Chapter 10
Cultural-Historical Theory and Pedagogy: The Influence of Vygotsky on the Field

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Abstract This chapter discusses in some detail Vygotsky's dialectical approach to human learning and its implications for teaching. Topics include how people may create their own social situations of development in which they propel themselves forward as learners, the role of teachers in creating learning environments which contain both demands on and support for learners, how concepts are used to work on the world and the implications for designing learning sequences and how important it is to recognise that learning, development and knowledge deserve equal consideration when considering pedagogy. The discussion recognises the extent to which Brian Simon's emphasis on the contribution that sound pedagogical understandings can make to social equality drew on early translations and interpretations of Vygotsky's work. It therefore attempts to deepen those understandings by paying close attention to Vygotsky's own ideas and ideas from those who have picked up his legacy in order to enhance student learning.

Keywords Learning • Learners • Teaching • Vygotsky • Simon

Introduction

When Black and Wiliam introduced their influential overview of the impact of formative assessment on achievement in schools, they used the metaphor of the 'black box' to refer to what happened in classrooms (Black and Wiliam 1998). Observing that education policies tended to focus on inputs, such as target setting, and outputs, such as pupil performance, they commented that what happened inside classrooms, while teachers worked with these inputs and achieved the outputs, remained largely unexamined. Consequently, practitioners were left without guidance and were sometimes burdened by input demands that were counter-productive to the expected achievement.

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One important exception to the mystification of what happened in classrooms was the ORACLE (Observational and Classroom Learning Evaluation) study of teaching processes in primary school classrooms led by Brian Simon and Maurice Galton in the 1970s (Galton and Simon 1980; Galton et al. 1980) and Galton's follow-up study two decades later (Galton et al. 1999a, b). Simon had long argued for increased attention to pedagogy (Simon 1980). His aim was not to prescribe what should be done, but to recognise how pedagogy can promote inclusion and equality. This analysis was in sharp contrast to how psychology had been used in the UK to segregate children into different academic programmes on the basis of an examination at 11. ORACLE took forward Simon's emphasis on pedagogy by placing a research lens on the practice of teaching, opening up the black box, analysing in detail what was happening there and raising some important questions for the teaching profession.

Galton's own fascination with what teachers do and how they might be helped continued through his studies of, for example, group work (Galton and Williamson 1992), the demands made on teachers (Galton 2008) and personalisation (Galton et al. 2007). Both Simon and Galton consistently saw teachers as crucial levers for social change through how they support learners' mastery of the knowledge that matters in society. Consequently both have argued unfailingly for more attention to the conceptual tools teachers need to do this work. Simon particularly recognised the contribution of Vygotsky to that quest, and in inviting this chapter, the editors have encouraged me to examine that contribution.

Vygotsky's legacy, frequently referred to as cultural-historical theory, recognises how minds are formed culturally through a dialectic of person and culture. It is an optimistic legacy. It demonstrates how learners are both shaped by and shape the historically created practices they inhabit and emphasises the responsibilities of the teacher in helping learners to act on and influence those practices. Vygotskian pedagogy is therefore an inclusive one which aims at enabling every citizen to contribute to the shaping of society and its cultural goods. In this chapter I shall highlight some of the intellectual resources that Vygotsky's legacy has offered teachers who, like Galton and Simon, see education as the key to an inclusive society.

Vygotsky and Education

For Vygotsky, learning and development were always intertwined and education was central to both. Born in 1896 in Gomel, 400 miles south west of Moscow, his initial interests were in the Arts and Humanities. However, barred from becoming a teacher because of his Jewish origins, he read Law at university, turning to Psychology with his PhD on *The Psychology of Art* at the Moscow Institute of Psychology in 1925. The remaining 9 years of his life was spent in Moscow where his intellectual quest was to tackle what he saw as a crisis in the behaviourally oriented psychology of his day and to create a version of the discipline that could

underpin a form of human development that might create a sustainable and ethical society.

