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# New Pedagogical Challenges in the 21st Century

Contributions of Research in Education



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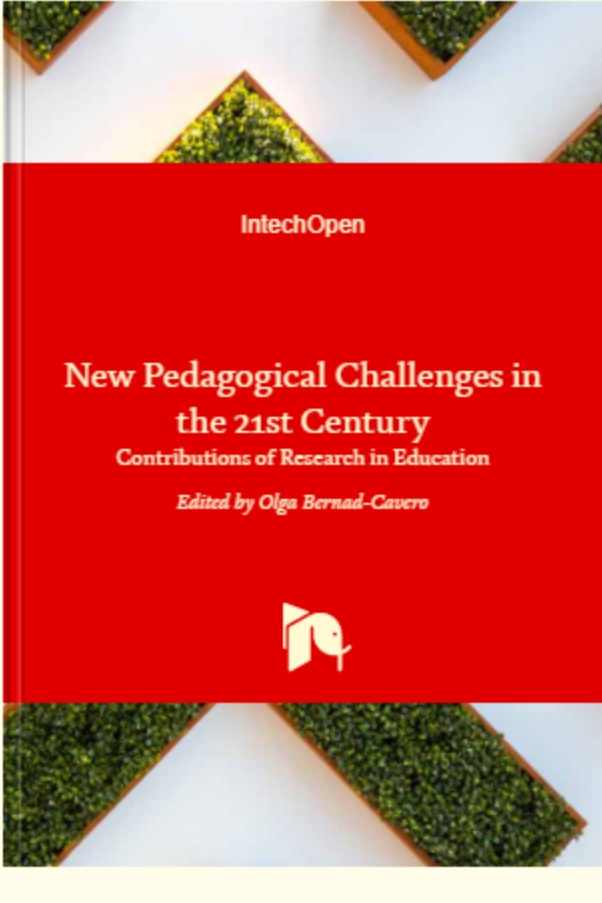
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The societies of the twenty-first century are subject to social, cultural, political, and economic changes. In this context, the school is asked to educate the future citizens in the present. To respond to this kaleidoscopic reality, the school is immersed in a pedagogical revolution. In this book, the reader will find a selection of avant-garde research works from different disciplines and contexts, which have their epicenter in the school and in the faculties of education. New issues in pedagogy and education, and new roles of teachers and students, are discussed in a global and diverse context. And new methodological and formative proposals are also proposed to build the ideal school and the ideal teacher, from the initial and continuous teacher training.

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# The Practice Architectures of Pedagogy: Conceptualising the Convergences between Sociality, Dialogue, Ontology and Temporality in Teaching Practices

Christine Edwards-Groves

Additional information is available at the end of the chapter

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## Abstract

Amidst constant waves of research seeking to understand and improve pedagogical practices in schools, this chapter positions pedagogy as social practice rather than a more commonly held view of pedagogy as method. It is a view of pedagogy that is centrally interested in the sociality, situatedness and happeningness of practices, and thus requires a theory of practice that treats it as socially, dialogically, ontologically and temporally constituted. Capitalising on the 'practice turn' in education, the chapter utilises *the theory of practice architectures* to consider the relationship between pedagogy, practice and practice architectures. It will be argued that pedagogical practices *as they happen* in lessons cannot be understood without a theory of practice that explains (especially for teachers) how practices unfold discursively through language and sequences of time, and how they are *interwoven* (*enmeshed* or *entangled*) with sites, not just 'set' in them. Empirical material from recorded primary school lessons will be used to illustrate particular practice architectures or cultural-discursive, the material-economic and the social-political arrangements that influence the conduct of pedagogical practice as it happens in classrooms. The chapter seeks to address these three broad questions: (1) how does *the theory of practice architectures* enhance understandings of pedagogy? (2) in what ways does this theory help us to understand pedagogy as social practice? and (3) what influences pedagogical decision making as it happens in the flow of instruction?

**Keywords:** best practice, constellation of practices, pedagogies for diversity, ecologies of practices, practice architectures, site based education

## 1. Introduction

The effectiveness and influence of classroom pedagogy forms a staple matter of discussion and debate around the globe. In contemporary education, the widespread call for the continual



improvement in pedagogical practices has pressured the daily work of teachers in ways that force them (or the jurisdictions in which they work) to seek out programs of instruction, curriculums, innovations or assessment regimes that offer solutions to the student learning, performance and achievement 'crisis'. In fact, professional development for teachers has been overburdened with a diet of rhetoric bundled up as 'best practice' that treat practice, and so pedagogical practice, as a unitary bounded package of solutions or approaches to instruction. Furthermore, these idealised notions of best practice sit glibly alongside a culture of performativity and mandated testing of students, neglecting the site based needs and circumstances of particular students, in particular schools, in particular communities. It is a line that neglects the constellation of practices that constitute pedagogy and the particular conditions that influence the conduct of pedagogy as it is enacted in particular sites. As practice theorist Theodore Schatzki ([1], p. 2) writes, such a narrow view of practice,

*Treats the intricate and complex tangle of phenomena that constitutes social life as neatly tied up in a system and governed by systemic principles [and] neglects the contingent, shifting, and fragile relations among social phenomena that weave them into everchanging constellations. The point is not, at least usually, that these phenomena are autonomous and isolated, but instead that they constitute complex nexuses that do not add up to something beyond themselves.*

But what if we were to follow Schatzki's [1] lead and take a different view of pedagogy, one that shifts attention to the particularity and sociality of pedagogy as practices enacted in sites? one that accounts for the contingent, shifting and fragile relations among social phenomena like the pedagogical practices that happen in lessons? one that weaves teaching and learning into everchanging constellations of practices? one that views pedagogy as happening in moments? one that considers students as actors in the practices that constitute pedagogy? Such a view of pedagogy would consider the humanistic—and so social—dimensions that form pedagogy in particular places as it takes shape in lessons between teachers and students. It would require a theory of practice that is centrally interested in the sociality, situatedness, and happeningness of practices and one that seeks to understand the particular conditions that enable and constrain the enactment of pedagogy at the time.

