into someone's class: you're just going in there to observe to look … to learn.

Opening up classrooms is an example of changing the practice architectures encountered in particular sites. Wattletree District's focus on deprivatisation of practice was part of a strategy of creating professional learning communities in schools. It was evident that particular Wattletree District consultants and some teacher leaders in schools were especially influential in facilitating the change from more traditional, privatised practices to a more open approach to teachers' learning. These personnel demonstrated how more traditional, and managerial, approaches could be challenged by opening up communicative spaces to foster a collegial approach to professional learning. Opening up classroom spaces created moments of tension for some teachers, however: for some, deprivatising practice was not always a comfortable experience, especially at first. Teacher Marissa Tait at Hillview described how the laudable school goal of encouraging team teaching and opening up classroom spaces might nevertheless constrain practice development. As a member of a new team, Marissa felt vulnerable because relational trust was problematic:

> We're attempting to open up the classroom… There's a wall in between us and we're attempting to open that wall up so that we're all working together, working together as teachers and the kids working together as a team. It's proving pretty tricky. I think it's just going to depend on having a fantastic team, which we're struggling with at the moment. It's all those things about communication and trust and having faith in each other and knowing which direction you're going. The team I'm working with this year is completely different to the ones I had last year. They all moved somewhere else…. Yeah and I think I've never worked with these two people before. So there's that trust issue, you sort of you back off and you sort of think "Hmm, what do I really trust them to do? Do I really trust them with me—my true self?" So there's trust issues. There's the inability to talk to someone and tell them what you really think without getting in trouble for it, from them or from higher up… At the moment there is actually a lot of tension; that would be the best way to describe it.

As Marissa described her experience, she also described how changing the *material-economic* arrangements for team teaching also led to resistance and relational trouble between staff, which in turn influenced, and perhaps limited, the possibilities for change and development.

In the literatures of 'communities of practice' and 'professional learning communities,' it is hard to escape the positive connotations of the word 'community'. In reality, professional learning communities are not always harmonious, and not always spaces of solidarity and cohesion; they are also spaces of tension, resistance, fragmentation and conflict. They can also be spaces where some people's interests get served at the expense of others, and where some people feel compelled to comply with their bosses' wishes in order to stay out of trouble. For those who inhabit them as well as for their leaders, managing a learning community is always a matter of managing the dynamic tension between cohesion and conflict, a matter requiring diplomacy, discretion, *nous* (practical good sense) and wisdom.

Given the delicacy of maintaining this balance, it seemed to us remarkable that the schools we studied were able to implement Wattletree District's *Communities of Practice Principles* as a way of life in the schools—if not without occasional lapses and pockets of resistance. They had established professional learning communities. In doing so, teachers and leaders at Hillview, Northton and Westville schools had opened new spaces for professional learning that we have characterised in terms of creating cultures of care and collaboration, exercising agentic collegial responsibility, and deprivatising practice. To be sustained, Establishing these practices of professional learning had required laying down new practice architectures to support them: new semantic spaces for professional dialogue and reflection, new occasions and activities in physical space-time for discussion and collaborative practice development, and new social spaces for sharing among peers. Moreover, as with other practices in the Education Complex, these new practices of professional learning required the support of other practices if they were to be sustained. We turn now to explore these interdependencies.

Professional Learning in Ecologies of Practices

In this section, we explore the interdependencies between practices of professional learning and other practices in the Educational Complex of practices. The practices and the practice architectures described in the last section were not simply a matter of happenstance—they were linked to each other and to broader practices previously encountered in projects of professional learning in Wattletree School District. Many of the contemporary educational practices observed in schools in the District bore traces of practices that had been advocated in programs of professional learning in the District more than 15 years earlier. One was the *Communities of Practice Institutes* program, which ran for 6 years in the 1990s, and reached almost all teachers in the District in that period. It fostered a tradition of communities of practice as a way of connecting professional learning with what we would now call 'practice development'—especially collaborative and collective practice development—in schools. Another was the *Pedagogies for Literacy* program, which focused on stirring teachers in to highly effective classroom pedagogies for literacy development.

Practice development, in each of our cases, was reflected in teachers' capacities—both individually and collectively—to respond to the particular needs of their

students, in specific locations, at particular points in space-time; that is, practice development was site based, locally driven and centred on students' learning needs. This was evident in the accounts from both District consultants and school participants who highlighted local space and circumstances as key dimensions of teachers and other educators' learning experiences. According to Gabrielle Kemp, a Curriculum Consultant in Wattletree School District, the key to practice development was connecting to school-based issues through the principal at each school:

> With the principal, I instigate the initial broader conversations around pedagogy and practices… and then from there about what directions they want for their school, working and walking alongside the school.

In each school, teachers examined their own students' areas of need and then acted on their professional knowledge and judgment about what was relevant in their local circumstances. This shaped the development of the projects in specific sites. For example, for Year 4 teacher Marg Thompson at Westville, there had been a particular concern about student language development. This concern led to the development of a project to improve language capacity amongst students—the *Learning Floats on a Sea of Talk* initiative:

> We've got children here who really cannot speak in sentences. You've still got … parents that … don't speak English properly, and so we don't have correct structure. And trying to get the children to write with correct structure is difficult … The vocabulary, the vocab is extremely limited, very limited here. And so that's when we all sort of went to that type of lifting our writing, lifting the vocab. So the writing and the reading, the way we were doing it. And it just all had to begin with the kids, they had to learn to speak first. And so that's where our professional learning focus *Learning Floats on a Sea of Talk* came from. (Marg Thompson, Year Four Teacher, Westville)

Questions of meaning ('What does that mean for our students?'), questions of value ('Is that the right way to proceed for our students?'), and questions of significance ('What will the consequences of that action be for the students in my class?') embodied the discursive dimension of local school professional learning practices:

> Everybody's focused on the children; you know the learning that the children need. We have a whole school goal oriented with the children in mind. There's always, you know, Stephanie [the principal], she's always asking what is best for the children, and that's her mantra: "Is this good for the children, you tell me how this is going to help the children?" So that comes through in everything we do. (Rose Armano, Deputy Principal, Westville)

In this school, teachers jointly determined and co-constructed the language, the activities and the relationships through their professional learning project:

> Here it's just a discussion almost like a dinner table discussion with everybody focused on the children's learning, you know, the learning level that the children are at, most importantly. And Stephanie's big on that: "How will this affect the children?" "How will this work?" "How will it benefit them?" So she's really keeping that goal. (Marg Thompson, Year 4, Westville)

The focus on student learning, which flows from District policy directions, was taken up and articulated in the sayings, enacted in the doings and demonstrated through the relatings of the staff at Westville. Teachers created, for themselves, distinctive whole school projects which not only lead to the recognition of learning as an independent endeavour but as a pedagogical partnership between teachers and students and between students themselves; these are constituted in the prac-

tice architectures which drove the direction of the professional learning activities encountered by teachers in this school, and in others we studied. The focus on student learning guided and shaped what was relevant in this particular site—specifically, a focus on developing the oral language of students. This focus determined which activities were encountered—staff led professional development sessions, staff-sharing meetings and staff discussions; that is, particular projects determined how particular activities were arranged, who was involved, and the nature of the dialogues co-created by participants.

In the schools we studied, it was significant that students (in focus group interviews and debriefs) were able to describe instances of their teacher's professional learning. For example it was notable that 'deprivatising practices' had a recognisable influence on how the students described their learning:

Student 1: Well last year, well we had the doors closed, so we couldn't like change for maths groups or anything…

Student 2: So—and it's nice to just go into another class and share, share with other people in your group and different people that you haven't worked [with] before…. And it's nice to just go into another class and work with them too.

Consequently, teacher learning practices did not exist in isolation but influenced student learning—the very reason for the existence of such practices within the broader Educational Complex. These *changes* changed the dimensions of the intersubjective spaces students found themselves in in their lessons. Significantly, deprivatising teaching practices led to deprivatising learning practices; and the students recognised this in their descriptions of how they learnt in the classrooms and lessons they co-habited:

Riley: I quite liked the way we learnt it *now* with all like joining in a group and putting our ideas together and the words and spelling words in groups.

Maisie: It was interactive.

Researcher: And you said it was interactive and it was fun; can you talk about that for a little bit more?

Piper: Because sometimes like we do like activities and we don't get to work together. But this one was like hands-on and it was like helping each other, because in spelling tests you're not allowed; you have to spell the word right. And they can't tell you anything or—and when you do the activities, there's—you can't talk to anybody. But when you've finished you could talk to the whole group.

Researcher: Why is that better?

Archie: It is better because it's more fun because then you can talk to people and you can help each other, and they can help you sometimes.

Indy: And you can share your ideas and answer questions.

Researcher: Oh, so, why is that helpful when you're doing spelling?

Maisie: Because your fellow students might, if the teacher explains something and you don't really understand it, they could explain it in a different way that you do understand.

Archie: Like another person can explain it and you're like going, "Yeah I get it now."

Indy: Well in maths, Miss Travis explained something and I was like, "I don't really get that," and then I asked my friend, Maddy and she explained it really well and that's when I could understand it.

Researcher: And so, you're allowed in your classroom to explain things to each other?

In this excerpt, when Riley described how the students engaged in their spelling lessons *now*, he is directing us to changed circumstances for them as learners which were influenced by the development of the NAPLAN Focus Group (described earlier). This further illustrates how teacher professional learning is ecologically connected to student learning. Changed professional practices shifted student learning practices to encompass working collaboratively in groups, as the students recognised.

Connections Between Professional Learning and Teaching, Leading and Researching Practices

For the teachers at Hillview, there was widespread recognition of the role that District programs, in particular the *Communities of Practice Principles*, played in professional learning, practice development and student learning. Hillview Deputy Principal Wendy Michaels emphasised the connection between teacher professional learning and student learning:

> … for everything we do we go back to those six [*Communities of Practice Principles*] practices and the essence of learning communities being around relationship, support and challenge and we question ourselves the whole time every time we introduce new things into the school as to where it fits, around your moral literacy and your social and emotional development and also around academic [needs of our students].

For Wendy and teachers at Hillview, relationships, support and challenge were important for their own learning as well as for the learning of their students.

Many senior staff in Wattletree District—inside and outside schools—in the District had participated in the *Communities of Practice Institutes*. Some had also supported or led or participated in the District's *Pedagogies for Literacy* program. The particular professional learning practices that had evolved in the District were layered and developed (with variations) over time, but also reproduced for new times. These programs served as practice architectures enabling specific kinds of professional learning practices and, in turn, specific kinds of teaching practices characterised by *capacity building*, *communicating*, *collaborating*, *connection making* and a shared and continuing commitment to building a *culture of care*.

At Hillview, Westville and Northton schools, the District's *Communities of Practice Principles* were conscious points of reference that framed local *professional learning* and *practice development* initiatives developed in and by the schools. The *Principles* also flowed into the *leading* practices of positional leaders and other teacher leaders in the schools. And these practices of leading supported practices of

professional learning and *researching* in the schools. In turn, these practices fostered *teaching practices* oriented towards promoting *student learning*.

In Wattletree District, directions for professional learning flowed from the District level to schools and among teachers in particular schools involved in particular professional learning projects. Christopher Draper, Senior District Consultant, emphasised the need for a "whole school focus on student learning":

> The whole school focus on student learning is what mobilises professional learning and moves all of that place into the one direction, which is where the school's aiming for, to improve learning outcomes for kids.

In Wattletree School District, District and school leaders acknowledged that mobilising *professional learning* for *teaching* and for *student learning* required making ecological connections between *practices* as well as participants and projects. In the District and the schools we studied, *professional learning* focussed on *teaching* for *student learning*, supported by practices of *leading* practices that fostered participation in professional learning communities, and *researching* practices that encouraged teacher reflection and professional reading for *professional learning*.

These interdependencies were recognised by Hillview Principal Bronwyn Harper who saw professional learning as a part of a leadership "change strategy"; teacher learning was deliberate, planned and "evolved as layering" (Bronwyn Harper, Principal, Hillview). The leadership which enabled this teaching practice development to occur was not just evident at District level, or through those occupying formal leadership roles, but also among teachers themselves. In a Progress Report to schools, our *Leading and Learning* project team wrote about *travelling practices*—practices that travel across sites and across time, and that can come to persist in new sites if they can find a niche in appropriate practice architectures that provide the resources (cultural-discursive arrangements, material-economic arrangements and social-political arrangements) to support them. The idea had a particular resonance for Hillview Deputy Principal Kendra Clarke, who had accepted a new position in another state, and would soon leave Hillview, taking some of the practices she had learned with her. She saw the kinds of ecological connections we have described, between her leadership and teacher learning within the school, including how she had learned through her time in the school:

> "Practices that travel": I love the analogy in there about the invasive species in our learning … that one resonated with me in the fact that the practices that I brought from, even previous places, like from the Gumtree District, down here to Wattletree, and the practices that were here, and the impact that they've played on me. Like it's been a two way street: I brought a lot of English practices with me … I did *First Steps Writing*™ 20 years ago, and so I brought a lot of that English explicit teaching knowledge with me, and tried to spread it out here. Whereas, I understood inquiry learning, I thought, reasonably well, but my work here at Hillview has definitely depthed that, so that, that will then go with me. And I can't imagine teaching in any other way. How can you? I just can't. And the same thing with running a staff meeting in any other way, that doesn't go "Well where are they at? What do they know?" [and then] "Okay, well let's find out something new, and let's sort through that, and reflect on it a bit" … So that process is just now part and parcel of what I do, even with staff. And so that will [also] travel [with me]. So that was quite an interesting

> [idea], because I'm someone who moves around a fair bit, quite an interesting [idea] … One [other] way it has also travelled [is] through the different class levels of the school, as different people come on board.

The connection between *leading* and *professional learning* was similarly observed in the conduct of professional development in other schools, as teachers and principals drew on District-led initiatives to arrange professional learning experiences for teachers in their schools. Year 5–6 teacher and Deputy Principal at Northton, Sarah Anderson (teacher of Sarah's lesson described in Chapter Four and the Appendix) pointed specifically to a range of *collaborative learning practices* developed and supported in the District's *Pedagogies for Literacy* program—practices such as peer mentoring, inter-classroom visits, critical analytic dialogues, sharing practices and professional literature, peer observation and debriefing dialogues. These practices informed and transformed the *professional learning practices*, the *teaching practices*, the *literacy practices* and the *student learning practices* of the teachers and students with whom she now worked.

Similarly, at Westville School, for example, Reading Recovery™ Teacher-in-Training Toni Braithwaite saw *collective learning* as intricately connected to the *leading* practices of individuals who had been involved in leading teachers' *professional learning* in other spaces and at other times:

> I can bring my learning from *Reading Recovery*™ to share with the staff. I've done a demonstration lesson in front of all the staff with a *Reading Recovery*™ student just to give a few ideas on how to get them to break unknown words down and solve them and how to solve words on the run quickly and what sorts of things are important. I just thought it would be really good, I think it's such a valuable thing to be able to share with everyone.

In this example, Toni described practices she learned about in her *Reading Recovery*™ training, and how they travelled through her professional leadership to the practices of other teachers in the school. It also shows how *collaborating* as a learning practice travels from one site of professional development to another (Hardy et al. 2012) as she took on a leadership role by demonstrating practices in front of the other teachers. In this school, the *Reading Recovery*™ Teacher-in-Training (like learners of every practice) was not only learning to *notice* and *name* and *reframe* certain kinds of things (for example, in this case, different kinds of difficulties children confront as they work themselves into the practice of reading). She was also bringing these practices to the work of others. We also interpret her description as an example of how teachers get stirred in to certain practices of supporting students, certain practices of supporting teachers and, in particular, certain practices of helping teachers to develop practices that will support individual students' literacy learning (by getting them to notice, name and reframe things about students' learning). This is further evidence of practices existing in ecological relationships with one another.

In the schools we studied, strategic leadership created changed opportunities for development and professional learning among staff. The Principal and Deputy Principal, in Hillview, for example, responded to their critique of existing practices and the lack of change in spelling practices and inquiry learning within the school by changing the organisational set-ups of staff meetings to turn them into

regular professional learning meetings hosted by different teachers in their own classrooms.

In the schools we observed, there was also recognition that a key condition contributing to a climate of teacher agency and collegial responsibility was formal leadership that was genuinely visible and egalitarian. This was highlighted by teachers as well as leaders in each of the schools we studied. Year 3 teacher Lawrie Gibbs at Northton, for example, said:

> The way we work brings all teachers and the hierarchy, so to say, all into even balance. We all know what we stand for; we all know what we need to do. I think if a teacher knows there's really no pressure, that's a really important part of it.

This connection between leadership and teacher learning practices was even more evident in how Westville Principal Stephanie Marks described the importance of working and thinking collectively:

> It's just that acknowledging that you don't have the answers, and that other people have the answers. And sometimes none of us have the answers but when we put our heads together we find the answer.

Sometimes leadership entailed acknowledging deficits as part of a process of improving teaching practice. In their decision making, leaders constantly made allowances for contestation, stumbling blocks, hindrances, and points of resistance. Bronwyn Harper, Principal at Hillview, commented that "it's hard with people coming in and out, and all the staff are not on board, not interested". At the same time, it was also not simply a matter of those in formal leadership positions presenting themselves as knowledgeable, and not needing to engage in professional learning, but as leaders who constantly needed to learn to improve their practice. As Hillview Deputy principal Kendra Clarke remarked,

> The fact that, those like myself or Olivia Lincoln [a senior teacher] who are perceived as leaders in curriculum still openly say, "Actually, what I'm doing isn't working", and that, none of us will stand there and go "Actually I know it all", that we all, that openness of "We're all on this journey together" and we all, none of us, know all the answers yet.

Kendra's comments shows an awareness that leading practices supported professional learning practices, and that professional learning practices also stimulated leading practices (Edwards-Groves and Rönnerman 2013). The focus was upon leadership as part of professional learning, rather than upon leaders as providers of 'answers'.

Those in formal leadership positions at the District level, like Mick Kruger, Senior Curriculum Consultant, actively promulgated teacher learning for stimulating teachers' growth and development:

> For [teacher] learning to take place, we talk about relationship. Relationship is the glue that holds a community together, and that's sort of like a mantra of our *Communities of Practice Institutes* days. Once you've established good relationships and people feel supported, you can then take the next step and challenge, and that's where the growth takes place.

Similarly, a whole-team focus upon improving learning was evident in the leadership support provided by other key personnel at the District level, including curriculum consultants like Hilary Roberts:

> … the whole thing is going round and round, and you're feeding it backwards and forwards into your own teaching. It's based very much on dialogue amongst teachers—so, it's sort of co-constructing your understanding amongst the teachers and trying to lift it and shape the talk—shape discussion, as they observe each other teaching, and help them to reflect, using data, on how they could inform their teaching …

Under these circumstances, the knowledge the teachers were being taught and that they were learning was made meaningful in the context of the practices in which they were anticipating. Such learning relied on interactive dialogue which challenged teachers as they discussed and observed practice. This helped to orient and inform future practice.

In the schools we studied, there were also strong connections between *professional learning* projects and the particular *researching* and reflection projects teachers initiated in their schools. For instance, at Northton, some teachers developed a two year action research project which aimed to improve *teaching* practices connected to the development of student oral language skills. For the teachers involved, the action research approach shaped the form and texture of the professional learning for themselves, for their learning partnership, and for their colleagues as they shared their experiences of learning and practice development among the staff.

At Hillview, Kendra Clarke created the NAPLAN Focus Group which aimed to assist teachers to critically reflect on and improve student learning in areas highlighted as problematic through the national testing program, as well as student achievement in the national testing program itself. From the base of professional reflection and focused research in seeking out effective strategies for teaching spelling, this group of teachers changed the practice architectures of their staff meetings to influence teacher practice among all staff in their school. Research and critical reflection on practice created conditions for change and development in this school as new practice architectures emerged.

Similarly, at Westville School, peer coaching consisting of *coaching conversations* constituted a form of research, evident as a form of focused professional reflection, which informed and influenced teaching practice. For Westville teachers, professional learning practices like coaching shaped other practices (like teaching and student learning), as teachers acknowledged in a focus group interview:

Stephanie: [The Coaching Conversations are about] *working with a learning partner* to focus on a particular aspect of my teaching and *providing feedback* for my teaching; team teaching; *targeted collegial conversations*; having an observer on a *regular* basis; coaching conversations and *clear the deck*. And clear the deck was 'let's get rid of all that other stuff that is driving us insane that isn't important—find ways to get rid of all of that so that we can focus on what's *important for practice development and student learning* because that's what we were really excited about and really wanted to get going with……

Rose: What is special is that openness… and that trust to *go forward*… having a targeted conversation about an aspect of your practice you want to improve… that's how we can go forward to *make these differences to student outcomes*.

Diane: It's about *evaluating [practice*] afterwards/
Kathy: And… for putting in *on a regular basis*/
Toni: It's the *support with inquiry about learning*…
Diane: [My coach helps me to] make sure I'm picking the right battles to *meet my [professional goals* and] challenges.
Marg: [The *partnership*] it's just good to be forced to think about some things that you sort of know you should do, but that person's asking you the *critical questions*, they're not putting the answers in your head, you have to actually think about them and yeah keep coming back to what's important and why we're doing this.
Stephanie: … to have someone give it to me to ask me the questions and to *give me that sup*port, it's such a luxury. It's all about me for a change… And Toni asked really good questions… she was listening to what I was saying… It was really, her questions really followed on from what I was saying, which made me go to that next step of thinking and that was really great… they really made the conversation deepen.
Toni: Gee… It's not the quantity, it's the *quality*…
Stephanie: … it was very powerful for me, … since then *I've changed*.
Diane: I was thinking about the first step—how I could go about *helping myself to achieve* what my goal.
Marg: [When I was coaching her] to have her—think everything through, the challenges; what's working well; where to start from and just to *refocus* the overwhelming…
Toni: … it's *good research driven practice*. If it's going to help you think about "What … is it that you are going to want from that conversation that's going to make a difference?"
Diane: We *negotiated* that together. Once you know what is it that you want to work on and what to get there… will change the conversations [emphases added].

In this excerpt, teachers describe how teacher inquiry and critical reflection through coaching conversations existed as a form of site based research and development. It was clearly evident that this professional learning practice was inextricably connected to "good research driven practice", as acknowledged by Toni above. Furthermore, in this school, "clearing the deck" enabled teachers to "go forward" as they participated in targeted, supported collegial conversations which served to evaluate practice in a way which reflected the school goal of prioritising practice development for improved student learning outcomes.

In each of the schools in our study, we observed how practices of *researching* and *critically reflecting* entered the sites as influential practices in the accomplishment of *professional learning*. Furthermore, these practices existed as mutually sustaining, forming an ecology in which *professional learning* practices were in a dynamic balance with other practices and projects in the sites—*teaching*, *student learning*, *leading,* and *practice development*.

Professional Learning and Site Based Education Development

In the schools we studied, teachers developed a sense of shared collegial responsibility for student learning. For these teachers, deprivatising teaching transformed their *sayings* (how they thought and talked about their practice), their *doings* (how they conducted and arranged the activities of their practices), and their *relatings* (how they related to one another, their students, their community, and to others). Shared *professional learning* practices were at the heart of this change. These practices were made possible, and held in place, by practice architectures composed of new *cultural-discursive*, *material-economic* and *social-political* arrangements for professional learning in the schools and in Wattletree District. Teachers recognised and acknowledged how their shared professional learning influenced their practice—that their professional learning was a process of practice development. It was also a process of site based education development. Arguably, their professional learning also initiated them into richer forms of educational practice, as persons and professionals able to enact the practice of education with greater virtuosity.

The teachers we observed encountered one other in professional learning practices which exist as a nexus of intertwined and overlapping intersubjective spaces: in semantic space, physical space-time and social space. These professional learning practices—and their associated sayings, doings and relatings—were driven by a common project: a whole school focus on student learning. This project was manifest in multiple ways, including through developing students' capacity for language, or improving the pedagogy of spelling, or improving teachers' technology practices, or using inquiry learning or developing skills as a *Reading Recovery*™ teacher. Professional learning practices developed at these school sites were fuelled by the recognition that practice development required knowledge of and response to the distinctiveness and uniqueness of the circumstances of each school site.

For many schools in Wattletree School District, the practices of professional learning, teaching, student learning, leading, and researching were closely entwined. In the process of engaging in site based whole school professional learning projects, teachers positioned and located themselves as agents of change, responsible for their own and others' development in their respective schools. These practices enabled teachers to rethink themselves as activist democratic professionals (Sachs 2003) and to influence practice development in their own schools.

Ultimately, practice development requires responding to the particularity of sites, the people who inhabit them, and the circumstances that pertain there. This means not only implementing national or District policies or curricula, but doing so in ways that respond sensitively to the particularities of the school, the students, the teachers and the community. Wattletree District Senior Consultant Harry Masters recognised this explicitly:

> In a society that holds us accountable for what we have to do in professional learning, we're really promoting, as a [School District] Office, the whole notion of it [professional learning] being site based [and] it being supported, and that it's actually ongoing. It's not just the one off; it's sustained over a period of time, because, in that way you can see the

> transference of people's learning, and it starts to develop and become part of the culture of a school community.

We observed such sustained, site based professional learning practices in the *activities* and *set-ups* we observed in Wattletree District schools; we heard evidence about them in the *words* teachers and leaders used to describe what was going on in the schools; and we saw site based professional learning take shape in the *relationships* between the people in the schools—teachers, students, leaders.

In our study, it was not just the student performance on national tests for example that shaped professional learning agendas. Wider professional community conditions were also pivotal in determining directions for teacher learning. Teachers and formal school and district leaders were committed to site based professional learning and site based education development because, to make a difference for students, professional learning as practice development needed to be relevant to, and take into account, the existential and ontological dimensions of their 'place'.

In Westville School, for example, the staff recognised how students' language development was an issue requiring specific attention and action within the school community. The staff drew on knowledge of their community to design whole-school professional learning with the specific aim of improving students' oral and written language. In our view, this is evidence of their humane and professional sensitivity to local needs, opportunities and circumstances. On the basis of this sensitivity, teachers in the school charted their own path of professional learning and practice development. In this case, the path they chose involved discreetly refusing a District-wide initiative (*First Steps Writing*™) for their professional learning, and launching their own initiative, *Learning Floats on a Sea of Talk*. Practice development, in this school and others like it, was designed to respond directly to the needs, opportunities and circumstances of *these* students and *their* community.

For us, the notion of site based education development is crucial: it names what happens when teachers and others use their professional understanding, judgment and creativity to respond to the unique opportunities, circumstances and needs that exist in that specific place; to the educational interests of the particular students, families, and community who live and work there; and to the educational and professional interests of the teachers and leaders who practice there.

Consequently, teacher professional learning includes a crucial set of specific practices that play out in distinctive ways in specific sites, and in relation to the other practices that constitute the Educational Complex, including teaching, student learning, leading, and researching. Education development in these sites is much more than a standardised kind of school improvement process; rather, it involves taking the site seriously. For us, as for teachers in the schools we studied, 'place matters'.

Conclusions

In our observations of teachers' professional learning, we observed teachers being drawn or stirred into particular practices like the practice of collaborative site based professional learning. This work occurred through the co-participation among

teachers through practice architectures which enabled the deprivatisation of teaching practice, professional learning conversations and a whole school or team focus. These practices worked reciprocally to produce conditions such as a culture of care and collaboration, a whole school focus on improving student learning, engagement in critical reflexive dialogues, and agentic collegial responsibility.

It has been argued that in order to make practice development possible, schools as professional communities need to change organisational practices to provide communicative spaces for teachers to be able learn from one another and work together (Muijs and Harris 2006). This chapter has provided one kind of answer to the questions of what 'learning from' and 'working together' actually look like in practice development. In one way, the notion of teachers working and learning together in spaces described as 'communities of practice' is an ethereal notion, seemingly difficult to pin down, to isolate in actual practice. In the schools we studied, the establishment of collegial professional learning practices and places was a among the conditions that fostered communities of practice—even though these communities were not always as harmonious and cohesive as the word 'community' seems to connote.

Enacting collegial professional learning was a powerful element in the co-production of communities of practice. Learning together opened a collegial space in which the work of the school could be seen as more than the sum of the work in each classroom—in which educational practice was a shared responsibility, not a matter of individual performance. In their collegial professional learning, we observed teachers recognising a sense of significance beyond themselves.

Despite world-wide adoption of the performative techniques of the New Public Management which envisages standardised solutions to systemic problems, our data suggests that revitalising education requires taking each site seriously, and considering how each site and the people in each site create distinctive conditions for teacher professional learning, student learning, leading, teaching and researching. Developing education for the people in these sites requires engaging with the practice architectures—the distinctive cultural-discursive, material-economic and social-political arrangements—that pertain in these sites. Changing professional practices is not just a matter of changing the professional practice knowledge of practitioners; it is also a matter of changing the conditions under which they work. People made many, though not all, of those conditions, and it is people who must change them.

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Chapter 7
Practising Leading

Introduction

This is not a chapter about the principalship. Rather, we place an emphasis on how the cultural-discursive, material-economic and social-political conditions for transformed practices in schools can be created by reshaping the arrangements in which educators practise. Specifically, we focus on leading as practices, rather than as series of traits or capabilities invested in sovereign individuals. Our focus on practices is not to eschew the important work that is undertaken by principals and other formal leaders in the transformation of educational practice and their indirect but critical role in influencing student learning outcomes through their impact on teaching practices (Robinson 2007). Instead, by using the verbs 'leading' and 'learning', we are drawing attention to the 'situated knowledge and situated action' (Gherardi 2008, p. 516) which resides in the work of leading and learning. We want to challenge the common sense of 'leading' which so often means that leading and leadership are unproblematically equated in the research literature with 'doing' the principalship. The two are not the same.

Hence, 'leading' is not a set of practices that is solely invested in the principalship. Yet, simultaneously we recognise that one of the critical roles of principals and executive teams is to create the educational conditions under which transformed learning and teaching practices may flourish (Lingard et al. 2003). This is not a new insight. Indeed much time and attention has been paid in the research literature to how these transformed conditions can be created. We suggest, however, that too often the search for the processes by which the material conditions for learning in schools can be fostered and sustained has been rather like the story of the man who loses his keys in the dark of night and looks for them under the lamppost. We have looked for too long in the direction of the leader (and often, just at the principal) to understand leadership; we need to look instead at the *practices* of leading and the practices that connect with them. In this chapter, our interest lies in the practice architectures which make possible the formal and informal practices of leading (and their links to researching, professional learning, teaching and students' learning), that is, exploring "how … [these] … *practices* themselves relate to one another, rather than *participants* in the practice" (Kemmis et al. 2009, p. 7). In this search,

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we need to explore both formal and informal leading practices and how small but highly significant changes in the relations of power embedded in the practices and practice architectures we observed in our case study sites have enabled a richer sense of *shared responsibility* (rather than authoritarian or bureaucratic responsibility) for leading and learning to be facilitated amongst executive teams, teachers, students and communities.

In this chapter, we examine how a range of practices connecting leading, professional learning, teaching, researching and student learning work together to create the conditions for transforming schools to become sites of shared responsibility for education rather than sites of bureaucratic responsibility. Practices of leading for shared responsibility foster an intellectual climate characterised by *cultural-discursive arrangements* which nurture teacher and student agency and substantive dialogue based on critical reflections of educational practice. They engender *material-economic arrangements* that support transformed teaching and learning practices. They facilitate and build *social-political arrangements* that sustainable and democratic communities of educators, including teachers as pedagogical leaders (Lingard *et al.* 2003), students as leading learners, and positional leaders such as those in designated formal positions of authority, like principals and deputy principals. To stimulate such changes requires not only the enlightened practices of positional leaders but a thickening of leading practices throughout the school. Yet no school is an island. The building of these communities also requires practices of leading from beyond the school setting—'up' to the level of the school district and 'out' to other key stakeholders in the school and its community. Finally, it also requires a fundamental shift towards viewing leading practices as situated in an overall project of *education development* (a social and critical view) rather than *school improvement* (a technical and managerialist view).

In this chapter, we make a necessary distinction between on the one hand, *positional leading practices*, that is, the leading practices of officers like principals and deputy principals who hold formal positions of authority and grounded in system arrangements; and on the other hand, *informal leading practices*, exemplified in, for instance, the pedagogical leadership of teachers and the collective leadership of senior students. The distinction between formal and informal leading practices is frequently not clear-cut in practice (Wilkinson et al. 2010). Nor indeed do we suggest a simplistic binary between the systemic and the day-to-day imperatives of formal and informal leading practices. Indeed, schools that have foregrounded students' education as a project of educational development (as opposed to the project of 'schooling') have been characterised by a blurring of distinctions between the formal leading practices of positional leaders and other stakeholders such as teachers and students. Of course, this makes studying and making claims about leading as a practice a slippery and seemingly elusive task. Nonetheless, this highlights the necessary dialectical relationship between the differing imperatives of the formal positional leaders, and informal leaders in a school. The distinction recognises and calls attention to the necessarily different cultural-discursive, material-economic and social-political arrangements of practice and system demands in which positional leaders such as principals are located and to which they are subjected (cf.

Lingard and Rawolle 2010) compared to other people in schools, such as teachers and students. Also, this means that the practices of formal leaders (such as principals and executive teams) in their particular sites are integral, but not sufficient on their own, to bring about change in schools through shifts in the sites' practice architectures.

At the level of positional leading practices, in each of the case studies, the executive team shared a clear *telos* or aim in terms of the overall *project* of the school—that is, an emphasis on student learning and education development as the central foci of leading and teaching practices—and at principal level, had the positional authority and resources to carry out these aims. The leading practices they instituted had significant impacts on the practice architectures in which teachers, students and executive staff carried out their work, particularly in terms of *dispersal* of leading practices throughout the school. This dispersal was facilitated by a range of practices carried out by the principal and executive team of the various schools, including changes in *material-economic set-ups* through strategic resource management, such as the selection of promising teacher leaders to attend professional development programs identified as important to each schools' work. They included the hiring of staff who shared each site's overall philosophy, and the choice of executive team members who shared the principal's fundamental commitment to humanistic values underpinning student learning, and who brought a range of complementary strengths to the team. In two of the sites, there was a deliberate attempt to reshape the *relational architectures* amongst teachers (Edwards-Groves et al. 2010), through the creation of teaching teams at each stage level, via shared timetabling for teacher release. The clear expectation from the principal and executive team was that staff use this time to collaborate on planning of units of work, sharing assessment items and evaluate work units. In terms of *cultural-discursive arrangements*, members of the executive team in the schools provided research literature at staff meetings as a means of facilitating substantive critical conversations and intellectual engagement about teaching practices.