His concern with cognition in activity, how people learn and act in the world, meant that pedagogy was central to his work. He recognised how cultural expectations shape behaviour; but looked beyond behaviour to consider how mind was also culturally shaped. His focus on mind in activity in the world connected him intellectually with early psychologists such as Wundt, who had been working in Leipzig in the late nineteenth century, and with North American pragmatists such as Dewey and GH Mead. Dewey and Mead, like Vygotsky, influenced by German Liberal ideas on the improvability of society, similarly aimed at understanding and supporting human development within changing societies (Edwards 2007; Valsiner and van der Veer 2000). Yet Vygotsky's sustained focus on mind, individual sense making and collective meaning making marks his particular contribution to this broad area of enquiry and in particular to a developmental psychology which placed pedagogy at its core.

Between 1921 and 1923, he gave a series of lectures at the teacher training college in Gomel, now available as *Educational Psychology* (Vygotsky 1997a). His intention appeared to be to create an introductory psychology text for the teachers who would take forward the new post-revolution Russia. In laying out the purpose of the collection of lectures in the first chapter, he explained educational science as follows: '[p]edagogics rests upon auxiliary sciences, for example, social ethics, which define the overall goals and problems of education, and psychology together with physiology, which together define the tools for use in solving these problems' (Vygotsky 1997a, p. 2).

This short extract points to three features which were key to Vygotsky's quest. First, the development of mind has a social purpose; second, learning is not simply a matter of concept acquisition but also involves development; and finally pedagogy can be a tool for achieving the kind of learning and development that can benefit society. The statement also reflects the powerful dialectic that Vygotsky has revealed for us, that learning involves both internalisation and externalisation. Learning is a matter of taking in the ideas that are valued in a culture and using them to work on and shape that culture. Vygotsky's learner is therefore not simply swept along by the historical practices of the community she enters, but is agentic, using concepts while acting on and shaping those practices.

But as Charles Taylor later observed (Taylor 1991), attention needs to be paid to creating the socially responsible and ethical agent. This is where Vygotsky's emphasis on cultural mediation and consciousness becomes particularly important. If for no other reason, Vygotsky's status as genius is secured by his solution to the problem of consciousness. For decades psychologists had been grappling with how to access mind, to discover how people think. Solutions included the stream of consciousness approaches of William James and the psychoanalytic work of Jung and Freud, but perhaps only Peirce's linguistics, together with his interpretation of pragmatism, came close to Vygotsky's insights (Edwards 2007). Vygotsky's solution to accessing mind, to understanding how and what others were thinking, was to examine what people did in activities. For him the key was how they interpreted

tasks and used resources, both conceptual and material, to tackle the task. Their use of conceptual and material tools in their interpretations and responses gave access to how individuals were making sense for themselves. These analyses also showed how resources, both ideas and material artefacts, are cultural products, often fashioned by history and mediated by more expert others. As Bruner once put it so simply, 'Education is from the outside in' (Bruner 1966, p. 21).

Mediation, passing on cultural tools which carry what is already known and valued, is therefore a key idea in Vygotsky's work. His approach to accessing mind, his attention to the cultural origins of ideas and artefacts and his emphasis on their use suggest a version of pedagogy that is very different from the authoritarian delivery of curricula that marked Russian schooling in the early 1920s and indeed is frequently suggested as a way forward elsewhere almost 100 years later. Instead, learners are introduced to tools which enable them to first engage with the knowledge that is valued and in time master and use that knowledge in their actions on the world.

Vygotsky's learner is therefore active, constructing understandings and propelling herself forward making personal sense and connecting personal understandings with powerful publicly recognised meanings. In school she is helped in this process by teachers who understand pedagogy as well as the subjects they teach. The final chapter of *Educational Psychology* on 'psychology and the teacher' should be required reading for every Minister of Education, if only because it undercuts beliefs about teaching that don't recognise pedagogical expertise. Here are just two extracts:

> The teacher... has to become the director of the social environment which, moreover, is the only educational factor. When he acts like a simple pump, filling up the students with knowledge, there he can be replaced with no trouble at all by a textbook, by a dictionary, by a map, by a nature walk...When he is simply setting forth ready-prepared bits and pieces of knowledge, there he has ceased being a teacher. (Vygotsky 1997a, p. 339)
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> Thus the first condition which we impose on the teacher is that he or she be a scientifically trained professional... (Vygotsky 1997a, p. 344)

The argument pursued in this chapter is that Vygotsky's legacy includes a way of thinking about learning which has considerable implications for how teachers help learners engage with what matters now and will matter in their futures. I shall therefore not be offering brief descriptions of, for example, the zone of proximal development (ZPD) (see Chaiklin 2003 for a scholarly account); but will instead attempt to delve a little deeper into what learning and teaching meant for Vygotsky and for those who have interpreted and built on his ideas.