Much has been written about the affordances of practice theories for understanding the nature of social life as it exists in education, organisation, politics, and indeed in everyday life. This chapter specifically capitalises on the theory of practice architectures conceptualised by Stephen Kemmis and Peter Grootenboer in 2008 [2] (and developed further by Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer and Bristol in their philosophical-empirical enquiry [3]) to offer fresh, but deeper, understandings about pedagogy as social practice. The theory of practice architectures is a theory, among other practice theories, that represents a systematic way of understanding and representing the conditions and circumstances in which the social, physical and political world exists. In educational work, understanding the practices, behaviours, conditions and/or situations of the teacher and students involved is necessary for framing, conceptualising and reframing (and changing) what happens in places where education practices happen, like in lessons, in classrooms, in schools, in communities. Therefore, any practice theory must also liberate the entangled dimensions of social world to offer ways to understand the multidimensionality, interrelatedness and complexity of practices.

Broadly, the theory of practice architectures is a theory that pushes beyond a rhetorical understandings of education practices by allowing us to “get at” the density, porosity and nuances of practical work [4]. The premise here is simple, but the implications are not. As a primary concern, the chapter specifies the central importance of moving beyond considering pedagogy as method to a view that regards pedagogy as socially constituted (among people), dialogically formed (through language and communication), locally situated (in particular places) and as accomplished in real-time happenings (in a real-time flow). This site-based view means that the influence and role of students are equally recognised in the accomplishment of pedagogy; it would not allow for a teacher-centric account to dominate the discussion. Understanding the practice architectures of pedagogy therefore opens up a view of teaching that provides a more fulsome picture of the realities of the kind of nuanced work teachers do. Specifically, considering pedagogy through the lens of practice architectures conceptualises it as a social practice discerned not simply as a bounded, unified entity but also as performance embodied in enacted practices that are socially, dialogically, ontologically and temporally constituted. Further, it offers an alternative view of pedagogy that illuminates the cultural-discursive, material-economic and social-political arrangements that influence the conduct of practice.

Like notions of practice, the term pedagogy as a term and a concept has been widely utilised but differently understood in different education and intellectual traditions. Pedagogy as it is generally regarded in the Anglo-Saxon tradition centres on the discipline of teaching as it related to method and practice of teaching and learning (sometimes considered the art or science of teaching or function of educational instructional methods ([5], p. 42). In other government documents and curriculum, pedagogy has been variously defined. For example, Education Scotland ([6], p. 9) states that “Pedagogy is about learning, teaching and development influenced by the cultural, social and political values we have for children...in Scotland, and underpinned by a strong theoretical and practical base”. The New Zealand early childhood curriculum *Te Whariki* [7] considers “pedagogical practices as facilitating for diverse children their access to knowledge, activities and opportunities to advance their skills in ways that build on previous learning, assist in learning how to learn and provide a strong foundation for further learning in relation to the goals of the early childhood curriculum and cultural, community and family values” ([8], p. 5). In other literature, pedagogy has been described “as the instructional techniques and strategies that allow learning to take place. It refers to the interactive process between teacher/practitioner and learner and it is also applied to include the provision of some aspects of the learning environment (including the concrete learning environment, and the actions of the family and community)” ([9], p. 10). These conceptualisations of the term tie learning to teaching (and so students to teachers) to various degrees, but are distinct from, for example, continental European traditions of *Pedagogik* (Pädagogie) that understands pedagogy as a human science connected to the upbringing of children [10], or the Germanic concepts of *Bildung* and *Didaktik* [11]. *Bildung* is also used as a framing concept in the Scandinavian tradition of folk enlightenment in education that understands pedagogy as the formation of individuals in a civil society, whilst *Didaktik* connects to the multifacetedness of planning and performing instruction [11].

Throughout the chapter the intricate relationship between pedagogy, practice and practice architectures is explored. In the opening section, pedagogy is positioned as a social practice. In

this section, practice is the central axes around reconceptualising pedagogy as social, dialogic, ontological and temporal. Following this, the theory of practice architectures is discussed. It is an orientation that helps direct us towards a more critical appreciation of teaching and learning practices that when interrogated, holds meanings far from the simple, the commonplace or the everyday. Empirical material is drawn from a broader two-year qualitative study conducted in a rural region in New South Wales (NSW), Australia that examined classrooms pedagogical practices in eight middle primary literacy lessons (Years 3 and 4); these sites formed case studies of pedagogical practices. Case study research [12] offers those interested in the conduct of social life a method for examining the constitutive conditions and circumstances that shape sociality. It enables the possibility for drawing out a more detailed picture of the nuances and particularities of singular cases that can be taken together to form a comprehensive description of the phenomenon in question. In this study, the larger corpus of data consisted of 48 recorded literacy lessons and follow-up interviews with the 8 primary school teachers. Transcript extracts will be used to exemplify key concepts across the chapter. Extracts were selected from 2 lessons recorded and transcribed from a Year 3 classroom (students aged 8–9 years). Specifically, transcripts will be used to show the distinctive and dynamic dimensions of pedagogy in practice and how it works as it unfolds in within and through the moment-by-moment interactions which occur in lessons. All names are pseudonyms; transcription conventions presented in Appendix 1. Ethics approval was sought and gained for the conduct of this study.

## 2. Pedagogy as social practice

Pedagogy is a rich and complex notion that broadly, in the Anglo-Saxon tradition, focuses on teaching and learning in classrooms in school settings. When thinking about teaching and learning in classrooms we are taken directly into the lessons that take place there. As an example, consider this short extract from the summary phase of a Year 3 lesson where the teacher is facilitating student recall of particular facts and terms arising from the earlier science lesson.

### *Extract 1: Pedagogy in practice*

1. Sam: it's dirt, terra is dirt
  2. T: dirt, yes Sam, terra means dirt or earth, so:o aqua is water and terra is earth (0.2)
  3. so we've got our little container [with earth-and what's that, Josh?
  4. Josh: [a terrarium
  5. Sally: it's got to have a top on top of it, a lid to make it work
  6. T: mm:m Josh excellent, terrarium, the technical term (0.3) yes a lid, it's gotta
  7. have a lid on it (0.2) right (0.1) okay tell me more Sally, listening everyone
  8. Sally: to keep the moisture in=
  9. Shay: =h:he to keep our blue tongue ((lizard)) in
  10. Ss: ((laughter))
  11. T: yes Shay, Bluey is an escape artist you're right about that (0.3) well that's
  12. enough discussion about er:r terrariums (0.1) we're going to write about that
  13. in a minute, but I thought we might have a read first (0.2) Jerome can you 14.
- please get our book stand...