However, it would be a mistake to read these practices as purely 'top-down' initiatives by principals, the intent of which was to *disperse* leading as part of a more instrumentalist approach to creating conditions for improved learning and teaching. Indeed, the notion of 'dispersal' implies a set of hierarchical power relations of leaders and followers embedded in the *social-political arrangements* supporting such a practice. Rather, in each site the move towards *dispersal* of leading practices by the principal and executive team was underpinned by their commitment to more democratic relations of power. This commitment was in turn reflected in the broader sense of *shared responsibility* engendered amongst student and teachers for learning and leading which pervaded the sites. This was in some degree due to necessity (that is, each of the schools was small in terms of student numbers and staff—under 250 students). However, this was not the overriding reason for there were other small schools in the two districts that had more traditional hierarchical arrangements. Rather, the dispersal of power, agency and responsibility reflected a set of practices invested in by the positional leaders in the particular schools we studied, which in turn reflected an ecological connection between each of the executive

teams and staff, both groups of whom were committed to more democratic ways of working together. A manifestation of this ethos was that in each of the schools, there was to a greater or lesser degree, less of an individualising focus on the principal as the ultimate authority figure, and more of a sense in which the principal was 'first amongst equals' (Wilkinson et al. 2010, p. 77). Moreover, each of the sites contained a number of teachers who held no formal positional authority but whose pedagogical leading and curriculum leading practices were enabled by the positional leadership practices noted above in ways that named and located these other teachers unequivocally as "generative" leaders in the school (Edwards-Groves and Rönnerman 2011).

In the following sections, we explore how practices of leading are held in place in the schools we studied—in *intersubjective space*, that is, in *semantic spaces* that were opened up in the schools, amid the *cultural-discursive arrangements* to be found there; in spaces in *physical space-time* opened up in the schools, amid the *material-economic arrangements* to be found there; and in *social spaces* opened up in the schools, amid the *social-political arrangements* to be found there. To change or remodel these arrangements—changing the practice architectures in a site—is to remould the intersubjective space in which participants encounter one another.

We have chosen to focus on particular kinds and cases of leading practices in these schools, however, to show how a new conceptualisation of leadership and leading is taking hold: a view of leading as a shared responsibility rather than a hierarchical (or authoritarian or bureaucratic) view of leadership. Thus, we explore site based practices of leading that foster a sense of shared responsibility through the transformation of staff meetings into collective spaces for professional learning and practice. We examine the ecological connections between the generation of more collective practices of leading and how these link to parallel shifts in the practice architectures which enable students' understanding of leading as a shared, communitarian enterprise. Finally, we examine leading beyond schools—how practices of leading in the school districts we studied fostered transformation in schools and in part, in the districts.

Practices Architectures of Leading

Staff Meetings as an Intersubjective Space for Enabling Practice Development

The executive leadership team at Hillview School is passionate about enhanced and rich forms of teacher and student learning. Philosophically and practically, the executive is committed to the overall district *project* of building highly effective learning communities based on Wattletree District's policy promulgated in its *Communities of Practice Principles*. Hillview School has a view of establishing learning communities that is different from other schools in the District, and one of

its distinctive emphases lies in its long-standing adoption of an inquiry approach to student and teacher learning. Like many more successful schools, Hillview is peculiarly responsive to the shifting nature of the specific site ontology of the community in which it is located (namely, an increasingly diverse mix of students from middle and lower socio-economic backgrounds, along with a small group of children from culturally and linguistically diverse origins). The school has developed an 'antenna' of responsiveness to these ontologies, which is both responsive to and nurtured by the idiosyncrasy of the specific context in which it works. However, it is not simply reactive to local circumstances and outside influences; it is sensitively responsive. In this section, we explore some of the leading and learning *practices* and practice architectures that have facilitated the building and apparent sustainability of Hillview's currently vibrant, living, responsive practice community.

One especially notable feature of the leading practices at Hillview was the way leaders and teachers had transformed and extended the practice architectures of leading in the school, to remould the intersubjective spaces in which teachers and members of the school executive team encountered one another. One example was the shift in the purpose and function of staff meetings from transmission of information about administrative matters to professional learning: the meetings were re-created as a collaborative and dialogic space focussed on professional learning for the school as a whole. Such meetings have been particularly critical for facilitating a shared responsibility for enhanced learning and teaching amongst all staff, including the executive team. Both executive team members and teachers regularly identified the remodelled staff meetings as significant in enhancing the overall professional learning of the staff, individually and collectively, and in nurturing the relationships between the staff as a whole, including the executive team, as co-participants in a community of practice.

What is of particular interest to us is how remoulding the intersubjective space of the staff meeting enabled different kinds of teaching and leading practices to flourish, whilst simultaneously challenging more traditional *arrangements* of leading practices in staff meetings. For example, in terms of the *material-economic arrangements* of the practice of staff meetings, the executive team made a decision that staff meetings would be held regularly throughout the term and that administrative matters (the traditional focus of staff meetings) would be dealt with via email and in a separate short, fifteen minute meeting at the start of each week. This decision freed up the space and time of staff meetings so each could focus on a specific aspect of professional learning, clearly related to relevant elements of teachers' teaching and students' learning practices, on which the staff as a whole had agreed. Importantly, this professional learning was not regarded as 'one off' or *ad hoc* professional learning (as professional development activities often are in schools and school districts), nor did it focus solely on an aspect of practice handed down to the schools by the school district or the state, for example. Instead, it was embedded in the Hillview School's annual professional learning plan, negotiated and agreed via consultation between the executive team and staff at the end of each year, and then agreed to by a senior Wattletree School District staff member responsible for formal liaison with the School. Hillview Principal Bronwyn Harper notes:

> (O)ur nitty-gritty staff meetings are 15 min on Monday or on bits of paper memos. Our staff meetings are all on professional development, so that we can depth in [our] understanding—for example, in relation to inquiry learning. I will go in and do some mind mapping… what do they know about it now, what are they feeling comfortable with, what are still the challenges, where do we need to go next…

The structuring of the meetings ensured that connections made in the staff meetings flowed into teachers' conversations and classroom practices. Ronnie Kinross and Jeanette Maidment, two highly experienced upper stage teachers described the meetings as follows:

> [T]hey're very hands-on, the staff meetings, like it's never chalk and talk. We always have to get into groups and actually do [things], and then… plan and report back. You do get a say, and it's not just from the top-down, and it makes you very familiar with whatever it is you're looking at. You'll then go and put it in place and work with it, and take it into the classroom. As a staff we are challenged. We're always talking about how to do something better, or "Look, I did this and it was really great, and it worked." Lots of conversations people have, just over lunch and things, are like that, where people talk about things, just in conversation.

Staff members' professional learning was also enabled by small but highly significant changes to the *physical set-ups* of the staff meetings. For example, Hillview adopted a policy of deliberately rotating meetings through various teachers' classrooms. The aim of the executive staff was to facilitate the deprivatisation of classroom practice (one of the principles of Wattletree District's *Communities of Practice Principles* policy). An added informal professional learning bonus occurred as teachers were exposed to the variety of material 'set-ups' in the diverse classrooms they encountered. As one member of the executive commented, in regard to the trust required for teachers to accede to this deprivatisation of practice, "that took a lot of years to develop and it was explicitly taught by doing different things like rotating staff meetings around different classrooms."

In terms of the *social-political* arrangements of the staff meeting, that is, the relations of power between individuals and groups, Hillview's policy was that the teacher in whose classroom the meeting was held would take responsibility for chairing the meeting. The teacher's leadership skills were thus facilitated, but even more importantly, a more democratic set of relatings was subtly but powerfully signified within the school, namely that authority was not solely invested in the formal leadership team. Moreover, by rotating the meetings between classrooms and Years, traditional hierarchies of power in primary school settings could be challenged and disrupted (for example, the binary division between feminised and seemingly less authoritative Kindergarten teachers and masculinised and seemingly more authoritative upper primary teachers). Remodelling the social-political arrangements of staff meetings remoulded the social space of staff meetings and *relatings* in the school more generally: leading came to be seen as a practice of *power with* others, rather than the more conventional Western-centric notion of *power over* others (Smeed et al. 2009).

Executive staff attended and participated fully in the meetings, in general facilitating them only when it was their turn to do so, when they were the host in the classroom where the meeting was held. Thus, through their practices, they

demonstrated their commitment to shared professional learning and to learning as a shared responsibility for all staff, including the executive team. In primary schools, the active engagement of principals in staff professional learning has been demonstrated to be the most significant factor in enhancing and transforming teachers' practices, and in turn students' academic practices (Robinson 2007).

A further range of practices was embedded in these meetings by executive staff to ensure collaborative engagement by all teachers and the executive team. In terms of the *cultural-discursive arrangements* of practice, staff meetings at Hillview were characterised by particular kinds of *sayings* that focus on professional learning as a collective, shared responsibility amongst the staff. For example, a group of teachers across stage levels had worked with Kendra Clarke, a member of the executive and highly-regarded upper stage teacher, to analyse the school's NAPLAN (National Assessment Program in Literacy and Numeracy) results (the NAPLAN Focus Group mentioned in previous chapters). It was agreed that the teaching of spelling throughout the school needed to be enhanced and the group identified the staff meeting as the primary forum for staff professional learning about how this could be achieved. Kendra facilitated a series of staff meetings examining the school's practices for teaching and learning spelling. Particularly noteworthy was her language, which did not 'name or shame' teachers but signified a shared sense of responsibility for enhancing teachers' (collective) work as professionals in the teaching of spelling. For instance, she commenced the first meeting asking, "What are *we* doing wrong? *We* need to work on this. *We* are clearly teaching these skills in isolation" (our emphases). Staff were then asked to reflect individually on a series of questions about their teaching practices such as, "How do you teach spelling in your room?" Kendra took part in this activity along with the others present. Crucially, the questions and tasks modelled an inquiry approach to learning, which the school had adopted a number of years before, rather than a hierarchical approach in which, for example, facilitators might transmit a chosen method for teaching spelling to staff. In the meeting we observed, Kendra was discursively modelling the practices of inquiry learning which the school had been implementing, while at the same time signifying by her language an active building of the relationships between staff that are characteristic of a professional learning community.

Sayings at Hillview's staff meetings were characterised not only by the language and ideas initiated by members of the executive team or other staff, but also informed by ideas sourced from *professional readings*. One of the critical features of staff meetings at Hillview was Principal Bronwyn Harper's insistence that professional reading be a key component of each meeting, in order to stimulate teachers' learning. To be selected for discussion at a staff professional learning meeting, an article or document had to be accessible, relevant and short enough to be digestible in one reading. All of the participants in the meetings were expected to read, share responses, and discuss the findings of the chosen piece. The readings were not only chosen and sourced by executive staff; as a result of their being constantly exposed to different types of professional reading, teachers frequently brought along their own chosen readings to share with executive staff and teachers. Continuing professional reading thus became a taken-for-granted collective practice at Hillview (unlike many other Australian schools). Focused talk and reading

about pedagogical practice was subtly but powerfully conveyed as a kind of continuing *intellectual* engagement which was a necessary part of the professional lives of staff at the school, in an expectation that teachers would continue to explore whether and how theory and practice supported one another. As Deputy Principal Wendy Michaels commented:

> We had a staff meeting last term, and we did *Habits of Mind*™ and all I had was three one-paragraph readings. All they did was sit and read in their groups, brainstormed and thought and jotted down ideas, and then shared [responses] with the whole group. I found it fascinating because the connection that, "Oh, we can use the *Habits of Mind*™ language in general comments in our reports" wasn't a natural connection. But it was just a very simple, one paragraph thing that all of a sudden they went, "Oh, yeah, I can see how this fits into that, that makes so much sense… let's run with that."

In this particular case, the *semantic space* of report-writing at Hillview was slightly remoulded as participants in the meeting came to realise that they could use the language of *Habits of Mind*™ (*cultural-discursive resources*) in their reports to parents and care-givers, not just in their teaching.

In terms of *activities* and *work*, we deliberately have focused on the micro-practices of staff meetings in order to explicate how such meetings were crucial sites for transforming leading practices in ways that facilitated teachers' and leaders' professional learning and enabled the building of more authentic professional learning communities. *Theoretically*, we have focussed deliberately on staff meetings as sites of practice in order to foreground the phenomenological reality that staff meetings are critical locations existentially and ontologically. They were specific sites in which transformations of practices—professional learning, teaching and leading—were engendered. The transformations that occurred in these practices were directly related to the specific conditions created in the meetings—conditions including where they took place (rotating from one teacher's classroom to another's), what they focussed on (topics discussed in readings chosen by different staff, always relevant to teaching and learning in the school), and the routine activities of the meetings (individuals pre-reading for the meeting, discussing the readings in small groups, sharing responses with the whole group, and drawing inferences for practice at Hillview). An example of how such transformations may be engendered through shifts in the practice architectures in a site such as Hillview is outlined in Fig. 7.1.

Figure 7.1 highlights the inherent sociality of participants' (such as Hillview's leaders and teachers) practices and the dialectical relationship between an individual's practices and their immersion in the social world. For example, the outer right and left hand columns of the Figure reveal that the participants who enter practices of leading always do so through the intersubjective spaces and sets of cultural-discursive, material-economic and social-political arrangements depicted in the middle column of the Figure. This intersubjective space and the arrangements that constitute it prefigure and shape the interactions between the leader and teacher. One of the valid criticisms of much of the literature reporting research into leading is that it tends to privilege either an *individualistic approach* to understanding leadership practice that foregrounds only the left hand column in theories such as trait, transformational or capabilities theories of leading, while ignoring the critical

	The leader's *practices* are interactionally secured in	**Leader and teacher encounter one another amid *practice architectures* that enable and constrain their interaction:**	**The teacher's *practices* are interactionally secured in**	
	The leader's ***'sayings'*** – and *thinking* For example, reconceptualising leading to promote shared responsibility	***Cultural-discursive* arrangements** For example, Wattletree School District's 'Communities of Practice Principles'	The teacher's ***'sayings'*** – and *thinking* For example, re-interpreting leadership to promote shared responsibility	
A LEADER entering the interactions of a practice	The leader's ***'doings'*** For example, using staff meetings as sites for sharing responsibility for learning; exploring ways to teach spelling via inquiry learning	***Material-economic* arrangements** For example, changing staff meeting agendas: from administrative meetings to professional learning spaces	The teacher's ***'doings'*** For example, leading staff meetings for professional learning in own classroom; sharing reflections on own and others' practice	**A TEACHER entering the interactions of a practice**
	The leader's ***'relatings'*** For example, re-balancing hierarchy (positional authority) towards collegiality (shared responsibility)	***Social-political* arrangements** For example, from staff meetings giving instructions to staff meetings for shared learning and reflection; sharing professional readings	The teacher's ***'relatings'*** For example, becoming collegial members of a professional team; sharing practice, reflection and responsibility	
	which are bundled together in the leader's *projects* and *dispositions* (*habitus*).	**which are bundled together in characteristic ways in *practice landscapes* and *practice traditions***	**which are bundled together in the teacher's *projects* and *dispositions* (*habitus*).**	

Fig. 7.1 Practices of leading: An example

role of teachers' leading practices; or a *systems approach* that privileges the middle column of the Figure (and especially the 'social-political' cell in this column) in theories such as distributed leadership. The theory of practice architectures of leading depicted in Fig. 7.1 focuses on *both* individual *and* systemic aspects of leading, not *either* individual *or* systemic aspects. The stereoscopic view afforded by the theory of practice architectures allows us to see *both* how individuals' practices are *shaped by* social *conditions* (arrangements; practice architectures) *and* how individuals' practices also *shape* social conditions by making and transforming the arrangements that support individuals' practices. This is to recognise not only the agency of individuals, but also the agency of the human and non-human (for example, buildings, floors, walls, resources, money)—arrangements that enable and constrain practices. As stated in earlier chapters, here, too, we see that practices are *interactionally secured*; they are not just the 'property' of the people who participate in them. More powerfully still, the notion that practices are enabled and constrained in practice architectures that are distinctive for those practices highlights not only the *systems* that shape leading practices, but also the *lifeworlds*—the semantic spaces, locations in physical space-time and social spaces—in which we encounter one another as thinking and acting beings. It is amid such system and lifeworld arrangements that leading practices like those we observed in the staff meetings at Hillview are located and embodied.

Site Based Leading Practices

In the preceding section, we examined some of the micro-practices of Hillview School as a means of illustrating a broader point about the intrinsic intertwining of formal leading practices directed towards enhancing staff professional learning in ways that encompassed the practices of teachers and members of the school's executive team. In that example, the executive team put in place a series of practices to foster and facilitate professional learning communities that were grounded in the particularities of the site. These practices have engendered the growth not only of a sense of shared responsibility among staff for their professional learning and its educational consequences, but also the nurturing of leading practices amongst both individuals and teams of teacher leaders, including beginning as well as more senior teachers—a "thickening of leadership" across the site (Lingard et al. 2003). In short, the leading practices of positional leaders gave rise to leading practices amongst other staff members.

In terms of the *social-political arrangements* supporting leading at Hillview, this sense of the 'we' of the school and of the educational field more broadly (Lingard et al. 2003, p. 74) is characterised by relational trust. That is, the way positional leadership was practised at Hillview conveyed a sense of the Principal's and the executive team's openness to changes initiated by staff, which in turn, conveyed a belief in teachers' professionalism, judgement and agency. Consequently, the ecological relationship between leading practices and transformations to teaching and professional learning practices in this school (and the other case study sites) can be more typically conveyed as a dialectical process occurring in learning communities, rather than the more individualistic and hierarchical notion of the relationship between leaders and followers. This is not to suggest that relations of ruling had disappeared, but rather to draw attention to a shift in the practice architectures of positional leadership from a notion of *power over* others, to *power with*. This characteristic 'thickening of leadership' throughout the school was evident in a range of ways, including sharing responsibility for school-based curriculum decisions and positional leaders deferring to particular expertise spread across the staff and school community.

A feature of positional leading practices and their arrangements was that they were evolving in response to the developing nature and needs of the school community. This responsiveness (rather than reactiveness) was illustrated in the changing nature of the leadership group at Southwood School in Figtree District in Queensland. In 2007, the school had a new Principal who had instigated a reform of the leadership within the school. Brian, the Deputy Principal, recounted:

> I guess a lot of schools will say they have shared leadership, but … Margaret, who was the Principal when I first started three years ago, she actually lived it every day. It is shared leadership where … she had faith in others and their professional ability to make decisions. … I think with her leaving at the end of last year, that shared leadership model has really come to the fore because there hasn't been that person driving it.

In structural terms, Margaret created the initial Southwood leadership group of five that had limited representation from across the school staff. Its purpose was to ensure that decisions were made in consultation with staff and it included the principal, the support teacher, the pastoral care worker and the two community development workers. By 2011, this group had grown to about 12 people, and included the librarian, a group of classroom teachers and the school secretary. In terms of the material-economic arrangements, the meetings were held every fortnight, and anyone could add to the agenda. Brian also noted that “it is quite a broad range, and everyone who wants to come is allowed to come; it is not an invite only sort of thing”. Interestingly, Belinda, the new Principal who started at the beginning of 2011, reviewed the leadership group structure. Her concern was that in the process of trying to be representative, it had become a large and unwieldy group. As such, the material set-ups of the group were actually working against its original democratising intent by excluding some staff members. Hence, at the end of 2011, the motion to disband the leadership group meeting in favour of a whole staff meeting was proposed, and the leadership group ended its own existence.

This example highlights the willingness of Southwood School staff to deal flexibly with material structures in order to maintain their commitment to the democratising and collective intent that underpinned their leadership principles and values. It also stresses the ecological relationship that was a common feature across the case study sites, that is, leading for learning practices were not randomly dispersed, but were profoundly interconnected to other practices such as professional learning, classroom teaching and students’ learning.

We have drawn attention to the ecological relationships between such practices, through analysing how the cultural-discursive, material-economic and social-political arrangements supporting teachers’ professional learning and leading practices at staff meetings were transformed via the processes of facilitation and structuring of the meetings outlined above. This transformation was achieved in a variety of ways. First, teachers’ practices were transformed by shifting teachers’ *sayings*—by changing the *cultural-discursive* arrangements that supported their practice (for example, by sharing professional readings that introduced new ideas to teachers, which they were able to discuss in small groups, and use to interrogate their existing and possible new classroom practices). Second, transformation was achieved by changing teachers’ *doings*—by changing the *material-economic* arrangements that supported their practice (for example, the rotation of Hillview’s staff meetings through various classrooms so teachers had an opportunity to observe new material set-ups and arrangements for classroom practice which they could safely discuss with a host teacher). And third, transformation was achieved by subtle but critical shifts in *relatings* between staff—by changing the *social-political* arrangements that supported their practice (for example, the decision at Southwood Primary School to adopt a whole staff meeting as the vehicle for whole school leadership, gave a clear signal that the executive team trusted the staff to act as professionals who shared a joint commitment to democratic and collaborative practices of leading).

Students' Leading Practices

One of the obvious implications which flows from a lifeworld view of leading as a shared and democratic practice is that leading and leadership are not limited to positional leadership, nor restricted to teachers and others with formal positions of authority. This was explicitly recognised by staff at Hillview School. A deliberate decision was made by the executive team, and supported by staff, that all Year 6 students (the most senior year in New South Wales primary schools) would take on a leadership role, involving activities undertaken both within the school and outside in the community. This was in contrast to the more hierarchical norm in many Australian schools, in which two students (one female and one male) are selected as school captains. While, in one sense, the decision to appoint all the Year 6 students as Year 6 student leaders, might seem to be a recognition that leadership, in practice, flows out of and escapes from the hierarchy of formal positional leadership to others; in another sense, and perhaps paradoxically, the designation of the group as 'Year 6 student leaders' might equally be read as an extension of the formal leadership structure—an elaboration that assimilated some of those to be led (the Year 6 students) into the leadership structure. As outlined below, however, we think the designation of Year 6 leaders created—as the staff of the school intended—new and positive opportunities for Year 6 students to exercise a variety of responsibilities.

The tasks for Year 6 student leaders encompassed a variety of dimensions, including local community work (which involved a good deal of emotional labour through activities such as regular visits to an elderly people's home); school community work (such as tutoring younger children in the school, representing the school at community events and sport); and a number of more 'menial' but fundamental jobs, intrinsic to caring for the physical conditions of the school (for example, emptying rubbish bins and looking after the sports shed). Ronnie Kinross and Jeannette Maidment, the upper stage teachers, commented thus:

> We don't have school captains here. All our Year 6s are just Year 6 leaders. So they just have roles and responsibilities which are as low and degrading as doing the bins and all of those things… They take turns… in representing different things, like Bronwyn … [the Principal] … took us, to a [community event] last week. [T]hen there's ones that volunteer… that run the swimming carnival… then there's different house captains for the athletics carnival.

When asked what the rationale was for sharing leadership amongst the Year 6 students, Ronnie and Jeanette observed:

> Well, just to recognise that all children have gifts and talents… to offer and that there is not—you know—there's lots of people worthy of being a leader of the school and not just one boy and girl. And although, I'm sure not everyone has got great leadership skills, they all have something to offer.

When asked why the decision had been made to share leadership amongst Year 6 as a whole, the combined Year 5 and 6 student focus group commented variously:

Student: Because we're all equal.
Student: We all have potential to do it.
Student: And we've all learnt the skills.

Student: Like, we've learnt—some people may be smarter than others but we've all –
Student: You trust them to be a leader …
Student: So we've all got responsibilities around the school and maybe when me and all the other Year 5s next year, I think it's really good to have leaders all around you so that you always—there's three classes, there might be one in the other class, and one in—another one in the other class as well. So there won't be any leaders in our class but we still have the Year 6s which are actually all leaders, so we all learn from them and so then we know how we should be next year about being just like them and having leadership.
Student: And everyone takes on responsibility so you're not just relying on two people, everyone knows they're a leader and thinks of themselves as a leader and knows they can help.

Both teachers and children stressed the relational domain inherent in the activities they undertook, "They all have something to offer"; "We're all equal." Importantly, these *sayings* did not appear to be symbolic only, but were connected concretely and explicitly to the *doings* and *relatings* of the students' leading. For example, Ronnie and Jeannette observed:

Ronnie: And, even, lately we've been talking a lot about being givers and takers and about giving of yourself in—not only within the classroom, but out on the playground and at home as well.
Jeannette: And they also ... were going to the Daycare in the church of a Thursday lunchtime ...
Ronnie: And as part of being leaders of the school, and as part of reaching out to others in the parish ... they were just rostered on to spend some time with the elderly people in the parish—and they loved it ...
Jeannette: You had to be chasing them back to class!

However, the connections between children's practices went more deeply than this. They also provided an important model of student leading as democratic and shared responsibility, which linked into what Hillview School was striving for, captured in the Wattletree School District policy *Communities of Practice Principles*—a notion of schools as learning communities. These practices generated an important message that school and District policies were not only symbolic but had real material impacts for children's as well as teachers' practices. Students' leading practices connected up with student learning practices and teaching practices and teacher learning practices and practices of researching, in an ecology of practices that together realised the idea and ideal of the learning community. These connected practices within the learning community emerged, together with its underlying commitment to humanitarian values in which new arrangements of collective student leading challenged traditional arrangements. In turn, they opened up new intersubjective spaces for social practices and ways of relating between different groups of students. A clear example appeared at Hillview in the 'buddy' system which paired Year 6 students with beginning Kindergarten students, with the Year 6s sometimes teaching the Kindergarten students (to give them opportunities to report to others

about things they had learned); and through a student community partnership in which Year 6 students regularly visited elderly people in a nursing home. The Year 6 children observed the following doings in relation to teaching their Kindergarten counterparts, which illustrated clear ecological connections to the facilitative classroom conditions that their teachers had enacted for them as learners:

Student: Yeah and we—sometimes we get asked to go to the younger classes, like the younger kids' classes and help them on the computers, like help them make a slide show or something and just a basic one to teach them how to do it.
Interviewer: And what sort of things do you do?
Student: You let them control it, but …
Student: They tell—they sort of tell you what they already know and you just give them a hand.
Student: You just like let them do it, but you show them how to do it, like you tell them, click there, that'll do this for you, but if you want that, click there.
Interviewer: So how did you learn how to do that?
Student: Well we normally teach each other, so it's normally just like teaching ourselves and other people around you but, just like in an easier way, like the younger kids they normally just ask for your help and you just sit there and say, "Oh, maybe this might be a bit better" and you just show them extra ways and maybe a different way to use headings or something, and then you can just—because we've been teaching each other and listening to each other we just know that we can teach these younger kids because they're just like us, but a little bit smaller.
Interviewer: Oh, okay.
Student: It's just basically sharing what you already know with them. I don't think of it as teaching, I just think it like …
Student: We sort of learned the same way they did, from …
Student: Yeah it's just that they need … Yeah, when we were younger the older people helped us.

The senior students' understanding that teaching was not about transmission but facilitation, and their stress on the affective domain of teaching and learning practices, "we've been teaching each other and *listening* to each other … these younger kids … they're just like us, but a little bit smaller" was striking. It suggests that the enabling and more democratic teaching practices adopted by Hillview staff, which the children viewed as the norm, "we normally teach each other", had 'travelled' as pedagogical forms of leadership practice from senior children to juniors (Wilkinson et al. 2013). This approach to teaching and learning also connected up with the shift, noted by Hillview's Deputy Principal Kendra Clarke, from a more transmission approach to staff meetings, to an inquiry approach to pedagogical leadership, which we will examine later in this chapter.

Systemic Leading Practices

Leading practice is not confined to schools; it also entails transformations to the conditions for practice in the broader systems in which schools are located. There has been a recent interest in examining the conditions by which systemic educational development can be fostered and enabled (see, for example, Hargreaves et al. 2007; Anderson et al. 2010). The foundation of such research is an (often implicit) recognition that the practices of schools are shaped by the practice landscapes of the educational systems in which they are located. For example, all our schools could be characterised as

> school-level learning communities in which a combination of managerial and teacher leadership as well as sometimes student and parent leadership build 'professional learning communities' and 'collective efficacy' (Hargreaves et al. 2007, p. 4).

In the Wattletree District schools we studied, however, the building of school communities of practice was orchestrated not only by people at the schools, but by a confluence of systemic practices and orientations that enabled and fostered the conditions for collective leading practice in each school. For example, in ecological terms, the Wattletree District schools' practices and dispositions towards learning communities were 'nested' within a long-term, District-wide orientation to learning communities. Some of the key features of this orientation were outlined in Chapter Three, and included the formation of *Communities of Practice Institutes*, the production of the *Our Children, Our Future* policy, and the development of associated programs such as *Pedagogies for Literacy*. Here we will focus on the *Communities of Practice Institutes* and *Our Children, Our Future* to illustrate and exemplify some of the leading practices at the District level—at the level of the Wattletree District Office in its relationships with schools, principals, teachers, students and families.

The *Communities of Practice Institutes* were formed in the 1990s and two leading researchers in professional learning communities were employed to work with Wattletree District and its teachers on an ongoing basis. The aim was to engender a system-wide practice of collaborative learning amongst teachers as a vehicle to enhance student collaboration, with the goal of improved and engaged student learning. The Institutes placed strong emphasis on teachers' collaborative professional learning, including the building of relational trust between teachers. In terms of leading practices, a number of points can be made about this initiative. Firstly, at the level of the Wattletree District education system, the *Communities of Practice Institutes* produced an ongoing "learning frame" based on teacher collaboration and learning communities, in which the local district "embrace(d)… the forms of learning that … [were] … valued" in the District (Hargreaves et al. 2007, p. 11). These principles were encapsulated in its key policy document, *Our Children, Our Future*. The challenge for such systemic leading was to work in concert with schools to embed these practices at all levels of the system in sustainable ways, and to ensure they continued to travel into the classroom teaching practices of teachers and the learning practices of students. As Brian Alwyn, Director of the District explained:

> What's the very thing that is going to give the teacher the freedom to take a risk? It's a relational trust. It's the trust between two teachers suddenly saying, "Can you come past and watch how I ask questions in the classroom?" instead of going, "Bang", with the door … therein lies the challenge of leadership for our principals. [I]f you can hark back to the basic diagrams of learning communities—it's where that intersects in the middle there. It's where the trust is … without it the opportunities for achieving and learning at all levels are compromised. That's the basic belief around learning communities and the relational take … it really underpins everything that I do as Director … in terms of the need to take the time to do that. You know it's a model all the way down. You think of a student in a classroom … [if] there's no connection between the teacher and student for whatever reason, there ain't going to be much happening there.

In terms of building system capacity and the thickening of teacher and executive leadership, there was evidence that the *Communities of Practice Institutes* had been instrumental in the production of a new generation of leaders across the district, for whom the building of authentic learning communities was a key practice. In particular, collaboration and relational trust were two principles of the effective learning communities that were practised by principals in our case study schools. The development of shared understandings, language (for example, *Habits of Mind*™ at Hillview School), norms and values amongst staff, and between staff and students, was one concrete manifestation of these practices 'travelling' to the district via Australian and international researchers. As Bronwyn Harper—the Principal of Hillview—herself a graduate of the *Communities of Practice Institutes*—observes about the school:

> We started a long time ago talking about learning communities based on … [leading researchers'] … work and that's really becoming the focus that now we try to align … [our] work … around … [these] … six practices … So everything we do we go back to those six practices and the essence of learning communities being around relationship, support and challenge and we question ourselves the whole time, every time we introduce new things into the school, as to where it fits around your moral literacy and your social and emotional development and also around academic …

A critical feature of the leading practices underpinning systemic approaches to educators and students' learning in the district is a shared, system-wide commitment to a "clear and defensible moral purpose" for education (Hargreaves et al. 2007, p. 10). The longitudinal nature of the *Communities of Practice Institutes* and the ongoing commitment over two decades to the philosophies underpinning the *Our Children, Our Future* district policy, indicated a long-term commitment by district leadership in "support of their student-focused missions" (Leithwood 2010, p. 278). Wattletree District Director Brian Alwyn commented:

> We're talking about students taking control of their own learning all the way down the line … But where does this all come back to—that person who fronts up with them every day. There's our target. That's the … centre of influence for us is the teacher and anything we do is directed straight at improving that person in their potential; their skill base; their knowledge; they're everything—that's the future. That's the greatest centre of influence on a student.

This moral purpose was reflected in Bronwyn Harper's observations about Hillview in her comment above and also in this comment:

> I say to parents "As far as I'm concerned, if we don't have children leaving us after seven years here feeling really good about who they are, we've failed", and I really feel that's the essence of character development and kids being successful because they'll all find their strengths probably after they've left school and their purpose for learning in all of the cases.

In relation to engendering transformations to learning and teaching practices, of particular note was the interdependent ecological arrangement between the practices of Wattletree School District Office staff and teachers and members of school executive teams in the District schools. This arrangement was facilitated and sustained by close relations of trust and respect that had been built over a long time between core District professional development officers and case study schools (Leithwood 2010). Westville Principal Stephanie Marks demonstrated this trust in her comments about Wattletree District Curriculum Consultant Hilary Roberts—at the same time revealing an openness to building not only the professional practice of Westville staff, but also her own practice as a teacher, which is one of the hallmarks of leading learning practices amongst positional leaders. Stephanie notes:

> [O]ver the last few years, we've been really privileged to be working with Hilary and she has been such an amazing leader in taking us forward in literacy … [W]e sort of worked with Hilary to come up with… [a program] … that we could implement as a whole staff because that was critical and be able to tap into … key big things … [S]he has such an amazing way to get the big things and say this is the core of what we're trying to get to and be able to communicate it … so although Hilary has left us recently … we've been able to have one of her great, well I guess, 'apprentices' is the word … [to continue her work with us]…

It would be a mistake to suggest that there was a seamless alignment between Wattletree District's learning communities philosophy and leading practices, and that of its schools. For instance, when students who had been exposed to an inquiry approach to learning moved to secondary schools, a new challenge for system leadership arose, that is, major clashes between the cultural-discursive, material-economic and social-political arrangements that framed the far more hierarchical culture of secondary schools, compared to the learning community philosophy so valued by Wattletree District and evident in the practices of the primary schools we studied. In Bourdieuian (1990) terms, secondary schools' differing location in the education field, entailed a very different *logic of practice*, with which the District continued to struggle. Brian Alwyn observed:

> [T]he primary schools had—well 15-20 years we've been immersed in that culture of … learning communities … It's around the essence of things being based in relationship … It took … five or six years for … [the secondary schools] … to even catch up with what we're talking about, to even use the same language. Narelle Jones, who was a former employee of ours … was my personal gauge … because she came in new and she would say to me, "What the hell are you talking about?" "If I can't understand it, how are they going to understand?" and she was instrumental in me slowing down … and waiting until that enculturation time, that use of language … till they had hold of that enough for them to understand where we had been and the worthiness of getting them on board and coming forward with us for the rest of the journey.