Individual, Social and Collective

Galton and his colleagues wisely concluded their 1999 paper on the ORACLE follow-up study (Galton et al. 1999b) with the observation that attention to pedagogy needs to start from what it is that the child needs to learn, to be followed by ideas on how to assist the learning. These topics, knowledge and learning, are central to a

Vygotskian understanding of pedagogy. The ORACLE team's solution, to the problem of restricted notions of pedagogical support in schools in 1999, was increased attention to theories of learning in Teacher Training. Simon, interestingly, had earlier taken a slightly more nuanced view of the matter. Echoing Vygotsky, Simon's view spoke to a stronger dynamic between psychology and education through recognising the interplay of culture, represented in historical terms, with psychological analyses of language (Simon 1982). Simon's argument is mirrored in Vygotsky's enduring concern with the interplay of culturally valued knowledge and the conceptual tools, carried in language, which we employ when getting to grips with that knowledge.

Neither Simon nor Vygotsky emphasised culture to invoke a backward-looking education. Instead both recognised the importance of analysing culture and the knowledge valued within it, as part of the work of education which would sit alongside providing learners with the conceptual tools to work with and on that knowledge. Simon's perspective is very much in line with Vygotsky's view of the learner as active agent when he suggests that: '[e]ducation should be recognised as a mode of development proper to humanity in society...rather than something superimposed on creatures construed as a construct of heredity and environment' (Simon 1982, p. 94). Pedagogy in this formulation becomes the lever for social change that Vygotsky too had envisaged.

Vygotsky was also as scathing as Simon about the limitations of the objectivist and measurement-obsessed psychology that emerged from the 1920s onwards in the USA and much of Europe including the UK. He described two 'camps' of psychologist: one of which '…[h]as gone further and deeper into subjectivism than even Dilthey et al.....The other, ranging from America to Spain, is trying to create an objective psychology' (Vygotsky 1971, p.19). Both directions, he argued, were flawed; instead he suggested that attention should be paid to an examination of the social and collective aspects of psychology (Vygotsky 1971). The arguments are initially made in his PhD *The Psychology of Art* and relate there to how aesthetic judgements are made; but the relationships between the individual and the collective and the individual and the social are at the core of his thinking about learning and development and therefore his contribution to understandings of pedagogy.

So much of his legacy can be traduced to simplistic formulations such as active learning or learning through interaction or participation that it is worth going in some depth to what he was actually explaining to us. The effort spent is, I suggest, worthwhile helping us see just how learning and knowledge are tightly intertwined and with considerable implications for how we think about teaching.

Vygotsky made a distinction between sense and meaning, seeing them as dynamically connected. In brief, individuals are involved in sense making when they encounter, in social interactions which will include authored texts, the meanings that are valued within the collective. As Vygotsky put it, '...[s]ense is what enters into meaning' and '... [t]he formation of sense is the product of meaning' (Vygotsky 1997b, p. 136–7). This dialectic interplay between sense and meaning, between individual and collective, is central to his view of learning and is essentially social. He was adamant that learning does not arise through telling. His writing is some-

times in note form and therefore not always clear. But the following point is underlined and emphatic: '... [t]he sign [the word *my addition*] gives birth to meaning; meaning sprouts in consciousness. It is not like that. Meaning is determined...by the activity of consciousness'. Meaning is there for us to work with and on, it is made, and our sense making is part of that process of meaning making. This is a form of constructivism, but a version that emphasises public meaning alongside individual sense making and involves effort.