At a fundamental level, this brief segment of classroom talk typifies a pedagogical interactional flow. Taken from an ordinary everyday lesson it shows that pedagogy is “an interactive process between teacher/practitioner and learner” as suggested by Siraj-Blatchford et al. ([9], p. 10). As the lesson happens, it *unfolds discursively* through moments of time, in moments of sociality, with each turn in an interaction following the next to form the discussion about terrariums. By reading through the transcript it becomes clear that the concept of pedagogy – and the teaching and learning practices that comprise it – cannot be understood without accounting for the social. Here, the sociality of pedagogical practice is evidenced since to ‘get this lesson done’ these students and their teachers interact with one another in the lesson as interlocutors co-participating in instructional dialogues about terrariums and aquariums. In this sense, pedagogy is characteristically social; that is, it is about “participation in an evolving interactive event co-produced by the teacher and students in the doing of it” [13].

As Schatzki ([1], p. 169) reminds us “a phenomenon is social, accordingly, when it pertains to human coexistence”. On this he explains that “human coexistence is a hanging-together of human lives that forms a context in which each proceeds individually in the practice” ([1], p. 14). Drawing on the German word *Zusammenhang* to describe the “state of held togetherness” ([1], p. 14), Schatzki asserts that practices are the medium in which human lives interrelate or hang together. For the Year 3 students and their teacher, therefore, their actions, interactions and inter-relationships hang-together to form the pedagogical practices of the particular lesson in which they took part. This means that individuals in this cohort of Year 3 students and their teacher come into their participation in pedagogical practices through their sociality that simultaneously forms the social, the linguistic and physical context of ‘the lesson’ that is, at the same time, governed by particular ‘lesson’ rules, organisations and arrangements. These orders and arrangements produce both the context of the practice and that they (teachers and students) coproduce in the doing of the lesson. According to Kemmis et al. [3], the sociality of practice itself relies on:

- a. forms of meaning-making, comprehensibility, language and understanding made possible through *sayings* and thought shaped discursively in dialogue,
- b. modes of action and activity in the physical and material space–time of the particular classroom made evident through *doings* at a place in time, and
- c. ways in which teachers and students relate to one another (in power, in solidarity and with agency) and the world experienced through *relatings*, roles and relationships.

In practice, these three ever-present realms of sociality are always held together (as *Zusammenhang*) in a nexus of interrelated practices as teachers and students come into or participate in classroom *projects* like a science lesson on terrariums (as shown in Extract 1).

Based on Schatzki’s ideas, Kemmis et al. ([3], p. 31) developed further a definition of practice that characterises practice as:

*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 actions – or interconnected sayings, doings and relatings – ‘hangs together’ in a distinctive project.*



Turning to this characterisation of practice illuminates the notion that practices make sense or are comprehensible to practitioners in the practice (like teachers and students in lessons) because of the idea that “a *Zusammenhang* of lives is not interrelated individuals *simpliciter*, but individuals interrelated within and through practices” ([1], p. 14). Practices, consequently, are a dimension of human coexistence distinct - though not separate - from individuals and their actions, interactions and interrelationships. This means individuals in practices make sense of practices through participation; they understand, or come to understand, what is being said, what is being done and how to relate to the others present at the time by being present or participating. Participation in the moment and over time contribute to the emergence and development of particular characteristics of practices - like characteristic or distinctive scientific language and educational discourses spoken in their discussion, characteristic or distinctive school-type listening, reading, writing or science activities, or characteristic or distinctive ways for teachers and students to relate to one another in the lesson like the teacher organising and controlling the turns of talk in the class discussions, or students waiting to be nominated to speak. According to this view of practice, pedagogical practices are formed socially (within the company of others), dialogically (through talk and interaction), ontologically (in particular places) and temporally (in and through time) through a complex of actions constituted by characteristic sayings, doings and relatings that ‘hang together’ in a distinctive project like learning about terrariums in a science lesson.

Returning to Extract 1, it is evident that in this Year 3 Science lesson, participants (the students and their teacher) enact:

1. characteristic or particular *sayings* formed discursively in language known to and spoken by those present (like using specific scientific terms and language such as terra, aqua, terrarium, earth, moisture, blue tongued lizard; see for e.g. lines 1, 2, 3, 4, 6, 8 & 9),
2. characteristic or particular *doings* formed through doing activities understood and undertaken by those present (like reading a book, writing, engaging in a class discussion; see for e.g. lines 1–10), and
3. characteristic or particular ways of *relatings* developed through the ways these students and their teacher related to one another in their different roles and understood relationships they demonstrate there (like peers in a cohort, or a teacher with power over students).

These characteristic sayings, doings and relatings are tightly entangled and interconnected in ways that formed for them this distinctive project, this particular ‘lesson’. These three dimensions of the practice of pedagogy unfold discursively through language in real flows of time as characteristically interdependent and overlapping. However, this is far too simple a view of practices since it overlooks the particularity of the conditions and circumstances that exist in the actual site itself. For example, the particular students in this particular Year 3 classroom knew about blue tongue lizards because their local experience of them enabled them to bring this knowledge into this practice (evidenced in lines 8–10), or that the use of technical terminology is valued and praiseworthy (see line 6). Therefore, it can be said that pedagogical practices *as they happen* [14] in lessons cannot be understood without a theory of practice that explains (especially for teachers as they set about to develop their pedagogical practices) how

practices unfold, and how they are *interwoven* (or *enmeshed* according to Schatzki [15], or as Hodder [16] suggests *entangled*) with sites, not just 'set' in them.

In actual sites (like a classroom lesson about terrariums), practices are always influenced by other things that are both local and external, that both enable and constrain what can possibly be done at the time or what actually happens in reality. Even at the most fundamental level, a teacher might be able to predict the kinds of responses students may offer to her questions because of the students' prior experiences, but this may not determine what actually happens in the lesson itself. That is to say, practices of any kind are influenced by conditions described as practice architectures [3]. In the field of education, Kemmis et al. [3] delineated five practices that have the potential to influence the conduct of the other, namely teaching, student learning, professional learning and development, leading and administration, and researching and evaluating. They refer to these broader practices as the *education complex of practices* ([3], p. 82); and as they found, these education practices also exist in ecological relationships with each other. The conduct of practices, therefore, is not a seamless flow of sayings, doings and relatings; rather, practices are never neutral but always mediated (enabled and constrained or influenced) by practice architectures (site-based exigencies or influential conditions). Thus, to strengthen understandings about the nature of pedagogy, and teaching and learning as it is experienced in actual lessons, we need to understand both the practices *and* the practice architectures that simultaneously constitute (and mediate) and are constituted (and mediated) by locally produced courses of action as well as the situated pre-existing conditions present in the site.