Nonetheless, the long-term philosophy that underpinned systemic leadership practices was integral to the development and maintenance of community-responsive education in the case study schools in Wattletree School District. However, it was

also clear that the leadership required from the District was grounded in principles of trust and respect, where a broader lifeworld understanding of leadership was expected across all levels of schools and their communities.

Site Based Leading: Leading Practices (in Ecologies of Practices)

The previous sections showed that leading practices were composed of particular *sayings*, *doings* and *relatings*, and how these were enmeshed with and supported by the particular cultural-discursive, material-economic and social-political arrangements that pertained at the particular sites. A critical feature of the leading practices examined above is not only their composition but also how they travelled to and connected up with other related practices and practice architectures within and beyond District, school, classroom and community sites.

For example, in the discussion of students' leading practices earlier in this chapter, it was clear that there was an ecological interdependence between the *students' leading practices* and their *learning practices*. There were similar connections between staff *leading* and *professional learning practices*, exemplified through the re-arrangement of the architectures of Hillview's staff meetings to enable a more collective approach to professional learning. In turn, this was fostered through the adoption of a range of practices, including the executive team's use of an inquiry approach to teachers' professional learning in these meetings, as part of a deliberate shift towards engendering a more dialogic and collaborative learning space. The quotation in the preceding section from Hillview Principal Bronwyn Harper reveals that Wattletree School District's *Communities of Practice Institutes* had set in place a set of cultural-discursive arrangements that supported more dialogic and collaborative professional learning practices. These cultural-discursive arrangements had been assimilated by teachers[1]—some of whom, like Bronwyn Harper, later became principals—who participated in the Institutes, and the ideas were being daily realised in such teachers' and leaders' practices of *leading* in their schools.

Not only were these ideas evident in the work of teachers and leaders at Hillview and other schools, they travelled to students. Hillview's Year 6 student leaders' description of the approach they had adopted when teaching their Kindergarten buddies, illustrates the strong connection between practices of *leading* and *student learning* in the classroom, as well as the staff room. The students' emphasis on the

[1] On a Piagetian cognitive interactionist view, one might say *both* that teachers had assimilated these arrangements *and* that they accommodated themselves (or were accommodated) to these arrangements; in our terms, by accommodating themselves to these practice architectures (or being accommodated by interacting with them), these practitioners assimilated the *sayings*, *doings* and *relatings* of the relevant practices. On the relationship between assimilation and accommodation in Piagetian theory, see Piaget 1971, pp. 172–182.

facilitation of classroom practices with their junior learners, parallels the practices we observed in Hillview's staff meeting where teachers collectively formulated an inquiry approach to spelling—an approach, that is, realised in their *teaching* practices. The Year 6 buddies of the Kindergarten children at Hillview adopted the practices they had learned in their own classroom (how they as a class were being taught and led by their teachers), and clearly articulated these in a language of facilitative and collaborative practices—a language they learned from their teachers, used with each other, and were in the process of passing on to the junior students.

There were also clear links between the case study schools' *leading* practices and their practices of *researching*. For example, at Hillview, in the face of some staff hostility and resentment in relation to their poor NAPLAN results in some areas of literacy, Deputy Principal Kendra Clarke had shifted from a more hierarchical approach in which she analysed the school's NAPLAN results (that is, she had been the sole evaluator of results) to a more organic, 'bottom-up' set of practices of collaborative review and reflection in a volunteer group of staff—the NAPLAN Focus Group. This was as a result of her move to Wattletree District from a different district (Gumtree District) and her exposure to the learning communities framework and inquiry approach to learning at Hillview. Kendra noted that in earlier years when Hillview's NAPLAN results had begun to decline, past practices such as the executive team analysing data and then having a staff meeting in which they "threw up the NAPLAN results", were extremely problematic. Staff were "negative and threatening … mostly the younger ones who felt threatened, they hadn't yet learnt to go, 'Well, actually we don't know it all'". Yet this initial response had significantly shifted through a variety of changes in practice architectures, including the formation of the volunteer NAPLAN Focus Group and the actions of executive team members in a variety of settings—like staff meetings for professional learning—where they modelled being learners who did not "know it all". Kendra noted that

> there's been a huge shift … and I think it's through the professional dialogue that we've slowly built on … Constant discussions in staff meetings … those like myself or Olivia [Lincoln, the other Deputy Principal] … who are perceived as leaders in curriculum … will openly say "What I'm doing isn't working" … That opens conversations in teams …

A new set of material-economic arrangements (the NAPLAN Focus Group) was created, in which the volunteers met weekly to analyse results and then plan and discuss the school's resultant professional learning approach. Staff engagement and a greater set of shared responsibility for the school's overall professional learning when it came to NAPLAN results was one consequence of this deliberate shift in leading practices.

A critical component of the ecological connections between leading practices and teaching practices was the composition of each study site's executive team. Each school had a 'traditional' hierarchical executive in the sense that it was composed of a principal and, depending on the size of the school, one or two Deputy Principals. However, all but one of the schools operated their executive along the lines of a professional learning community, thus modelling via their leadership practices, their expectations that teachers should also work in more collaborative

and team-based ways. Westville's and Hillview's executive team modelled a dynamic and inclusive form of collaborative leading practices, meeting weekly as a team to discuss not only administrative matters, but engage in long term planning around teacher professional learning and curriculum development. The collaborative practices engaged in by these teams flowed into both schools' staff meetings, characterised as they were by a dialogic (rather than monologic) approach to professional conversations. In a similar vein, the executive team at Southwood School operated as a leadership team that included representatives from across the school community. Importantly, each of the teams contained at least one member who was highly respected by staff as a pedagogical leader, thus demonstrating the genuine commitment the schools placed on student learning and providing them with a critical resource for teacher learning. In sketching the composition of the executive teams, we are not implying that those in positional leaders' roles did not undertake aspects of their leading practice individually and independently. Rather we are foregrounding the strategic reflexivity suggested in positional leaders' practices in relation to which facets of the school required more collaborative or dispersed leading.

Conclusion

None of the connections and interactions between leading and the other practices and site arrangements outlined above can be reduced to a neat set of capabilities or competencies that will ensure educational 'success' for students. The shifts in leading practices we observed in the schools we studied has led us to the conclusion that practices of leading as 'command and control' might not be as effective in producing changes in teaching practices and student learning as practices of leading that foster a sense of *shared responsibility* among staff and with students for the conduct teaching, student learning, professional learning and researching in a school. On the latter view, we understand leading as located in ecologies of practices that have a common commitment to, overall project of, *education development*. We contrast this with the 'command and control' view of leading which seems to us to underlie many programs of *school improvement* around the world—and which may often take a technical and managerialist view of the process of educational change.

In this chapter, we have shown how some schools have made the shift from more hierarchical practices of leading to practices of leading that foster a sense of shared responsibility for education in a school. We have traced this shift as entailing firstly, a move away from viewing positional leadership as a hierarchical and technical practice—the primary purpose of which is to *disperse* leading and learning amongst followers in order to enhance learning outcomes—and, secondly, a democratic and collaborative approach to positional leadership practice which engenders a notion of *shared responsibility* amongst principals, executive teams, teachers and students. However, we would posit that there is one more step in the shift towards a social and critical view of leading practices, and this entails understanding leadership as

a *practice-changing practice*. This latter is in contrast to the notion of leadership as a transmissive pedagogy, as may be implied in characterisations of “leadership as pedagogy” (see, for example, Lingard et al. 2003). By characterising leading as a practice-changing practice, we are highlighting the critical role that the practices of positional and informal leading play in conjunction with other, interconnected practices such as professional learning, in shaping the conditions for transformed learning and teaching. Simultaneously, by conceiving of leadership practice as a practice-changing practice, we are attempting to forestall its reduction to a form of *technē* (or technique). Finally, we aim to foreground the role of leading in the process of *education development*, which focuses on its power to shape site based education development as a *praxis*-oriented practice, that is, as a morally-informed practice enacting a socially-critical practice tradition in the education field (Kemmis and Grootenboer 2008).

The shifts we observed in practices in each case study site—across the Education Complex of practices of student learning, teaching, professional learning, leading and researching—attest to the fundamental importance of the practice of leading as a practice-changing practice. We saw how practices of leading change sometimes met resistance and contestation. We saw that results were not always guaranteed, as if ‘success’ could always be achieved if only a leader were technically adroit enough. Leaders act in uncertain conditions, and their actions are interpreted (and sometimes misinterpreted) by those around them, with sometimes unpredictable effects. Leadership is not just a technical matter of producing known effects by known means. In this chapter, we have attempted to sketch the kinds of *practical* actions undertaken by leaders—principals, executive teams, teachers, students and District Office personnel—that are not dictated by rule-following, or producing an outcome of a kind that is known in advance (both characteristic of technical action) but rather actions whose implications can be evaluated only in the light of their consequences (characteristic of practical action). We have also tried to disrupt the view of leadership that see leading as manifested in the person of the leader. Instead, we have tried to show *that* and *how* leadership is realised *in practices of leading*. We think this view of leadership as leading—as *practising leading* (as we describe it in the title of this chapter)—offers new insights into the ways different practices of leading are enabled and constrained by different kinds of practice architectures (cultural-discursive, material-economic and social-political arrangements) with which leading practices are enmeshed in the many different kinds of sites where leading goes on. We also think this view of leading—as a practice-changing practice—allows us to see how the practice of leading is enmeshed with other practices (like teacher professional learning, teaching, student learning and researching). By understanding how leading practices are enmeshed with practice architectures that support them, and how they connect with other practices in ecologies of practices, we may also better understand how leading practices are and can be *practice-changing practices*. Seen from this perspective, leading practices are not the prerogative of leaders; they are ubiquitous; they are practices enacted by everyone.

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Chapter 8
Researching as a Practice-Changing Practice

Introduction

This chapter explores how educational practice was formed, re-formed and transformed through practices of *researching* in our case study sites. Whilst there is some debate as to whether practitioner research, teacher research or teacher inquiry employ the same standards of rigour that other educational research practices do, we position research in this chapter within an emerging tradition of "researching practice from within practice traditions" (Kemmis 2010, p. 18). In this vein, we take seriously the movement towards educational research becoming the domain of those who inhabit the practice itself as a counter to redress the long-standing domination of quantitative and externally driven research (Lankshear and Knobel 2003) which often subverts the very goal it sets out to achieve (Lankshear 2003). Hence, the chapter is located within the realm of a developing practice tradition that contributes to educator-driven, educator-directed and educator-led arrangements and which, in turn, we argue, nurture informed and strategic change. This practice tradition of participant research positions educators (that is, teachers, school leaders and district personnel) as agentic, for they control their own agenda for change and develop their capacity for transforming practices in their own sites—be it their district, their school or their classroom. This tradition views practice and practice development primarily from the perspective of the participants engaging in the research, that is, the educational practitioners who study their own practices with a commitment to development and change. These practitioners take steps beyond what theorists such as Hara (2009) describe—damning with faint praise—as informal knowledge sharing and peer learning. Teacher practitioners, by contrast, organise themselves in deliberate and strategic ways to ask critical questions of their practice and to act on these answers to re-form and transform practices in a cycle of critical reflection, planning, action and critique.

Many participants in our study were teachers and executive team members in schools who acted with a commitment to improving practices through systematically interrogating their own practices and capacities as educators. They were insider-practitioners of the practice of teaching *and* the practice of researching. As

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such, they inhabited both their day-to-day professional activities and the communicative spaces they co-created for the collective and collaborative theorising of their practices. From their insider-practitioner perspective, they gave us insight into their practices (Carr and Kemmis 1986) as they revealed their understandings of their practices (their *sayings, doings* and *relatings*) and the practice architectures (the *cultural-discursive*, *material-economic* and *social-political arrangements*) which made their practices possible.

Researching one's own practice requires educators to engage in systematic, self-critical inquiry that is publically shared. Such research is a deliberate, situationally-sensitive and action-oriented process (Kemmis and McTaggart 2005). As we observed it in the schools we studied, it assisted educators to see their practices from the inside as they systematically asked reflective, critical questions of their practices and acted on information in careful and strategic ways. This critical and self-critical research enabled the lived-ness of practice to be understood as teacher-researchers and leader-researchers engaged subjectively and intersubjectively with the particular practice architectures which enabled the development of practice in their specific circumstances. For the schools in our study, researching practice was a form of *practice development* which moved teachers and leaders beyond speculation to "the organisation of enlightenment" (Carr and Kemmis 1986, pp. 144–149) and to their own development as activist professionals within a community of critical inquirers (Sachs 2003). Their critical, reflective research was a crucial element of *education development* in their sites. Through their commitment to education development, the teachers and leaders established a shared research agenda which we have termed 'educational', because "the knowledge that it seeks to develop is that which will enable those engaged in educational activities to achieve their purposes in a more systematic and self-critical way" (Carr 2007, p. 275).

When teachers research their own practice, they engage in a kind of evidence-informed, critical, systematic self-reflection with an audience. In this chapter, we adopt Lawrence Stenhouse's concise and considered definition of research as "systematic enquiry made public. It is made public for criticism and utilisation within a particular research tradition…" (Stenhouse 1979, p. 7). Research practices are consciously undertaken, identifiable, deliberate, planned, data-driven, analytical, interpretive, oriented towards reflection and action, and directed towards communication with others (including a range of people from peers in a setting to researchers in a discipline or professional field). Sometimes research practices are principally oriented towards contributing to *disciplinary knowledge*, as is often the case with 'professional' research by outsiders to an educational setting. Sometimes research practices are principally oriented towards contributing to the knowledge of *professional peers*, as is often the case with teacher action research in fields like language and learning, or mathematics education, for example. Sometimes research practices are principally oriented towards *peers and other participants in a local practice setting*, as is often the case with critical (collective) self-reflection and participatory action research. And sometimes research practices are more evaluative in intent,

oriented towards reporting to '*outsiders*' (from educational agencies or managers or sponsors of a program or even to the general public) about how well or badly a program or curriculum or initiative is going. These different kinds of researching practices are described in different *languages*, involve different *activities*, and exhibit different kinds of different *relationships* between the people involved. As we will illustrate later in this chapter, we observed different kinds of researching practices that were sometimes in dynamic tension with one another in a school site. Towards the end of the chapter, we will also show how practices of researching in our case study sites were differentiated from practices of leading, professional learning, teaching and student learning. Crucially, however, practices of researching were also interdependent with these practices, that is, they were necessary to those other practices as part of ecologies of practices.

Three distinguishing features of the relational properties of research undertaken in these sites should be noted. The first feature was the *practical* and *critical* approach adopted towards collective practitioner research, as teachers and leaders stepped into action, actively critiquing and transforming their leading, professional learning and classroom practices in a spiral of action research and change. Critically reflective and evaluative practices were a key component of this research spiral. Second was the practitioners' collective commitment to what we have termed a 'dialogic' approach to research and evaluation, as opposed to a more 'monologic', hierarchical or externally-imposed approach. This shift in approach will be explored in more detail below. Third, uniting the examples of practice that we examine in the following sections was a *telos* or shared commitment to practitioner research as we described it in the last paragraph.

In the next section, we outline three empirical cases of practices of researching and provide a brief description of their shared research agendas or projects. Each case had its own specific project, contextualised to the needs of the particular school and its community. However, what each case also had in common was a notion of *site based education development*—that is, the development of education in each school so that it was appropriately and effectively *responsive* to the different local needs, opportunities and circumstances of the particular kinds of students, schools and communities located in each site. After this discussion, we explore the case study examples in more detail to examine how the *cultural-discursive, material-economic* and *social-political arrangements* of classroom teaching practice were being re-shaped by particular researching practices enacted by teachers and leaders. We describe the particularity of the practice landscapes which came to exist as research in each site. Next, we explore practices of researching (and critically reflecting and evaluating) as practices which exist in ecological relationships with other parts of the Education Complex. We show how these practices were part of the practice of practice development, and part of an interconnected ecology of practices. Finally, we argue that researching practices occurred in the case study schools as part of a strategic, deliberate approach for educational change and note how it contributed to site based education development in these sites.

Site Based Projects of Researching Practice

In our case study schools, teachers and/or executive team members deliberately established particular research projects. These formed a strategic and shared agenda of researching (informed by critically reflecting and evaluating practices) aimed at changing their practices. This section briefly outlines three different studies in which teachers and executive team members in the particular school sites participated. In the first example, a small team of teachers at Northton used peer mentoring to develop an *action research* project that focused on enriching vocabulary among students. In the second example, Westville staff also undertook a form of action research in which *critical reflection* on their practice was facilitated through employing systematic peer coaching to inquire into and enhance individual teaching practices. The third example, at Hillview, provides an instance of *evaluating* practice, in which research data was used by teachers to critically reflect on and inform changes to classroom and whole school approaches to the teaching of spelling.

In the first case, two teachers at Northton developed an *action research* project investigating *enriching oral and written vocabulary*. After identifying the need for improvement in this area from analysis of NAPLAN (National Assessment Program in Literacy and Numeracy) data, they gathered a range of classroom data (including written work samples, oral work samples with recorded segments of student group talk, and results of a standardised oral language assessment with a selected sample of students) that would shape the direction of the study. Their inquiry was reflexive and iterative. Its reflexive character was revealed through a range of initiatives in which their research was publicly shared and scrutinised. These included: whole staff meetings about their current and developing practices, co-planning strategies for classroom action, planning a timeline for meetings, designing a staff notice board which visually represented their project, trialling new practices, a questionnaire to parents, and meeting together and with our research team to reflect and critique on their practices, and iteratively re-negotiating action plans for further research and for teaching and learning.

In the second case, teachers and executive team members in Westville who shared a commitment to an overall school project of improving student learning, developed a collective inquiry project *researching student language development*. As had the teachers at Northton, the Westville teachers undertook the project in response to poorer than hoped student performance in writing tasks on NAPLAN. Critical reflection on their individual and collective practices was a crucial feature of this ongoing process. Framing the initial inquiry was the knowledge that to change writing outcomes for students, there was a need to understand and change students' oral language, that is, developing *intellectual dialogue* among students required a whole school commitment to lift the level of students' vocabulary (both oral and written). Through a systematic inquiry approach, teachers and executive team members examined existing pedagogical practices. To inform their investigation, they adopted a conceptual framework derived from James Britton's (1970) work on the role of talk in the formation of students' writing, summarised in his phrase "writing floats on a sea of talk" (1970, p. 164). With this as an inspiration,

the Westville teachers named their initiative *Learning Floats on a Sea of Talk*. This project was entered into with the view that to change education practices, there was a need for a whole school commitment to understand and change existing practice architectures supporting student oracy that did not support the kinds of language and vocabulary development the teachers desired. Westville teachers engaged in a range of *mentoring* practices, amid practice architectures for mentoring brought to the school for the purpose, with the intention of exploring and transforming practices and practice architectures of *language learning* and *language teaching* at the school; for example, teachers entered mentoring relationships which changed the nature and conduct of staff discourse about language and learning, their activities and the physical *set-ups* of their classrooms (team teaching and open-door arrangements), and relationships (who worked with whom, within and beyond the school).

From this earlier work, teachers at Westville then designed more individual professional learning projects developed through a systematic inquiry approach using a Wattletree District initiative based on *coaching*. Mentoring and coaching practices at Westville re-formed teachers' talk, their actions and their relationships as teachers (sometimes supported by our *Leading and Learning* research team) met regularly together to negotiate and design *action research projects*, based on some aspect of their professional practice that they wished to enhance. They acted, observed, shared, challenged, analysed and re-designed practices in a self-extending and systematic cycle of change, all the while informed by systematic collection and analysis of data. Through coaching conversations with a colleague, teachers entered a spiral of action as they researched their practice for the sake of practice development. These collaborative coaching arrangements enabled teachers to focus on individual projects, such as improving questioning, developing inquiry learning and developing reading skills for lower achieving students, whilst at the same time being mindful of the broader school project aimed at improving student learning outcomes.

The third case, at Hillview School is an example of a site based research practice that was also informed by evaluation data from NAPLAN testing at the school. Researching and evaluating teaching practices are well understood as integral parts of effective teaching but they are often part of the unseen work of teachers. At Hillview, there was an explicit push for making research practices a part of the public face of teaching practice in the school. The NAPLAN Focus Group was formed with a shared commitment for change and action. It met once a fortnight to investigate trends in NAPLAN test results and then act on that evaluative information by working towards practice change. Subsequent staff meeting time was devoted to investigating specific aspects of spelling pedagogy identified by the Focus Group as requiring enhancement, for example, how the teaching and learning of spelling could be done following an inquiry approach. At these meetings a strategy for whole school change—developing the pedagogy of *inquiry spelling*—was negotiated, acted upon and evaluated. Generally, the work in these two interconnected projects was iterative and took shape in the form of a series of cyclic, action-oriented activities designed to understand and improve teaching. The activities included building and refining practices as staff came together to share practices, trial new

practices, read relevant professional literature, challenge each other's practices, explore developments, and set new goals, for teachers individually, for teachers teaching at the same stage level, and for all of the teachers collectively, as a whole staff. For Hillview teachers, the NAPLAN Focus Group became the impetus for educational change among the broader staff; it became the foundation for action research practices that developed new practices and practice architectures of teaching and learning. It ultimately rearranged teachers' language, as the language of inquiry and questioning emerged; it rearranged their activities, as material set-ups changed to reflect their inquiry-based teaching activities and the spiral of cycles of their action research; and it rearranged the relationships among staff, as teachers and executive staff worked together in different interactive arrangements (in coaching pairs, in small groups, and as a whole staff).

In each of the three case study sites, practices of researching made the language, activities and relationships of teaching and learning the focus of exploration, development and change. Over time, their researching practices provided a frame that gave their educational work an increasing sense of coherence and validation at the local level. Educators entered new practices of exploring, explaining, justifying, analysing and evaluating, which enriched the professional discourse of the staff as a whole. It turned out that the learning of teachers and executive team members also "floats on a sea of talk". This enriched professional discourse enabled an enhanced professional reflexiveness about educators' practices to emerge as their practices were produced, reproduced and transformed over time with changes and variations. We now turn to an examination of the case studies to examine this process in more detail.

Practice Architectures that Enable Researching Practice: Northton School

Rather than focusing on the teachers and leaders as participants researching practice within a 'community of practice', our theoretical approach focuses on the formation and transformation of the intersubjective spaces that members of a community of practice co-inhabit: shared *semantic space*, shared *physical space-time* and shared *social space*. In these spaces, we observe how practitioners' *sayings, doings* and *relatings* are shaped, respectively, by the particular *cultural-discursive, material-economic* and *social-political arrangements* that make those *sayings, doings* and *relatings* possible in a given site. The case studies below analyse how changes to these arrangements or *set-ups* enabled and/or constrained conditions for nurturing researching practice amongst teachers and leaders in three schools.

At Northton, Deputy Principal Sarah Anderson and Kindergarten teacher Paula Dennis decided to work together on an *action research project* aiming at enriching students' oral and written vocabulary. In the initial stages of the project, they requested that two members of our *Leading and Learning* research team work with them as critical friends. A significant feature of their project was their ongoing effort to nurture their own reflexivity as neophyte teacher-researchers by opening up

their research to public scrutiny by their colleagues in staff meetings. One of their first public acts was to introduce their project at one of the timetabled staff meetings, with the aim that the study and the concomitant research practices it engendered might contribute to the pedagogical discourses and practices of the school as a learning community. Here is how Sarah introduced the research:

> So we're just having a staff meeting today about the rationale and the aims of the project … [Our research question is:] "Does Enriched Speaking Vocabulary enable students to create a higher level of written text?" … [W]e're focusing on developing specific vocabulary through our speaking and listening, moving that into our reading and then into our writing component. That is our aim, so it will take in all Key Learning Areas … We've gathered some data in our own classes … and we're looking at some standardised assessment … to actually justify where we're coming from. So the purpose of this meeting is just to get other people's input into what they are actually noticing within their Key Learning Areas, and within their speaking, and the correlation between their speaking and their writing.

Sarah carefully introduced the study using the *sayings* of formal research language such as "data", "justify", "correlation". She referred to activities (*doings*) such as "standardised assessment" to substantiate the study, "to actually justify where we're coming from"—a reference to the increasing emphasis on quantitative data which increasingly has characterised New South Wales schools (Ellis and Armstrong 2013). And she began to establish a new set of *relatings* around her research with Paula, drawing other staff into a shared communicative space in which there would be public reflection on Sarah's and Paula's teaching practice. Importantly, however, Sarah attempted to situate the *material-economic* arrangements of the research study within the lived experiences and pedagogical lifeworld of her colleagues' classroom practice. She did so through a variety of *sayings*, including framing the study from a participant-researcher perspective as a shared project, for example, "developing a specific vocabulary through *our* speaking and listening", and employing the more colloquial word, "project", rather than the more formal language of "research" or "study". Simultaneously, she invited colleagues to participate in the changing *practice architectures* that prefigured hers and Paula's classrooms, through her request for shared professional reflection about teaching and learning practices: "the purpose of this meeting is to get other people's input into what they are actually noticing within their Key Learning Areas".

In terms of *social-political* arrangements, Sarah was a teacher-researcher and Deputy Principal with great credibility amongst Northton staff as both a classroom practitioner and teacher-leader in the area of curriculum, having successfully led school curriculum initiatives for a number of years. Her confident and clear introduction to the study, the fact that the study had been placed on the staff meeting agenda, and that it was she and not Paula who introduced the study, "we're just having a staff meeting today about the rationale and the aims of the project", suggested she was in charge. However, the fact that she had paired with Paula—a highly regarded and experienced classroom teacher who did not carry a formal leadership role—sent an important message to the staff that the research study was an accessible *doing*, and not solely the province of teacher-leaders like Sarah. For example, after Sarah invited staff input, it was primarily the Principal, Francis Beech, who responded, noting the improvements he had witnessed as a parent in his child's

vocabulary since the study commenced: his child was in Sarah's class. In response, Paula remarked:

> I've noticed since we've started this project that … if it becomes a focus, you do really notice lots more things, like you [Francis] said, with the way they speak, with the way they write and there is generally a bit of a gap isn't there, between the way they—you can enrich them with the way they speak and we can talk about all these great descriptive words but then to transfer it. When they're writing we're finding there's quite a gap, or we found out … by videoing them while they're talking about what they're going to write, but then when they actually write, those words are lost … So I guess we have to, lessen the gap between, even what we are speaking about and encouraging them to speak that way, but also to encourage them to write that way as well.

Paula's research observations were cloaked in everyday, accessible language, "you really do notice lots more things … with the way they speak … there is generally a bit of a gap". Crucially, she made a number of key points about research *doings*, such as emphasising systematic collection of evidence via "videoing" to identify a "gap" between speaking and writing. In terms of the *material-economic arrangements* of the classroom, the introduction of research practices had, she noted, made a difference to her own teacherly *habitus*, "if it becomes a focus, you really do notice lots more things". In terms of *social-political arrangements*, her observations were couched as an invitation to dialogue, through such comments as her focus on the embeddedness of her researching practices in the teaching and learning that constituted her "world of work" (Loughran et al. 2002, p. 3, cited in Ellis and Armstrong 2013, p. 2); and her use of inclusive language: "I've noticed "there is generally a bit of a gap, isn't there?"; "*we* have to … lessen the gap …". It is perhaps no coincidence that after these comments, other staff including more junior teachers, began to respond and the ensuing discussion encompassed the whole staff.

A few months later, Paula's and Sarah's research in their classrooms had considerably progressed. Both had utilised a range of activities to enhance their reflexivity, including scheduling regular meeting times in order to evaluate and reflect on their findings, making further refinements to the study, and subsequently implementing these at class level. In the *cultural-discursive dimension*, Sarah employed her iPad as a reflective journal and increasingly in these reflections, drew on language and research literature she encountered in the postgraduate studies in which she had enrolled after commencing the action research project at her school. According to Sarah, both classes of students had responded well to the greater classroom focus on enriched language, noting that "[t]hey have really improved and the quality of both their oral discussion and writing proves it. If you actually analyse it, in fact, they're using enriched vocabularies in their elaborations for discussions."

At the whole school level, Sarah and Paula had instigated a range of strategies to de-privatise their research, such as introducing a "something to talk about" home-school initiative. Each week, "a talk tip" was introduced into the weekly newsletter in a segment the two teachers named "Sweet Moments". The segment contained, according to Sarah, a "fun, informal language discussion task", such as, "If you could meet a person from history, who would it be? Why?" "What was your Mum or Dad's favourite subject at school? Why?"

These segments acted as informal conversation starters between parents and their children that could be taken up at any stage during the week. Moreover, the students could bring their response to school to add to "quotable quotes" boards in Sarah's and Paula's classrooms. Both teachers remarked that parents had responded positively to this initiative; these are among the parent comments they observed and collected:

Parent One: It was very beneficial as it brought us together to really discuss things as a family; it got us thinking about different things;
Parent Two: It makes you think about your answers, listen to other opinions and debate the pros and cons; and
Parent Three: It got us talking—we discussed things we wouldn't normally discuss. Made us think outside the box.

In Northton, researching practices shaped and re-shaped the *cultural-discursive, material-economic* and *social-political arrangements* not only among teachers and students at Northton, but between teachers, and—even more significantly—between teachers, students and the wider parent community. Researching emerged as a practice-changing practice on a number of levels.

However, the most significant changes both teachers noted involved shifts in students' learning practices and their teaching practices as a result of the transformations to the *cultural-discursive* and *material economic arrangements* of their classrooms. As Paula observed:

> I guess it's just more of a focus, within their reading groups … whatever it is we're focussing on—whether it be the Word Trees or the Reading Olympics or whatever it is, with whatever resource I've found. And every day we have a "Wow" word that we choose out of a jar and that's the word for the day. And throughout the day the children have to find the meaning of it or and then we'll put it up on the wall. It's just fostering it through lots of different ways. It just makes—I'm more conscious of it—even we're reading *Matilda* by Roald Dahl and they're seeing how many "Wow" words there are in that. And just making the kids aware and getting a bit excited about it and saying, oh, isn't that a great word, fantastic, maybe we could use that in our writing and pop it up on the wall. So it's just that whole, not just specifically at language time, but all the time …

Paula's increased consciousness was driven by the methodical and systematic reflective practices that were informing their teaching practices. As Sarah commented:

> By putting it down as I'm going and thinking about what we're using, and evaluating what's working—and whether it's working only in the speaking and listening or whether it is transferring to the writing. … Because I think that, like, there's no point, if things aren't or don't seem to be really gelling in terms of what we're trying then it's either a matter of changing what we're doing slightly or throwing … [it out]… Because there's really not a lot of point putting time and effort into things that don't specifically work for our kids or that we don't see the movement in. …
>
> So it's that continually looking at the samples of work. And like yeah, I'll keep that sample of work from today. I'm also going to photocopy what they do tomorrow to add to it, and then we'll use that *Spice Up Your Writing* pro forma next week and see how that works in terms of looking at their ability to find words within their writing that need to be spiced up and being able to find synonyms for that—starting to create that picture.

Sarah explicates her *doings* as a practitioner-researcher through: documenting ("putting … down" what she was working on); reflecting ("thinking" about her notes); collecting data to inform her pedagogical judgements ("we'll use that *Spice Up Your Writing* pro forma next week and see how that works …"); and thence evaluating the emerging findings ("evaluating what's working …"). In Sarah's lucid explanation, and Paula's before it, we witness two practitioners "rationally examin(ing) their practice on the basis of their own reflective inquiries" (Carr 2007, p. 282). In so doing, they give resonance to a formulation of educational research as a genuinely "practical science", that is, a "practical wisdom", grounded in researcher-practitioners' "notions of deliberation and judgement" (Carr 2007, p. 277).

Practice Architectures that Enable Researching Practice: Westville

The formation of collegial coaching pairs at Westville provided an example of how changed *material-economic arrangements* had supported teachers and executive team members in implementing a new practice of systematically researching an aspect of their individual teaching practice: the practice of *coaching conversations*. The foundation of this new practice was a process of *critically reflecting* on teaching practices, utilising coaching techniques introduced to the school by Wattletree District Office. Importantly, neither the District nor Westville executive team members imposed the process of developing reflecting and researching coaching pairs on staff as a new technology of surveillance or *technē*. Rather, it was clearly negotiated with staff by executive team members in ways that befitted the school's overall disposition of *phronēsis* (or wisdom) as a learning community, characterised by collaborative, collegial and reflexive educational practices. Moreover, the practices of coaching gradually transforming into critically reflecting and then transforming into action research, were embedded in the specific *cultural-discursive, material-economic* and *social-political arrangements* characteristic of Westville and its learning community culture. In other words, there was a *niche* at Westville which was both receptive to—and nurturing of—this more dialogic engagement with teachers' and executive team members' research practices, rather than a more monologic, top-down approach. The practice of coaching conversations had travelled to Westville, persisted there because it found a supportive niche, and been transformed in a sequence of variations into critical reflection and then into action research.

Coaching as an activity arose from a Wattletree District initiative aimed at enhancing teaching practice. As part of this initiative, all teachers at Westville developed individual Professional Learning Plans (PLPs) which were discussed and then signed off by the principal and the senior district consultant. The PLPs were then used by Westville staff as an initial stimulus for identifying an aspect of their individual practice they wished to enhance. Christopher Draper, a senior consultant of Wattletree District, introduced and demonstrated to Westville staff how the use of coaching pairs could enhance one's professional learning and practice. Staff

then engaged in a series of executive-designed professional learning activities at subsequent staff meetings, in which all staff, including teachers and executive team members, reflected individually and then collectively on the strategies the school was employing that were assisting in making a difference to students' learning. In the *social-political dimension*, Westville's employment of staff meetings as a dialogic professional learning space provided an important *niche* in which teachers and the executive team members (who also taught part-time) could identify an aspect of their teaching practice for enhancement and subsequent research in an atmosphere of trust, support, respect and non-judgement.

Importantly, the language used by executive in this process of reflection and negotiation focused on identifying the strengths and assets of current school practices. It emphasised that this site was a learning community, rather than employing terms associated with a deficit model of teaching practice, or a notion of teaching as an individualised and private activity conducted behind closed doors. For example, at one of the initial staff meetings in which explicit reflection on practice was being introduced, the staff watched a DVD about how schools could make a difference to students' learning. Principal Stephanie Marks commented:

> That program was a really great stimulus for us for thinking … The fact is that we saw it made a difference in student learning. Those are the ones that we saw on the DVD and what did you see that was already evident at our school? All of those were the ones that we saw there that we could identify as being present at our school … So those were the ones that we found that we could see are the strengths: so the opportunity to go elsewhere; working with a learning partner to focus on a particular aspect of my teaching … feedback to my teaching; team teaching; targeted collegial conversations; having an observer on a regular basis; coaching conversations, and 'clear the deck'.