Accessing Meanings in the Space of Reasons

More recently Derry has discussed how Vygotsky envisaged the knowledge held and developed within culture and its implications for what he meant by learning. Again the social aspects of individual human learning run through her arguments. Her main point is that Vygotsky did not intend us to regard learning as simply an individual's movement from everyday heavily situated and weakly formed understandings to more powerful abstractions, i.e. abstraction is not the end point. Instead, we should recognise that concepts are embedded in wide systems of inferences that are already there in the world. Learning involves gaining familiarity with these wider sets of inferences and thereby a deeper understanding of the concept (Derry 2008). In brief, we explore and examine these wider inferences and interconnections using the concepts we have available and so strengthen our grasp of these concepts. This example is mine not Derry's: once I recognise the importance of sovereignty as a concept in history I can employ that concept to interpret and discuss the Norman conquest of England, Shakespeare's Richard II and the rights and wrongs of the Allies' invasion of Iraq, and in doing also come to see the potential and the limitations of the concept itself. This analysis has strong echoes of Simon's recognition of the importance to education of the dynamic between culture and language.

Derry points to how concepts arise and are refined in the process of examining the wider systems of meaning and inference in which they are located. She argues, therefore, that: 'The concept is a result of a complex process of development in which thought and the world are never categorically separated' (Derry 2013, p. 132). The meanings are there in the world for us to work on and with; learners need to be able to access them in order to be able to draw on them, expand their grasp of their connections and contribute to them.

Learning and Development

Derry's work warrants more attention than I can give it here. I'll simply focus on her suggestion for how publicly validated meanings can be accessed. Derry, like Bruner (1960), is no advocate of discovery learning.

> ... [a] Vygotskian approach doesn't depend simply on individuals being placed in the required environment where they discover meaning for themselves. The learning environment must be designed and cannot rely on the spontaneous response to an environment which is not constructed according to, or involves, some clearly worked out conceptual framework. For Vygotsky concepts depend for their meaning on the system of judgements (inferences) within which they are disclosed. (Derry 2008, p. 60–1)
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> One element in the design is what she terms 'the space of reasons'. She draws on the American philosopher Brandom to argue that making claims and asking for reasons enables learners to access the meaning-making that is valued in the discourse in which they are participating. She quotes from Brandom to explain:
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> [t]o have conceptual content is just for it [a concept] to play a role in the inferential game of making claims and giving and asking for reasons. To grasp or understand such a concept is to have practical mastery over the inferences it is involved in—to know, in the practical sense of being able to distinguish, what follows from the applicability of a concept, and what it follows from. (Brandom 1994, p. 48) (Derry 2008, p. 17)

Her explanation of Vygotsky's concern with learning, as a growing understanding of the inferences that comprise currently accepted meaning, has strong implications for how pupils are engaged as learners. The space of reasons is not a version of the Socratic dialogue, led by the expert teacher, which in some hands can lead to an interaction where students' understandings are merely tested. The intention, instead, is to create a site where it is legitimate for all participants to ask for and be asked for reasons for the claims they make. In this way sense making is made visible and learners are encouraged to explore the implications of their current understandings and test their implications as they engage with public meanings.

Let us stay with the image of the learner engaging in increasingly informed ways with what is publicly valued and open to scrutiny. I have already described the Vygotskian learner as an active agent, engaging with and acting on the world, but not yet gone into the detail of his explanation of how that engagement leads to learning. Here his idea of the social situation of development is key. As Derry has argued, learning is not simply promoted by placing a learner in a rich environment. The social situation is therefore not a convivial assemblage of people who interact with each other.

Vygotsky instead used the term social situation of development to explain the developing child's changing relationship with his or her environment over time. He explained that these changes are marked by new structures of 'consciousness' (Vygotsky 1998, p. 199) which in turn alter the child's relationships with experienced reality. It is these relationships which make up the social situation of development. Therefore as fresh structures of consciousness emerge, defunct relationships fade away, and new are formed so that children become repositioned as agents within the discourses in which they are participating. In terms of Derry's analysis, new inferences are recognised and adjustments made. These adjustments include new ways of interpreting and responding to what is familiar but also changes in how one's relationship with the world is organised, such as the development of memory strategies, the capacity to synthesise understandings and so on. Development is a crucial component in the social situation of development and is intertwined with what is learnt.