### 3. The theory of practice architectures

The theory of practice architectures [3] is among a broad group of practice theories that draw attention to social life, and in particular the different and distinctive ways people, objects, discourses, relationships, activities and circumstances are entangled *in practices* in sites. It is a theory interested in the sociality, situatedness and happeningness of practices, thus conceptualises all practices as being formed socially among and between practitioners as they encounter one another. Fundamental to the theory of practice architectures is the importance given to the arrangements that enable and constrain the conduct of practices in any given site at. It suggests that practices – like teaching and learning practices – always involve people (or practitioners) interacting with one another in and through language, people doing particular things together, and people relating to one another and the world in particular ways. The theory of practice architectures thus explains how human beings (e.g., students, teachers and others) orient to, and so encounter, one another as interlocutors in practices through:

- *sayings* bundled with cultural-discursive arrangements in *semantic space* (in the medium of language),
- *doings* bundled with material-economic arrangements in *material physical space-time* (in activity or work), and
- *relatings* bundled with social-political arrangements in *social space* (in solidarity, individual and collective agency and power).



This complex of actions – or interconnected sayings, doings and relatings – exist as bundles ‘hanging together’ in projects like in a lesson teaching students about terrariums. Furthermore, as Kemmis and colleagues ([3], p. 2) suggest, understanding the theory of practice architectures,

*depends upon 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 socially and politically amid arrangements that contain and control conflict, secure social solidarities, and give us our agency, 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.*

The theory explains how particular arrangements (present in the dimensions of the cultural-discursive, material-economic and social-political) found in or brought to a site influence how practices actually happen in real time in real sites; for instance, government endorsed curriculums are practice architectures for teaching since these may influence what language might be used in a lesson or what activities might be done or even how the teacher relates to the students in the course of a lesson. Pedagogical practices as social phenomena encompass interconnectivities between:

- *cultural-discursive* dimensions secured interactionally in language and understanding (or what is said, how it is said, what words are used in lessons),
- *material-economic* dimensions secured interactionally in the doing of the activities in physical space–time (or what is done, how it is set up in the space, what resources are required in the conduct of lessons), and
- *social-political* dimensions secured interactionally through relationships (or ways of relating, who relates to whom and the displays of power, agency and solidarity at any given moment in lessons).

In practice, these arrangements are present in the intersubjective spaces which ‘lie between’ people in temporally located spaces in time and place. In these intersubjective spaces teachers and students in classrooms for example display through their talk and their actions levels of comprehensibility of one another and what is happening; that is, in semantic space, in physical space time and in social space. Practices, thus, are interactionally secured. And so, practitioners of practices comprehend one another in shared language, coordinate their activities with one another in talk and interaction, and connect with one another in social relationships.

From this, pedagogical practices (the sayings, doings and relatings encountered in lessons) and the practice architectures that shape them, do not simply exist as contained, arbitrary or isolated entities. They are enabled and constrained by other practices and practice architectures, but also are enabling and constraining of other practices and practice architectures. For example, particular teaching practices create conditions for particular student learning practices – and vice versa. So, practices themselves create conditions for the conduct of other practices and other practice architectures. The complexity of practices and interconnectedness between practices and practice architectures has been represented diagrammatically by Kemmis et al. [3], and is presented in **Figure 1**.