A sense of excitement and intellectual engagement was evoked through Stephanie Marks' language, for example, "great stimulus". She emphasised collaboration and collegial *relatings* between executive team members and teachers, noting that the DVD was a "stimulus for us for thinking" (that is, not, "for *you*"). Her list of activities in which the school already engaged stressed the collaborative nature of the *material-economic set-ups* for professional learning existing in the school and the deprivatisation of practice that accompanied these existing practices architectures, for example, "working with a learning partner … team teaching … having an observer on a regular basis". Her language emphasised the pedagogical nature of these arrangements, for example, "feedback to my teaching", and the community of practice in which they were occurring, for example, "targeted collegial conversations … coaching conversations", as opposed to a transmission or top-down notion of teacher learning imposed externally via a fiat of the government, the District or the school executive team.

In terms of staff *relatings*, we observed that the language used by both executive team members and teaching staff throughout staff meetings consistently emphasised coaching as a new practice that needed to be embedded in the existing *niche* of collegial and pedagogical practices of the school. For instance, coaches were described as "learning *partners*" and coaching was "targeted *collegial* conversations" or "coaching *conversations*". Our observations in coaching sessions bore these

claims out. The coaching activities that occurred at Westville were not a one way discussion between an all-knowing coach and a passive 'coachee'. Rather, through professional learning activities such as the one noted in the preceding paragraph, the expectations were clear that partners should coach one another in a democratic, reciprocal relationship. Thus, practice architectures—the *cultural-discursive and material-economic arrangements*—were put in place for a more dialogic approach to the research to be undertaken through coaching.

Coaching as a practice at Westville was very explicitly linked to research practices that were data-driven, deliberate, planned and measurable. Indeed, they were described by one Westville teacher as "good, research-driven practice". Wattletree District's initiatives of coaching and PLPs were two examples of *material-economic set-ups* at district level that were driving an emphasis on reflection in Westville. However, in order to extend teachers and executive team members beyond *critical reflection* into *research* about their practices, a new set of arrangements were gradually introduced, associated with the *sayings, doings* and *relatings* of researching practices.

For instance, after discussing the DVD and allowing time for individual and partner reflection, the staff agreed to go ahead with the *peer coaching* and *action research*ing initiative. Deputy Principal Rose Armano, and Year 5 teacher Diane Adler then demonstrated to the whole staff how a coaching conversation could be conducted, focussing on identifying a particular aspect of their practice teachers wished to research. Rose's questioning gradually supported Diane in reflecting on the research process she could undertake and what kinds of data would be helpful in assisting her to measure progress in her identified area of practice. The conversation ensued thus:

Rose: So where do you think you would go from here? To start that process—if you were going to say "Right. We're going to make a book and start on this tomorrow until the end of the week"? How do you think you would go about it—when, what, where—have you got any ideas that might–?

Diane: … I think I need some more samples of other people in assessments on how they've assessed and questioned which areas they've assessed on—not just in writing but how people assess reading and things like that.

Rose: Okay, so I think we can probably do that. That would be a good place to start. How would you know your program was getting to the stage where you were happy with it and you felt that you had achieved what you were thinking—your thinking is around these challenges? …

Rose: …What sorts of other things could you put in place so that you're moving along that track of getting the ticks or being at a place I think where you're comfortable; where you're proud and happy with what you've done. What sort of perhaps steps along the way could you put into place?

Rose's careful and supportive questioning (for example, "How would you know your program was getting to the stage where you were happy with it?") suggested how spaces for non-judgemental dialogue could be nurtured and recognised Diane's agency and practitioner knowledge. Rose's questions also introduced the idea that

clear measurable *evidence* for improvement in one's practice was critical. At a later part of the same staff meeting, when staff were asked to reflect on the coaching demonstration, a teacher picked up this point, observing:

> I loved the, "How would you know when that's happening?" That was such a powerful question. It really made … Diane think, "Okay, if this is what I want, how am I going to know when I am getting there?" That was a great question, and also saying, "What steps are you going to take?" That was also really powerful—so making her think okay, "This is what I want to do: how am I going to get there?" … It set it down to a really deep level.

Before the demonstration of coaching by Rose and Diane, Principal Stephanie Marks gave very clear directions. Stephanie stressed how existing *sayings* and *doings* at Westville, associated with teachers' professional learning and critical reflection, could support this shift into research. Stephanie stated:

> So, before we start—let's just put it in context—what I want you to do is have a listen to what … Rose's … doing; listen to the questions she's asking; listen to what's working so that you can give her that great feedback when she is finished.

The stress that staff "listen" and provide "great feedback" suggests that existing practice conditions at Westville, that is, the deep imbrication between teachers' practices of *reflection* and *professional learning*, were providing a potentially supportive *niche* in which *researching* as a practice could be taken up.

As the coaching conversations proceeded, there was evidence that the *sayings, doings* and *relatings* associated with coaching and practitioner research were enabling a new set of *cultural-discursive, material-economic* and *social-political arrangements* to emerge. These new arrangements enabled Westville practitioners to engage in "more systematic and self-critical" research practices (Carr 2007, p. 275). These practices travelled from staff meetings into teachers' conversations, into changed classroom practices and subsequently, surfaced in coaching conversations. The extract below captures Marion Volney, a highly experienced and influential classroom teacher, reflecting on the process of identifying an area of practice on which she wished to work. She is speaking with her coaching partner, Rose:

> Well m[y goal] … was very personal and it's still very much a journey that I am on … I guess I couldn't see … how I was going to measure … [my initial goal] … effectively from a school perspective. And so I was talking to … [Westville Year 4 teacher, Marg Thompson] … and she asked me to help her with her goal … I feel I have some knowledge and understanding and ability to do it … Marg wanted to lift the reading levels of children in her class, who needed that extra assistance. And so she came to me and said, "How can I do it?" And … straight away I had ideas that I'd used before. A and that's what made me think, well, we can work together and I can do the same …

Because of the close collaborative relations between teachers at Westville, they were prepared to allow the intersubjective space of the staff meeting to be remoulded. The staff meeting was already a space for *professional learning*; the staff trusted Stephanie and Rose when they remoulded the intersubjective space of the meeting to introduce *coaching conversations*. And their trust also allowed teachers to embrace the further—and riskier—proposal that staff would engage in *practitioner research*. As they explored this new space of possibilities, Marion and Marg were able to identify a mutually agreed area of practitioner research, that is, focussing on

students who were struggling readers. Language like "measure … effectively from a school perspective" suggested Marion's heightened consciousness of the need for a "more systematic" and "self-critical" approach towards researching her practice (Carr 2007, p. 275).

The research Marion and Marg initiated had an impact beyond their own practice. There was evidence that the changes in their practice were facilitating a shift towards a more learning-, child-, and parent-centric approach to teaching reading amongst a number of staff. This shift not only provided crucial academic support for struggling readers, but also appeared to be transforming *relatings* between teachers and parents. This was as a result of at least some parents being brought into a new reading community of practice with their child through the changed emphasis in some classrooms on parent-child reading approaches:

Marion: And so … I did a training session for parents, we invited parents … to come to the session, and Rose [who is Marion's coaching partner and the parent of a struggling reader in Marion's class] … was one of them. And we did video it … And I actually used Rose's little boy … to show the parents how to be able to work with their … children at home. At the same time, both Marg and myself and I think … Fiona [another teacher] … has adopted it too, because Fiona and I work together. So … when I told her what I was doing, she said I think I should do that too, so she's changed.

Marion: So we are implementing it and both Marg and I had done assessment at the end of last term. So we thought we've got two terms to make this shift and it's a valuable amount of time to actually see that shift. And the kids are loving it, we can already see, not all the families have adopted it, not. Some parents still haven't been to a meeting because they couldn't come then and then others said, "Well, I plan to do it", it can go on forever, but it's in progress. It's something that's happening-

Rose: It's in progress at … [Overlapping talk].

Marion: It's not difficult to do, it's very easy with the kids we take—there are two groups in our class and the idea is to work with them 4 days a week. The ideal is for the parents to also work with their own child for 4 days a week, and so we want to measure at the end.

Marion's use of terms such as "assessment at the end of last term" and "we want to measure at the end" connoted a shift in the *cultural-discursive* and *material-economic arrangements* at Westville as the language and activities associated with teacher research emerged in staff and executive team members' coaching conversations. What was also emphasised by both teachers in the coaching conversation was their awareness of the importance of gathering qualitative data from key stakeholders such as parents, as well as baseline quantitative data, such as *Reading Recovery™* assessments undertaken before and after the program. For example, later in the coaching conversation, Rose described the shifts in *relatings* that had occurred between her and her son as he embarked on the structured reading program at school, reinforced by sessions at home:

> [H]e lacked complete confidence in, didn't want to do it. So Mum, teacher and son bashing heads, fairly often … Marion's a good person to have, but this is all about that building the relationship and the success … [H]e's now coming to me, "Mum, can we go read this …" Quite a powerful change!

Subsequent to this feedback, Marion commented in regard to collecting further data:

> And … what I would like to do … maybe towards the end of this term is ask those parents to come back in and we have a little chat about how it's worked for you. So that there's still time for it to work in next term … it's happening for about four children in my class with the parents at the moment, it'll be a little bit more later on, but if that's all that happens where the partnership is involved, it's still better than what was happening before.

At Westville, new practice architectures such as coaching conversations and staff meetings as forums for initiating and reflecting on practitioner research, afforded teachers the time and space to enter the domain of researching-in-practice. The dialectical interplay between practitioner development and practice development generated through these changed practice architectures, enabled teachers to develop and refine their approaches to pedagogical activities, such as the teaching of reading to struggling learners. There were suggestions that researching practice for teachers such as Marion had transformed their lived experience in that site, as well as the lived experience of students and parents, giving teachers intrinsic purchase on the development of their own practices in their own classrooms.

Marion' actions in sourcing reading materials and demonstrating the program to parents and teachers connoted how the practice architectures of researching which underscored Westville's approach to leading, professional learning and teaching had enabled practitioners such as Marion "reflectively to expose and critically revise the presuppositions inherent in their practices" (Carr 2007, p. 280). As such, the research activities constituted a "practice-changing practice" (Kemmis 2007, p. 464), for they supported Marion and Rose as teacher-researchers to "reconstruct their knowledge and understanding of how … [the] … internal *good*" of a practice, that is, supporting reluctant readers to read, could be pursued (Carr 2007, p. 271). We now turn to the vexed practice of the employment of externally-gathered evaluative educational data, to explore further how the pursuit of research as an "internal good" of practice can be enabled for teachers and leaders as researchers (Carr 2007, p. 271).

Practice Architectures that Enable Researching Practice: Hillview School

As noted in Chap. 6, 'Professional learning as practice development', *professional learning dialogue groups* at Hillview had provided a useful catalyst for teachers and executive team members to commence systematic examination and reflection on aspects of classroom practice at the whole school. The collective social projects examined in these focus groups had included improving teacher questioning of students, lifting student engagement in lessons, and integrating technology across

subjects in the classroom. In the example which follows (noted briefly in Chap. 3, 'Ecologies of practices'), the project also included reintegrating the teaching of spelling into Hillview's inquiry approach, as a response to NAPLAN test scores which had revealed a decline in spelling results.

In the past, the school's NAPLAN results had been analysed solely by Kendra Clarke, an executive team member, and the results shared with staff. However, a significant shift to the practice architectures of NAPLAN analysis and subsequent school follow-up had occurred in the past 12 months with Kendra, in consultation with the Principal Bronwyn Harper, forming a 'NAPLAN Focus Group'.

In the Focus Group, staff were asked by Kendra to "analyse the results and come up with the positives about each area and the difficulties that we were experiencing". As a consequence, the formation of the group reshaped the existing practice architectures encountered by the teachers at Hillview. In terms of the *cultural-discursive arrangements* of the group, Kendra noted the aim was to promote "constant dialogue" about the NAPLAN results with an end result being that staff in the focus group would work with other members of their stage to "transfer the information on to them". Despite Kendra's initial stress on the relaxed and cooperative nature of the group, suggested by colloquial phrases such as "a lot of *chat* … We'd have a *chat* about something" (our emphases), her *sayings* also suggested a clear emphasis on process and outcomes, in which teacher learning was the ultimate goal, "We'd have a chat about modelling [classroom strategies]… we'd go back and try a few things, and then we'd come back and share how it went, and then we'd set another goal …".

In terms of the *material-economic arrangements* of group composition, Kendra was strategic in asking for "who I knew I wanted", that is, those teachers she and Bronwyn had identified as "leading thinkers", who, in their eyes had "some understanding already" of an inquiry approach.

In terms of the *social-political arrangements*, despite the initial suggestion of democracy, "anyone who wanted to join it, could join it", Kendra was clearly the authority figure in the focus group, strategically guiding the "chat". However, this role signified a key change from previous practice architectures, whereby Kendra had been the sole gatekeeper of NAPLAN analysis, with her observing, "in previous years I've done it completely on my own". Symbolically, the formation of the NAPLAN Focus Group signalled a shift towards a more collective orchestration of inquiry-in-action and a potential 're-professionalisation' of teachers—for the executive team's actions suggested an emergent trust in teachers' professional capacity to analyse and evaluate the results. As Kendra remarked, "this year I got different groups to analyse the results and come up with the positives about each area and the difficulties that we were experiencing in each area".

It is important not to view this shift in the practice architectures of the focus group in isolation from the larger web of *cultural-discursive, material-economic* and *social-political arrangements* for researching and evaluating classroom practices at Hillview. The NAPLAN Focus Group followed and built on the practice architectures of the professional learning approach adopted in staff meetings, along with previous voluntarily-attended, focus groups, based on identified and interconnected areas of professional learning. In terms of practitioners researching their own

practice, however, the NAPLAN Focus Group also provided a broader range of staff with a dialogic and collaborative set of practices through which to initiate research, along with a new set of research tools by which to begin analysing NAPLAN whole school data (rather than solely, individual teachers' data or data collected at a stage level).

Importantly, the emphasis in the group was not on an instrumentalist-driven approach in which staff had to acquire 'technical expertise' around NAPLAN analysis in order to analyse the results. Rather, the emerging practice architectures enabled the group to model and extend the collaborative approach to inquiry that had been a hallmark of previous focus groups, the conduct of staff meetings, and classroom practice. For these teachers, researching and evaluating practices merged as together they both entered and co-created new practices which explicitly drew the examination of NAPLAN data into teacher inquiry approaches for practice development

In transforming the *language, material* and *relational set-ups* of Hillview to nurture a greater level of systematic self-reflection in relation to NAPLAN results, the initial reaction of some staff had been hostility and contestation. For example, Kendra noted that when Hillview's results began to decline, past practices such as members of the executive team analysing data and then having a staff meeting in which they "threw up the NAPLAN results" were extremely problematic. Staff were "negative and threatening … mostly the younger ones who felt threatened, they hadn't yet learnt to go, 'Well, actually we don't know it all'". Yet this initial response had significantly shifted through a variety of changes in practice architectures, such as those noted above. Moreover, senior staff were willing to model themselves as learners who did not 'know it all'. Kendra noted that:

> [T]here's been a huge shift … and I think it's through the professional dialogue that we've slowly built on … Constant discussions in staff meetings … those like myself or Olivia … [a teacher] … who are perceived as leaders in curriculum will openly say what I'm doing isn't working … that opens conversations in teams …

Our ongoing observations of *staff meetings* that focussed on the teaching of spelling corroborated Kendra's assessment. For example, at the first staff meeting held dealing with the NAPLAN spelling results, Kendra modelled the *inquiry approach* to student learning adopted throughout the school, as she took staff through a discussion of how to deal with the poor spelling results the students had obtained. As noted in Chap. 7, 'Practising leading, practising learning', the discursive emphasis was on *shared responsibility*: "What are *we* doing wrong?" This was echoed in the *material-economic set-ups* of the meeting (staff were asked to group themselves across stages and did so); and the *social-political arrangements* (a variety of staff, both experienced and inexperienced, took turns to lead small group discussion, report back and initiate whole group comments). Teachers were asked to note down on a prepared survey how they taught spelling in their classroom and where they rated themselves in regard to teaching spelling. These rankings were placed on a white board. This could have been seen as an immensely threatening activity and yet the teachers' responses were of amused laughter when they saw how staff had ranked themselves. This activity was followed by an engaged discussion about why

they had placed themselves in certain levels, and then absorption as they read the professional literature sourced by a fellow teacher.

The *researching practices* described in this section account for the changes to the teaching and learning practices we observed in a number of Hillview's classrooms. New arrangements for sharing, critiquing and analysing their own and others' practices afforded teachers the time and space to enter the domain of researching-in-practice. As we observed, the dialectical interplay between practitioner development and practice development generated through changed practice architectures, enabled teachers to develop and refine their approaches to teaching spelling through inquiry. Researching practice transformed their lived experience in that site, giving teachers intrinsic purchase on the development of their practices in their own classrooms.

Researching in Ecologies of Practices

For teachers and leaders in our study sites, the collaborative, critical and systematic self-reflection on classroom practices which they had progressively adopted enabled the practices of researching to form, reform and transform existing practice landscapes. These practices of inquiry and development can be understood in three distinct ways. First, how they—as practices—are connected to each other as they come to exist in sites; second, how the practice architectures in particular sites enable and constrain their enactment; and third, how they are connected to other practices in the Education Complex of Practices—that is, to leading, professional learning, teaching and student learning.

Ecological Connections Between the Practices of Researching, Critically Reflecting and Evaluating

Researching practices cannot be considered without highlighting the interconnections between critically reflecting on, and evaluating practices. *Critically reflecting on practice* as a practice played an important role for the case study schools in laying the foundations for developing and improving teaching practices, and provided the impetus for more developed researching and evaluating practices. *Evaluating* as a practice worked hand-in-hand with the practices of researching and critically reflecting to influence teaching, professional learning and classroom practices in the education landscapes of the schools. Each practice did not occur as a discrete activity in the schools, but appeared with or because of the other. In Northton, action research practices developed because the teachers initially responded to a school-based evaluation of student achievement in NAPLAN. These results led the teachers to critically reflect on their existing practices through deliberate and strategic questioning, and in turn, to use the subsequent answers to challenge, guide

and change their instructional practices in a focused action research project. The projects of critical reflection, evaluation and research at Northton were interrelated and overlapping. In sum, the dynamism of these practices and the possibilities for change were built into the practice architectures of a site such as Northton.

Ecological Connections Between Teachers' Practices of Researching and the Research Practices of the Leading and Learning Project Team

No account of the ecological connections between researching and changing teaching and professional learning practices in our study can overlook the role we played as researchers and critical friends in the case study schools and districts. In the *cultural-discursive dimension*, we periodically provided oral reports on the progress of our research at staff meetings and sought teachers' and executive team members' feedback on their veracity. At the District level, an interim written report on our study was provided to Wattletree District Office as a means of participant checking. Feedback from District personnel working with the case study schools, led us to reflect further on our preliminary findings and to incorporate further questions and observations in our subsequent research with schools. In the *material-economic dimension* of our research practice, we employed a range of activities, including the collection of data through focus groups, interviews, lesson observations and subsequent debriefs with teachers and students.

In terms of the *social-political dimension* of our research, we worked at two levels, that is, practitioners' responses to our research with them; and practitioners' responses to our reflections about their practices. In regard to the former, after observing lessons, we debriefed with teachers, and also held focus groups with students about their learning. The intention was not to critique or evaluate the lessons, but rather to open up a dialogue about both groups' understandings of learning and teaching practices.

In regard to participants' responses to our reflections, we periodically provided oral reports on the progress of our research at staff meetings at the case study schools and sought teachers' and executive feedback on their contents. At Westville, as staff moved from critically reflecting on practices into practitioner research, we took on a more active role as critical friends. We observed paired coaching conversations and subsequently attended staff meetings where teachers and executive team members collectively reflected on the progress of their individual research projects and at a meta-level, how the practices arrangements of coaching may have been enabling and/or constraining the research process. At these meetings, we provided our own reflections on the researching process we were witnessing, which in turn stimulated further staff discussion and reflections, as can be seen in the following extract:

Researcher: But for me I just have one question really about … how sharing what you have done in this forum, how has that worked for you, what have you learnt, just from even this process …

Stephanie: I've already written down a few things just to remind yourself, like group work with … I mean that's something maybe I could be doing more …

Marion: I think it's been great to hear what everyone's doing because I guess for me being a part-timer, I miss out. I'm hearing those things, because I'm here Monday and then I'm gone Tuesday … I'm not normally in staff meetings … But it was just lovely for me to see … what … [other teachers were] … doing.

Marg: [I]t brings you back to thinking, "This is how the kids feel". You've got that little bit of vulnerability thinking, "I'm not sure if I'm doing this so well" or "How can I do this better?" or "Are you going to like my plan: is it okay?" And it just reminds you: the kids feel that on a daily basis, all day … And how important it is … to stop and do this … just that stop and sit and listen and [say] "How are you going?" and "What can I help you with?"

The teachers' reflections on the research they were undertaking and on the feedback we were providing suggests how researching educational praxis occurs in dynamic movements across a research spectrum. Such research ranges from and between various roles ranging from the classic paradigm of twentieth century research, that of the third person "spectator" role; to the second person, "informed interlocutor" subject location, to that which was evoked by the Westville teachers' preceding discussion, that is, a first person, subjectivist "participant" researcher role (Kemmis 2012, p. 896). In this latter subject location, the Westville teachers' discussions powerfully captured a notion of researching practice from an insider, participant perspective, suggested in statements such as, "[I]t brings you back to thinking, this is how the kids feel. You've got that little bit of vulnerability ". Their reflections connote the power of practices of participant researching, which "recognise…, reflect…, respect… and engage…" with Westville teachers' "interpretive categories, their lived realities, and their experience—how they understand themselves, individually and collectively" (Kemmis 2012, p. 893).

Our practices as researchers have been undertaken from the three perspectives of spectator, "informed interlocutor" and participant/co-researcher (Kemmis 2012, p. 896), and have had an impact on our own research practices. Firstly, in methodological terms, we wished that we had video-taped the practices we were observing in staff meetings and classrooms—video records would have given us more comprehensive data about how practices were enmeshed with practice architectures as they unfolded in activity timespace. Secondly, in terms of researching educational praxis, when we began our study, all of us (save one team member who had a previous professional relationship with one of the districts) viewed the practices at our case study sites from a third person objectivist or "spectator" viewpoint. In other words, we utilised our theories of practice architectures and ecologies of practices as frameworks for understanding educational praxis as external to us. Over the 4 years we spent with the schools (3 years with Southwood), our role as researchers in the sites gradually underwent a shift from a spectator perspective to a far more collaborative role, as we came to know people in our case study schools and dis-

tricts, and as they came to know and trust us. By the end of the funding period for the *Leading and Learning* study, and in the subsequent year, we were drawn into teachers' and leaders' researching practices at Westville and Northton as they turned to us as 'experts' in the field who could help to shape and influence their developing practices of researching, that is, the very practices we were studying.

As relational trust and confidence grew between ourselves and the people in the schools and districts, we increasingly moved into a second-person relationship, that is, research *into* educational praxis (Kemmis 2012, p. 896), for example, through our role as "interlocutors engaging in a discussion" with our participants, illustrated by the coaching conversations and Westville's staff meetings as described above. Thirdly, we also shifted into a co-researcher role in both Northton and Westville schools. For example, when we gave Westville staff members flip-cameras to record their coaching conversations about their action research projects, this had a number of flow-on effects. It allowed the teachers and executive team members to view their practices in a different way: they became part of our research practices and we became part of theirs. This opening of communicative space between us meant that we felt able to ask the school staff to reflect on our researching practices in their staff meetings.

The three perspectives we have described in this chapter can be "complementary" for they "allow us to see ourselves as formed by a … collective, history-making human-social praxis" (Kemmis 2012, p. 903). Furthermore, it would be a mistake to view our own practices as researchers as locked into static categories of "spectator", "wise interlocutor" or "participant". Instead, we have attempted to illustrate above, the genuine fluidity of movement between these positions; the "stereoscopic" vision these various perspectives have afforded us (Kemmis 2012, p. 901); and the impact on ourselves as researchers in terms of the development of our theories of practice, and our methodological approaches to studying practices. It is in this sense that we would indeed view practices of researching as a "practice-changing practice" (Kemmis 2007).

The Practices of Researching Shaping Leading Practices

In each of the school cases, different influences and histories converged, producing local effects in the practices of researching we found in the schools. Some of these practices had entered the schools previously through their involvement in other projects in the districts. For example, a number of executive team members and teachers leading the design of the researching projects at Northton, Westville and Hillview had previously participated in Wattletree District's action learning project, *Pedagogies for Literacy*. Practices encountered in this project were taken up in subsequent teaching practices via the *cultural-discursive arrangements* utilised by leaders and teachers—for example, the employment of the language of inquiry, collaborative analytic dialogues, questioning and reflection. They moved into the *material-economic set-ups* we observed—for example, videoing teaching; sharing and critiquing classroom lessons; visiting one another's classrooms; providing professional

literature to inform teachers' practices; debriefing with visiting researchers after teaching a lesson; using staff notice boards to focus on sharing practice. They were translated into the *social-political set-ups* we observed—for example, peer mentoring; and the rotation of teachers so that all of them led professional learning sessions in their own classrooms. As the accounts we have given demonstrate, these influences played out differently in the varying projects in the different schools, but ultimately they were connected ecologically to practices of researching (including critically reflecting and evaluating) encountered at other times and places. They did not enter the new sites as abstract, general or uniform practices, but as practices which "travelled" into the sites and were subsequently "translated" over time (Wilkinson et al. 2013), characterised by new purposes, new practitioners and new locations.

Researching (Critically Reflecting and Evaluating) for—and as—Professional Learning

In relation to critical reflection and evaluation as practices of inquiry, the Northton *action research inquiry project* was at least partially initiated in recognition that NAPLAN results, along with teachers' own assessments and data, had revealed a relatively impoverished vocabulary amongst students. Westville staff opted to use *coaching* as one means by which to systematically inquire into, reflect on and research their individual teaching practices, forming a foundation for further professional learning and practice development and the initiation of *action research projects* by staff. In the third instance, the use of NAPLAN results as an evaluative tool to commence Hillview's *inquiry into their spelling practice*, revealed how such practices were assisting the re-shaping of practitioner research into classroom practices.

These researching practices were utilised in all three schools in combination with a range of pre-existing practices of research, critical reflection and evaluation embedded in the sites. At Northton, the practice of '*classroom walkthroughs*'—in which teachers entered each other's rooms to view and discuss each other's approaches to teaching Literacy—was initiated by the Deputy Principal to encourage the deprivatisation of teaching. Westville employed *staff meetings* to demonstrate and analyse an aspect of classroom practice that had worked for them, and which had arisen out of their professional learning focus. At Hillview, teachers who taught the same year levels were timetabled for *simultaneous release time* in order to plan units of work together, jointly craft assessment items and peer mark assessments in order to reflect on what had worked well and what needed to improve. In this school, these practices emerged from the development of a foundation of inquiry laid down over time to enable what the Principal described as a "mindful school working through a thinking curriculum". These practices of inquiry were named as practices which continued to enable teachers in these schools "to just keep rethinking ourselves" as described by one of the principals—an aspiration explicated in each site.

Researching Shaping Changes to Teaching Practices

Researching, critically reflecting and evaluating as systemic practices can impact on classroom teaching in deleterious ways (for example, 'teaching to the test'). What we have attempted to trace in this chapter, however, is how systematic and interconnected orchestration of the practices of researching (including critically reflecting and evaluating) can open up intersubjective spaces in which rich classroom practices and enhanced student practices can evolve. Each school had a clear sense of an overall project that underpinned collective school practices, such as *enriching vocabulary* (Northton), *student-focused learning* (Westville), or *inquiry learning* (Hillview). Underpinning each site was the sense in which researching one's practices entailed researching one's individual and collective *praxis* from a "practitioner perspective", that is, "re-orienting oneself in the *practice* of the practice, re-orienting one's *understanding* of the practice, and re-orienting the *conditions* under which one practices" (Kemmis 2012, p. 897, emphases in original). The ecological connections between leading, professional learning, teaching, learning and researching in each site created the practice conditions in which educators were located, not as "detached spectators of their own practices", but "responsible" for such practices, both as the "authors" of the practices, and thus, of their "consequences" (Kemmis 2012, p. 897). The individual and collective agency thus engendered was a powerful means by which practitioners and leaders were enabled to utilise evaluative tools such as NAPLAN in ways which positively transformed the conditions under which they and their students practised.

Researching to Improve Student Learning Practices

The overarching goal of all the researching practices described in this chapter was to improve student learning practices. Teachers acknowledged that starting by collecting "base-line data" was a critical point for "developing student learning". As an example, at the beginning of the process of critical reflection through *coaching conversations*, Westville Year 3 teacher, Bonnie Tabor, described a goal of her professional learning plan:

> Oscar interrupts all the time and—I'm just saying "Oscar, you're interrupting, remember the rule is, you have to put your hand up. If you do that, you earn a point". It just takes a lot of my time and I'm constantly thinking about him and trying to prevent a meltdown… And it takes away from the other kids… that's an area that I do want to improve. So what I've come up with, with Stephanie [observing teaching as initial data] and speaking with Kathy [Oscar's previous teacher, to understand the strategies she used to manage Oscar] to then maybe to refocus what we're doing with him and how we can be harsh but fair with him…. So I guess just managing him better [to use social stories to teach him new rules] is my goal.

Here, Bonnie outlined her initial goal to better manage Oscar, who continually disrupted the learning of the whole class. After only 2 months, her practice had

changed as a result of the coaching conversations she experienced with Stephanie; as indicated in this next excerpt:

> My professional learning plan has benefitted a lot of students, I think. [It]'s helped the kids that are low in maths that are getting help from Frances [support teacher] because we're all managing Oscar better and he's independent in what he's doing.

For teachers like Bonnie, practices such as coaching and conducting action research had a direct connection to her practices of teaching and the students' practices of learning experienced in her local site. Coaching conversations, for instance, changed the practice architectures in the school. This, in turn, enabled teachers to think about teaching to improve student learning in a regular, critical and systematic fashion. As illustrated in the preceding example, teachers have an opportunity, through research, to develop their capacity to nurture their praxis, through interacting with other educators to change what they do in order to achieve their ultimate goal of improving student learning. In this way, *praxis*, reflection and student learning are inextricably and ecologically linked.

Site Based Education Development: Practices of Researching Fostering a Praxis Orientation

As shown in the previous sections, practices of research emerged as projects that enabled an ongoing, dynamic process of educational renewal in the schools we studied. Particular practice architectures came to exist in Northton, Westville and Hillview which enabled teachers, in varying ways, to continuously consider and reconsider their teaching actions, and to problematise, question and analyse them in purposeful, conscious and deliberate ways (van Manen 1995). The teachers and leaders at the three schools entered projects which formed, informed and transformed their teaching. As reflective practitioners (Dewey 1933; Porter and Brophy 1988; Schön 1983), they co-produced site based practices which responded to their individual and local needs and circumstances in ways which assembled the individual and collective *cultural-discursive, material-economic* and *social-political arrangements* required to reframe and progress teaching action in an educationally sound and morally-informed manner.

This practice reflects a disposition towards what we described in Chap. 2, 'Praxis, practice and practice architectures' as a *praxis*-orientation (Edwards-Groves 2008). This disposition of *phronēsis*—to act in a morally-committed way—developed through public discourses in public spheres in collaborative research and reflection in the schools. In turn, it enabled these teachers and leaders to reflect on and to shape and re-shape their practices. As they described their practices, teachers and leaders in our study, almost without exception although to varying degrees, oriented to "empowering others", "sharing responsibility", "developing respectful relationships", "taking ownership", "moral obligation", "moral literacies", "collaboration and communication", "meaningful learning", "learning community philosophy",

being "student- focused", and "collegiality". For these educators, participating in particular practices of researching created a particular landscape for *praxis* to be nurtured in each site. As Bronwyn Harper, Principal of Hillview School put it, this was "built layer on layer on layer". The commitment to, and conduct of, *praxis* is formed within a practice landscape constituted by practice architectures which enable the development of teachers' and leaders' capacity to explicate, describe, reframe and adjust classroom and school actions and interactions. As we observed over more than 4 years, these practices enabled the emergence of new conditions for new kinds of conduct of teaching and learning. Taken to the critical level, research practices and the practice architectures that supported them, enabled the teachers and leaders to look back on pedagogical events, analyse them, make judgments about them and transform teaching and leading in the light of the realities of their own context, current research, and ethically informed knowledge (Edwards-Groves 1998, 2003; Valli 1997). Not surprisingly therefore, these practices now play a central role in the practice landscapes of these schools.

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Chapter 9
Revitalising Education: Site Based Education Development

Introduction

In this final chapter we briefly revisit the key themes and ideas of the book before picking up the argument begun in Chap. 1 (and illustrated through empirical examples through the book): that is, (1) *that education always occurs in local sites and that changing education, no matter how it is imposed or encouraged, always sets in train processes of* '*site based education development*'; and (2) that a theoretical, practical and critical orientation towards site based education development can serve as the vehicle for *revitalising education* and re-invigorating the students, teachers and school and system leaders who live and work together in the communicative spaces of education.

Foundational to the arguments of this book is the notion that there is a key difference between *education* and *schooling*, and the muddling of these two terms has sometimes undermined education as it occurs in schools as institutions. As we argued in Chap. 2, education has a dual purpose, namely, developing individual students and, simultaneously, developing a world worth living in. Nevertheless, education is often realised through schooling, so we have focussed on the educational practices of schools and classrooms, and the development of the practices to be found there. To bring about changes in schools requires change in the interdependent practices that together constitute what we have called 'the Education Complex' of practices, namely, student learning, teaching, professional learning, leading, and researching.

In Chaps. 4–8, we examined instances of each of these practices in turn, to show how the *sayings*, *doings* and *relatings* are bundled together in *projects*, and how practices are always enmeshed with *practice architectures* that make these projects possible: specific *cultural-discursive*, *material-economic* and *social-political arrangements* that are found in or brought to the local sites where the practice takes place. We also examined how these practices are sometimes interdependent with others in the Education Complex, forming specific local, site based connections between practices—between student learning and teaching, say, or between researching and professional learning, or between professional learning and teaching. These local interdependencies are arrayed in what we have called *ecologies of practices*—relationships not (or not only) between *participants* in practices, but relationships in which *the practices themselves* are interdependent.