From this account we can again see that Vygotsky's learner is intentional, creating networks of relationships with the world and finding as a consequence that '... [n]ew connections appear between experiences when they acquire a certain sense' (Vygotsky 1998, p. 291). Vygotsky's social situations of development are therefore not created by teachers, but by learners.

This notion of the learner propelling herself forward in attempts to make sense and engage with the meanings she encounters is, of course, only half the story. There is an interventionist role for teachers in this process. Derry's argument is crystallised in her proposal that reality or meaning is not represented in language, instead '...[i]ntervention prises reality into expressing itself in particular forms that do not exist without it' (Derry 2013, p. 133).

What kinds of interventions do this work? We again return to Vygotsky's emphasis on thoughtful engagement in order to help us.

> ... [t]he links, dependencies and relationships among things which are the content of our scientific knowledge are not the visible perceivable qualities of things: rather they come to life through thought. (Vygotsky 1993, p. 203)

Here scientific knowledge means strong and tested concepts. In this statement, Vygotsky suggests that the connections that comprise our scientific knowledge are activated by the use of concepts that have come into being historically and are worked with and refined as people engage with them in the world. His argument, with its emphasis on conceptual work in and on the world, reflects the extent to which he agreed with Marx's view that science, or conceptual enquiry, is necessary because of the gaps that need to be filled between current forms of representation and the essence of phenomena.

As Simon observed, Vygotsky reminds us that education needs to be oriented towards the future and not the past (Simon 1980). It is concerned with creating stronger representations of the world. Vygotsky's is therefore a very different view of learning from either the passive reception of received wisdom or versions of active discovery which downplay the emancipatory aspect of accessing and employing powerful knowledge. It calls for a particular kind of intervention, one which demands and sustains the use of concepts.

One weakness in many of the accounts of learning and development that have followed a Vygotskian line has been that writers have tended to emphasise either learning or development. Interestingly, Simon was careful to attend to both aspects in the case he made for a new emphasis on pedagogy in schooling (Simon 1980). More recently, however, strong emphases on curricula have meant that the 'D' for Development in ZPD has often been superseded by a focus on concept acquisition. Chaiklin in particular has criticised those who have ignored the 'D' in ZPD and so rendering it, in his view, a zone of proximal learning (Chaiklin 2003). Chaiklin reminds us that the notion of ZPD was also intended to direct attention to developments in mental functioning, such as improved memory and ability to organise our thinking.

But an emphasis on development alongside learning is not at all a matter of recognising an unfolding of innate individual attributes, the learning dialectic is cru-

cial. Writing from a developmentalist perspective, Hedegaard (2009, 2012) has been critical of psychologists who have focused too much on learners' progress and their needs and not enough on the learning demands they encounter. She reminds us that Vygotsky's account of learning centres on the dialectic of person and culture which is captured in his idea of the social situation of development (Vygotsky 1998).

Hedegaard's argument, with its attention to the demands in practices and how learners engage with them, has considerable implications for schools. In brief, drawing on her extensive research programme examining transitions between home and school (Hedegaard 2009), she suggests that when children engage with the learning demands that are embedded in practices at home and school, they develop what she calls '...[o]rientations to the demands in institutional practices' (Hedegaard 2012, p. 10) and these demands interact with their personal sense making to help explain why, for example, a child might be willing to do maths tasks in school, but not at home (Hedegaard 2014). Hedegaard is not drawing direct conclusions for schooling, but her argument, as it develops in her 2012 chapter, has considerable implications for how opportunities for learning are provided. She explains:

> Through anchoring the child's social situation in activity settings in institutional practices [such as breakfast time at home or a maths task in school my addition], a double perspective can be put on the child's activity. From the perspective of the child's social situation of development, it is how the child experiences the activity emotionally and acts in the institution, whereas from the institution's perspective, it is how the activity takes place in recurrent activity settings. (Hedegaard 2012, p. 21)

She goes on to elaborate that this dialectic between person and practice is not simply something to be recognised by researchers, but is at the core of learning and development. She suggests that if we are to capture learning and development, the '...[p]ractice within which persons' activities take place has to be analysed as encompassing activity settings that contain demands for activities' (Hedegaard 2012, p. 21).