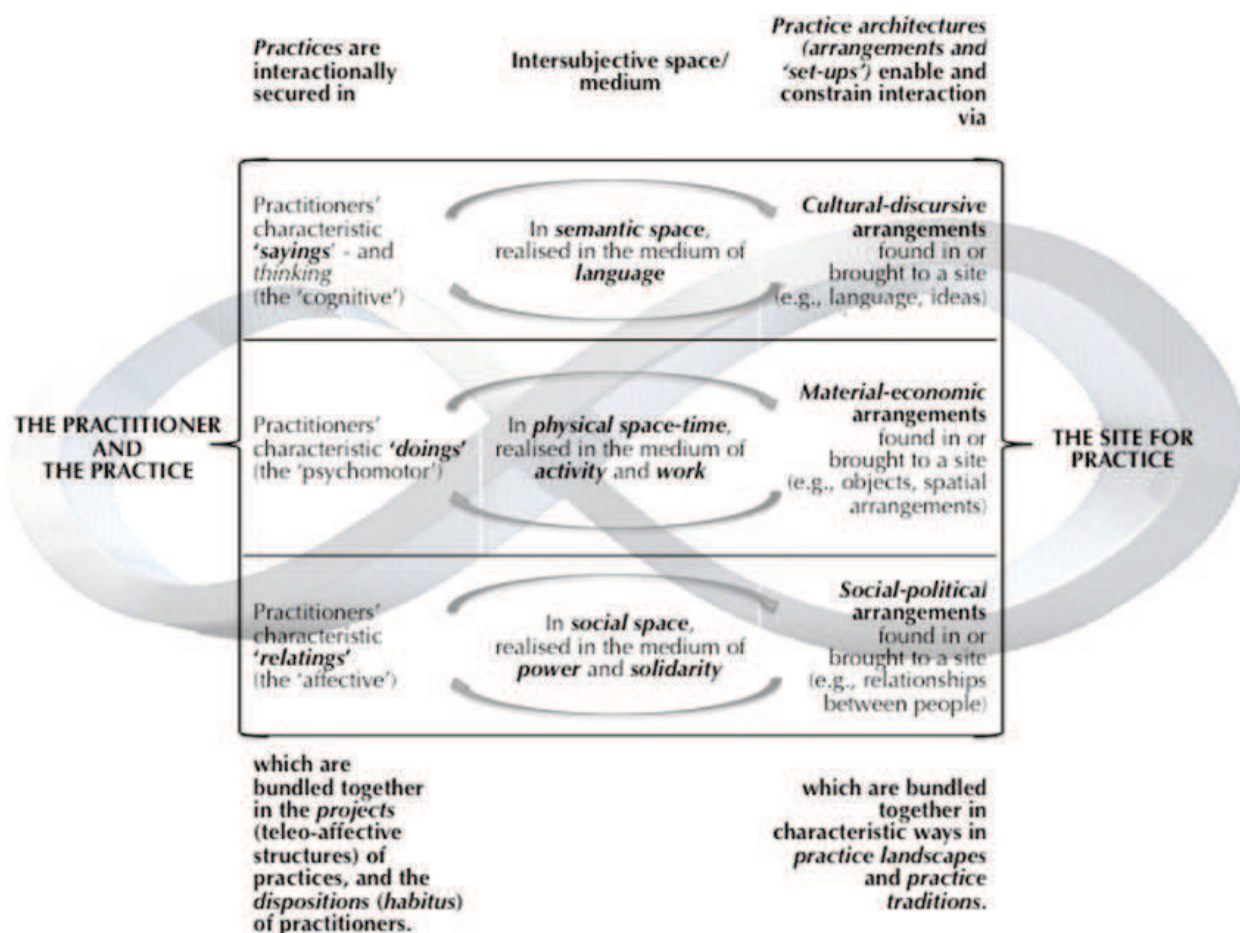


Figure 1. The theory of practice architectures ([3], p. 38).

The conduct of practices is never neutral but always undergirded by prior experiences of all practitioners involved as well as pre-existing ideas, ideologies, traditions of the field, discipline knowledge, standards, curriculums and policy agendas and so on. This is described as the prefigurement of practices. However, enacting practices (in the moment) is not only influenced by what conditions pre-exist at the site but by what is brought into the site (like particular resources, ideas, policies, language) and by who is present at the time (like students, others teachers, colleagues, the principal) and the relationships between them. Each of these dimensions of practice influence or prefigure the happenings, but do not necessarily determine what actually happens at the time. According to Kemmis and colleagues ([3], p. 90),

*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.

From this, it can be said that practices are made in the doing. Furthermore the conduct of practices is always pre-figured by other practices and practice architectures, but not necessarily pre-determined [3]. In this way, practices are not fixed or static because they are always created, organised and enacted anew at the moment of happening, are prefigured but not predetermined, are always enabled and constrained by other practices, are always dynamic and contestable in their conduct, and always occur amid other practices.

In summary, the theory of practice architectures orients to and avails itself of seven master concepts about practice that propose that:

1. Practices are social
2. Practices are constituted by sayings, doings, and relatings
3. Practices are site based and so nuanced and distinctive to conditions that exist at the site
4. Practices are shaped (or enabled and constrained) by practice architectures or mediating cultural-discursive material-economic social-political arrangements
5. Practices are made and remade in the doing of it at the time in everchanging constellations
6. Practices are ecologically arranged and interdependent with other practices
7. Practices account for the individual and the collective

This line of thinking inaugurates the possibility of viewing pedagogy as a constellation of practices enabled and constrained by conditions or practice architectures present at or brought into the site.

#### 4. The practice architectures of pedagogy

In practice (as it happens), as shown in the previous section, practice architectures exist as three kinds of arrangements always intertwined with one another, each irreducible to and influential on the others. In this section, we will see the ways practices and practice architectures 'bundle' together at both a minute and more molar level in lessons as sites of pedagogical practice. In particular how pedagogical practices become ontologically *interwoven* (or *enmeshed*) with people and other objects in specific sites like classrooms *as they happen* will be illuminated. As Schatzki suggests ([17], p. 16), this is a necessary direction, "[b]ecause the relationship between practices and material entities is so intimate, ... the notion of a bundle of practices and material arrangements is fundamental to analysing human life". As the empirical material presented next will show, this is a view of pedagogy that will extend perspectives on pedagogical practices in new directions towards being understood as socially, dialogically, ontologically and temporally constituted (see also [18–21]), but at the same time enabled and constrained by practice architectures.

One main way to understand the nature of pedagogy and the practice architectures that influence its conduct in lessons, is to examine transcripts. Lesson transcripts, as a technology for analysis, show how teachers and students in their lessons meet one another as interlocutors



in language, in the doing of activities and by relating to one another in different kinds of interpersonal relationships. Consider this next extract recorded in the same Year 3 classroom but occurred after the science lesson presented earlier (Extract 1). Here, the teacher Mrs. Kallo (T) begins the English lesson focused on writing with an organisational phase, followed by discussion about camouflage based on a jointly read text which acted as a shared reading stimulus for the subsequent writing task.

*Extract 2: Practice architectures and pedagogical practices in Year 3 shared reading*

1. T: ...before our writing task let's have a bit of a read to get some ideas (0.2)
2. everybody stand up, get in a comfy spot on the floor so you can see (0.4)
3. everyone<sup>↑</sup> facing front, no Jase (0.2) beside your talking buddy ((students
4. shuffling)) the way we do for our reading (0.3) have a stretch cos you've been
5. sitting on your bottoms for a while. Jane?
6. Jane: can I go to the (toilet)?
7. T: Yes (0.3) big stretch up, o:oh now sideways, okay down you go (0.2) sitting<sup>↑</sup>
8. ready? (0.4) ((various noises from students)) Mrs Celi will think we don't do
9. anything but learn big words, cos this new book is a-all about a big word (0.2)
10. remembering<sup>↑</sup> what was the other big word? c'mon now recalling the rich
11. vocabulary we learnt in our science groups this morning? away from the bin 12.
12. Max (0.2) where's your partner?
13. S1. [terra, terrarium
14. S2. [aquarium
15. S3. [°camouflage°
16. S(s): ((overlapping utterances from students))
17. T: I'm gonna ask you two in a minute ((points to students)) (0.3) there's
18. something in this picture? ((teacher pointing to the picture on the cover))
19. Josie: it's there, Mrs Kallo, the lizard
20. T: Don't call out, wait your turn Josie, be fair! We all get a say here,
21. wait your turn. There's an animal in this picture, can you see it?
22. S(s): [Yes::s] [Yes] [Yes]
23. S4: [It's a lizard
24. T: Can you see what it is?
25. S(s): [Ye::es
26. Ben: [no::o
27. T: Why not Ben?
28. S(s): ((utterances called out from students))
29. Ben: Cos its granite it's made out-it's made out of, like rock
30. T: Do you think it's really made out of rock, Ben?
31. Ben: No, it's a thorny devil
32. S(s): [No::o
33. S5: But it looks, as if it's made out of rock, or stone=
34. S6: =it's camoufla[ged
35. T: [it's camouflaged isn't it? that was that other big word we learnt,
36. it's a good metaphor though, skin looking like granite, well let's have a closer

