Pedagogy, didactics and the co-regulation of learning: a perspective from the French-language world of educational research

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Pedagogy, didactics and the co-regulation of learning: a perspective from the French-language world of educational research

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Since pedagogy is a key term in the Teaching and Learning Research Programme (TLRP) principles, it is of interest to examine the evolution of the concept of pedagogy in the French-language world of education, as well as the emergence of a new field of research called 'didactics'. Work on situated cognition provides a framework for defining co-regulation of learning in the classroom as resulting from the joint influence of student self-regulation and of regulation from other sources (teachers, peers, curriculum materials, assessment instruments, etc.). Several examples of research on this topic are mentioned. In conclusion, it is argued that the concept of co-regulation of learning can be seen as a way of linking the TLRP principles of scaffolding and of student engagement.

Keywords: co-regulation; didactics; learning; pedagogy; scaffolding; situated cognition

Introduction

The contribution by Mary James and Andrew Pollard appearing in this volume presents ten principles developed by the Teaching and Learning Research Programme (TLRP) on the basis of studies carried out in schools and other education centres throughout the UK. The authors have formulated an impressive, well-documented synthesis of the findings acquired from over 100 research projects involving researchers from a wide range of disciplines and practitioners working at all levels of the educational system. The result of this endeavour is an interlocking set of principles that are conceptually coherent and carefully formulated to reflect the evidence coming from the TLRP projects. The authors provide an overview of the theoretical and empirical foundations of each principle and give numerous references to publications and websites that the reader can consult in order to learn more about the methods and findings of the studies and the thematic contributions of the forums organised by the programme.

As requested for this collection, my comments will deal with how the review by James and Pollard resonates with the work conducted in my own scientific community. My reference is the French-language community of educational research and practice, within which I have worked for over 30 years and which includes France and the French-speaking regions of Belgium, Canada and Switzerland. I will first

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examine the concepts of pedagogy and didactics, as they have emerged and evolved in this context, and the implications for the TLRP proposals. I will then discuss a topic of my own research – the co-regulation of learning – and the links I see with the TLRP principles.

Pedagogy and didactics

Pedagogy is a key term in the TLRP principles. Each principle begins with the words 'Effective pedagogy...' and then states a requirement to be met to promote quality and equity in student learning. James and Pollard present several arguments for their choice of the term 'pedagogy', which has replaced the expression 'teaching and learning' used in earlier TLRP publications. Their main argument is that pedagogy 'expresses the *contingent relationship* between teaching and learning' (in this volume, 8). I can only agree that this relationship – which implies interdependency of teaching and learning – is at the heart of educational undertakings. It must be noted, however, that most definitions of pedagogy, including those of Simon (1981) and Alexander (2004), quoted by James and Pollard (in this volume, 3, 8), refer to the act of teaching and its attendant discourse without explicit mention of the processes of learning. Put succinctly, pedagogy is generally considered to be embodied in teachers' actions and ideas, rather than being focused on teacher–learner transactions.[1] The nature of these transactions will be explored further in the second section of my response to their work.

UK publications on education often suggest that elsewhere in Europe the concept of pedagogy is well established and well accepted. While this may be true in some countries, its presence has in fact become quite marginal in most of the French-speaking world. An essay on *Pédagogie* by my colleague Hameline (1998) traces the evolution of the concept from its origins in scholarly reflections (Montaigne, Rousseau, etc.) on the purposes and principles of education to its institutionalisation in the Normal schools (teacher training institutes) of the late nineteenth century as a form of moral philosophy aimed at uplifting and guiding teachers in their work with children. Pedagogical doctrines, formulated by Pestalozzi, Decroly, Montessori, Freinet and others, were characterised by principles formulated at a high level of generality, as well as by a strong focus on practical details of educational method. In the early twentieth century, prominent figures in the emerging social sciences attempted to redefine the foundations and orientations of pedagogy. The sociologist Durkheim (1911) proposed to consider pedagogy as a 'practical theory' situated in an intermediate zone between art and science, like medical and political theories. Claparède (1912), founder of the J.-J. Rousseau Institute in Geneva, argued that pedagogy could acquire legitimacy only by rigorous scientific grounding in psychology. This position, shared by many researchers and leaders in education, inaugurated the development of a new field – *psychopédagogie* – which became a mainstay of teacher training in Belgium, France, Quebec and Switzerland. Although it sought to apply empirical findings from developmental and educational psychology, psycho-pedagogy retained a general level of prescriptive discourse similar to that of pedagogy.

Subsequent disregard of *pédagogie* and of *psychopédagogie*, which accelerated towards the end of the 1970s, can be explained by several factors (Hameline 1998; Hofstetter 2010). One of the most important is the development of *Sciences de l'éducation* as an autonomous field of research that draws on insights from a multiplicity of disciplines (psychology, sociology, history, linguistics, economics...), but cannot

be reduced to the application of any one or even several of these disciplines. In the Faculty of Psychology and Educational Sciences that grew out of the J.-J. Rousseau Institute in Geneva, the term pedagogy has nearly disappeared (in the 2010–2011 bachelor and master programmes, it appears in only two course titles[2]). There remains, however, a highly articulate spokesman for pedagogy in France, Philippe Meirieu, professor at the University of Lyon 2, whose website (www.meirieu.com) provides substantial documentation on the history of pedagogy, its conceptual, moral and pragmatic foundations, and the debates it continues to inspire.