Pedagogical Implications

We now turn to Claxton for one proven way of analysing and enhancing the practices in which activity settings, such as a maths lesson, are created. His starting point is also Vygotskian understandings of learning, and like Hedegaard, he is concerned with learners' orientation to engage as well as with the demands and possibilities that teachers can create in their classrooms. He uses the term 'disposition' to signify elements of what Hedegaard has described as motive orientation. For Claxton, disposition is an ability that one might be disposed to make use of (Claxton 2007), a definition which has much in common with Derry's focus on learners' use of concepts as they explore meanings. He also offers a useful way of evaluating and creating environments which may or may not invoke a disposition to engage in such an exploration.

These environments may be prohibiting, affording, inviting or potentiating. He argues that even inviting students to operate as engaged learners is not enough. The practices of the classroom should expect students to learn through being challenged in 'potentiating' environments that stretch the learner.

> Only the fourth kind of epistemic culture, potentiating milieux, make the exercise of learning muscles both appealing and challenging. In a potentiating environment, there are plenty of hard, interesting things to do, and it is accepted as normal that everyone regularly gets confused, frustrated and stuck. (Claxton 2007, p. 125)

Here there are strong echoes of Vygotsky's concern that effort is needed if personal sense making is to enter into public meaning making.

Claxton offers a list of ways of creating such an environment, all tested in his work with teachers, which he characterises as 'epistemic culture change programmes' aimed at answering the question 'What would it mean to organise your classroom and your pedagogy in such a way that every day, little by little, in the midst of the Literacy Hour, the Romans or an experiment on magnets, your students were learning to learn more robustly, more broadly, more skilfully and more flexibly?' (Claxton 2007, p. 121).

These adjustments are changing the language in classrooms to include building dispositions to engage, designing activities which focus on stretching the learner, selecting topics that excite and make demands on learners and building a sense of progression as a learner. These suggestions are neither entirely new nor radical; but Claxton offers one more lever for epistemic change, what he terms 'split-screen thinking' which is novel and extremely helpful. In brief, teachers and learners are asked to use a split screen when planning classroom activities. On one side of the screen are the concepts to be addressed and on the other are the learning strategies to be prioritised. These strategies can range from the practical such as setting out the page using subheadings to the personal such as organising revision time before the next assessment. Importantly teachers share both screens with students so that learning processes on the second screen are made visible, and students may also populate the second screen based on their own assessments of how they need to develop as learners. In one simple strategy, Claxton brings together both learning and development. The teachers I have worked with most recently have found split-screen thinking to be a crucial tool (Edwards, in press). It allows students to take control over their own actions as learners, while they undertake the risky work of creating their social situations of development, propelling themselves forward and repositioning themselves in relation to the knowledge they encounter.

Another tool that teacher colleagues have found useful is a way of planning student engagement which draws on Vygotskian ideas to create an architecture within which various learning sequences can be selected. Frequently referred to as the Quadrant Model, it owes a great deal to Harré's work on identity development within a Yygotskian framework (Harré 1983), has been tried and tested by teachers who have worked with me over the last 25 years and is written up in detail in Edwards (in press). Here I shall briefly outline its main features and indicate how it connects with the emphasis that Vygotsky, and more latterly Derry, place on seeing

4 Demonstration of grasp of key concepts and ways of enquiring	1 Introduction of key concepts and modelling of ways of engaging with key concepts
3 More open tasks which enable learners to apply key concepts and ways of enquiring	2 Tightly structured tasks which demand engagement with key concepts and ways of enquiring

Fig. 10.1 A model of task sequencing to promote learning

learning as enriching conceptual connections, Hedegaard's concern with motive orientation and demands and with Claxton's similar focus on disposition and potentiating environments.

The model is shown in outline in Fig. 10.1. Quadrants 1 and 4 are public arenas where knowledge is displayed: by the teacher or more expert learners in quadrant 1 as they model and instruct and by the students in quadrant 4 when they display their knowledge in some form of summatively assessed task. Poor teaching is frequently characterised as a direct move from 1 to 4 (see, e.g. the critique offered by Barnes 1976). When the move is from 1 to 4, there is no opportunity for a learner's sense making to connect with public meaning and make mistakes, get stuck and attempt an effort after meaning. Figure 10.1 therefore points to the advantages of taking time, through tasks presented in quadrants 2 and 3, to enable learners to both acquire and use the concepts that make up the subject-based curriculum while also taking control over their own learning.