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In order to better understand the nature of education in schools, and how education can be transformed, we adopted and developed a *practice perspective* on education. We have explored how the *sayings*, *doings* and *relatings* of the practices of education take place in *intersubjective spaces* composed of overlapping *semantic space*, *physical space-time*, and *social space*. These intersubjective spaces are opened up as the practices are practised by the *activity timespace* (Schatzki 2010) of practising. The activity timespace of practices unfolds and enmeshes practices and practitioners with arrangements that are found in or brought to sites—as the *sayings*, *doings* and *relatings* (respectively) enmesh with the *cultural discursive*, *material-economic*, and *social-political arrangements* in the site. When some participants in a site (students in a classroom, for example) encounter the *sayings*, *doings* and *relatings* of another participant (for example, a teacher) who is enacting a practice (for example, teaching), they encounter those sayings, doings and relatings as *practice architectures* (composed of arrangements) that enable and constrain *their own* practices (for example, the students' learning). The teacher's sayings, doings and relatings occur together, as a conjoint whole, simultaneously opening *semantic space*, *physical space-time* and *social space* in the intersubjective space the teacher and students share. From the students' perspective, they happen as a single, composite, phenomenologically unified practice architecture. From the teacher's perspective, they are unified in the *project* of the practice—a telos or purpose. They are bound together in the project as what the teacher intends to do at that moment.

Our theory of education, practice and practice architectures (introduced in Chap. 2) are based on the perspective of *site ontologies*: the view that practices like education occur in sites, amid particular kinds of arrangements to be found there. The notion of the site is *theoretically* significant, but it is also significant *practically* (in terms of how we think about what we should do in the world) and *politically* (in terms of what kind of world we want to live in). Thinking carefully about sites as the places where practices of education actually unfold has led us towards a notion of *site based education development*, by which we mean the development of the practices and practice architectures of education in every site in which education is practised. Education always occurs within particular sites, and changing education, no matter how it is imposed or encouraged, must always set in train processes of local, *site based education development* if change is to be effected and secured. We think that the notion of site based education is especially important with the advent of standardised curricula, professional teaching standards, and high-stakes external assessments. Some transformations in education can be achieved through transforming these standardised instruments: they operate as practice architectures that enable and constrain education and educational practice, but even these standardised instruments require local responsiveness. They necessarily imply that site based education development will occur so they connect with the different kinds of students, teachers, leaders and communities to be found at each local site. Site based education development has the potential to be a powerful vehicle for *revitalising education* and re-invigorating educational practices and practitioners. Now we have signalled this key point, we will briefly revisit the key ideas from the sites before we interrogate the notion of site based educational development more rigorously.

Some Key Findings

The empirical work of the *Leading and Learning* project provides practical insights into the ways in which educational happenings come to be at and in sites. We are now able to make practical statements about the life of particular practices within the Educational Complex: student learning, teaching, professional learning, leading, and researching. In Chaps. 4–8, we have been able to demonstrate the ways in which these practices are ecologically connected and the ways in which, together, they give rise to a specific educational life as they respond to the particularities of the sites within which they are practised.

In the case of the practice of *student learning*, we have shown how students are *stirred in* to *practices*—by being stirred in to new *language-games*, *activities*, and *ways of relating to other people and the world*. We argued that their learning could be understood in terms of *coming to know how to go on in practices*—or, more concisely, *being initiated into practices*. We have noted that students have been able to explicitly name the learning projects and activities they were engaged in and, identify how living through these projects and activities (like inquiry learning, shared talk, co-constructed knowledge) helped them to practise their learning.

In the case of the practice of *teaching* we have shown how teaching responds to specific school circumstances, creating opportunities for teachers and students to co-produce learning. We have seen evidence of how practices of teaching have developed in response to needs, circumstances and opportunities at specific school sites—for example, responding to poor NAPLAN (National Assessment Program in Literacy and Numeracy) results in spelling by developing a new approach to teaching spelling using the inquiry approach favoured by the school—*inquiry spelling*. And we saw how teaching *initiated students into learning*—learning both *substantive practices* (new practices like writing expository texts, for example) and *learning practices* (practices by which students learned, like collaboration in group work, for example).

In the case of professional learning we have shown how teachers and leaders fostered the development of a *culture of care and collaboration*, in which teachers exercise *agentic collegial responsibility*, and in which they *deprivatised their practice* to learn from one another as they worked together on particular educational projects. In these collaborative projects of teacher professional learning, teachers and leaders reflected on their shared histories, and recognised the importance and contributions of the people in the site to the success of shared professional learning, shared practice development, and school transformation.

In the case of *leading*, we saw that leading can be a *practice-changing practice* that changes practices of teaching, student learning, professional learning and researching by changing the practice architectures that hold those practices in place. Teachers and teacher leaders in the schools we studied challenged common understandings of the ways practices in a site can be transformed by creating spaces for talking to learn which connect teacher capacity building with student leadership and learning. We saw how several schools we studied acknowledged and respected positional leading while also creating conditions under which people in the school could take *shared responsibility* for the life and work of the school.

In the case of practices of *researching*, which we also described as a practice-changing practice, we saw staff in schools assembling common understandings about, and shared practices of, being and becoming a learning community. We saw how the practices of researching, critically reflecting and evaluating could become more inclusive to embrace parents, teachers, students and university researchers as people with multiple perspectives to bring to the process of developing education at each site. The communicative spaces engendered by shared reflection and shared research fostered productive conversations between school and community, school and university, parents and teachers, teachers and teachers, parents and students, teachers and students, and students and students.

We have concluded, from our explorations of how each of these broad practices (student learning, teaching, professional learning, leading, and researching) can exist in interdependent relationships with the others—in locally particular relationships in particular local sites—that all have powerful, constructive roles to play in the process of site based education development.

Site Based Educational Development

We begin with an idea that seems a truism but turns out not to be. It is that education—life, in fact—always happens *at* and *in* particular sites, and that changing education means changing the things that happen *at* and *in* particular sites.

For many decades, educational reformers have offered teachers, schools, school leaders, students and communities general plans or proposals for 'doing education' differently. An example is the national curriculum being implemented around Australia from 2012 (although at different paces and in somewhat different forms in different states and territories in Australia). It is widely acknowledged, of course, that such a general plan or proposal must at some point engage with the particulars of the diverse sites where education is actually done. In much of Europe, North America and Australasia in the 1970s and '80s, there was much talk about the professionalism of teachers residing, at least in part, in their capacities to interpret state syllabi to meet local needs and circumstances. The view was that it took a professional teacher to make a reformer's plan come to life in the practices of teaching and learning in a particular school and community: a recognition that plans don't come to life by themselves. This view acknowledged that schools and communities were not all the same; that they were not equally hospitable to reformers' plans. Thus, it was argued, teachers would need to adapt (as well as interpret) reformers' plans if they were to realise in practice what the plans intended. This view regarded teachers and the developers of a new curriculum, for instance, as being 'professionals' who 'spoke the same language'.

During the 1980s, however, there was also a strand in the North American literature on innovation that was interested in the *fidelity* of particular implementations of innovations. 'Fidelity' was regarded as a measure of the degree to which curriculum developers' proposals were being implemented as the developers envisaged. Low

fidelity was when implementers distorted developers' plans; high fidelity was when implementers complied with developers' plans. Of course some in the literature also recognised that at the highest levels of fidelity, implementers developed such fluency with developers' proposals that they were able not only to adopt but to adapt them to meet local needs and circumstances. The contradiction inherent in this understanding of innovation seemed to pass more or less unnoticed at the time: both the lowest fidelity and the highest fidelity consisted in varying developers' proposals rather than slavishly complying with them.

Lawrence Stenhouse (1975) was acutely aware that a curriculum is not a *blueprint* but a *proposal* for action. He was strongly of the view that teachers were, or should be, "extended professionals" who would make autonomous and responsible practical decisions about whether and how a curriculum proposal should or could be implemented in their own school or classroom. As extended professionals, teachers would never be actors who did no more than follow a curriculum developer's script, as if the curriculum developer were a playwright whose curriculum was a world that could be enacted and brought into being by dictating the performances of teachers and students[1]. By contrast, Stenhouse knew that teachers and students encountered one another in the real world, not just imagined worlds. The curriculum project he led, *The Humanities Curriculum Project* (HCP), was a response to the raising of the school leaving age in England and Wales, and to the needs of students who might not find nourishment in the academic curriculum of the upper secondary school of the late 1960s and early 1970s. He proposed that such students be offered the opportunity to explore and debate controversial issues (like euthanasia or racism), using a variety of sources (of variable reliability) to inform their views. The HCP teacher was to be a "neutral chairperson" helping the students to use and test the views offered by the sources, and to engage in civil argument about the issues. Teachers were to ensure that the curriculum was delivered in a manner that was responsive to the site and, in particular, to the students in the class. Stenhouse expected teachers and students to make the discussion of controversial issues in their own way, for their own circumstances, not to follow a script dictating what views on the issues were or were not legitimate.

Somehow, however, today we seem to have lost sight of—or lost faith in—Stenhouse's vision. We think that what *ought* to be done in education is what the curriculum prescribes, not what the pedagogical situation demands. In Europe, pedagogy is frequently conceptualised in terms of a 'pedagogical triangle' (Ponte and Ax 2009) in which considerations about a pedagogue (or 'upbringer') bringing up another person must be weighed in relation to considerations about the person being brought up (the 'upbringee') and in relation to considerations about the social

[1] It is as if some of the curriculum developers of the 1970s and '80s, especially in the US, saw themselves as gods animating the worlds they imagined. Perhaps when they thought of the importance of their words, they had in mind the opening verse of the St James translation of the Gospel according to St John, "In the beginning was the Word, and the Word was with God, and the Word was God." Perhaps they thought they occupied a similar location in relation to the teachers and students whose work they sought to form. In any case (to switch religions), like Icarus, they flew too close to the Sun.

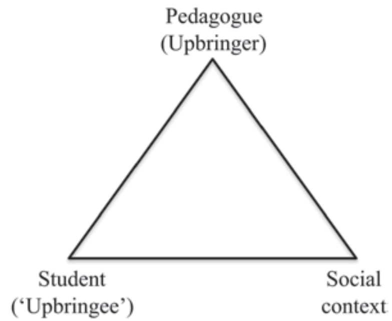

Fig. 9.1 The pedagogical triangle. (after Ponte and Ax 2009)

context in which they find themselves—both the immediate context, like a classroom, and the wider context of the society and world in which they find themselves (see Fig. 9.1).

While it may rely for some things, like planning a lesson, on *technical reasoning* (pursuing known ends via known means; following rules), pedagogical action also requires *practical reasoning* (Aristotle 2003; Schwab 1969; Reid 1978; Carr and Kemmis 1986) about what to do—it addresses the *particulars* of a pedagogical situation. This means acting in response to situations as they unfold, pursuing multiple ends, weighing what aspects of a situation to respond to, and sometimes pursuing unexpected opportunities or responding to unexpected threats. Using the mnemonic of the pedagogical triangle, the teacher (pedagogue) constantly asks:

- In relation to the *student* ('upbringee'): What is in the interests of the student/s at this moment?
- In relation to the *social* context: What is it right to do at this moment in this situation (here in the classroom, school and community, and at this moment in history)?
- In relation to *him/herself as a pedagogue* ('upbringer'): What should I be thinking about and doing, and how should I be relating to others and the world at the moment?

From the perspective of the European tradition of pedagogy, pedagogical action always involves mediating between a plan or proposal, which one might try to enact on the basis of technical reasoning alone, and the concrete and immediate particularity of the situation in which the pedagogue finds her- or himself. Pedagogical action cannot occur *without* the pedagogue's interpretation of the situation and without their adapting the proposed action to the particular needs and circumstances of the others present in each historical moment—each 'here and now'. It requires that the teacher or pedagogue make the practical leap *from* the plan *into* the particularity of the situation: the leap from *an intention* into *history*—the historically-formed situation in this particular place and time, under the particular circumstances of the continuous present, unfolding and changing as it happens.

As she enters that historical moment, the pedagogue does not forget the plan or the intention about what was to be done in the situation; she inhales a whole range of new information about what can and can't be done given the exigencies of the

situation—given, for example, the needs and perspectives of all of the other people involved (whether in the room or beyond it) and the resources actually available at that moment. Metaphorically, the teacher as pedagogue is no longer *thinking about* swimming across the river but *in the river*, swimming, responding to the current, avoiding obstacles, and taking account of the locations and trajectories of other swimmers, for example. The pedagogue is no longer thinking about how to intervene in the history of the situation but actually intervening, actually in the history: *in* that history, one might say, and no longer *above* history in the privileged position of the observer or the outsider—or the planner. At this moment, the pedagogue enters the realm of action—actions whose consequences cannot always be known. In this realm, as Aristotle remarked (in the Ethics 2003, p. 120), quoting the poet Agathon, the educator knows that

> For one thing is denied even to God:
> To make what has been done undone again.

As the educator steps into the world of action, and, by doing so, stepping into history, she becomes enmeshed with the unruly life of the site—an unruliness that escapes technical calculation. And as she steps into the life of the site, to enact education in the best way she can for these students, this school, and this community, she begins to act as an *educator*—as only an educator can act. She begins to act *educationally*, in the way that only a person initiating students into practices would act, and when she initiates them into these practices to in a way intended to realise both the good for each student and the good for the human community.

In his *Meditations*, Stoic philosopher and Roman Emperor (161–180AD) Marcus Aurelius (121-160AD) wrote:

> Each of your actions which is not related either distantly or immediately to an end which serves the common good tears life apart, and prevents it from being one. It is a seditious act, as, when, within a nation, someone separates his party from the concordant unity of all citizens. (*Meditations*, IX, 23, 2; cited in Hadot 2001, p. 214)

It is this sense, the sense that Hadot (2001, p. 214) described as Marcus's "City of the World", that we can think about the good of the human community, even though we are aware—as were the ancients—that what constitutes the good for humankind is always contested (as we noted in Chap. 2). Despite this contestation, human beings have a shared fate, living on a shared planet. In a similar spirit to Marcus's City of the World, Hadot (2001, p. 192) quotes Cicero (*On Duties*, III, 12, 51–53):

> You must care for the salvation of all human beings, and serve the human community. Nature has fixed as a principle that your particular usefulness should be the common usefulness; and, reciprocally, that the common usefulness should be your particular usefulness … You must remember that there is a community between all human beings, which has been formed by Nature herself.

In Chap. 2, we defined education as the process by which children, young people and adults are initiated into forms of understanding, modes of action, and ways of relating to one another and the world, that foster (respectively) individual and collective self-expression, individual and collective self-development and individual and collective self-determination, and that are, in these senses, oriented towards the good for each person and the good for humankind. When educators act *educationally*,

they aim to enact this process in a site—in a classroom, or a school, or anywhere at all where education takes place. When educators think together about *how best* to do this, in a particular school, for particular students and a particular community, they are engaged in *site based education development*.

What is Site Based Education Development?

Schatzki (2000) proposes that social existence and the lives of humans are connected to each other through the "intelligibility that governs what they do, the actions they perform, and the layouts of, as well as, connections among the material settings in which they proceed" (p. 21). Life unfolds in social fields where particular practice traditions (ways of thinking, doing things, and relating to people and things) shape—prefiguring without predetermining—how social life unfolds. This shaping is not just a product of the internal dynamics of the practice (the ways practitioners speak and think, do things, and relate to other people and objects) but also a product of the sites where practices take place. Practices are embedded in sites in what Schatzki (2012) calls *practice-arrangement bundles*. His (2002) notion of *site ontologies* draws attention to the historical and ontological situatedness of practices: how practices unfold over time in ways that are prefigured and transformed *through* and *in* interactions that take place at particular sites. As we have argued, practices are enmeshed with the practice architectures at any site, so the sayings of a practice draw on the cultural-*discursive arrangements* found in or brought to the site, the *doings* of the practice draw on the *material-economic arrangements* found in or brought to the site, and the *relatings* of the practice draw on the *social-political arrangements* found in or brought to the site. These arrangements provide the resources that make the practice possible; they prefigure practices without predetermining them.

This ontological view also accords with the ancient Stoic view of the way human beings are enmeshed in the world, in a 'Nature' that is everything that exists, through all time, and within which human beings strive—for their short chapter in the long history of the Universe. Hadot (2001, p. 143) quotes the *Manual* of the Stoic philosopher Epictetus (55–135AD), as written down by his student Arrian (86-160AD),

> Do not seek for things to happen the way you want them to; rather, wish that what happens happen the way it happens: then you will be happy.

In the same place, Hadot also quotes Marcus Aurelius on the same theme:

> All that is in accord with you is in accord with me, O World! Nothing which occurs at the right time for you comes too soon or too late for me. All that your seasons produce, O Nature, is fruit for me. It is from you that all things come; all things are within you, and all things move toward you.

Our ontological perspective understands the way not only *people* but also *practices* are enmeshed with the world—enmeshed with *practice architectures* and with *sites*—in a similar way: at every moment when the teachers or leaders or students or

District office personnel in our study acted, they did so in a moment that had been prepared by the whole history of the world and the whole history of the Universe—and then they did whatever they did. And when they acted, they were enmeshed with what was around them in the site at that moment (including such things as messages from far away, or digital connections with distant web sites, or state policies they had in mind). By their action, they stepped into the history of the universe and they left an indelible trace on the history of the universe—no matter how fast that trace perished in the minds of any of the people their action involved or affected.

Our ontological perspective has led us to see the development of education not as something abstract, or as something that can be done only in a general way. We see the development of education, as it actually happens, as something that necessarily happens at a local site, involving particular people and things to be found there. It is education in this site, this local 'here and now' that must be 'developed'. By 'developed' (a very Modern, Enlightenment word) here, we mean no more than to be responsive to the site and the people (especially students) in it, though we also mean (by cleaving to the word 'education') to be responsive to some idea of the good of the human community.

What we mean by *site based education development*, then, is the development of education and educational practices to be appropriately and effectively responsive to the local needs, opportunities and circumstances of students, schools and communities in diverse and different local situations—at each local site. The notion of site based educational development has precursors. In Sweden, for example, 'local development work in schools' or (in Swedish) *lokalt utvecklingsarbete* (Hardy et al. 2010), was the first stage in the process of decentralising schooling in Sweden from 1984. According to this notion, schools and local municipalities were to respond to local needs and circumstances—for example, the striking differences between the north and south of Sweden that had previously been overlooked in (southern-dominated) curriculum materials. A similar process occurred in Finland from 1980, described by Johnsson (2006) as the period of 'delegation and deregulation' when many decisions about curriculum and teaching were delegated to the municipal level. In Australia, the 1980s notion of 'school-based curriculum development' served similar intentions of local responsiveness to education.

We take the view that educational work, properly speaking—that is, educational practice aimed at being educational, not just a performance of the routines of schooling—cannot be other than closely responsive to the particular needs and circumstances of students and teachers in diverse *sites*. Schooling, by contrast, proceeds without this responsiveness; it retails content to all the students for whom it is prescribed. Curriculum makers wholesale 'frozen' knowledge, skills and values to teachers: knowledge frozen into the language and texts of curricula, skills frozen into suggested activities and performances of teaching and learning; and values frozen into the disciplining relationships of compliance to authority and assessment. By focusing so intently on the standardisation of what is intended to be educational for students, in fact curriculum makers and the policy makers who direct them destroy what is at the heart of education: the pedagogical triangle that connects a student, a teacher, and a social context—the here and now of the classroom, the school, the community and the world at this moment in history.

Our empirical work has clearly demonstrated that education cannot proceed without engaging students' and teachers' existing forms of understanding, modes of action and ways of relating to one another, as the teachers work to engage and initiate students into new forms of understanding (sayings), new modes of action (doings) and new ways of relating to others and the world (relatings)—that is, new practices that engage students with their worlds in new ways, so they can live different and richer lives. To return to our encapsulation of the double purpose of education, education aims to initiate students into forms of understanding, ways of acting and modes of relating to others and the world so they can *live well in a world worth living in*. And this means, as our empirical evidence has shown, reaching out to engage diverse and different students on the basis of their existing knowledge, skills and values, as these have been formed and prefigured by the practice architectures in their local schools and families and communities. Their schools and communities are sites shaped by local languages and cultures that constitute the cultural-discursive resources of a school, a community and a region; by local material conditions and set-ups that constitute its material-economic; and by local social conditions that constitute its social-political resources. By initiating students into new practices—new bundles of knowledge, skills and values—teachers change the living resources of the school, the community and the region. In this way, education serves not just the students, taken one by one, but also serves their community by enriching the language spoken here and our local culture (*sayings*), the 'ways we do things around here' (*doings*) and our politics and society (*relatings*), and the practice architectures that hold all of these in place.

Site based education development creates the possibility of opening *communicative spaces* for the play of educational ideas and for innovation in educational practices in ways that are responsive to the diverse needs and circumstances that exist in different sites—each unique in its particular local combination of *cultural-discursive*, *material-economic* and *social-political* arrangements. According to Habermas (1996), communicative spaces foster communicative freedom among participants, which in turn engenders communicative power and legitimacy for the ideas and practices they develop through their communicative action (Kemmis 2001; Kemmis and McTaggart 2005). To the extent that it creates such communicative spaces, site based education development gives form and substance to the notion of the teacher as an 'extended professional' and researcher (Stenhouse 1975), and as an 'activist professional' (Groundwater-Smith and Mockler 2009; Sachs 2000, 2003) who does *educational work* aimed at the good for each student and the good for humankind in the classroom, school, community and beyond.

To do this kind of educational work requires that teachers, as individual professionals and collectively as a profession, be expert in site based education development; that is, that they be expert in interpreting and adapting national curricula and educational policies in order that the educational encounters they arrange will engage and develop their particular students' understandings of, modes of acting in, and ways of relating to their communities and the world. As we have said, the *site* –a classroom in a school in its community, for example—is always *the existential*

and ontological given in education. It is the place where things happen—where people meet and engage with one another in practice amid the practice architectures that make those practices possible. The site of a practice is the phenomenological reality that always and necessarily escapes standardisation in curricula, standards, assessments and policies. The site is not only a matter of happenstance (where practices happen to take place and where things happen to be arranged as they are), nor only because the site is the specific location in which participants' practical deliberation and their practical action takes place. The 'site' is also crucial *theoretically*—to be understood in existential and ontological terms as an actual and particular place where things happen, not just as a location in an abstract and universal matrix of space-time.

Educators and educational researchers who want to understand and enact education must engage with educational practices and the practice architectures with which they are enmeshed in sites. Educational practice and educational research either serve to reproduce the practices, practice architectures, practice landscapes and practice traditions of a site or, alternatively, they assist in the interrogation and transformation of these things. Educational practice and research can assist in the transformation of education through a deconstruction and reconstruction (transformation) of existing patterns of *sayings, doings* and *relatings*, and the existing practice architectures that hold them in place (existing cultural-discursive, material-economic and social-political arrangements). In such ways, educators and educational researchers recognise that education is a practice that is both:

Discursively formed and socially situated [and] can only be learned by acquiring the largely unarticulated and usually tacit body of practical knowledge and understanding endemic to the social context within which educational practices are conducted. (Carr 2007, p. 276)

Site based education development requires critical and self-critical inquiry through which initial understandings of what participants are doing is reflectively developed, refined and transformed (Carr 2007). Research *for* and the practice *of* site based education development is a mode of philosophical-empirical inquiry. It operates from the premise that education is a field of political struggle. It provides a critical-theoretical frame of reference which allows teachers and teachers-as-researchers (in the act of teaching and researching) to interrogate and transcend the limitations of their inherited traditions. It allows practitioners to "develop their own way of seeing and understanding the world", designing morally and historically appropriate educational practices which emerge from and are indigenous to the traditions of the site (Freire 1985, p. 31). Research *for* and the practice *of* site based education development makes evident, to practitioners and practitioners-as-researchers, the means through which they create, and are created by, educational practices, practice architectures, practice landscapes and practice traditions.

Site based education development thus aims to sustain schools and educational change over time through fostering interrelationships between schools and their communities and the world: relationships in which students are initiated into practices that will allow them to live well in a world worth living in.

Site Based Educational Development in Ecologies of Practices

We are strong advocates for site based education development because we have seen it in practice in the schools we have studied: schools that ‘do’ education, not just schooling.

In relation to the practice of *student learning*, we found students in our school sites who were able to discuss their learning metacognitively by meaningfully discussing their learning practices using the language of the particular school-based projects concerned (for example, “shared talk”). These specific projects were part of an educational development program developed within the site in response to particular local needs—a development program aimed also at changing practices of *teaching*. In this case, and others we have reported throughout this book, school transformation was achieved through site based education development that also changed practices of *teacher professional learning*—processes that began with the staff interrogating the learning needs of their students and communities, and allowed them to explore how they could themselves grow as learning community with shared understandings and practices. We saw how these local efforts of site based education development were also fostered by practices of *leading* not only by principals and school executive teams who initiated and supported development efforts, but through fostering a sense of shared responsibility among staff—and students—for the development of educational practice in their schools and classrooms. And these were supported, in turn, by practices of *research, critical reflection and evaluation* that encouraged teachers and teacher leaders, especially, to interrogate their own practice and to discover more powerful and sustainable ways to engage students in learning. In these ways, site based education development in the schools we studied focused not on individual practices in isolation but on a network of educational practices that are interdependent in an ecology of practices in each school and across the school districts we studied.

The evidence of our study shows clearly what an important place the practice of *professional learning* has in site based education development. The evidence from the schools and districts we studied suggests that professional learning thrives in a culture of care and collaboration that permits members of a school community collectively to engage in the endlessly renewing task of developing education to make it appropriate to the needs, circumstances and opportunities of students and communities—and of the staff of the schools and the districts. It was clear that professional learning for site based education development works best when it is determined by people at the site and targeted towards the strategic needs of the particular school community.

Site based education development is relationally dense. It involves working collaboratively with colleagues and others in a site. It builds upon a consciousness of what went before—the historical practices and practice architectures of the site. Professional learning for site based education is also open-eyed: it should be

conducted in ways that understand how educational practices support and sustain each other—that practices of student learning, teaching, professional learning, leading and researching are organically and interdependently connected with one another in ecologies of practices at the site. In our view, professional learning outside or external to the site only has force and value as it connects and engages with what happens in the site and what happens *for* the site—for its people, its community and the practices that hold them together.

Professional learning that is organised as site based educational development gives credence and honour first to the wisdom, professionalism and experience of teachers and others who practice in the site, even though new practices may travel to the site through the mediation of outsiders. Without the agency of people at the site, however, nothing new can take hold there. As noted in earlier chapters, this requires a school culture characterised by trust and mutual respect which require particular kinds of practices of *leading*. Across the schools in our study, practices of leading were not limited to the principal or the school executive team, but evident across the whole school community—so participants took shared responsibility for the life and work of education at the site. The *Communities of Practice Principles* we observed in Wattletree District and schools fostered the formation of this sense of shared responsibility not only among school leaders and teacher leaders, but also among students in the schools.

Site Based Education Development: Conclusions

Schools are *sites*, not only in a physical geographical sense, but also in the sense that they are nexuses of *intersubjective* spaces—semantic space, physical space-time and social space. The practices that go on in schools—student learning, teaching, professional learning, leading and researching—are also bound together in relationships we have described as *ecologies of practices*. While many of the schools we studied showed relationships of reciprocity and mutual support between these five kinds of educational practices, this kind of harmony is not always to be found in schools or school districts. All too often, the relationships between practices of student learning, teaching, professional learning, leading and researching are better characterised in terms of tensions and contradictions; rather than being mutually supportive, they may be at odds with one another. Yet, when school communities and school districts *do* get the relationships right, as happened often in the schools we studied, a powerful sense of collective agency is created. While the galvanising concept used by people in the schools was a commitment to *student learning*, we would prefer say that the galvanising commitment was a genuine commitment to *education*—to initiating students into forms of understanding, modes of action and ways of relating to one another and the world that were for the good of the people involved and for the good of humankind. This educational commitment seems to us to be what lies at the heart of Wattletree District's *Communities of Practice Principles*, for example.

We think that people—among them teachers, leaders, educational policy-makers and administrators—might think more usefully about how education and educational practice can be transformed, on a large scale or small, if they learn to see more 'ontologically'. This means not just seeing education and educational practice in terms of ideas and knowledge (teachers' professional practice knowledge, for example)—which we would characterise as an 'epistemological' view—but as something that happens through *embodied people* who live and work in *sites*. What they *do* in those sites is *practice*, and their practice is held in place by *practice architectures*—the cultural-discursive, material-economic and social-political arrangements that pertain there. Because practices are prefigured but not predetermined by practice architectures, changing practices requires not only changing practitioners (for example, their professional practice knowledge) but also the practice architectures that make their practices possible. On the one side, we have embodied people who animate and enact practices; on the other side, we have the reality of actual sites that contain the arrangements that enable and constrain practices. The ontological view throws the actuality of practitioners and sites into sharp relief; it invites us to consider closely what *meshes* them together. We have shown that what enmeshes people and sites is *practices*: what people say and do and how they relate to one another and the world in and through a practice. We have shown, too, that they are enmeshed by the *practice architectures* that are found in or brought to a site: the cultural-discursive, material-economic and social-political arrangements found in or brought to a site, providing resources for the sayings, doings and relatings of the practice. The ontological view insists that we approach the social world as it appears in all its materiality and actuality, not just in terms of what participants or we might know about it (the epistemological view). To put it another way, the ontological view insists that we attend to the *actuality* and *materiality* of educational practices, not just practitioners' or researchers' or curriculum developers' *knowledge* about education.

On this ontological view, then, the development of education necessarily involves engaging with education as it is realised at a particular site—at every particular site. Education does not exist in the abstract, or as a generality; it exists only in real sites. And it can only be changed by the actions of people and things at those sites. If we want a change in education across a nation, we can only have it by its being realised in each site, site by site. If we want national change in education, we must also harness the agency, experience and wisdom of the people who know and inhabit the site—in particular, of course, teachers and leaders and students at each site. The perspective of site based education development takes the ontological view: it aims to address people at the site as the ones who actually create education, in practice, not just as recipients of new knowledge or curriculum proposals developed elsewhere. Education always involves more or less interpretation and adaptation of an 'external' curriculum proposal for local use—and the more sensitive the interpretation and adaptation for the circumstances, needs and opportunities that exist at the site, the more educational it will be. We saw this process of interpretation and adaptation in a variety of language and literacy initiatives in the schools we studied—for example, in the *Learning Floats on a Sea of Talk* initiative at Westville school, where teachers adapted James Britton's (1970, p. 164) formulation "writing

floats on a sea of talk" in order to encourage students to talk more about what they were learning as a rehearsal for their thinking and their writing.

As is clear from our advocacy here, we believe that the *site* is where education is lived and where educational development in response to educational challenges are best located, even if those at the site welcome good ideas, advice and resources from people outside it. Site based education development is by its nature oriented towards the practical, theoretical and critical development of education by and for its practitioners, including teachers, leaders and students in their local sites. As has been shown in the initiatives of site based education development we have observed in the schools we studied, site based education development involves the interrogation of local educational practice and provision in relation to practice traditions, and in relation to external forces that come to bear on practice locally. Site based education development creates communicative spaces for practitioners to explore ways to develop and transform their educational practices and the practice architectures that support them. In several of the cases we have observed, site based education development also involved creating opportunities for students to take greater responsibility in and for their own learning—and in many cases, for creating conditions that enhance their engagement as learners.

Despite a national curriculum, national teaching standards, and a national assessment program for Australian schools, people in local sites—communities, schools, classrooms—know that local students' learning happens in these sites, not in some abstract space defined by the national curriculum, national teaching standards or national assessments. People at these sites know that it is essential to engage these particular learners if anything is to be learned, and that these learners have themselves been shaped by their own histories, their families' histories, their community's histories, their schools' and classrooms' histories. The teachers at each site are not teaching generalised or universal 'epistemic subjects'—students in the abstract—but people with local knowledge, with their own particular lived experience, and their own histories of learning. Thus, teachers are always involved in interpreting and adapting curricula, for example, to take advantage of local opportunities, to recognise local circumstances, to reach out to the particular lived experience of the students and others in their communities. When they do so, they are engaged in site based education development.In an era of national curricula, national professional standards for teachers and national assessment programs, it is even more important to recognise and celebrate the particularity of learners and the particularity of the sites in which they are situated. There is an argument, we think, for establishing a national professional development campaign for Australian teachers aimed not at having them teach and having their students learn in standardised ways, but at unleashing the professional creativity of teachers to allow them more richly to interpret and adapt national curricula, for example, so that national goals for education would reach and engage diverse learners in all the diverse situations in which they live and work. A national program supporting local site based education development is needed to complement national curricula, teaching standards and assessments, and to help teachers and leaders to reach out and engage the particularities of learners and their local communities.

To reach out and engage the local is to recognise that practices of learning, teaching, professional learning, leading and researching are grounded in the particularities of sites, and to recognise that teachers and leaders, for example, need to be connoisseurs in responding to the particularities and the possibilities of the local and the situated. For the sake of developing local students' learning practices, teachers and leaders must learn how to interpret and adapt national curricula, teaching standards and assessments to local circumstances. As Plato recognised, justice resides not in treating all people, communities or sites as the same, but in responding to and engaging them differently, as their circumstances require. The same—responding differently to differences in the people who inhabit educational practices and sites—is true for education. Without an acute sensitivity to the particularities of sites, schooling will remain a haphazard affair that reaches some at the expense of others.

In this final chapter, we have emphasised the ontological view of practice and education. We have shown that the perspective of *site based education development* accords with this ontological view. Early in this book, we said that education, properly speaking, is the process by which children, young people and adults are initiated into forms of understanding [*sayings*], modes of action [*doings*] and ways of relating to one another and the world [*relatings*], that foster individual and collective self-expression [in the *cultural-discursive* dimension, in semantic space, in the medium of language]; individual and collective self-development [in the *material-economic* dimension in physical space-time, in the medium of activity or work] and individual and collective self-determination [in the *social-political* dimension, in social space, in the medium of power and solidarity]; and that are, in these senses, oriented towards the good for each person [*individually*] and [*collectively*] the good for humankind. While this may seem a very abstract proposition, we nevertheless believe that it also eminently practical. It connects readily with practice, and especially with the notion that education is always a practice-changing practice. In our view, education always aims to initiate people into new forms of practice—and the sayings, doings and relatings that hang together in the project of each practice—that will allow them to live and work in ways that are sensible, sustainable and socially just.

On this view of education, then, teachers and leaders in schools (for example) might more frequently ask themselves what new *practices* students are intended to learn; what sayings, doings and relatings hang together in the project of that practice; what practice architectures enable and constrain the practice in the classroom, the school and in the community; and how the practice does or does not foster individual and collective self-expression, self-development and self-determination not just in the classroom and school but also in the wider world beyond its gates. And it is possible to ask these questions not just in the abstract, but to see whether and how the answers to them can be found *in practice*: in the living practice of the classroom, the school and the community.