37. look, there it is, the thorny devil, looks like granite,  
 38. what's he look as if he's got on him=  
 39. S7: =grass or something  
 40. Eva: it's moss  
 41. S(s): ((overlapping utterances from students))  
 42. T: moss, yeah Eva, called lichen, but lichen's stuff that grows on rocks, do you  
 43. think he really has got lichen growing on him?  
 44. Eva: No↑  
 45. T: No, but they made him look like that-or he looks like that so, he can hide  
 46. from who? Ewan?  
 47. Ewan: His pred, predators  
 48. T: His predators? yes good Ewan, so he's really gotta a pretty good defence  
 49. because it's very hard to spot him there.  
 50. Jax: Mrs Kallo, I know its predators  
 51. T: Ok::ay Jaxon, who would like to catch the lizard, what do you think?  
 52. Jax: a wedgy  
 53. T: be more explicit  
 54. Jax: a big wedgetail eagle  
 55. Sara: [I know (0.1) a cat, a feral cat would like to eat that nice little juicy lizard  
 56. Mel: [a bird  
 57. T: a cat might, but wowee::ee! what beautiful adjectives Sarah! what an express-  
 58. -ive sentence, it gives us a clear image in our minds. Yes? hands up, Mel?  
 59. Mel: A bird might↑  
 60. T: What sort of a bird-a little willie wag tail? What sort of a bird? Mel?  
 61. Mel: No, a big bird, like magpies and, and a big, big wedgetail eagle  
 62. S(s): [foxes][the ferals][feral cats]((overlapping responses from other students))  
 63. T: woa::ah, hang on, good discussion points but let's listen to each other,  
 64. no calling out, you all have such good information to build on and add

Specifically, by examining the turn-by-turn moments of classroom dialogue the focus shifts towards considering how pedagogy works interactively at the moment it happens; that is, showing how through turn-by-turn exchanges teachers and students co-create meaningful talk and interaction, pedagogical activities and roles and relationships. These are the very practices upon which they rely to support learning in this lesson. Broadly, across this phase of the Year English lesson, teaching and learning practices are held in place or bundled together as a constellation of pedagogical practices amid the particular:

1. *cultural-discursive* arrangements found in (or brought to) the lesson as a site of pedagogical practice; these arrangements enable and constrain the *sayings* characteristic of the practice,
2. *material-economic* arrangements found in (or brought to) the lesson; these arrangements enable and constrain the *doings* characteristic of teaching and learning, and
3. *social-political* arrangements found in (or brought to) a site; these arrangements enable and constrain the *relatings* characteristic of teaching and learning practices.

Not one of these arrangements exists as an entity on its own, but each is a practice architecture for the other. Examining the particular arrangements that enable and constrain the characteristics of the practice ([3], p. 32) offers insight into questions that asks us to consider what influences pedagogical decision making as it happens in the flow of instruction. Transcript analysis shows the distinctive and dynamic dimensions of classroom dialogues as produced in lesson practices, and how this works to influence student's learning and teacher's teaching as these unfold in the moment-by-moment interactions which occur in lessons. Furthermore, at a deeper level, examining transcripts reveals how pedagogical practices are composed as interlocutory activities primarily concerned with intersubjective meaning making. **Table 1** brings together an example of the constellation of practices and practice architectures that shape the conduct of pedagogical practices found in a lesson (evident in Extract 2).

As **Table 1** illustrates, grasping the intricacies of the pedagogical enactment, requires understanding how the bundles of practice architectures arrange practices as they unfold discursively through language and sequences of time, in actions and interactions. In lessons, these occur as a body or constellation of practices intertwined or enmeshed in the doing; and further simultaneously enable particular kinds of sayings, doings and relatings to exist or come to exist in classroom lessons at the moment of enactment. In other words, teaching and learning practices in classrooms both constitute and are constituted by the particular words used (scientific terminology is required to make the lesson characteristically a science lesson or an English lesson), the particular activities done (like the discussion that required students to recall the scientific terms encountered earlier) and the particular relationships which exist between the teachers and students present as they listen to one another, comply with the teachers expectations. But added to this, practices are also influenced by other conditions (like the curriculum or a teacher's professional development program) that may prefigure but not necessarily predetermine what actually happens in the discursively-produced flow of lesson interactions (like the student's actual responses to a teacher question). This means that pedagogy in the moments of enactment is influenced, but not predetermined by prefiguring conditions or practice architectures.

The pedagogical practices experienced and produced here in this lesson are thus encountered as, and made evident through, the social exchanges between the teacher and students that formed *sayings* in and through particular language, that formed *doings* in and through particular activities, and that formed *relatings* in and through particular ways of relating reflecting different roles and relationships. These three dimensions of practices formed the basis of *how* and *what* practices meet the students, and as the 'lessons' progresses through the realities of time students display their understandings of the particular lesson context - the language, the activities and the ways of relating in the lesson as a context for learning something new – by their responses and actions in the practice itself. Furthermore, the students (as individuals and as a collective) are recognisably co-producers of the pedagogy [25], contributing to shaping or influencing how the lesson unfolds at the time.

As Schatzki [1] recognised, and Baker [26] identified empirically, persons (like students and the teacher) proceed individually in the practice but as interlocutors through shared activities, actions, interactions and interrelationships, and at the same time co-create the very context