Quadrants 2 and 3 offer semiprivate arenas where revealing misunderstandings is permissible and where help can be requested. Quadrant 2 is where learners undertake fairly structured tasks which are designed by teachers to help learners engage with concepts and ways of organising their thinking. Learners begin to take some control over the concepts and to explore what they can do with them in safe environments where options are limited. In quadrant 3, those concepts become resources learners can deploy and test in open-ended problem-solving activities. In doing so, students begin to grasp the potential and limitations of these ideas and more firmly connect them to their readjusted knowledge schema, connecting them to wider systems of inferences.

The demands that learners encounter in quadrants 2 and 3 are the teachers' contributions to learners' potential constructions of their social situations of development. The formative assessment and type of feedback students receive therefore crucially need to encourage their dispositions to engage. As well as guiding learners in their use of concepts and ways of organising, the feedback should also encourage them to be willing to approach, recognise and respond to task demands. Elsewhere

I have discussed the role of assessment and self-regulation in relation to this kind of student engagement (Edwards, in press). A major implication of Fig. 10.1 is that student agency needs to be developed and supported if they are to take advantage of learning opportunities in quadrants 2 and 3. Progress through the four quadrants can be read as increasing student agency and decreasing control by the teacher, nonetheless demands need to be sustained, and students need to be able to believe they can meet them.

The model is simply a way of structuring a learning sequence, which may last one lesson or several. In some cases, it may make sense to start the sequence of activities with some tasks in quadrant 3 rather than quadrant 1; and one frequently moves back from 3 to 2 to deal with misconceptions that arise in 3. In brief, it is a heuristic that points to the need to see learning as students' increasing control over the subject matter while also developing as learners and to help teachers identify the different kinds of task demand required in each quadrant, how their roles as teachers change in each quadrant and how formative assessment can help guide students' engagement.

Final Reflections

Some time ago I traced how 'pedagogue' had become a term of abuse in the UK political arena and gave one reason for that usage as the failure of UK and US educators to weave pedagogy into analyses of curricula. I then argued that as a result, front-stage performances of slick curriculum delivery were what are required of teachers and any backstage pedagogic work remained invisible (Edwards 2001). Little has changed. It is therefore important to recognise the contributions that both Galton and Simon have made in reminding us to attend to the backstage professional work of teachers.

Simon's paper Why No Pedagogy in England? (Simon 1980) needs to be reread, not as a late 1970s view of opportunities lost, but as a tract that has resonance in an English education system where public (i.e. private) schools are held up as models, where some subject knowledge is seen as a sufficient preparation for teaching and where university-based teacher education is being eroded. There are strong class-based injustices in all of these developments. I introduced Vygotsky by explaining that his pedagogy is an inclusive one aiming at enabling every citizen to contribute to the shaping of society and its cultural goods. His key message is that education is not simply about individual achievement; his attention to the collective and how education both draws on and feeds it has some urgency, and not only in England.

Galton has presented the teaching profession with tools they can use to enhance pedagogy and has undertaken projects that point to the need to sustain a pedagogic focus. His is an important legacy in its own right. It is also a legacy that receives strong support from the cultural-historical analyses of Vygotsky and those who are now taking that older legacy forward.

References

Barnes, D. (1976). *From communication to curriculum*. Harmondsworth: Penguin.

Black, P., & Wiliam, D. (1998). *Inside the Black Box: Raising standards through classroom assessment*. London: GL Assessment.

Brandom, R. (1994). *Making it explicit: Reasoning, representing, and discursive commitment*. Cambridge, MA: Harvard University Press.

Bruner, J. (1960). *The process of education*. Cambridge, MA: Harvard University Press.

Bruner, J. (1966). *Towards a theory of instruction*. Cambridge, MA: Harvard University Press.