The ontological perspective and the view of site based education we have advocated here also recognises that five kinds of educational practices always

occur in interdependent relationships with one another in sites like schools and school districts: student learning, teaching, professional learning, leading and researching. Site based education development requires a coherent approach to all five, recognising that each shapes and is shaped by the others. This is something also to be grasped not just in the abstract but in practice: each school, each school district, and each jurisdiction needs to consider how all five are to be put into practice in relation to each other, so each practice 'learns' from the others, and so the practice architectures of each supports the practice architectures of the others. As we have tried to show throughout this book, the schools we have studied have appreciated the interconnectedness and interdependency among these practices, and have created school cultures—not always all the time or for all participants—that nurture this interconnectedness and interdependency as a collective task and responsibility of everyone in the school, and especially for teachers and leaders. The five practices hang together in one big project: the project of education. It is their profound commitment to education for their students that motivates their efforts of self-renewal and continual revitalisation. Their commitment is not just to student learning, but also to the renewal and revitalisation of teaching, and to the renewal and revitalisation of professional learning, leading and researching. The unity of the project of education is not just a unity around the project of educating students, although that is an important part of what makes their efforts coherent. Their educational project is coherent on a larger canvas: it recognises that a profound commitment to education is always and necessarily a commitment to *self*-education, in which the self concerned is not just each student, but also each teacher and each leader. Moreover, beyond these individuals, the project of self-education is always and necessarily a commitment to *collective* self-education, where the collective is the community within the classroom or the school, the community outside its gates, the community of the nation or the world, or the community of the profession and the discipline of education. On this larger canvas, each of us, student and teacher, is part of a larger community *for whom we educate ourselves, and for whose sake we intervene in the lives of our students*. We participate in education because we share a common fate: to be bound up with one another in a world we share. We practise education to help people, individually and collectively, to live sensibly, sustainably and justly in this world, and to leave the world in a state in which the generations who follow us can also live sensibly, sustainably and justly in ways appropriate for their times and their circumstances.

These are not empty words, nor is this an empty hope. What makes this view of education practical is when people *live* it—as people evidently do, as people in the schools we have studied have done. So site based education development is not just an idea, it is a living practice: a way for people to enact this hope. The notion of site based education development might also be a rallying cry for a social movement—an educational movement—in our times. We think it is a way to revitalise education in our times—a way, that is, to revitalise education in an era of schooling.

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Appendix

Analysing Practices Using the Theories of Practice Architectures and Ecologies of Practices: An Example

In the first part of this Appendix, we present an analysis of a lesson about expository texts in a composite Year 5–6 classroom in an Australian primary school. Our intention is to show how the theory of practice architectures helps us to understand practices by allowing us to see how they are enabled and constrained by the practice architectures that make them possible and that hold them in place. In the second and shorter part of the chapter, we present an analysis of the lesson using the theory of ecologies of practices, to show how some of the practices evident in the lesson are related to other practices in the present and past, and perhaps in the future, and how practices are sometimes interdependent.

Analysing Practices Using the Practice Architectures Framework

Using the framework of the theory of practice architectures, the lesson is analysed in five episodes. Each episode has a distinctive purpose—that is, there is a distinctive *project* for that episode of the lesson. It is the distinction between these projects that makes it possible to break the lesson into episodes. Following the teacher's introduction of the visiting researchers to the class, Episode 1 is a review of an earlier lesson on the topic of expository texts; Episode 2 is a sequence of activities conducted to prepare students for what will be the main task of the lesson (drafting an expository text). Episode 2 involves assembling a range of key ideas (like 'affirmative' and 'negative' positions on a topic) relevant to writing expository texts; Episode 3 is a brief introduction to the main task of the lesson (drafting an expository text in seven small groups); Episode 4 is the small group work activity (students working together to produce the draft expository text); and in Episode 5 representatives of three of the small groups read their draft texts to the class as a whole. As we

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shall see, the lesson as a whole also has its own project, and it is nested within a unit of work that has a broader and more encompassing project.

Our analyses are made using a table like the one outlined in Table 1. The text in each cell of the Table briefly describes the kind of interpretive comments that might be recorded in the Table as the analysis is being made.

Some Notes About Analysing Social Life Using the Theory of Practice Architectures

There is not space here for detailed notes about making the kind of analysis presented here, but it might be useful to make a few comments.

First, the kind of analytical tables we present in this chapter are not mechanically 'read' from a transcript or a text or a video record or from field notes; they are an interpretation of what happened, seen through a particular kind of frame—the practice architectures table. We use the table as a 'table of invention' (an idea that goes back to Aristotle's *Rhetoric*); that is, we use the structure of the table as a set of topics or viewing platforms from which to consider a practice as it happens. We use these topics sequentially and more or less systematically (but certainly repeatedly) to consider how the practice is composed in terms of its sayings, doings and relatings, its project, and the dispositions it requires and develops; and, alongside this, how it takes place in a practice landscape, furnished with resources found in or brought to the site (cultural-discursive, material-economic and social-political arrangements), and as a moment in an unfolding practice tradition which shapes and will be shaped by what happens here. Our analytical framework is schematically presented in Fig. 1 (first presented in Chap. 2) and then in Table 1, which elaborates the Figure by giving a brief description of what we mean by the key terms in the theory of practice architectures. (Note, however, that the bottom row of Fig. 1 is split into two rows in Table 1, one of which now appears as the top row in Table 1.)

As we make our interpretations of practices we observe in the field, we try to remain alert to the dialectical relationship between the columns on the left of the table and those on the right: in each horizontal pair of terms (row), we expect to find relationships of mutual constitution in which each term is shaped and influenced over time by its opposite number. Thus, for example, the *sayings* of a practice (what people say in and about the practice) are made possible by a particular language used in the site—a particular set of *cultural-discursive arrangements*; reciprocally, however, new developments that occur in what is said in the site may become incorporated into the language and become part of a more elaborated set of cultural-discursive arrangements that make it possible for participants to play with new ideas in what they say in or about the practice.

Arriving at an interpretation of a practice using this analytical framework requires looking carefully at the evidence (in the research reported here, we relied heavily on transcripts and interviews; we regretted that we did not make video recordings since these would have given us better records of the material-economic arrange-

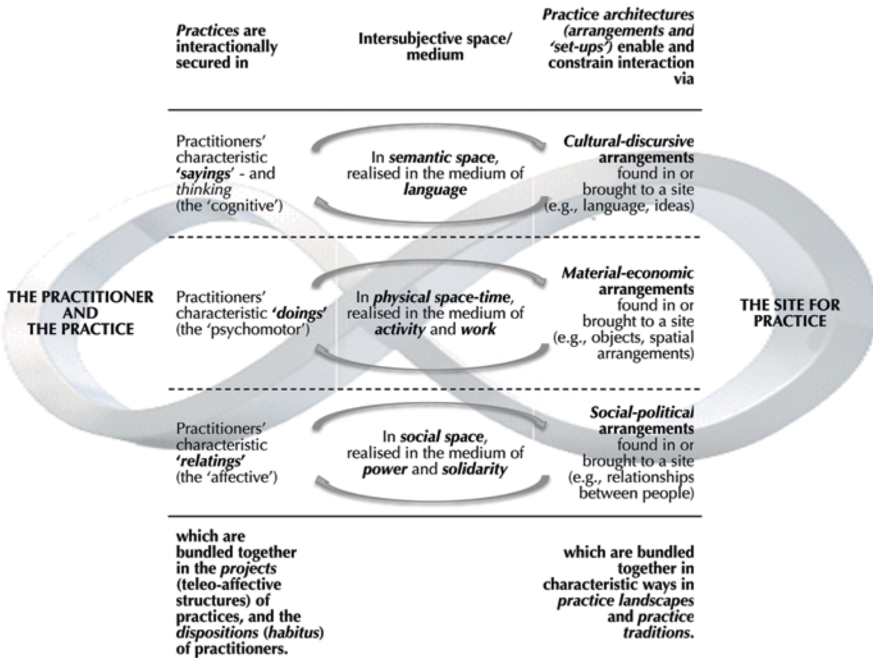

Fig. 1 The theory of practice architectures

ments and physical set-ups of classrooms and other spaces). But the evidence is not all apparent; arriving at an analysis also requires drawing informed inferences about what supports the practices (sayings, doings and relatings hanging together in a project) we observe—that is, the kinds of cultural-discursive, material-economic and social-political arrangements that make those practices possible. These arrangements, found in or brought to the site, create the conditions of possibility that do or do not support the sayings, doings and relatings of the practice and the project in which they hang together. In turn, these conditions form the niche that makes the practice sustainable—or that make it *un*sustainable. Some of these conditions may be distant from the site (like the decisions about funding to be allocated for a school by a school district), and some may be in the near or distant past (like policies formed many years ago that still apply, or pedagogical approaches that an experienced teacher learned long ago); nevertheless, they must in some way be present at the site for them to be part of the practice architectures that support the practice there. Thus, for example, the funding allocated last year pays the salary of the teacher who is present in the class today, and provides many of the resources we observe in the classroom.

Second, it is unclear how far one needs to go in describing a situation in terms of the evidence, interpretive asides and notes we gather in the cells of the table as we go about making our analysis. We try to focus carefully on the particulars of what is said and done in the practice, and how people and things relate while they do it, and on the particulars of the arrangements that are present at the site in which we

Table 1 Table of invention for analysing practices

<table>
<tr><th colspan="2">Elements of practices</th><th>Practice architectures in the site</th></tr>
<tr><td colspan="2">Project
In this cell, we describe what we take to be the project (or telos or purpose) of the practice we are studying, based on the evidence available (for example, the content of a transcript and other related observational, interview or documentary evidence available). When a participant sincerely answers the question ‘What are you doing?’, they describe the project of the practice (from their perspective).</td><td>Practice landscape
In this cell, we describe how people and objects are differently enmeshed in the interactions (that is, in the activity-timespace) of the practice being studied. Different people and objects may be involved at different stages or in different episodes or in different aspects of the practice, and they may participate in different roles or from different perspectives. Some objects not apparently relevant to the activities (the ceiling, for example) may in fact play a role in enabling or constraining the practice and in this way be enmeshed in the activity-timespace of the practice.</td></tr>
<tr><td>Sayings</td><td rowspan="3">In the cells on the left, we identify the principal sayings, doings and relatings that compose and ‘hang together in’ the practices under study; alongside these, on the right, we identify (respectively) the principal cultural-discursive, material-economic and social-political arrangements that are resources that make possible (prefigure) the sayings, doings and relatings we observe. In the analysis, we aim to identify at least the most significant proximal arrangements that shape the sayings, doings and relatings observed (things present in the site), and, where relevant, more distal conditions (like more widespread languages of policy or theory, more extensive material layouts, or wider sets of social relationships in or beyond organisations) that are significantly enmeshed in the practices under study. Together, the cells on the left describe the practice in terms of what is said and done and how people relate in it; together, the cells on the right describe the practice architectures that form the niche (on the model of an ecological niche) that permits the practice to survive in the site.</td><td>Cultural-discursive arrangements</td></tr>
<tr><td>Doings</td><td>Material-economic arrangements</td></tr>
<tr><td>Relatings</td><td>Social-political arrangements</td></tr>
<tr><td colspan="2">Dispositions (habitus)
In this cell, we describe what we take to be the most significant dispositions (or habitus) called on or developed in the principal participants as they participate in the practice. Bourdieu (1990) describes the habitus as a set of dispositions developed by a participant enacting a practice in cultural, material and social fields (for example); these dispositions are what give the participant the ‘feel for the game’ that makes it possible for them to act appropriately in the field. In our view, dispositions include knowledge, skills and values. Knowledge relates chiefly to the sayings and cultural-discursive resources (in language, in semantic space) present in or brought to the site; skills relate chiefly to the doings and material-economic resources (in activity and work, in physical space-time) at the site; and values relate chiefly to the relatings and social-political resources (in power and solidarity, in social space) at the site.</td><td>Practice traditions
In this part of the table, we comment on the practice traditions that appear to be in play, reproduced, or transformed in the practice. This sets the interactions that compose the practice against a longer history of practice, including at least the history of practice in the local site (for example, in terms of how the participants have acted and interacted as part of the practice in the site over previous days, months or years). Where relevant, we also comment on the practice interpreted against a broader history of this kind of practice (for example, how practice in a particular classroom might be an expression of a practice tradition like progressive education or a particular approach to literacy education).</td></tr>
</table>

observe the practice happening. Once it has happened, it is only present for us in memory, and in the records we have of its having happened—evidence in the form of recorded observations, field notes, or interview transcripts, for example. As we consider the evidence of what has happened (which might be a history or a moment, a single room or a geographical region, a concrete exchange between two people in a corridor or an exchange conducted digitally between locations dispersed around the globe) in the particular site we are studying, it is always unclear—a matter of judgement—how far we must trace the historical and physical lines of connection between the events and locations and things we observe: it is always a matter of

judgement about whether we now have a sufficiently compelling and sufficiently rich understanding of how a particular practice is held in place and made possible by practice architectures, a practice landscape or a practice tradition, for example. It is a matter of this kind of judgement whether it is necessary to mention—or to pass over without mentioning—the teacher's salary or the architect's plans for the school or the history of schooling in New South Wales as among the crucial conditions that make possible the practice we observe in the site. There comes a point at which to mention all the relevant enmeshed present and past conditions would be overwhelming—because it happens to be true that nothing less than the whole history of the universe prepares us for what we observe at this moment in this classroom in this school.

Third, we are also very conscious that it is a very different thing to make an analysis in terms of the practice architectures framework presented in Table 10.1 on practices at different levels or of different sizes or scopes. We use Table 10.1 as a 'table of invention' that allows us to explore something as broad as the history of (the practice of) schooling, for example, or as detailed as a single lesson in a particular school this year. One can use the table to consider a practice as vast as social constructivist pedagogy, or as narrow as an interchange between a student and a teacher in a classroom. It may be impossible to access sufficient evidence about epochs or events on large scales, and thus the practice architectures table may not offer much assistance in making an analysis. The extent to which the evidence is sufficient is also always a matter of judgement.

Thus, finally: our aim in using the table is to become more adept at seeing the world relationally, and especially at seeing the world as it happens at particular sites and as things unfold through time. We use the practice architectures table as a prompt to help us think about relationships across the columns and between the rows, to find connections and interdependencies that will lead is to a richer understanding of the social life unfolding around us, happening and ramifying as histories do, rippling out in chaotic patterns from everything that happens. To reiterate, the practice architectures framework table is not a machine that spits out a reading of the world; it is merely a prompt for a certain way of making a reading of it. It is the analyst who makes the reading, not the table.

A Caveat

It is *our analysis*, not Sarah's lesson, that we intend to be the example in this Appendix.

The lesson we analyse here is not an 'exemplary' lesson—a case of some kind of 'best practice'. It is an everyday lesson of a kind that might be met with in many Australian schools. It is also a lesson in which a teacher is teaching in front of three visiting researchers. Sarah is a highly experienced teacher, and she is used to teaching in front of observers from her own school, from other schools, and from elsewhere. She also frequently has student teachers observing in her classroom.

This lesson was the first time she has taught in front of the visiting researchers, however, and Sarah admitted to our research team that she was a little nervous. It appeared to us, and especially in our analysis of the transcript of the lesson, that because of our anticipated presence Sarah had probably over-prepared for the lesson as a performance, and that she over-scaffolded the tasks for the lesson, with the result that the lesson was probably a little more controlled and less free-flowing than is usual in her teaching.

We want explicitly to express our gratitude to Sarah for allowing us to use this transcript, not as an example of a 'model' lesson or a 'model' approach to teaching, but as an ordinary lesson—if a very well managed one—that we could analyse. As we said earlier, it is our analysis, not Sarah's lesson, that we intend as the example here.

It is important to note that a long preparation has gone on before this particular lesson—the students are in a composite Year Five-Six class in primary school; they know many of the standard games of schooling. Moreover, in terms of their work with Sarah, some were with her the previous year as Year Five students who are now in Year Six, while others are Year Fives who joined Sarah's class this year. The particular lesson we observed took place in September, three quarters of the way through the Australian teaching year (which begins in February); Sarah had thus been working with the students in English and other subjects for many months. She and the students know each other well. In this specific lesson, Sarah refers to the lesson before the one we researchers observed: in that lesson she set up important elements of the lesson to be presented in the following pages.

Equally, it is important to remember that Sarah and the students went on to do further work on this topic the next day and beyond that: the lesson we observed is a small segment in a much longer journey.

In this lesson, Sarah is preparing the students to write draft expository texts. In the previous lesson, they have talked about some features of effective expository texts that they induced from discussing some examples. Sarah reviews that work in the beginning of the lesson presented here. In Episode 4 of the lesson, the students work in groups to draft an expository text on a topic given by Sarah. Some groups share their drafts with the class in Episode 5. After the students have written their draft texts, and read some examples of their work at the end of the lesson, they will go on to work further (the next day) on how to write expository texts. The particular work they are doing in this sequence of Reading and Writing lessons is designed to contribute to a unit of work the class is doing in Science on the topic of 'Rainforests'. Before the end of the unit of work on rainforests, the students will be required to write an expository text about some issue to do with rainforests (e.g. sustainable growing of cocoa for chocolate, or the threatened extinction of species). In her Reading and Writing curriculum, Sarah is thus spending time helping the students to develop relevant skills like note-taking and explaining key words, expanding their vocabulary in directions that will allow them to argue logically and cogently, and giving them opportunities to 'publish' various pieces of work that they do along the way in preparation for the expository text they will produce for their assessment at the end of the unit of work in Science. At the commencement of this unit of work,

Sarah did a pre-assessment of the students' skills in expository writing. Around the time of the lesson we observed, she was concentrating in particular on helping the students to develop skills like sequencing arguments, elaborating ideas and taking and arguing for a position. These skills are important for writing effective expository texts. At the end of the 'Rainforests' unit of work, Sarah will assess the students again so she, the students, and their parents can see how their expository writing skills have developed through the unit of work.

Transcript and Analysis: Sarah's Lesson on Expository Text with a Year 5–6 Class

NOTE: T denotes Teacher (Sarah); F and M denote female and male children, although sometimes it wasn't certain if it was actually a male or female. Occasionally, another female adult spoke, also denoted with an F.

In the transcript, a triple line indicates the end of one episode of activity and the beginning of another; a double line indicates subsections of episodes.

Introduction of Visitors

Transcript	Comments
T: There are a few visitors in our classroom today. Can you remember their names, so that we are using our manners and making sure that we are addressing them by their names? Kirralee, can you remember anyone's names?	Note that Sarah recognises and names the visiting researchers who are observing the lesson. Note that we researchers become part of the practice architectures for this lesson
F: Stephen	
T: Stephen? Which one was Stephen? (All laughing) Just checking. Christina?	The children laugh because there is only one male visitor
F: Jane	
T: Okay. Where was Jane? Okay, over at the back there. And can anyone remember the last person's name? A very hard name. Bradley?	
M: Christine	
T: Christine, okay. Very good. So, just making sure that we are addressing them by their names, so that we're showing respect. Now, I said that when we came in here I was going to get some people to explain what we've been working on	

Episode 1: Introduction to the Lesson: Review of Past Lessons on the Topic

Transcript	Comments
T: So, the text form that we've been working with has been what?… text form, what form of text are we using? Sandra?	
F: Persuasion…	
T: Okay that's the *purpose* of our writing. Social purpose is to persuade. What's the form of text that we're using though, Sandra?	
F: Exposition	
T: Exposition. Now, would someone just like to explain the models that we've been using to develop our understanding of exposition texts? Liam? You might just like to turn around and face them. So, what have we been doing to explore these texts?	The SMART Board™ shows the criteria ('guidelines') for effective expository texts or persuasive texts. Sarah prompts Liam to attend to the SMART Board™
M: We've been using texts on the SMART Board™. One was that we all should save water. We used—what was it called	Note: students have a lot to say about SMART Boards in the focus group interview
F: So, was it like an advertisement, or a?	
M: No it was like someone—it was persuasive, it was-	
T: So, this was our single text model, wasn't it?	
M: Yeah	
T: And what did we do with that text? What did we look at, specifically?	
M: I'm trying to think of that word-	
T: Yeah that's okay. Can someone help him? Can someone give him a hand? Nguyen?	
M: We've been looking at a piece of text and extracting the important points of information, which were used to structure the text	
T: Okay so, we looked at the organisational structure of the text. Anyone like to add something else? Elizabeth?	
F: [Language]…(too faint)	
T: Okay so, the language. So, we looked at the language features. So, that was analysing a single text. So, we spent a lot of time doing that. And then, what did we move onto? Harrison?	
M: We had four texts that were all-…(background noise) then we had to-…(background noise) which was the best exposition, which was-	
T: Do we use the word 'best'?	
M: Which was the most effective and the least effective?	
T: So, we ordered them in terms of the most effective all the way through to the least effective. Then, what did we do? Steven?	
M: We ranked and we-	

Transcript	Comments
T: Yeah we ranked them	
M: Put it in—we wrote some words-	
T: About?	
M: About the text in the… the two most effective… (too faint)	
T: Okay and what did we write about the texts? Meg?	
F: We wrote why we thought that they were most effective and least effective	
T: Okay. So, points on why these texts were most effective, in our opinion, and why these other texts were least effective, in our opinion. What did we then go on to do, Isaac?	
M: We went on to do some guidelines	"to do some guidelines". See Sarah's next utterance: "to do" here means "made up"
T: Okay so, this morning we've actually made up some guidelines for what we believe would be effective expositions. And we've put them on the whiteboard, and then, I've gone and actually put them onto a PowerPoint, looking at—so, [we are] actually looking at what the children have said are guidelines for writing an exposition	In the previous lesson, Sarah collected the students' ideas on the white board, then, during the morning recess, transferred them to a PowerPoint
F:…	
T: Yeah that'd be great, thanks Helen [this is Helen Thompson, a parent volunteer helping in the classroom]. Okay so, you said an exposition needed a strong effective title, which is, as emotive language, is topic specific, and catchy. Is that right?	In this exchange, Sarah checks that her PowerPoint notes (the 'guidelines') reflect what the children said in the lesson before morning tea Sarah initiates a round of chorusing in which she says something and the students chorus the reply "Yes" in every case
(Chorus of yes)	
T: Tell me if you disagree with what I've written. It uses openers like, firstly… secondly… thirdly… in the end… The opinion of the author is clearly stated in the first paragraph and the last paragraph	
(Chorus of yes)	
T: Arguments are discussed in order of importance; most important to least important	
(Chorus of yes)	
T: Each argument is justified and elaborated upon	
(Chorus of yes)	
T: Persuasive and emotive language is used to express the author's opinion	
(Chorus of "yes")	
T: The author may discuss the actions that the audience need to take, or solutions to the issue	
(Chorus of "yes")	
T: The author creates a clear picture in the audience's head, creates visual pictures	
(Chorus of "yes")	
T: The consequences and benefits of the action may be stated	

Transcript	Comments
(Chorus of "yes")	
T: Aren't always stated but may be stated. Nguyen, text is?	
M: Clear and concise	
T: Clear and concise. Vocabulary is emotive, technical, topic specific and persuasive. The author leaves no room for doubt in the audience's mind about the position that they should take	
F: I was really impressed with that	
F: Did you guys come up with those?	Sarah asks the class to verify the authenticity of the list as a summary of their own ideas (presumably to suggest that she didn't put the words into the students' mouths)
(Chorus of "yes")	
F: Did you?	Repeating that the children developed these guidelines
(Chorus of "yes")	
F: How?	
M: Very smart (whispered)	
T: Besides that, Reece. You put your smart ideas on the SMART Board™, did you?	Sarah indicates that the students (not she) put the ideas on the SMART Board™
M: Yeah	
T: So, how did we do that? Because we've done this—we've been through this process before, and we haven't come out with anything quite as powerful as that. Why was this really powerful this time? How did you get to the point where you could be so precise about what an exposition needs? Darcy?	
M: Because we've done it on other times	
T: Done what?	
M: The four different texts	
T: The four model texts. And so?	
M: So, we know what to do to make it better	
T: Okay so, we're more effective at that. Reece?	
M: Improve on what we've done since last time	
T: Okay. So, what have you been, particularly more effective in using though? Liam?	
M: Note taking	
T: Maybe note taking has helped. What have you used more effectively, though, do you think? I know what I think you used more effectively. I don't know whether you do, though. Reece?	Here Sarah guides the students in a 'guess what I'm thinking game'
M: Our vocabulary	
T: I think that there's actually been a massive increase in vocabulary	
Okay so, that just gives you a little bit of a background about where we're coming from, hopefully	Sarah signals that this is the end of the review of the previous work, and the point of departure for the new work for this lesson

Analysis of Episode 1

Elements of practices	Practice architectures found in or brought to the site
Project	*Practice landscape*
Review of previous lesson: For Sarah and the students, the aim (at this stage[1] is to achieve the mutual accomplishment of doing the work Sarah has in mind for this lesson (and unit of work and curriculum): in content terms, this means re-establishing and securing ideas developed with the students that serve as criteria for identifying and writing effective expository texts; in process terms, it means drawing the students into the rhythm of the lesson via teacher orchestration by questioning (ensuring the students' active participation) and by having the students chorus responses ("Yes") to Sarah's chanting of the criteria from the SMART Board™. The students appear very comfortable being drawn into the classroom game for this lesson: reviewing the previous lesson/s relevant to learning more about expository texts (in relation to the sayings, doings and relatings of previous lesson/s—which we see evidenced in Sarah's backward references to those lessons)	The lesson takes place in the Year 5–6 classroom: a new, spacious, light classroom, well furnished and resourced including, for example, computers and a SMART Board™. It is a resource-rich landscape. All of the people and other objects in the room have their own histories and trajectories, and all depend on other conditions that support them (the students' food that sustains them, the electricity that powers the SMART Board™, the manufacture of the bricks in the classroom walls, and so on). Not all of these histories and trajectories are in play in the practices being observed in the lesson, however: only some people and other objects are enmeshed in the *activities* in the lesson; other people and objects may be necessary and sufficient for the existence and persistence of the people and objects enmeshed in the activities, but those others are not directly enmeshed in the activities in the lesson. The practice landscape refers to the things that are directly enmeshed in the activities (more precisely, the *activity timespaces*) that can be observed in the lesson. It is also significant that different participants may exist in overlapping but different practice landscapes in the lesson—being enmeshed in their particular activities with different people and other objects than other participants (for example, when each individual student works with a uniquely different group of other students in Episode 4) In Episode 1, the students sit on the floor in an open space in the classroom. At the front is the SMART Board™, which plays a central role in orchestrating a brisk sequence of activities after an initial exchange between teacher and students. The activities in this episode at first enmesh Sarah and the students chiefly in relation to remembered objects—ideas made prominent in the lesson before the morning recess—and later in the episode enmesh them with the list of features of effective expository texts shown on the SMART Board™ at the front of the room

Elements of practices	Practice architectures found in or brought to the site
Sayings	*Cultural-discursive arrangements*
In this review, Sarah is checking technical language the students are to use for discussing expository texts (for example, 'structure', 'most/least effective', 'exposition', and 'language features'. She stirs the students in to *using* the relevant technical language: that is, the students are being stirred in to using the technical language of text types, namely, 'expository text'. The ideas are presented visually, in text on the SMART Board™, as well as in Sarah's verbal utterances	The lesson is conducted in English, both spoken and written. Specialist discourse for the lesson is drawn from a language of text types that appears in the *First Steps Writing* books. Sarah has brought this discourse to the classroom and to the students. She is especially familiar with this discourse, since she leads the school's professional development initiative to implement *First Steps Writing*. Implementation of the *First Steps Writing* program is a school district-wide initiative in response to NAPLAN test results that indicated that schools in the district were underperforming in writing
Doings	*Material-economic arrangements*
The activity in this episode is principally *reviewing* previous lessons about text types, then focussing more specifically on work done before the morning recess which involved developing criteria ('guidelines') to describe effective persuasive texts. Sarah *orchestrated*/led the review, questioning the students and nominating which student was to respond. The students are sitting on the floor, having their attention directed by Sarah, and entering (being stirred in to) the work of the lesson	SMART Board™; classroom; chairs, desks, classroom furniture, etc.; bodies in space—children on the floor during this episode and teacher at the SMART Board™. Teacher gets students to sit on the floor; orchestrates via concise questioning. Note that Sarah does not need to give elaborate instructions; the students are evidently participating in a well-rehearsed question-answer routine (being nominated, answering…)
Relatings	*Social-political arrangements*
Teacher orchestrating students (teacher-whole class). The teacher nominates students to respond to her questions, and, in doing so, reproduces her positional authority as the teacher-leader of the class (vis-à-vis the students). It is evident that the students are willingly complying (actively fulfilling their roles as students in response to Sarah's questions and instructions), and as conversation partners adding to Sarah's and each others' points/responses	Teacher and student roles; teacher-student and student-student interactions; turn taking (respecting one another—NB Sarah talks about respecting others). Note that teacher nominates students to respond—that is, turn-taking without hands up. [Aside: might turn taking with hands-up be regarded as less collaborative because more radially organised with teacher nominating who may speak?] The students are relating as students are 'meant to' relate according to the conventions of the classroom game: letting the teacher do the orchestration and responding in the manner expected by the teacher

Elements of practices	Practice architectures found in or brought to the site
Dispositions (habitus)	*Practice traditions*
For the teacher: being a literacy teacher, and both *an* authority and *in* authority in her class For the students: learning about text types and how to write texts of different types. (The lesson today will give them an opportunity to write a persuasive expository text.)	This episode is a familiar form of lesson opening. It recalls prior work to orient students towards a particular topic for the day. The students are well rehearsed in this kind of introductory activity, as is clearly evident from their courteous, compliant behaviour. It becomes clearer later that this is also a kind of social constructivist approach to teaching The lesson follows the typical IRE (Invitation, Response, Evaluation) sequence with the teacher nominating an individual student to response or inviting a chorused response from the whole class. More generally, the lesson is an example of the kind of 'discourse-action machinery' described by Heap (1985) according to which the teacher says something (discourse) and the students act (either by answering a question or by doing something)

[1] The students appear willing to comply at this stage. They have just come in from recess break. Perhaps there will be a stage later in the lesson where some (or all) might want to contest this project, and to move on to other projects. Sarah, by the way, seems very skilled at anticipating this possible eventuality, so she keeps the lesson moving swiftly, with explicit tasks for each episode.

Episode 2: Preparation for the task for this lesson: Writing an expository text

Transcript	Comments
T: Okay so, today where we're leading to—the purpose of today is for you to actually take some positions on topics. And at the end of today, what I want you to have done is to have started to write your own exposition. Scared?	Clear statement of the purpose for the activity in this lesson, and of the task for the lesson. [Note that Sarah does not need to repeat these—she is satisfied that she has the students' attention.] She makes a joke ("Scared?"), then moves on the elaborate how the tasks will be done
(All laughing)	
T: Okay so, what we're going to do to start with is, some of you have noticed that I've actually put some interesting statements around the room in different places. And I'm going to get you to just decide where you stand on these topics. Now, if you looked closely, you would have noticed on that wall I've got, 'yes'. Over there behind Christine, I've got, 'no'. And I need you to take a position on some different things. I don't want you to talk about it. I'm not going to ask you to justify your opinion. All I want you to do is to decide whether you agree or disagree with the statement that I put up. Can you do that?	Activity 2.1: decide where you stand on topics placed around the room: indicate your view by standing under 'Yes' or 'No' signs on the wall of the classroom. [NB active movement]

Transcript	Comments
T: Okay so, we should go to school six days a week	2.1.1: Example 1
(Kids rushing over to the 'no' position, presumably!)	
T: Don't talk about it, just do it. Jack, you don't need to… you just need to make a decision. Throwing gets you everywhere, boys!	Sarah smoothly redirects the attention and behaviour of some boys who are momentarily off task
T: Okay. School uniforms are very fashionable	2.1.2: Example 2
(all laughing)	
T: Reece is wearing it obviously, at the moment	
(Kids talking and moving around)	
T:…(unable to understand—yelling too loudly) yes or no? Black or white, Jack?	
M:…(unable to understand) (all laughing)	
F: I bet you haven't even played it	
T: Okay…. (all laughing). Rugby league is a sport for people with no skills. (all laughing)	2.1.3: Example 3
M: You've got to be able to catch the ball	
T:… I didn't ask you to refute, I just… your thoughts, Harrison. [To class:] Okay sit down. [To student Harrison:] Okay what was I asking you to do then, Harrison?	
M: Pick a side on whether we think… people with no skills, or say, yes and yes	
T: So, I was asking you to take a position. Okay I didn't ask you to justify it. I didn't ask for you to elaborate on why you were there. There was no opportunity for you to sit on the fence. You had to decide. And that's what exposition's all about, isn't it, taking a position	Sarah concisely reviews Activity 2.1: what the students did and why, and how it is relevant to writing an expository text
T: Okay we're going to look at some vocabulary now. We're going to use a flash game. Okay so, these *flash games* are just, as part of our *smart software*. Okay so, these are some words that—you might know some of them and you might not know	Activity 2.2: 'Flash games' on the SMART Board™ [note SMART Board™-sourced language]: in this case, from anagrams, identifying key words including 'affirmative' and 'negative' that will be crucial to 'taking a position' later in the lesson
T: Abby, can you have a go, please? I'm only going to ask people who are sitting there… listening. You can do the whole thing if you think you can. You might want to use the clues… I know it's pretty obvious but that's okay	2.2.1 Identifying the first word from an anagram.
T: Okay so, the word is?	
All: 'Yes'.	The students chorus their response: the word is 'Yes'
T: Yes. Okay yeah. Candy?	
F:… last…	
T: Oh what do you reckon that was?… yes, no	
M: It could have been…	
T: I didn't check that one, did I?	
F: Thank you	

Transcript	Comments
T: Okay I'm just going to put in another letter, just so it lets us pass that	2.2.2 Identifying the second word
M: Now … had it to …	
T: Yeah but—I'm not going to worry. Yeah I'll just put that extra letter in so that it'll let us go through it, because we know what that word was though, don't we? [It was] 'No' that I was trying to put in. Okay. See, obviously, we didn't go far enough through it, hey, did I?	The word is 'No'
T: Okay this one gets a little bit harder. Diesel? (silence) Do you think you know without the clue, do you?	2.2.3 Identifying the third word
M:…	
T: Yes to the word, yes. So, the clue says…(talking over each other) yes	
M:… the same view	
T: I know. I was hoping that someone would read that and actually pick up on the word that we're going for	
M:…	
M: Oh wait… (several children talking—can't understand either)	
T: Are you having trouble, Diesel? Not sure of how to spell it? No you know how to spell it? (all laughing) Okay you can help him, Kirralee	
(Whispering)	
You are quite close. Can you help him?	
F: The F goes	
T: No you've got two letters in the wrong places.	
F: A…	
M: Don't help me. Tell…	
T: And the word is?	
ALL: Affirmative	The students chorus their response: the word is 'Affirmative'
T: The language means?	
SEVERAL: Yes.	
T: Okay. James Jarrad?	2.2.4 Identifying the fourth word
M: James	
M:… capital letter… negative… (background noise)	
T: Good. Negative, which means?	The word is 'Negative'
ALL: No	The students chorus in response
T: No okay. So, where is the sign, negative going to go?	
F: On that side	
M: No	
T: Emily, can you put that over there for me? Where is the word, affirmative going to go?	
ALL: Yes.	The students chorus their response

Transcript	Comments
T: Meg, can you put that up for me, please?	
T: Okay I am now going to ask you to either, just to look at the top statement: 'Homework is a valuable tool for learning'. I want you to see whether you are going to move to the affirmative or the negative. So, if you go into the affirmative, what are you saying?	Activity 2.3: Reviewing students' understandings of 'affirmative' and 'negative', and getting them to identify whether arguments are in the affirmative or the negative in relation to the topic 'Homework is a valuable tool for learning'
ALL: Yes	The students chorus in response
T: Yes what?	
ALL: Yes homework is a valuable tool for learning	
T: What if you go into the negative?	
ALL: No: homework is not a valuable tool for learning	The students chorus in response
T: Okay make a decision. (Children moving around and talking) Okay, isn't that interesting, I just had a comment: "It's boring but it's valuable"	
M:… true	
T: Okay…(unable to understand). Okay: 'Homework provides time for students to work through activities and to check their understandings'. Do you use that in arguments, or the affirmative, or the negative?	2.3.1: An affirmative argument
SEVERAL: Affirmative	
T: Okay. 'Students do enough learning at school'. Affirmative or negative, Lucy?	2.3.2 A negative argument
M: Affirmative	
T: Pardon?	
F: Negative	
T: Thank you, can you… move that for me? So, what is that argument saying, Jack?	
M: That students do enough work at school	
T: So?	
M:…(too faint)	
F: So, they need to do homework	
T: Okay, just checking that you're understanding	
T: 'Homework is an important tool for practicing learning'. Affirmative or negative?	2.3.3 An affirmative argument
ALL: Affirmative/negative	The students chorus their responses (both correct and incorrect)
T: Okay can you do it for me	
T: 'Students should be outside getting exercise after school, not stuck inside doing homework'. Which one, Darcy?	2.3.4 A negative argument
M: Affirmative	
T: Does that say that, yes homework is a valuable learning tool?	
M: Oh	
T: And children shouldn't be doing it?	
M: No	
T: So, which side does it go? Does it agree or disagree with that statement?	