Practice architectures	Broader prefiguring practice architectures (examples)	Practices found in (or brought to) the lesson as a site of pedagogical practice	Examples from Extract 2
the <i>cultural-discursive</i> arrangements	the externally mandated national curriculum; the school's local policy outlining the integration of English with other disciplines like Science; student's prior knowledge of local fauna (like wedgetail eagles, blue tongue lizards, the impact of feral animals on native fauna) and specific usage of technical terminology; teacher's knowledge of the student's rural background experiences; teacher's prior knowledge of science and English instruction	<p><i>sayings</i> constituted by the discipline content or technical language of science which has particular meanings attributed to them in science</p> <p>the language of the English curriculum which has particular meanings attributed to English instruction</p>	<p>e.g. <i>terra, terrarium</i> (line 13); <i>aquarium</i> (line 14); <i>camouflage</i> (line 15); <i>granite</i> (line 29); <i>thorny devil</i> (line 31), <i>moss</i> (line 40); <i>lichen</i> (lines 42, 43); <i>predators</i> (line 47); <i>wedgetail eagle</i> (line 54)</p> <p>e.g. <i>getting ideas</i> (line 1); <i>rich vocabulary</i> (line 10–11; a <i>good metaphor</i> (line 36); <i>beautiful adjectives</i> (line 57); <i>expressive sentences</i> (line 57–8); <i>clear images in our minds</i> (line 58); <i>good discussion points</i> (line 63); <i>good information to build on and add</i> (line 64)</p>
the <i>material-economic</i> arrangements	arrangements of desks in the room; resources like books and computers are differently arranged in the English lesson as distinct from the science lesson to enable this particular reading activity to be 'done'; the teaching and learning resources available at the school; prior participation in science groups; prior participation in the science lesson on terrariums; teacher's prior knowledge of the kinds of activities and resources required for teaching reading, writing and science; student's knowledge of 'the way we do reading'	<p>how the physical set-ups of material objects in the classroom space or how the students are positioned, seated or arranged in the space influence what is or can be done</p> <p><i>doings</i> shaped by particular activities forming this lesson phase like learning 'big words', having a whole class discussion, remembering and recalling</p>	<p>e.g. <i>get in a comfy spot on the floor</i> (line 2); <i>everyone facing front so you can see</i> (line 2); <i>sitting beside your talking buddies</i> (line 3); <i>seated in science groups</i> (line 10); <i>moving away from the bin</i> (line 10); <i>or on the floor or sitting next to their partner</i> (line 11); <i>seeing the picture on the cover of the book</i> (line 17–8)</p> <p>e.g. <i>reading - have a bit of a read</i> (line 1); <i>getting ideas</i> (line 1); <i>revising - remembering and recalling vocabulary</i> (lines 10); <i>learning</i> (line 11); <i>answering teacher questions I am gonna ask you two in a minute</i> (line 17); <i>being more explicit</i> (line 53); <i>adding good discussion points</i> (line 63); <i>listen to each other</i> (line 63), <i>you all have such good information to build on and add</i> (64)</p>
the <i>social-political</i> arrangements	teacher's prior knowledge of the students (interest, abilities and behaviours); teacher's pedagogical knowledge about the benefits of group work; the teacher's recent professional development about dialogic pedagogies [22–24]; prior experiences of the interactional conduct and behaviour management of students in lessons e.g. teachers nominating the next speaker, complying with the teacher's requests	<p><i>relatings</i> shaped by the ways teachers relate to their students would be different to how students would relate to their peers; students address the teacher in a formal way; following lesson rules</p> <p>positioning of students on the floor beside their 'talking buddy' but facing towards the teacher influences how they relate to others</p>	<p>e.g. <i>working in groups</i> (11); <i>like working with their partner</i> (line 12); <i>like being fair</i> (line 20) and <i>waiting your turn</i> (line 21); <i>we all get a say here</i> (line 20); <i>addressing the teacher appropriately Mrs. Kallo</i> (line 19, 50); <i>teacher asking for students opinion, what do you think?</i> (line 51); <i>teacher calling for 'hands up'</i> (line 58); <i>or listening to others</i> (line 63); <i>no calling out</i> (line 64)</p> <p><i>everyone facing front</i> (line 3); <i>sitting beside your talking buddies</i> (line 3) or <i>partner</i> (line 12)</p>

Table 1. Practices and practice architectures of lessons.

and the conditions that form the practice itself. Underpinning this perspective is the knowledge that all classrooms share one thing in common - they are unique social sites whereby teaching and learning activities happen whilst simultaneously constructing the roles and relationships between teachers and students [13]. These exist and evolve as enmeshed conditions which enable and constrain the kind of practices that can happen there. Teachers and students use their knowledge and past experiences of these contexts to generate appropriate behaviours, and the appropriateness of those behaviours, in turn, serve to define the context in which they interact [27]. These are mutually constitutive as students learn the ways of learning in lessons by participating from the moment they enter the practice.

Data (presented in Extracts 1 & 2 and **Table 1**) show that in real lessons in real sites, pedagogical practices are socially, dialogically, ontologically and temporally formed. That is, pedagogical practices are socially constituted (among people like students and teachers), dialogically formed (through language and communication comprehensible to those present), locally situated (in the particular classroom in the particular school in the particular community) and accomplished in real-time happenings (in the real-time flow of activity, action and interaction). This is a site-based view that regards as central the reciprocity of influence between and across the practice architectures made apparent in the

- *cultural-discursive* dimension of practices, whereby the different language and discipline knowledge and communicative linguistic competencies *influence the semantic space* and the particular sayings brought to bear on the pedagogic interactions in the lesson as it occurs;
- *material-economic* dimension of practices, whereby the different actions, activities, resources and material set ups present *influence the physical space-time* and how people present can do their work and relate to one another; and,
- *social-political* dimensions of practices, whereby the different roles students and teachers have in the doing of the teaching and learning and *shape the social space* and how they relate to one another, what power they have to act, how they act in solidarity with others and the agency or capacity for decision-making or acting autonomously.

These arrangements occur as intertwined or enmeshed dimensions of practice, enabling particular kinds of sayings, doings and relatings to exist or come to exist in classroom lessons. In other words, practices in classrooms both constitute and are constituted by the particular words used, the particular things done and the particular relationships which exist in the interactions between the people and things involved. A site based view also regards students and the teacher as being equally influential in the happeningness of accomplishing pedagogy, yet recognises too that the ways students are positioned with greater or lesser degree of power, solidarity and agency also influences the conduct of practice in the end. In these three dimensions, therefore, the extent to which the practice architectures exist in a site and influence the conduct of the practice at the time, appear to a greater or lesser degree as practices are made and remade each time, through time. These form part of the mediated nature of practices and practice architectures that also influence the possibility of other practices in the future.

In this vein, pedagogy cannot be taken to be simply an overarching term since i) this would gloss the complexity of teaching and learning as it happens at the time; ii) teaching and learning as it happens responds to the individual persons and the circumstances present in the

moment; iii) at the moment of happening pedagogical practices (made visible in the specific language, the specific activities and the specific ways of relating at the time) are influenced by the specific practice architectures encountered at the time; and iv) practices are also influenced by what has been encountered previously [23]. Thus, in any one lesson, like the English lesson presented in Extract 2, practices and practice architectures may be different from those encountered and produced in any subsequent English lesson, or different to the arrangements found in a Science lesson in the same classroom (since different and characteristic vocabulary or terminology is used that render it a discipline-specific lesson, or different configurations of student groups are used). In the conduct of lessons, therefore, teachers must respond adeptly to student and community reality and diversity: cultural, linguistic, economic, regional and social differences. And as Kemmis et al. [3] showed, that responding to diversity requires understanding pedagogy as it is enacted in real sites, under real conditions at every school; that is as *site based education*.