Chaiklin, S. (2003). The zone of proximal development in Vygotsky's analyses of learning and instruction. In A. Kozulin, B. Gindis, V. Ageyev, & S. M. Miller (Eds.), *Vygotsky's educational theory in a cultural context* (pp. 39–64). Cambridge: Cambridge University Press.

Claxton, G. (2007). Expanding young people's capacity to learn. *British Journal of Educational Studies, 55*(2), 115–134.

Derry, J. (2008). Abstract rationality in education: From Vygotsky to Brandom. *Studies in Philosophy and Education, 27*, 49–62.

Derry, J. (2013). *Vygotsky philosophy and education*. Chichester: Wiley.

Edwards, A. (2001). Researching pedagogy: A sociocultural agenda. *Pedagogy Cultural Sociology, 9*(2), 161–186.

Edwards, A. (2007). An interesting resemblance: Vygotsky, Mead and American pragmatism. In H. Daniels, M. Cole, & J. Wertsch (Eds.), *The Cambridge companion to Vygotsky* (pp. 77–100). Cambridge: Cambridge University Press.

Edwards, A. (in press). Designing tasks which engage learners with knowledge. In I. Thompson (Ed.), *Task design, subject pedagogy and student engagement*. London: Routledge.

Galton, M. (2008). Teachers under pressure: The impact of government policies on teachers' working lives. *Education Review, 21*(1), 39–48.

Galton, M., & Simon, B. (Eds.). (1980). *Progress and performance in the primary classroom*. London: Routledge and Kegan Paul.

Galton, M., & Williamson, J. (1992). *Group work in the primary classroom*. London: Routledge.

Galton, M., Simon, B., & Croll, P. (1980). *Inside the primary classroom*. London: Routledge/ Kegan Paul.

Galton, M., Hargreaves, L., Comber, C., Pell, T., & Wall, D. (1999a). *Inside the primary classroom: 20 Years on*. London: Routledge.

Galton, M., Hargreaves, L., Comber, C., Pell, T., & Wall, D. (1999b). Changes in patterns of teacher interaction in primary classrooms: 1976–96. *British Educational Research Journal, 25*(1), 23–37.

Galton, M., Sebba, J., Brown, N., et al. (2007). *An investigation of personalised learning approaches used by schools*. London: DfES.

Harré, R. (1983). *Personal being*. Oxford: Blackwell.

Hedegaard, M. (2009). Children's development from a cultural-historical approach: Children's activity in everyday local settings as foundation for their development. *Mind, Culture, and Activity, 16*, 64–81.

Hedegaard, M. (2012). The dynamic aspects in children's learning and development. In M. Hedegaard, A. Edwards, & M. Fleer (Eds.), *Children's development of motives: A cultural–historical approach*. Cambridge: Cambridge University Press.

Hedegaard, M. (2014). The significance of demands and motives across practices in children's learning and development: An analysis of learning in home and school. *Learning, Culture and Social Interaction, 3*, 188–194.

Simon, B. (1980). 'Why is there no pedagogy in England?' Extracted from Simon, B. *Issues for the 80s.* In J. Leach, & B. Moon (Eds.) (1999), *Learners and pedagogy* (pp. 34–45). London: Paul Chapman.

Simon, B. (1982). The history of education in the 1980s. *British Journal of Educational Studies, 30*(1), 85–96.

Taylor, C. (1991). *The ethics of authenticity*. Cambridge: Cambridge University Press.
Valsiner, J., & van der Veer, R. (2000). *The social mind*. Cambridge: Cambridge University Press.
Vygotsky, L. S. (1971). *The psychology of art*. Cambridge, MA: The MIT Press.
Vygotsky, L. S. (1993). *The collected works of L.S. Vygotsky*, *The Fundamentals of Defectology* (Vol. 2). New York: Plenum Press.
Vygotsky, L. S. (1997a). *Educational psychology*. Boca Raton: St Lucie Press.
Vygotsky, L. S. (1997b). *The collected works of L.S. Vygotsky*, *Problems of the theory and history of psychology* (Vol. 3). New York: Plenum Press.
Vygotsky, L. S. (1998). *The collected works of L.S. Vygotsky*, *Child psychology* (Vol. 5). New York: Plenum Press.