Transcript	Comments
M: Disagree	
T: Okay can you move it, please	
T: This is where it gets tricky. You've got to think about your statement. 'It informs parents about what their child is learning at school'. So, affirmative or negative, Emily?	2.3.5 An affirmative argument
F: Affirmative	
T: And thank you for moving it nice and quickly for me. Are we getting the idea?	
ALL: Yes	The students chorus in response
T: Okay we'll do one more. 'It is time consuming and a waste of time'. Is that supporting or disagreeing with it?	2.3.6 A negative argument
ALL: Disagreeing with it	The students chorus in response
T: Elizabeth, what do you think?	
F:…	
T: Okay so, come and move that there. Thank you. Okay we're going to leave those two, and we might come back to them another day	
T: Okay so, today I've written an exposition for you. The question that I was thinking about when I was deciding what I was going to write an exposition about, and I was thinking about a fairy tale, a fairy tale of Goldilocks and the Three Bears, and I was wondering—because, here is Goldilocks wandering through the woods, and she comes upon a house—what does she do? Goes inside, eats stuff, breaks stuff, and goes to sleep. You know, so, [a] is she just a poor innocent child who's lost in the woods? Or [b] is she a vandal, who goes out and burglarises people's houses? What do you think?	Activity 2.4: Analysing an example of expository text—in this case, a text written by Sarah
M: Burglarise	
T: I wonder. So, now, I know that you know this story quite well, so I'm not actually going to read you the story, although I do have the PowerPoint attached. But I think that you know this well enough, so I'm not going to read you the story, I'm going to tell you a nice bit of it. Are you ready…?	Explicit about shared knowledge of the story of Goldilocks and the Three Bears [an established and shared cultural-discursive arrangement] "Are you ready?" renewing engagement of attention
ALL: Yes	Students chorusing in reply
T: Are you sure? Okay this is the position that I've taken. Goldilocks is a burglar, who vandalises the home of the three bears. That's my position. Now, I don't care whether you agree or not, at the moment. This is my opinion. This is what I think. Hopefully, you will agree with me before I'm finished. I don't care what you think at the moment, though, because it's my job to do what?	2.4.1 Sarah states her position Sarah uses a question to remind students that she is aiming to write an expository text that will persuade a reader to agree with the position she advocates (by arguments)

Transcript	Comments
F: Teach	
SEVERAL:… persuasion	Sarah rejects 'persuasion' in favour of [to] 'persuade' because this conforms with the sentence she used ["it's my job to do what?"]
T: To what?	Sarah's questioning here is intended to maintain student attention and engagement.
M: Persuade-	
T: What am I trying to persuade you to…?	
M: To believe that Goldilocks is a burglar	
T: To believe that Goldilocks is a burglar. Obviously, I'm going to have some very much hard work to do, and some of you, because you're already agreeing with me. But some of you might not agree with me. So, by the end of this, you will be	
Okay: 'Goldilocks is a troubled teen who should be jailed'. And is there any doubt about the position I'm taking?	Sarah states her position
ALL: No	Students chorus agreement that there is no doubt about Sarah's position
T: Are you sure? Okay. 'Goldilocks was a burglar who vandalised the home of the three bears. She was an opportunist who waited for the three bears to leave their home and go out walking, before she brazenly opened their front door and helped herself to their possessions.'	2.4.2 Sarah elaborates her position
T: Firstly, she rifled through the kitchen and helped herself to the breakfast that mother bear had made for herself and her family. Not only did she eat all of baby bear's porridge, from mother bear and father bear's plates as well. She effectively ruined the breakfast of all three bears and she showed no respect for any of them	2.4.3 Sarah adduces Argument 1 in favour of her position
T: Secondly, she went on to jump all over the special chairs that each of the bears had custom made for themselves. She was so rough that she totally destroyed baby bear's chair. Once she had finished with his chair it was only suitable for fire wood. The three bears needed to replace baby bear's chair and also, pay out money to have the porridgy finger prints cleaned off of the other two chairs as well	2.4.4 Sarah adduces Argument 2
T: Lastly, not only did the three bears come home from their walk, looking forward to a delicious breakfast of porridge, they come home to total chaos and destruction, and to find a total stranger sleeping in one of their beds. Their bedroom was a mess of sheets, blankets and pillows strewn around the room, and there was Goldilocks, blissfully asleep in baby bear's bed	2.4.5 Sarah adduces Argument 3

Transcript	Comments
T: Goldilocks is a brazen and destructive vandal who needs to take a good long look at herself and the way she treats the property of others. She should be charged with breaking, entering and vandalism, and spend time doing community service, so she can learn to respect others and to think about how to value property and possessions of others	2.4.6 Sarah (a) draws a conclusion and (b) suggests actions that could be taken on the basis of her position
T: Does she deserve to go to jail?	Sarah invites students to express a view, to 'test' whether her argument has been persuasive
ALL: Yes	Students chorus 'Yes' in response
F: No	
M: Oh yes	
T: Yes I think she does	
M: Yes	
T: Okay so, what do you think of my exposition? So, we're looking at what I have done. So, is it an effective exposition? Sam?	Sarah invites students to justify their responses by exploring whether they have been persuaded
SEVERAL: Yes	
T: Why?	
M: Because you… (too faint)	
T: She did a lot of that herself, didn't she? Mm she should go to jail, I think. Craig, is it effective? Steven…(unable to understand)	
M: Yes	
T: Why?	
M: It drags you in…	
F: It drags you… it shows the things that she has done wrong	
T: Well she's done a lot of stuff wrong, hasn't she? Mmm… she has. Diesel, do you agree that it's effective?	
M: Yes	
T: Okay. So, let's think about it, let's think about what we know about expositions. What have I done that we know about exposition? What have I done or used to make this effective? James?	Activity 2.5: Sarah now draws the students back to the criteria for an effective exposition
M: Emotive effects	Students start supplying words from the list of criteria.
T: Okay. What types of things have I used to engage your emotion? Are there any words I've used that you particularly would like to highlight? Up you come. What have I used that grabbed you?	Students come forward to the SMART Board™ to highlight words in Sarah's text
(Writing on the board/Highlighting on the SMART Board™ [I think])	
T: 'Chaos' and 'destruction'. Isaac?	2.5.1 Example of using 'emotive words'
M: Get up?	
T: Yep, what have I used that grabbed you, and what have I used that made you believe what I was saying?	

Transcript	Comments
M: 'Destruction' and… of-	
T: Come and highlight them for me	
M: It's just—oh James has already taken	
T: Both of them? Okay. Reece…	
M: 'Blissfully'	2.5.2 Another example of 'emotive words'
T: Okay.	
M: Blissfully	
T: Blissfully. So, is that to do with the destruction that Goldilocks caused?	
M:…(too faint)	
T: So, why do you think that's effective?	
M: Because… like… asleep that she's nice and asleep, and like…(too faint)	
T: Have a bit more of a think and I'll come back to you. Jack?	
M: 'Ruined'	2.5.3 'Emotive words'
T: Ruined…. with me…(unable to understand)	
M: 'Should be charged with breaking, entering and vandalism'	2.5.4 'Emotive words'
T: Two more. Steven?	
M: When you said, like 'firstly', 'secondly' and 'lastly'	2.5.5 Cf. earlier in the lesson when the use of 'openers' was given as a criterion for effective expositions ("It uses openers like, firstly… secondly… thirdly… in the end")
T: Okay is that just a structure we use-…(background noise) so, that's a structure we use to help us outline our arguments, and we're trying to—putting forward. Okay. Last one, Nguyen	[NB: "That is *just* a structure we use…" (emphasis added): Steven's idea apparently does not conform to what *Sarah* thinks the classroom game is at this moment: she appears to think that the current game is only about 'emotive words' while Steven thinks it is about things mentioned in the list of criteria for effective expositions. Sarah re-asserts her view of what the game is—identifying 'emotive words' by asking Nguyen for a 'last one' (a last example of 'emotive words').]
M: 'Stranger in their …', because she's a stranger to them	2.5.6 'Emotive words'
T: Okay. So, rather than making her seem, I guess a bit innocuous, a bit harmless. Okay. So, there are two points to this-…(background noise) there are two types to this argument though, aren't there? Because I've taken one path. The other path I could have taken was that she was an innocent child who found herself lost in a big dark forest, and she was scared and alone	Activity 2.6: Taking an opposite position Sarah returns to an idea (formerly referred to as 'affirmative' and 'negative') that she now (newly) describes as "two types" and alternative "paths" for the argument. She names the other path: Goldilocks as an innocent child… She asks a question to elicit student engagement and responses

Transcript	Comments
T: Would I be able to use the same words I've used?	2.6.1 Sarah asks a new question to maintain attention and engagement
ALL: No	Students chorus their response
T: If I was going to take that argument	
SEVERAL: No	
T: Why not? Kirralee?	
F: Because you'd use, like bad words about her	
T: I haven't been very flattering about her. Okay, if we were going to say it was a poor innocent child, what arguments could we use? What could we use, Liam?	2.6.2: Sarah asks the students to offer arguments for the proposition that Goldilocks is innocent, lost and scared
M: That she was curious about the house.	2.6.2.1
T: Okay so, maybe that she was curious. Possibly. What else could we, maybe think? Georgina?	[Note that Sarah comments on each child's suggestion, authorising their answers.]
F:… she … [went to the bears' house by accident?] (too faint).	2.6.2.2
T: So, it was an accident. I think Goldilocks was a bit of an accident waiting to happen. Elizabeth?	
F: Lonely.	2.6.2.3
T: Okay, maybe lonely, and maybe she was looking for some friends. A bit of a funny way to find friends, but maybe that was what she was doing. Jack?	
M: Helpless	2.6.2.4
T: Helpless. Maybe she was lonely and helpless, and she was looking for someone to help her, and she had to search all through their house to find someone. Darcy?	
M: Terrified	2.6.2.5
T: Maybe she was terrified	
T: Okay so, there's some arguments that we might be able to use to defend Goldilocks to say that she was an …?	2.6.3 Sarah sums up Activity 2.6 (making the opposite argument)
ALL: Innocent child	Students chorus their response
T: Okay	

Analysis: Episode 2

Elements of practices	Practice architectures found in or brought to the site
Project Preparation for the main task of the lesson which will begin in Episode 3: In content terms, Sarah invites the students take a position on a topic (Activity 2.1), guides them towards understanding the key words 'affirmative' and 'negative' (2.2), helps them to identify whether arguments are affirmative or negative (2.3), invites them to analyse an example of expository text that she has written (2.4), has the class apply their previously prepared criteria for effective expository texts to her example text (2.5), and has them recognise that it possible to take, and argue for, an opposite position about a topic (2.6). She leads the students through these activities in order to prepare them to work in groups to develop an effective exposition about a topic and position (affirmative or negative) that she will assign to each group later in the lesson (in Episode 3). In a debrief of the lesson with the researchers, Sarah described this as a process of "tuning the students in" to the focal activity of the lesson (drafting an expository text in Episode 4) In terms of the teaching process, Sarah proceeds with strongly teacher-directed questioning. In terms of the learning process, the students comply with Sarah's instructions, laugh at her jokes, and appear to follow the content with understanding. The learning pathway here builds on that in Episode 1, in which they reviewed concepts, and followed Sarah as she assembled key ideas and activities that will scaffold the students for the group work to be undertaken in Episodes 3 (task introduction) and 4 (group work)	*Practice landscape* We continue to be in the Year 5–6 classroom: a new, spacious, light classroom, well furnished and resourced with computers, the SMART Board™ and so on. It is a resource-rich landscape; in this episode, the students occupy an open space in the classroom, in which they sit on the floor for some activities and in others move to show where they stand on particular topics (near a 'Yes' or 'No' sign). At the front is the SMART Board™, largely (but not entirely) driven by the teacher, which plays a central role in orchestrating a brisk sequence of activities In this episode, the students are very definitely directed by the teacher: which parts of the landscape will be important for them to connect with or be 'anchored to' (sitting on the floor, standing under 'Yes' or 'No' signs, attending to the SMART Board™) is determined in large part by the teacher. In this lesson and episode, many of the resources in the room are irrelevant; they stand as '(back)ground' behind the 'figure' of the objects that are made relevant by the activities Sarah has decided for the lesson (like the 'Yes' and 'No' signs; the SMART Board™). When the time comes for the students to use the computers (later in the lesson), the computers, too, will number among the objects that are part of the 'figure' in the activities [activity timespaces] that Sarah draws the students through—in this particular episode, however, the computers are referred to but not used. The practice landscape for this lesson is composed principally of the objects that are made 'figure' by the activities, but it is nevertheless also composed of the objects that remain as '(back)ground'—perhaps as 'latent' objects (like the computers that will be used later), but also perhaps as taken-for-granted (the windows, or the notion that we are conversing using the English language) or unnoticed (the dust on the top of the bookshelves)

Elements of practices	Practice architectures found in or brought to the site
Sayings	*Cultural-discursive arrangements*
In terms of the *content* of what is discussed in the lesson, students are directed to a variety of key ideas about 'expository texts' including: "taking a position on a topic"; "deciding where you stand" (without "talking about it" or "justifying it"); "yes" and "no" positions and that they are respectively "affirmative" and "negative"; and about criteria ("guidelines") for "effective" "expositions". In terms of *what is actually said* by the students, however, the episode is less rich. In fact, the students frequently have opportunities only to give one-word answers to Sarah's closed, literal questions. That is, they are providing these key terms to 'fill in' responses to Sarah's questions rather than using them in meaningful sentences of their own—as they would in a language game (Wittgenstein, 1958) about expository texts or in the kind of communicative action (Habermas, 1987a) in which participants sincerely strive to reach intersubjective agreement, mutual understanding and unforced consensus about some practical issue in which expository texts might be used As described in relation to the cultural-discursive arrangements that support what is said in this episode, a great deal of background knowledge (cf. Schatzki's "general understandings") is also assumed and drawn upon. It is perhaps fleetingly relevant (as a passing example) but it is nevertheless important to secure the key ideas for the lesson (for example, one can come to understand the language game of what is "affirmative" through rehearsing cases of things one agrees with and does not—the latter being what is both not a case of "affirmative" and also "negative"—through considering propositions that the students already comprehend like "we should go to school six days a week")	The language is English. Many of the key terms in the lesson refer to text types (especially 'exposition') referred to in the *First Steps Writing* curriculum materials. A great deal of background knowledge is presupposed and called into focus in the interactions, for example in the content of examples: about how many days a week the students go to school, about school uniforms and their appearance (un/fashionable), about Rugby League football, about justifying or elaborating a position, about 'vocabulary', about 'flash games' (on the SMART Board™), about word puzzles (the flash game), about spelling, about 'homework' and arguments for and against it, about being outside and getting exercise, about parents knowing how students are doing at school, about the fairy story 'Goldilocks and the Three Bears', about reading a text on the SMART Board™ screen, about moral positions on burglars, about persuasion as the purpose of expository texts, about vandalism, about 'strangers', about going to jail, and about 'effective' expositions that include 'emotive' words (like 'chaos' and 'destruction' and 'blissfully'), arguments (that can take 'two paths', affirmative and negative)

Elements of practices	Practice architectures found in or brought to the site
Doings	*Material-economic arrangements*
The episode is strongly teacher-driven, with Sarah nominating students to respond or asking questions that invite students to respond in chorus. It is clear from the immediacy of the students responses to questions asked individually or of the class as a whole, and from the students' easy compliance with Sarah, that they are well-rehearsed in these forms of classroom interaction	2.1: The action takes place in the open space in classroom where students can move around to stand under the 'Yes' or 'No' signs Sarah has put up on the classroom wall. The action is part of a whole class activity
Activity 2.1: Sarah invites the students take a position on a topic, indicating their stance by standing under a paper 'Yes' or 'No' sign on the classroom wall	
2.2: Sarah guides the students towards understanding the key words 'yes', 'no', 'affirmative' and 'negative'. She does this by putting clues to words up on the SMART Board™, and inviting students to say what they think the word is	2.2: SMART Board™ and 'flash words' software presenting anagrams of key words. Whole class activity
2.3: Reviewing 'affirmative' and 'negative': Sarah helps the students to identify whether arguments are affirmative or negative. Sarah displays arguments about homework on the SMART Board™, and nominates students to say whether the argument is 'affirmative' [A] or 'negative' [N]. [The arguments are presented in strict alternation, in the order A-N-A-N-A-N.]	2.3: Topic 'Homework is a valuable tool for learning' on the SMART Board™. Whole class activity
2.4: Sarah invites the students to analyse an example of expository text that she has written. Her text is about Goldilocks, arguing that 'she is a troubled teen who should be jailed'. She reads her expository text to the class, then invites the students to say whether they agree with her conclusion, that is, whether her argument has been persuasive	2.4: Sarah's text written before the lesson, displayed on the SMART Board™
2.5: Sarah asks the students to consider whether her text is an 'effective' expository text, using the criteria for effective expository texts that the class had developed before morning recess. Nominated students come forward to highlight words in the text on the SMART Board™	2.5: The student-developed criteria for assessing the effectiveness of expository texts. The SMART Board™ to display the text and to permit students to highlight words to demonstrate how they use criteria for effective expositions

Elements of practices	Practice architectures found in or brought to the site
2.6: Sarah has the students recognise that it possible to take, and argue for, an opposite position about a topic. She invites the students to consider the position that 'Goldilocks is a poor innocent child', and to offer arguments for that position. The students comply and suggest arguments	2.6: This brief activity is a verbal exchange
Sarah leads the students through activities 2.1–2.6 in order to prepare them to work in groups to develop an effective exposition about a topic and position (affirmative or negative) that she will assign each later in the lesson (in Episode 3)	
In terms of the teaching process, Sarah proceeds with strongly teacher-directed questioning. The students appear to respond willingly and eagerly, with few students apparently distracted or disengaged. Sarah moves briskly through the sequence of activities, giving very concise instructions about the task for each activity, and relatively rarely repeating the instruction. She regularly checks that the students understand the task and the substance of the work being done	SMART Board™; classroom; chairs, desks, classroom furniture, etc.; bodies in space—teacher standing and orchestrating via questioning (not by giving elaborate instructions)
In terms of the learning process, the students comply with Sarah's instructions, laugh at her jokes, and appear to follow the content with understanding. They are certainly engaged as a result of her swift and smooth orchestration. The learning pathway here builds on that in EPISODE 1, where they reviewed concepts, as the students follow Sarah as she assembles key ideas and activities that will scaffold the students for the group work in Episode 3	The children actively and willingly comply: they sit, stand, move to stand under signs, come forward to the SMART Board™ to highlight words…. They participate in familiar forms of question-answer routines (being nominated, answering…). It is clear from the smoothness of the process of interaction in this episode that the students are performing in well-rehearsed roles as students attending to, engaged with and responsive to Sarah who is also performing long-established and well-rehearsed roles as a teacher directing the students in this episode of today's lesson

Elements of practices	Practice architectures found in or brought to the site
Relatings	*Social-political arrangements*
Sarah continues to orchestrate the class in a one-to-many relationship that reproduces her positional authority vis-à-vis the students. The students continue to comply willingly, and there appears to be no contestation of her authority or intentions. The students continue to act in a friendly way with one another as conversation partners	The working arrangements for the class continue to be prefigured by strong incumbency by participants in teacher and student roles in the course of the interaction. Sarah continues to steer the course of the interactions. The students, eagerly engaged, perform smoothly in response to Sarah's skilful classroom manner. There continues to be respect for the 'rules' of this classroom, with students interacting courteously and warmly. There appears to be genuine warmth and good humour in the interactions and classroom banter. It is clear from the efficiency of the progress through the lesson, with Sarah giving clear and concise instructions that the students act on immediately, that they are following familiar routines of activity: they are used to being oriented by content presented on the SMART Board™, by Sarah's directive questioning and by her swift orchestration of a sequence of activities. In terms of established patterns of classroom management, it is as if the students have no alternative but to comply, since Sarah moves on so briskly and authoritatively; they appear to have been domesticated to these kinds of activities and this kind of pace.
Dispositions (habitus)	*Practice traditions*
Sarah continues to exhibit the habitus of the leading literacy teacher: *an* authority and *in* authority. She is conscious of the presence of three researchers in the classroom, but is sufficiently (and substantially) experienced with being observed as a leading teacher to appear unruffled in her performance The students continue to be stirred in to the classroom 'game' for this lesson, remaining attentively engaged and compliant as Sarah moves through the activities of the lesson. They appear to be answering relevantly and usually correctly [because Sarah has been nominating students to respond and/or because many of the questions Sarah asks in this lesson are closed, literal questions?] and thus they appear to be learning, if they have not already learned, about expositions, criteria for effective persuasive texts, the concepts of 'affirmative' and 'negative', about analysing a text, and about writing an exposition—which they will soon begin to do in groups	The lesson continues to be strongly teacher directed and explicit although the larger unit of work within which it is set may be of a progressive, social-constructivist kind. The content of the lesson is also from a particular tradition of literacy teaching that focuses on text types. This is part of a tradition in literacy education that aims for students to become metacognitively aware of different genres of speech and writing, to be able to be more effective in the use of language in spoken, written, heard and read communication

Episode 3: Introducing the group task of writing an expository text

Transcript	Comments
T: Now it's time for you to have some fun. Okay so, this is what you're going to do. I'll put you into some groups. The groups are fairly varied. I'm actually going to give you a fairy tale. I'm going to assign your group to a fairy tale. That fairy tale you will find in our 5–6 folder on Public. You will find it in a folder named 'a fairy tale'. So, if you need to refresh your memory about what that fairy tale is all about, that's where you go. I then assigned you also, a point of view. You don't have to choose the point of view you're going to take. So, you need to be really strong about convincing us of your point of view, even if you don't believe it yourself. That could be interesting. And there's a few of you who I have assigned points of view, simply because I want to see how well you argue. And I know there's some good arguers in here	Activity 3: Sarah explains that in this activity, students will be working in groups to create expository texts based on characters in fairy tales, with each group being given a position ('affirmative' or 'negative') to take on the fairy tale. Note the reference to "our 5–6 folder on public": part of the material-economic arrangements that prefigure the activities of the lesson
T: Okay so, you've got some other people who are working with you on that point of view. I want you to have a really good discussion about what you can do to actually get that point of view across, how you can actually argue. You saw how I argued, didn't you?	3.1: In what follows, Sarah elaborates her initial statement of the task. In 3.1, she sets the group task of having a "good discussion" about "Get[ting] that point of view across"
F: Yes	
T: There was nothing wishy-washy about my argument. So, you need to look at how you can get your argument across.	
T: I've also put in a vocabulary sheet with some ideas that might help you with vocabulary that's a little bit higher, and I'm sure you'll come up with some great vocab of your own	3.2 Sarah invites students to note potentially useful vocabulary on the sheet that she has provided to the groups
T: I want you then, on the format, like I showed you before, the one that I started taking notes on, I want you to start to outline your arguments on there. So, we've got it in the top part, stating our opinion, and I put your opinion in for you. And you've got your three arguments and you need to restate your opinion…(unable to understand)	3.3 Sarah draws the students' attention to a "format" (perhaps a template) that they are to use to outline their arguments (also part of the material-economic arrangements for the lesson)
T: Now, this is drafting we're looking at, putting our ideas together, trying to get really good, strong ideas together using what we know. It's getting the ideas. You're elaborating on them. You're justifying and you're making sure that you are going to persuade your audience	3.4 "This is *drafting*": 'drafting' is an idea presumably introduced to students previously, perhaps long ago (part of the cultural-discursive prefiguring of the lesson)

Transcript	Comments
T: I'm not sure how far we'll get today. That doesn't matter. The idea is for you to be having really good discussions and getting ideas from each other, looking at your use of vocab, and looking at the order of your arguments, so you've got your strongest, most important one, first	3.5 Indicating that the whole task need not be completed in this lesson, but emphasising that the students need to create content and populate the "format" with the structure they are to use for an expository text
T: How's that? Okay?	3.6 Checking that all understand the task
T: So:	3.7 Allocating students to groups [via random 'Group Chooser' on SMART Board™, see students' comments on the SMART Board™ in the student focus group interview]
T: Charlotte, Emily, Reece and Bradley, your position is, Jack was—so, this is about Jack and the Bean Stalk—Jack was an adventurous and inquisitive lad, who went exploring up the bean stalk looking for fun	3.7.1 +
T: Sam, Heath, James, Carrie and Bernadette—Jack was a conniving thief who set out to rob the giant of all his treasures and precious belongings	3.7.2 −
T: Harrison, Isaac, Madeline and Nguyenn—looking at The Three Pigs. The wolf was a lonely animal who followed the stuck up and unfriendly three pigs around, trying to make friends with them. (all laughing)	3.7.3 +
T: Elizabeth, Sarah, Sloane, Hugh and James Newman—the big bad wolf was a mean carnivore who would go to any lengths to catch his next meal	3.7.4 −
F: I've been very creative with this	
T: Okay Gingerbread Man—Sarah McLaughlin, Meg,… and Kirralee, the fox is a kind animal who is just trying to help out the gingerbread man in his time of need	3.7.5 +
T: Darcy, Steven,… and Lucy, come with me up here—the sly fox was a sneaky animal who saw the opportunity to eat the delicious gingerbread man by pretending-…(talking over each other)	3.7.6 −
T: There's a typo on that too	Sarah draws attention to an error…
T: Okay Liam, Jack… and Jack O'Dwyer—The poor wolf was just in the wrong place at the wrong time. It was his sad misfortune to come across Little Red Riding Hood and her axe crazy father	3.7.7 +
T: And who have we got? Lochi, Andrew… (talking over each other)	3.7.8 [−]
[Everyone talking loudly as class breaks into groups.]	

Analysis: Episode 3

Elements of practices	Practice architectures found in or brought to the site
Project The project for this episode of the lesson is to explain clearly what the task is for students when they work in groups to draft an expository text taking an affirmative or negative position on the actions of a character in a fairy tale (which they will do in Episode 4). Sarah has assigned each group a fairy tale and a position to be argued. She outlines the task clearly and concisely, with almost no repetition. The students appear to understand the task clearly (and at the end of the episode disperse to their assigned groups efficiently and with purpose).	*Practice landscape* Episode 3 continues to be in the Year 5–6 classroom, engaged in a whole-class activity directed by Sarah. The practice landscape begins to widen in this episode, however, to include additional resources with which students will interact in Episode 4 (the group writing task). Sarah draws the students' attention to digital resources available in the Year 5–6 folder on 'Public' that they can access via the computers in the classroom, to a vocabulary sheet they can use to extend the language they will use in their draft expository texts, and to a 'format' (template) they are to use to set out their argument. At this stage, Sarah simply draws attention to these resources, making them salient for the students; they will become more richly enmeshed with them when they begin the group work of drafting their expository texts.

Elements of practices	Practice architectures found in or brought to the site
Sayings The sayings in Episode 3 are largely monologic rather than dialogic: Sarah giving instructions to the class. Some of the language used in this episode is in the form of procedural instructions relating to the group work process (for example, “I’ll put you into some groups”, “discussion”, “getting ideas from each other”). Other language relates specifically to the content of the writing task and to elements of expository texts (“fairytale”, “point of view”, “arguing”, “convincing”, “nothing wishy-washy”, “vocabulary that’s a little bit higher”, “vocab”, “outline”, “arguments”, “format”, “opinion”, “restate your opinion”, “drafting” “trying to get really good, strong ideas”, “elaborating”, “justifying”, “persuade your audience”, “order of arguments”, “strongest, most important one, first”). In this and other episodes, it is principally Sarah who introduces substantive content and technical terms (specialist discourse) in the verbal interactions in the classroom. Students have opportunities to affirm and sometimes to repeat ideas that are significant to the content of the lesson, but they are often echoing rather than formulating or creating content in the classroom exchanges. These kinds of opportunities for students are rather different from the opportunities they would have in a more open-ended language game about expository texts or communicative action in which they strove to reach intersubjective agreement, mutual understanding and unforced consensus about what to do in relation to some practical issue is which expository texts might be used.	*Cultural-discursive arrangements* It is clear from the interaction in Episode 3 that the students are very familiar with being allocated to groups for group work, and that they clearly understand how they are expected to work on the specific drafting task for today’s lesson: drafting an expository text. It is also apparent from the students’ attention when Sarah describes the task that they understand clearly what the task is and what they are expected to do. The specialist discourse used in Sarah’s explanation of the task is understood by the students—there appear to be no students who do not understand what they are expected to do in terms of the content of the task (as well as the process). Sarah’s use of this specialist discourse appears to locate the students clearly for the group task ahead. The language appears familiar, not new, for the students; it is a cultural-discursive arrangement that prefigures their understanding of the task in terms of both process and content.
Doings Episode 3 is highly teacher-directed. The students listen actively and attentively, and appear to understand clearly what is expected of them. Their attention is drawn to digital resources, a vocabulary sheet and a ‘format’ for the group task ahead.	*Material-economic arrangements* The students are sitting on the floor in the open area of the classroom during Episode 3, with Sarah directing their attention. She particularly draws their attention to the digital resources (the fairy tale stories) the groups can access via the computers in the classroom, a vocabulary sheet and a ‘format’ for the task ahead—all prepared in advance by Sarah to use the lesson. These are key parts of the ‘set-up’ of material objects arranged for each group’s drafting task.

Elements of practices	Practice architectures found in or brought to the site
Relatings	*Social-political arrangements*
This episode is also highly teacher-directed, with the students attentive to and complying with Sarah's instructions, individually and collectively reproducing the compliant student role	It is evident from the interaction in Episode 3 that the students are enacting long-established patterns of social interaction in the classroom: they are attentive to Sarah's instructions and swiftly enact what is expected of them in the interactions. The specific pattern of interaction in Episode 3 is highly teacher-directed, but it also foreshadows the group work in Episode 4, which the students are anticipating: they are aware that they will shortly be released from the teacher-directed pattern of interaction in Episode 3 to the much more active, participatory and collaborative work expected of them in the group task for Episode 4. Perhaps the anticipated reward of the group work to come in Episode 4 also reinforces their willingness to comply with Sarah's instructions in Episode 3, reproducing both of two different kinds of engagement in Sarah's classes: active attention and compliance in whole-class work, and active and collaborative engagement in small group work

Elements of practices	Practice architectures found in or brought to the site
Dispositions (habitus)	*Practice traditions*
In terms of teaching, it is clear that Sarah has established patterns of interaction in her classroom that more or less guarantee that students will give her their whole attention during whole class activities—like Episode 3. By contrast with Episodes 1 and 2, however, Episode 3 is almost pure monologue. Nevertheless, it is clear that the students are attentively engaged and that they are following Sarah's explanation of the task. It is also clear from Episode 3 that the students are anticipating the group work of Episode 4, and readily accept being allocated to groups (assigned by Sarah), and assigned tasks. On the evidence of Episode 3, Sarah might be described as excellent in terms of classroom management; she is clearly very skilled at maintaining student attention and engagement. For the students, Episode 3 gives further evidence of their attention, compliance and engagement during whole-class activities. Sarah is clearly speaking to the students and being heard and understood by them: she makes and maintains contact with them individually and collectively through questioning and continuing verbal exchange. Their ready compliance suggests that the students trust that the lesson is 'going somewhere', that they can follow Sarah's instructions and something will be achieved—this trust has been produced and reproduced by Sarah and the students through their time together. In the process, Sarah has positioned the students as willing learners; in this lesson at least there is no evidence of contestation or resistance among the students about how life is to be lived in Sarah's classroom.	Episode 3 is an example of highly explicit whole class teaching, very teacher-directed. It is also an example of the 'known-new principle' (Pearson & Johnson, 1978) according to which the teacher has students use something known to work on a new idea—in this case using known fairytales to work on the new idea of constructing effective expository texts. On the other hand, and like the episodes that preceded it, Episode 3 also anticipates the group work of Episode 4 which is more socially-constructivist: the students will be actively and collaboratively engaged in producing an expository text. The students anticipate the freedom that the group work promises: this is evident from the noisy and cheery way they disperse to their groups at the end of Episode 3. The group work will not be a very open-ended inquiry task, however: Sarah has provided some very strong scaffolds for what the students are to do (what they are to produce) in Episode 4: (1) the list of criteria for effective expository texts co-produced with the students in the previous lesson, (2) the assigned fairytales and positions the students are to defend, (3) the vocabulary sheet, (4) the format (template) for setting out their draft text, and (5) the remembered example of Sarah's own expository text presented in Episode 2. With such strong scaffolding, not much has been left to chance: the students will be able to produce a draft exposition in the time available—and Sarah can be fairly sure that she, the students, and we observers in her classroom will see acceptable 'products' produced. In the light of this strong scaffolding, the question arises of what the students will learn during the group work to come in the next Episode. They will *use* the scaffolding material in constructing their texts, but the work will be more formulaic than if they were writing without those scaffolds present as prompts for how to set out their argument (the 'format' or template), suggested vocabulary (the vocabulary sheet), and the assignment of the positions they are to take regarding characters in the fairytales they have been assigned. To the extent that they remember the model of Sarah's expository text resented in Episode 2, and the criteria for effective expository texts discussed in the earlier class, these will also scaffold their creative work as they formulate their arguments. Together, these five sets of scaffolds are practice architectures that enable and quite tightly constrain the groups' practice as they write their expository texts, firmly prefiguring what they can produce.