## 5. The theory of practice architectures: a conceptual framework for understanding pedagogy as site based education

The interest in practices and practice architectures presented in this chapter stems from decades of theoretical and empirical work highlighting the sociality of teaching and learning. Utilising the theory of practice architectures offers some new insights into questions concerning pedagogy; these are summarised briefly next.

### 5.1. New contributions of this theoretical position

Broadly, the theory of practice architectures draws attention to *how* local or site based, as well as systemic external, conditions influence the conduct of pedagogical practices. Thus, it offers a fresh perspective on what happens in lessons in schools against the relatively volatile background of performativity, the measurement of the efficacy of teaching practice and student learning outcomes, and the rigidity being applied to the implementation of curriculum. It affords a view of pedagogy that necessarily accounts for the ways a constellation, body or assemblage of locally produced and intertwined practices and practice architectures shape what happens in sites of practice. The theory of practice architectures *re-centres* the significance of the sociality, situatedness and happeningness of classroom practices at both a *molar* and *micro* level in ways that enables the analyst *to get at* the diversity that exists in pedagogical practices.

While many traditional accounts of pedagogy as method place great store in technè or the techniques of teaching for learning, the theory of practice architectures contributed to the field of social science for its capacity to show the nuances and distinctiveness of the practices and practice architectures of pedagogy that may indeed remain elusive in a highly complex field of study. It takes understandings about the conduct of pedagogy beyond a tacit more instrumental level to reveal the ways practices themselves get accomplished in the everydayness of particular social happenings like classroom teaching and learning. In particular, it offers



purchase on how teachers and students enter into and create shared spaces for understanding and extending each other as learners and teachers in the semantic, physical and social spaces that form lessons. This is a view that orients to understandings about how the semantic, physical and social spaces of practice form the intersubjective nature of learning and teaching in classrooms. According to this view of practice, students become practitioners of learning practices by co-inhabiting particular intersubjective spaces with their teachers and peers in classroom lessons (over historical time and in physical space–time), and by employing particular sayings, doings and relatings appropriate to the practices of particular disciplines. Going further, the study of transcripts, like those presented in this chapter, reveals ‘the collaborative ways in which members manage their conduct and their circumstances to achieve the orderly features of their activities’ ([28], p. 7).

Returning to the questions that framed this chapter, the discussion shows how *the theory of practice architectures* adds insights into understandings about pedagogy as a practice, the ways the framework of the theory of practice architectures helps to conceptualise the sociality, situatedness and happeningness of pedagogy as it is produced in lessons. Furthermore, it offers enhanced perspectives about the local and broader systemic conditions or the cultural-discursive, material-economic and social-political arrangements that influence pedagogical decision making as it happens in the flow of instruction. From this position, understanding the practice architectures of pedagogy, strictly applied, counters more narrow but universal conceptualisations about pedagogy as method to liberate an inherently social view of teaching and learning. It opens up more restrictive and ambiguous perspectives of pedagogy to reveal an intersubjective positioning that orients to this view: *that to speak about pedagogy is to speak about how practices are socially, dialogically, ontologically and temporally constituted*.

## 6. Concluding remarks

The chapter aimed to offer a practice perspective on pedagogy through the lens of the theory of practice architectures and to do this it took up the challenge of reflecting critically on the teaching and learning that happens in lessons. Broadly, the chapter proposes the relevance and utility of considering the theory of practice architectures for research on pedagogy. The rendering of pedagogy presented is theoretically innovative in that it seeks to understand the more complex relationships between practices and practice architectures made apparent in the cultural-discursive, material-economic and social-political arrangements that influence the teaching and learning practices that occur in school settings. The ideas across the chapter have strong implications for teachers and leaders involved in practices of pedagogical decision making, since understanding how the practice architectures of pedagogy plays a decisive role in allocating life chances for young people is necessary for securing ‘best practice’ as a condition for efficacy, development and sustainability. Ultimately, this requires identifying the practice conditions that advance education itself in particular places as it leads to broader understandings about how and why some pedagogical practices persist and resist the constancy of change and the pressure of performativity, measurement and accountability.

The utility of the theory of practice architectures as applied to understanding the notion of pedagogy as a practice presents new conceptual work that concerns the interrelatedness and convergences between sociality, dialogue, ontology and temporality in teaching and learning. First, it is a conceptual position that shows the particularity of practices since as practices unfold discursively through moment of time they are particular to the persons involved, particular to the place in which they happen, particular to the actions and interactions of those present, and particular to that moment. Second, it shows how pedagogical practices are arrayed and enmeshed with people as they encounter one another through language, dialogue, activity, interactivity, and particular ways of relating that form semantic and social spaces. The theory of practice architectures advances notions about how disciplinary knowledge gets brought in, and enacted in and through practices in educational settings, and specifically opens the scope for discovering how diverse practices become interwoven in local sites or local practice landscapes. Third, this new conceptual work also addresses how practices are arrayed and enmeshed with people and other material objects as unfolding in real timespaces of human activity [15]. Finally, the theory of practice architectures is a theoretical position that contributes to understandings about how educational practices are developed in the local sites with which they are enmeshed, and about the teaching and learning practices necessary to support, develop and contribute to *site based education*.

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## A. Appendix 1

*Transcription conventions* (adapted from [29]).

[[	Utterances that begin at the same time
[	Overlap in speakers' talk
]	Point where simultaneous talk finishes
=	Talk between speakers latches or follows without a break
( )	Indicates length of silence e.g. (0.2)
:::	Indicates that a prior sound is prolonged e.g. li::ke
-	Word is cut off e.g. ta-
> <	Words enclosed within are said at a faster pace than surrounding talk

?	Rising inflection
¿	Rising inflection but weaker than ?
.	Stopping fall in tone
,	Continuing intonation
!	Animated tone
↑	Marked rise in pitch
↓	Marked fall in pitch
<u>no</u>	Underline indicating greater emphasis
CA	Upper case indicates loudness
°	Softness e.g. It's a °secret°
(it is)	Words within are uncertain
( )	Indicates that some word/s could not be worked out
(( ))	Verbal descriptions e.g. ((sits down))

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