Episode 4: Students work in groups to draft an expository text

Note: The small group work in Episode 4 was not recorded. The notes in the analysis section below are thus inferences from what participants said in Episode 5, or from the researchers' sketchy field notes about Episode 4.

Analysis: Episode 4

Elements of practices	Practice architectures found in or brought to the site
Project The students were working collaboratively to produce a draft expository text on a topic given by Sarah, namely taking and arguing to persuade a reader to agree with a position Sarah assigned the group regarding an assigned character in an assigned fairytale.	*Practice landscape* The groups worked around clusters of desks around the Year 5–6 classroom, with one (or more) of the students taking notes on a laptop computer. The students are referring to and getting ideas from a 'format' (template) handout distributed by Sarah at the beginning of the task, and also referring to and using words from a vocabulary sheet she also distributed. The preparatory activities in Episodes 1–3 are also part of the practice landscape for the students. A parent volunteer responds to questions and requests for help from the groups (although the groups work generally without assistance). Sarah is an ambiguous part of the practice landscape in the lesson. During this Episode, she converses with the three researchers, giving them an extended account of what she has been doing in the lesson so far, and why. Because she is present in the room, she is part of the regulatory architecture of the lesson, but, as it happens, she does not intervene in the group work or respond to the groups' occasional requests for help, leaving that to the parent volunteer.
Sayings As is clear from the texts that the students produce in the lesson, they use many words associated with the fairytales they have been assigned, and words drawn from the 'format' (template) and vocabulary list Sarah distributed at the beginning of the Episode. They also use words that show they know about how to do group work—for example, groups nominate a note-taker to work on the laptop computer recording material for the draft text they are producing, and they are able to monitor their process to ensure all participants have an opportunity to contribute.	*Cultural-discursive arrangements* The distinctive sayings in the Episode draw on the specific discourse in the fairytales they have been assigned and the topics they have been given, and from the 'format' and vocabulary sheet Sarah distributed. They are also drawing on the 'guidelines' for effective expository texts (for example, using emotive words, ordering arguments from most to least importance) that they developed in the previous lesson before the morning recess. They also use a discourse about group work that has become familiar to them through their careers in the school, and especially in Sarah's classroom

Elements of practices	Practice architectures found in or brought to the site
Doings	*Material-economic arrangements*
The students readily join groups assigned by 'Group Chooser' software on the SMART Board™. Without fuss or delay, the students proceed through the set activities for the Episode, using the format they have been given as a guide for the construction of their expository text, and the vocabulary sheet, for example	The students are using the format and vocabulary sheets distributed by Sarah. They are sitting at clusters of tables as they interact in group discussion. One student leads in note taking on the laptop computer being used by the group. The students also remain aware of the progress of other groups. occasionally, a group asks for assistance from the parent volunteer in the classroom. The students are aware of Sarah's presence in the room, but note she is conversing with the visiting researchers
Relatings	*Social-political arrangements*
The students work efficiently and effectively in small groups: they are clearly well-rehearsed in working collaboratively with one another. They also comply readily with Sarah's directions about the activity. They ask for help, if needed, from the parent volunteer as a resource, and they do not disturb Sarah who is conversing with the visiting researchers—though they remain conscious that she would intervene with an instruction if classroom behaviour warranted it	The students follow well-established class and school norms for working in groups. These are explicitly and closely connected to the School District's *Communities of Practice Principles* which place special emphasis on *meaningful learning, inquiry, collaboration and relational trust, communication and reflective dialogue, self-responsibility* and *human development*. At the same time, the relationships in the classroom also demonstrate courtesy and compliance to adults and especially to Sarah as the class teacher who is an authority and in authority in the room
Dispositions (habitus)	*Practice traditions*
The students are clearly developing knowledge, skills and values about expository texts, using their prior knowledge about fairytales in a new task context—drafting an expository text	The students are demonstrating that they are well-rehearsed in small group work, and in working in an inclusive way with all members of their groups (chosen at random). They are clearly well-rehearsed, too, in collaboration in shared tasks, contributing with no apparent hesitation or concern to the shared group project of producing a text. They demonstrate obedience to classroom norms about courteous and obedient behaviour, but in Episode 5 especially, demonstrate norms about collaboration and communication, and working with a purpose

Episode 5: Representatives of groups report on their draft expository texts

Transcript	Comments
T: Who found that incredibly easy? Who found that a little bit challenging? Okay, Lucy, why was it challenging?	
A: Because when you had to write the, … (Too faint) (Microphone Interference)	
T: Okay, so changing the words around to restate your opinion, okay. Meg?	
A: We disagreed with the …, so it was hard for us to-	Meg reports that her group weren't clear about the task and didn't manage to complete the drafting in time. Sarah made the decision not to spend further time discussing the task at this point. It is possible that some or all of the students in Meg's group had encountered a real problem, however: that they could not write an expository text taking a position that they didn't agree with. Sarah didn't explore this possibility at the time
T: So you had to be really, really, you had to really, really think about that-	
A: … gingerbread man, but on our card it said he was just trying to help the gingerbread man get across the street	
T: It was all an accident, didn't you realise that, a big accident, a fly landed on his nose and he tried to get rid of it, … the gingerbread man, tragic. It's hard sometimes to argue something that you don't agree with, but, that was part of the challenge, wasn't it. Okay, I'll just go around and ask a couple of people if they would be willing, now I'm aware that this is a draft, and I'm aware that we haven't done a lot of work on writing them, that we've spent most of our time on analysing and familiarising, so, it is a draft and it's a work in progress, and thankyou to those people who have agreed to share, … very supportive of you. Okay, would you like to start Harrison?	Sarah suggests the kind of response that Meg's group could have made
A: Yes	Harrison's group reports.
T: So nice clear voice, please put those down so we're not fiddling with things, so that we show Harrison the respect he deserves	Sarah makes a rare intervention managing a child's behaviour
A: Our argument was-	
T: I'm sure you're tell us your argument won't you, in your … statement?	

Transcript	Comments
A: The wolf was a lonely animal who followed the stuck up and unfriendly three pigs around, trying to make friends with them. My first supporting argument was, the pigs were too … (Background noise) to be the lonesome wolf's friend, who was in a time of need and was hapless in catching …. My second argument was, the wolf was exploited by the pigs and was inquisitive about their unfriendly nature. My third argument was, he was an adventurous wolf who was unfortunate and … when he tried to make friends, and was forced to try and blow their houses down, but was misfortunate in trying to blow the last house down and landing in boiling water. And my … statement of opinion was, the wolf should not of been punished or hated for blowing down pigs' houses and ruining their tea that was cooking in the pot he landed in	
T: Thank you Harrison, thank you. Anyone notice anything about what Harrison's tried to do? Madeline?	Sarah thanks Harrison and invites student responses to the group's draft text
A: His interesting vocabulary	
T: That was what I noticed as well, he's tried really hard to use some of that vocabulary off the sheet, I think he's had an excellent effort at that	Sarah elaborates and gives her evaluation. She makes explicit reference to the vocabulary sheet and Harrison's group's use of words in the list on the vocabulary sheet
A: He was trying to make it sound like the fox was just, like, a wolf, whatever, was just looking for friends, and wasn't … (Too faint)	
T: He's tried very hard to do that, so, that's a good effort Harrison. So you've got some really good things that we can keep building on that, well done. Okay, who else did I ask, Elizabeth I asked you didn't I?	
A: The big bad wolf was a mean carnivore, who would go to any lengths to catch his meal. My first, firstly the big evil wolf stalked the little pigs and watch them build their peaceful homes, then took the opportunity to sneak up on one of the three little pigs, and vandalise their home by blowing the straw house down, and then eating the poor innocent pig whole. Secondly this sly beast was mean and nasty enough to break one of the pigs hearts, by wrecking their most prized possessions, their stick home, then as the pig was miserable enough he ate the shallow pig in …. Lastly the sneaky … AKA the wolf, obviously was still hungry so he went looking for the only pig still alive, due to his dangerous construction, when he found the pig in his brick house, she wanted to kill it, but the pig was too smart and ended up … (Background noise)	Elizabeth reads her group's draft text

Transcript	Comments
T: What's Elizabeth done really, really well? Stay there, stay there, have your moment in the sun, and talk about what you did well. What did she do really well, Steven?	Sarah thanks Elizabeth and invites student responses
A: You highlighted the vocab off the sheet	
T: Okay, she did use some excellent vocabulary. What else did she do really well?	Sarah evaluates and elaborates on student Steven's response
A: She made the wolf look like more of a criminal than it did in the fairy tale	
T: I think she did, very effectively, doesn't sound like a very nice animal from what you've, the point you've put across, I think you've done that very effectively, well done. So that gives us a really good base to build upon as well. Thanks Elizabeth, who else did I ask, Jack?	Sarah evaluates and elaborates the next student's response.
A: The poor wolf was just in the wrong place at the wrong time, it was his misfortune to come across Little Red Riding Hood and an axe crazy father. Firstly little Red Riding Hood stole all of the lost innocent wolf's food, the wolf wanted it back so he ran in front of the Little Red Wolf and tried to trick her in desperation of getting his food back. Secondly, his ingenious plan to get his precious food back was to find grandma's clothes in the smelly garbage and dress up as grandma, so the little rebel would give him the misfortunate harmless explorative his food back. That shows how desperate he was. Lastly, the little rebel foiled his plan and called for her crazy murderous father who was an axe crazy wood cutter, he murdered the wolf and was never seen again	Jack reads his group's draft text
T: Okay, the poor wolf. Just tragic isn't it?	
A: Yes	
(All laughing)	
T: Okay, how was Jack effective? Reece?	Sarah invites student responses
A: Good vocabulary.	
T: Good vocab, you think it's good?	Sarah evaluates and elaborates on Recce's response
A: Excellent, fantastic-	
T: It was much better than good, good's a horrible word. Georgie?	
A: He didn't say the woodcutter the whole way, he used other … to-	
T: And even when he did use woodcutter, I think the words were 'axe crazy' and 'murderous' that went before it, so he's actually giving you that opinion, who's the baddie in this story?	Sarah evaluates and elaborates on Georgie's response
All: The woodcutter	
T: And who else?	

Transcript	Comments
All: Little Red Riding Hood	
T: Comes across very strongly. Okay, thank you to those other people who volunteered, we will use you tomorrow. I think that we've actually made a very good effort at this, I'm very, very impressed, so well done, and well done for all the hard work you were doing. I know I wasn't very much help then, but Mrs Thompson [the parent volunteer] was fabulous and you worked so independently. Did you [Christine; one of the visiting researchers] want to say anything?	Sarah thanks the class for their work, and thanks the parent volunteer who assisted the students while she (Sarah) conversed with the visiting researchers during Episode 4
T: No I just want to say thanks for letting us come into your classroom to see how much you've learnt since kindergarten, I cannot believe it, that was astounding, and so thankyou for sharing your class with us, it was just so fabulous and I think we're lucky to be able to talk to a few of your after you have your lunch break, so, we'll some of you after you have a good break, so thanks for sharing your stories as well, they were great	Visiting researcher Christine thanks the students and indicates that she is looking forward to a focus group interview with some of the students in the lesson after the lunch break
T: Thank you everyone	

Analysis: Episode 5

Elements of practices	Practice architectures found in or brought to the site
Project	*Practice landscape*
The project for Episode 5 was to hear the draft expository texts of a sample of the small groups (three of the seven), and to make some responses to the drafts, particularly with respect to vocabulary (particularly since Sarah had distributed vocabulary sheets with suggestions of words the students could use). Sarah indicates that the group work task will extend into tomorrow when the groups will complete and refine their expository texts	The lesson continues in the Year 5–6 classroom. Sarah moves to the front and invites representatives of groups and other students to respond when requested. The nominated students read their texts from the laptop screens or from the 'format' sheets they have been given. The students listen attentively to Sarah, the draft texts and the student responses

Elements of practices	Practice architectures found in or brought to the site
Sayings	*Cultural-discursive arrangements*
The students' texts use language from the fairytales they were assigned and from the positions they were assigned, as well as (in some cases) words from the vocabulary sheet Sarah had distributed. The texts were also structured in accordance with the 'format' (template) Sarah had distributed. It is clear, too, that the students tried to use the kind of 'emotive words' that were referred to in the 'guidelines' for effective expository texts developed in the lesson before this one	Sarah had constructed several scaffolds for the language the students were to use in their texts, including an assigned fairytale and an assigned statement of position regarding one of the characters in the fairytale; a 'format' (template) outlining the structure of the text; a vocabulary sheet indicating words they could consider using in their texts; and the 'guidelines for effective expository texts developed in the previous class. To the extent that the students were able to be creative beyond these scaffolds, they also composed texts, in English
Doings	*Material-economic arrangements*
In Episode 5, the students are principally listening to the draft texts produced by a sample of the small groups, and responding to those texts when invited to do so by Sarah	The students are sitting quietly at the clusters of tables occupied by their groups. Students nominated to read do so from laptop screens or the 'format' sheets distributed by Sarah
Relatings	*Social-political arrangements*
The students continue to be compliant to Sarah's directions (although Sarah intervenes very briefly to manage one student's behaviour). It is not clear what the relationship is between group members and the students chosen as spokespersons for their groups; Sarah used random Group Chooser SMART Board™ software to construct the groups, and nominated the students who were to respond. From the groups' perspectives, then, the spokespersons were just one member of the group (though the students may know better than us observers why Sarah chose Harrison, Elizabeth and Jack to present the texts of their groups). The other groups appeared to work efficiently and effectively, with good humour and engagement. At the beginning of the reporting session, Sarah discovered that Meg's group had been unable to agree what the task was; she decided to pass over this quickly and to hear the responses of other groups. She was aware that lunch time was approaching	The class continues to operate with Sarah in charge, and with the students complying readily with her instructions. It is clear that the students are familiar with the report back routine of Episode 5 after group work activities like those of Episode 4. It is clear, too, that the students are well rehearsed in working in randomly chosen groups with one another. They appear to conduct this kind of group work and report back in inclusive and conscientious ways. As indicated earlier, their fluent work in groups suggests that they are behaving in accordance with Wattletree School District's *Communities of Practice Principles*

Elements of practices	Practice architectures found in or brought to the site
Dispositions (habitus) The students are clearly developing knowledge, skills and values about expository texts as Sarah intends them to do. They are also reproducing knowledge, skills and values about collaborative group work from many prior occasions when they have worked collaboratively and inclusively in randomly chosen groups. Sarah is drawing on long established knowledge, skills and values about teaching: both the IRE (Invitation, Response, Evaluation) sequence followed in many of the teacher-whole class interactions in the lesson and the carefully constructed group work activities like the one Sarah designed for this lesson. She is also drawing on knowledge, skills and values concerning text types, particularly as these are expressed in the *First Steps Writing* program that schools in Wattletree School District were implementing at the time of this lesson. Sarah is a key teacher in disseminating this program from the District level to Northton school	*Practice traditions*As indicated regarding dispositions , the work in this Episode follows the established, teacher led IRE (Invitation, Response, Evaluation) sequence followed in many of the teacher-whole class interactions in the lesson. This sequence was suspended when the students worked in groups in Episode 4, but Episode 5 returns to the IRE pattern.It seems that the students are comfortable in following the IRE sequence of much of the lesson. They remain attentively engaged. It is also clear from the noisy and happy transition when they break into groups that they enjoy the collaborative group work that they do in Episode 4. They return comfortably to the teacher led IRE sequence in Episode 5 in which representatives of three groups presented their draft texts; perhaps they were interested to see how other students had interpreted and completed the task. The strong scaffolding in this lesson may (or may not) be in tension with the overall intention of the unit of work in Science on ‘Rainforests’ for which the students will individually prepare an expository text as an assessment item. That unit of work seems more social-constructivist and inquiry driven in character. Perhaps, however, that overall unit of work is also closely scaffolded. From the evidence of our observations and interviews, we cannot say

We hope that presenting this extended analysis of a transcript of a lesson helps readers to grasp more clearly what we mean by the key terms in our theory of practice architectures. We also hope that it will encourage others to analyse social life along similar lines.

Analysing Practices Using the Theory of Ecologies of Practices

We now return to the theory of ecologies of practices, introduced in Chap. 3, and a table of invention for analysing relationships between practices: how one practice shapes and is shaped by others. In the Education Complex discussed in Chap. 3, we argued that five practices are constantly shaping and re-shaping one another: student learning, teaching, teacher learning, leading, and researching. To conceptualise how they influence one another, we might begin with a table of invention like the one shown in Table 2.

Table 2 A table of invention for analysing ecologies of practices

How is the practice of						
		Student learning	Teaching	Teacher learning	Leading	Researching
… shaped by the practice of	Student learning	A1	B1	C1	D1	E1
	Teaching	A2	B2	C2	D2	E2
	Teacher learning	A3	B3	C3	D3	E3
	Leading	A4	B4	C4	D4	E4
	Researching	A5	B5	C5	D5	E5

In this table of invention, the 'target' practices are in the top row: 'A. Student learning' through to 'E. Researching'. The idea of the table of invention is that we should consider, more or less sequentially and more or less systematically, how each of the target practices in the top row (A. Student learning, for example) has been shaped by the practices in each of the 'shaping' practices in the rows below it. Thus, if our interest is in 'A. Student learning' in some particular case we have observed, we ask how student learning in this case has been shaped by each of the shaping practices in the rows below (Rows 1–5); as we consider each (in terms of what we think and what we have observed), we can then enter some notes about the evidence and our reflections in the appropriate cells (A1 to A5) below.

For example, reading down the rows underneath each of cells in the top row, in the case of the first target practice, 'A. Student learning', we ask "How is the practice of 'A. Student learning' shaped by the practice of '1. Student learning'?" This is one of the 'special case' cells down the diagonal in the table: the cells in which we ask how the target practice has been shaped by itself—that is, by its own history. To ask this is to ask how the target practice of student learning has been influenced by a particular history of *prior* student learning. Analysing a particular case of student learning we have observed, for example, we can make some notes in this cell (A1) about how the learning in this case builds on or varies from the learning that took place in the site on prior occasions—with the same learners and/or with other learners (depending on what kind of case we are considering). To use the practice architectures framework, we might ask whether and how the particular target case of learning we are considering has been enabled or constrained by previous *projects* of learning (for the learners or others in the case); by previous *practice landscapes* that may or may not enable and constrain learning in this target case; by previous *sayings*, *doings* and *relatings* of the practice of learning and the ways they may have been shaped by previously encountered *cultural-discursive*, *material-economic* and *social-political arrangements*; by the previously-developed *dispositions* of the learners involved; and by the previous *practice traditions* of learning that these learners have been part of, and that may have developed through this episode of learning.

We then proceed to cell A2: How has this case of student learning been shaped by the practice of *teaching*? Here we consider the evidence and our reflections, and make some notes about how a specific, particular case of (the practice of) teaching

shaped the particular target case of student learning we have in mind. To answer this question, we might go back to the practice architectures framework: we can ask, for example, whether and how the teaching we observed set or shaped the *project* for the practice of learning we observed; whether and how the teaching shaped the *practice landscape* for the learners; whether and how the *sayings*, *doings* and *relatings* of the practice of teaching functioned as *practice architectures* for the practice of student learning by furnishing *cultural-discursive*, *material-economic* and/or *social-political arrangements* that enabled or constrained the practice of learning in the case we are considering; whether and how the teaching shaped the formation of *dispositions* in the learners (what people frequently think of in terms of their knowledge, skills or values, for example); and whether and how this case of learning has been shaped by (or has contributed to the development of) particular *practice traditions* of teaching.

And so we can proceed through cells A3 to A5, and all the rest of the columns and rows in the table until we reach cell E5, asking each time how the target practice has been influenced by the other, shaping practices. In the special case of the cells down the diagonal of the table, we ask (as we did for cell A1) about whether and how the prior history of the practice has shaped the conduct of the practice in the target case; in the case of the cells in the other rows of the table, we ask the kinds of questions we asked about cell A2: about whether and how the other practices have shaped the target practice in the specific case we are considering. By the time we have worked and re-worked our through the whole table a number times, we have considered each target practice in relation to each of the other practices in the table of invention, as well as in relation to itself (how it has been shaped by its own history of prior practice).

In our experience, it is important to go through the process of making notes about each cell in the table at least several and at best many times. Certain ideas, themes and interpretations begin to crystallise on successive passes through the table; it is important to test these critically: is the evidence for this idea, theme or interpretation strong? Is the evidence *against* the idea, theme or interpretation equally strong or stronger? Gradually, some more definite interpretations and insights begin to emerge as things one would want to communicate about the case, and some overall interpretations of the case begin to emerge and to withstand critical scrutiny. These overall interpretations are interpretations about the interrelationships between all five of the practices—about how each is related to the others in an ecology of practices.

In our experience, key things to note about ecologies of practices include what persists or endures over time; what new practices (or projects, or sayings, doings or relatings, or dispositions) travel into the site or into the capabilities of the practitioners (and from where) and whether or not they endure, are secured, or disappear; and what practice landscapes, practice architectures (cultural-discursive, material-economic and social-political arrangements) and practice traditions travel into, are secured in, are transformed, or cease to endure in the site.

In Table 3 below, we make a brief analysis of Sarah's lesson to show how practices evident in the lesson are interrelated in ecologies of practices. This is not a

Table 3 Sarah's lesson: Evidence of ecologies of practices

	How is the practice of				
… shaped by practices of	Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
Student learning	A1 The students' practices of learning have been influenced by their prior history of learning, for example, prior lessons about text types and the previous lesson about expository text types in which they co-constructed a list of 'guidelines' for effective expository texts	B1 Sarah's teaching practices are reflexively shaped by her observations, and her interpretations of the ways students respond to her teaching. For example, her explicit teaching style shows that she has refined her practices of teaching to maintain high levels of student engagement	C1 As Northton School has proceeded with the implementation of the Wattletree School District's *Communities of Practice Principles* and other initiatives like the *First Steps Writing*™ program, teachers have been reflecting more intensively on their own teaching so they can learn from their students' learning. Sarah is a leader in the kind of professional self-reflection, using data about her students' learning to inform her teaching. As a consequence of her learning as a teacher, Sarah is now extremely effective at maintaining student engagement, for example	D1 Student learning influences leading rather directly at Northton School and in Wattletree School District: District and school NAPLAN results shape directions for curriculum change and professional development throughout the District. Students' learning also shapes leading at school and classroom levels, as teachers and leaders reflect on what and how students learn	E1 Educational research is motivated, at root, by a commitment to improving student learning and by felt problems and issues of student learning. This is also true at local levels: Wattletree School District and its schools, for example. Where problems and issues are identified in student learning, for example, in relation to NAPLAN Writing scores, for example, then School District personnel and teachers and leaders in schools begin to explore research literature and professional reading about writing and writing development. Also, and equally significantly, teachers in the schools begin to explore writing through reflection on their own teaching, leading and teacher learning

Table 3 (continued)

	How is the practice of				
… shaped by practices of	Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
Teaching	A2	B2	C2	D2	E2
	The students are well rehearsed in responding to—and learning through—Sarah's style of teaching, for example her use of IRE (invitation, response, evaluation) sequences, and her brisk questioning, nominating individuals to respond or inviting responses from the whole class	Sarah's teaching in this lesson is framed by her long experience as a successful teacher. It is clear from the lesson we observed that she is able to construct effective demonstration lessons to teach when there are observers in the classroom. Most importantly, Sarah is a teacher whose practice is informed by reflection on her experience both formally and informally	Sarah's learning as a teacher is partly shaped by others' teaching (in professional learning settings, in her professional reading, and in the formal courses she has taken, for example). But it is also shaped very directly and substantially by her systematic reflection on her own teaching: through her reflection, her teaching becomes a kind of engine for her continuing professional learning as a teacher	Teaching practices also shape leading practices in Wattletree School District and Northton School. The outcomes of teaching in student learning are watched carefully by District and school leaders, and whether and the extent to which teaching expresses the commitments of the District laid out in its *Communities of Practice Principles* is a matter of keen interest to Northton's principal and Deputy, as it is to key District personnel	Teaching practices shape research, critical reflection and evaluation in Wattletree School District and its schools: teaching is a constant focus for self-reflection, thus informing research and reflection practices in the District and its schools. Sarah's lesson has been influenced by Sarah's reflection on her teaching practices over many years: her teaching continues to inform and be informed by her practices of self-reflection

Table 3 (continued)

… shaped by practices of	How is the practice of Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
Teacher learning	A3 The students' learning has also been framed by teacher Sarah's learning as a teacher—for example, her facility in using the *First Steps Writing*™ program for teaching about text types like expository texts	B3 Sarah's teaching has been influenced by what she has learned, for example through her initial teacher education and her current Master of Education studies, as well as through her participation in continuing professional development programs like Wattletree School District's *Pedagogies for Literacy* program, and (especially) the District's adoption of literacy teaching using the *First Steps Writing*™ program in response to lower Writing scores on NAPLAN than was hoped	C3 Sarah continues to find a variety of types of opportunities for her learning as a teacher: by taking formal courses, by participating in programs of professional development offered by Wattletree School District or other bodies, and by learning from her reflection on her own experience and the experience of her colleagues in Northton School (and in other professional settings like initiatives of the *Primary English Teachers' Association*, for example). Sarah is a very autonomous professional leaner: her prior experience and history of teacher learning has taught her that she must continue to reflect and develop to maintain her professionalism as a teacher and as a professional leader in the school and Wattletree District	D3 Teacher learning practices also affect leading practices in the District and Northton school. The content and form of teacher learning shape how leading is done by teachers in the school, for example. The District's commitment to its *Communities of Practice Principles* has been expressed over more than a decade in work done in the District during and since its *Communities of Practice Institutes* initiative that ran through the 1990s into the early 2000s. Teacher learning has not been an instrument only for developing teaching and learning in the District; it is explicitly seen as an instrument for developing leading in the District, in schools, in teacher professional development, and in every classroom	E3 Wattletree School District's *Communities of Practice Principles* aim to ensure that reflection informs and is informed by professional learning. Sarah's professional learning has strengthened her commitment to research and reflection in her own classroom and, with her colleagues, in the school. Sarah has also been part of professional development initiatives like Wattletree District's *Pedagogies for Literacy* initiative; it was also explicitly committed to showing teachers how to reflect on their reflection practices and teaching practices in ways that could help them improve their teaching practice

Table 3 (continued)

… shaped by practices of	How is the practice of Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
Leading	A4	B4	C4	D4	E4
	The students are influenced by Sarah's practices of leading in this and other lessons, by their leadership of one another as peers (for example in the group work in the lesson), and by the leadership of the school (influencing all the activities of the school) and the School District (for example, the dissemination of the District's *Communities of Practice Principles* which pervade leading practices at every level from the District to the school to the classroom)	Sarah's teaching is informed by leadership in various ways. Her own leadership of Northton School's professional development program with the *First Steps Writing*™ program is one example. Another is her participation in *First Steps Writing*™ professional development sessions lead and offered by Wattletree School District. Another is the way Sarah has been influenced by the leadership of a former principal of Northton School, and by her developing relationship with the new Principal, Francis Beech	Sarah's professional learning has been greatly shaped by professional leaders throughout her career. She has participated in some extended and intensive professional learning programs like Wattletree District's *Pedagogies for Literacy* program that have explicitly modelled strong professional leadership, and required professional leadership of participants both in the program and in disseminating their learnings from the program in their own schools. Sarah has also learned from reflection on her own leadership practices	From our evidence, collected in these schools and the Wattletree School District over five years, it is evident that contemporary practices of leading in the District and its schools and classrooms have been greatly influenced by past practices of leading. Indeed, Edwards-Groves and Rönnerman (2012) have described long cycles of leadership development through programs like these in terms of *generative leadership*—practices of leading that, in turn, generate leadership and leading in those they address. Sarah herself after participation in initiatives such as *Reading Recovery*™, *Pedagogies for Literacy* and *First Steps Writing*™ has taken on leading roles within the District leading the learning of teachers in her own school and across the District	As already indicated, Wattletree School District and senior staff in its schools adopt leading practices explicitly designed to foster curiosity about research and professional literatures related to problems and issues experienced in schools, and to fostering reflection by teachers and leaders on the nature and consequences of their practices. Leaders prompt school and classroom research and reflection as part of their commitment to the District's *Communities of Practice Principles*

Table 3 (continued)

… shaped by practices of	How is the practice of Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
Research, Reflection & Evaluation	A5 The students' learning has been shaped by decades of literacy research (for example, the research that shaped the *First Steps Writing*™ program. It is shaped in this lesson by the presence of our research team as visitors to the class (which also shapes how Sarah conducts the lesson). The learning has also been shaped by teacher reflection (both Sarah's own reflection and the collective reflection of Northton School's teachers in their staff development program), for example, about how the *First Steps Writing*™ program works	B5 Sarah's teaching is extensively shaped by research, for example, in research in literacy education. She has participated in many Wattletree School District professional development initiatives in literacy education over the years, including the District's *Pedagogies for Literacy* program. Her teaching practices have also been shaped by research and evaluation like Wattletree District's results on NAPLAN assessments that caused the District to adopt the *First Steps Writing*™ program to improve students' NAPLAN Writing scores. As	C5 Sarah's—and Northton School's—professional learning has been shaped by research. One example is the educational and organisational research that underpins Wattletree School District's *Communities of Practice Principles*. It is also clear that individual and collective self-reflection in the school has become a significant foundation for professional learning in the school, with teachers formally (as well as informally), explicitly and increasingly sharing their own experiences and learning from one another's experience in line with the District's *Communities of Practice Principles* that emphasise individual and collective reflection on experience as a key feature of highly effective professional learning communities	D5 Wattletree School District's *Communities of Practice Principles*, view leading as a collaborative enterprise and foster a sense of shared responsibility among teachers, teachers and leaders, and leaders and students. These *Principles* are based on readings of research literature to do with leading and communities of practice. Practices of leading in the District and its schools are also the subject of self-reflection among leaders, teachers and students in the District: here, too, students, teachers and leaders develop their practices of leading from reflection on their own experience	E5 Sarah's teaching in the lesson we observed is a product of her reflection on her teaching practice over many years. Her reflective practice is a product of her reflective practice in the past, and reflection on her practice continues to inform the development of her practice—including her practices of self-reflection. Sarah also welcomes observers into her classroom—as on the occasion when we observed her teaching—in order to have access to others' insights into what goes on in her classroom and school, and how she might think in new ways about it

Table 3 (continued)

	How is the practice of				
… shaped by practices of	Student learning	Teaching	Teacher learning	Leading	Research, Reflection & Evaluation
	out for them in practice. Perhaps most importantly, the students' learning is also shaped by their own reflections on their own practices of learning—as shown in their reflections on their learning revealed in the focus group interview with members of our research team	importantly as all of these, however, is Sarah's own continual formal and informal reflection on her own teaching practices, that helps her to develop her teaching by learning from her experience			

detailed analysis, but we hope it suggests directions for readers to pursue in analysing the relationships between practices in the Education Complex: student learning, teaching, teacher learning, leading, and research and reflection.

In this analysis, we are focusing on the lesson as a whole, rather than the five Episodes separately. Our aim is to show not only how the practices of student learning and teaching are interdependent in the lesson, and are visible through the evidence of the transcript (or inferences from the evidence of the transcript) but also to show connections to other practices we know about from other evidence—in particular, our debrief with Sarah while the students worked on the small group task (drafting an expository text), our focus group interview with six of the students after the lesson, as well as a number of other interviews with Sarah and with other teachers at the school, and with Wattletree School District staff.

Ecologies of Practice Evident or Implied in Sarah's Lesson

Conclusion

In this Appendix, we have demonstrated how we analyse practices using the theories of practice architectures and ecologies of practices. Our aim has been to show that the theories are not machines for generating interpretations of practices and their interrelationships, but rather that they are 'tables of invention' that allow informed interpreters to engage with a range of evidence to arrive at interpretations of how practices are shaped by practice architectures, and how different practices in the Education Complex relate to one another in ecologies of practices. As indicated early in this Appendix in relation to the theory of practice architectures, much in the process of doing these analyses depends on the researcher's judgement of the value and weight of different pieces of evidence, on drawing inferences from what we can see in the evidence to what cannot be seen, and making reasonable sense about how things must be for them to 'hang together' in the world so it appears to us in the ways it does.

When we make analyses like these, we believe, we can see how, in particular cases and in particular sites and at particular times, practices occur in relation to practice architectures, in practice-arrangement bundles, in which what can be said and done in the practice, and how people and things relate to one another in the practice shapes and is shaped by practice architectures. We can also see how, in particular cases and sites and times, all of the practices in the Education Complex are practice-changing practices: they can function as practice architectures that enable and constrain one another substantively—that is, in terms of the particular contents of the sayings and doings and relatings of the practices involved, which become resources in the cultural-discursive, material-economic and social-political arrangements that appear in particular sites, and that help to form the *niches* that enable and constrain the practices involved. Whether and the extent to which they do provide the necessary resources for the practices is crucial to the persistence and survival of

the practices involved; whether and the extent to which they change the conditions for the survival of the practices may affect not only the persistence and survival of the practices but also their transformations: how practices change and adapt to new or changing conditions. This interdependence of practices and practice architectures in practice-arrangement bundles, in which each must stay in touch with the conditions of possibility provided by the other, is a dynamic process on which, in the end, the sustainability of both practices and practice architectures depends, whether in similar and enduring forms or in varied, altered, changed forms—that is, whether reproducing practices and arrangements from before or transforming them in ways that respond to changed conditions.

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