The decline of pedagogy has been hastened, in the French-language world of education, by the emergence, in the late 1970s, of discipline-based didactics (*didactiques des disciplines*) focused on the subject-matters of teaching: language, mathematics, science, etc. (for summaries in English by two prominent didacticians, see Caillot 2007; Chevallard 2007). This development is alluded to by James and Pollard (in this volume, 19) in their discussion of the didactic transposition of academic disciplinary knowledge into school-subject knowledge. From the beginning, the developers of didactics (most of whom were specialists in academic disciplines) took a highly critical stance with respect to pedagogy, considering it to be an antiquated, overly general discourse that could provide no useful guidance for the teaching of specific subjects. The researchers in didactics have developed a coherent, well-integrated set of concepts. Starting with the definition of the didactical system as a triadic relation between teacher, student and knowledge, they have analysed the didactic transposition of knowledge and the embodiment of knowledge in classroom situations. Studies of the dynamics of interactions between teachers and learners have also come under scrutiny in work on the functioning (and the breakdowns) of the 'didactic contract', defined as a set of mutual and largely implicit expectations between teacher and students with respect to an object of knowledge. More recent work includes the conceptualisation of bodies of knowledge as 'praxeologies' that contain both a form of practice (types of tasks and corresponding techniques) and a discourse or theory about the practice in question, its aims, its rationale, its effectiveness (Chevallard 2007).

Despite the important differences between pedagogy and didactics, as developed in the French-language world of education, they share, I believe, one common feature. Empirical research on the processes of learning, and especially on learning outcomes, is rarely the focus of their investigations. Writings on pedagogy often refer to theories or conceptions of learning illustrated by selected observations, but they contain few in-depth analyses of the learning outcomes attained by students in ordinary classrooms. Research in didactics has stronger empirical grounding in the observation of classroom activities, but student learning is analysed primarily through vignettes and prototypical excerpts of classroom talk, sometimes through qualitative analyses of a few individuals' progression, while leaving unanswered the question: what did each student learn in the situation or series of situations that were observed?

Returning to the choice by James and Pollard to frame the TLRP principles in terms of effective 'pedagogy', I would like to express two concerns stemming from my experience in the French-language world of education. Use of the term pedagogy will probably not facilitate the dissemination of the TLRP work in educational circles in Belgium, France, Quebec and Switzerland, given the long and complex history of this concept and its present disparaged status. The choice of pedagogy may, however, be appropriate for communication with practitioners and

policy-makers in the UK where the term is not encumbered by past usage and may be more easily accepted with the meaning that the TLRP principles seek to promote. A second concern is more fundamental. Because pedagogy, in its traditional and contemporary definitions, is more directly focused on teaching (its practice and its discourse) than on learning, there is the risk that what was long the hallmark of English-language research – careful empirical analysis of learning processes and outcomes – may be downplayed and possibly neglected. It would be a loss if classroom research in the UK, or elsewhere, no longer sought, in a systematic way, to answer to the question: what did each student learn in the situations and activities under investigation? The fact that it is often difficult and sometimes even impossible to answer this question does not diminish its importance at a theoretical and a practical level. My own preference would thus be to retain the more cumbersome expression 'teaching and learning' when formulating principles for goals, activities and practices in educational settings. I think this might improve the chances of keeping the contingent relationship between teaching and learning clearly in view.

Co-regulation of learning

The expression 'co-regulation of learning' refers to the joint influence of student self-regulation and of regulation from other sources (teachers, peers, curriculum materials, assessment instruments, etc.) on student learning (Allal 2007). One could also define it as: processes of learning and of teaching that produce learning. The focus is thus on learning as the outcome of education and teaching is subsumed within the 'co' of 'co-regulation' (an approach which may not of course satisfy proponents of pedagogy and didactics who are interested chiefly in teaching). I will attempt to describe the emergence of this concept in French-language publications and its possible links with the TLRP principles.[3]

The regulation[4] of learning has long been an important topic in French-language publications in psychology and education. In his theory of cognitive development, Piaget (1975) defined the processes of regulation that explain how equilibration works and thereby allows the transformation of cognitive structures and the adaptation of behaviour in interaction with the environment. This focus on internal processes of *self*-regulation has continued to characterise contemporary research dealing with metacognitive and motivational dimensions of regulation. In contrast, researchers using concepts developed by Vygotsky (1978) have been concerned primarily with the regulation of learning that results from the interactive guidance provided by a tutor or teacher and from the use of tools that mediate the processes of learning. For example, in the didactics of French language instruction developed by Dolz and Schneuwly (1996), different text *genres* are considered to be tools – in the Vygotskian sense – for organising and regulating students' progression in oral and written text production. French-language research on assessment, and particularly on formative assessment (Allal 2010; Allal & Mottier Lopez 2005), has been influenced by both the Piagetian and Vygotskian conceptions of regulation. Considerable attention has been given to the ways in which various forms of self-assessment can activate the processes of metacognitive regulation (goal setting, monitoring, interpretation of feedback, adaptation of goal-directed behaviour), as well as to the regulations fostered by interactive assessment (e.g. student–teacher conferences) and by assessment tools (e.g. rubrics for peer and self-assessment, guidelines for constructing a portfolio) used in the classroom.

The perspective of situated cognition, particularly as elaborated by Cobb, Gravenmeijer, Yackel, McClain, and Whiteneck (1997), provides a framework for understanding the relations between active individual construction of knowledge and social processes of enculturation within a teaching/learning community. This framework offers a basis for postulating a reflexive relationship between student self-regulation and the regulations linked to various aspects of the teaching/learning context: namely, the structure of the learning activities, the transactions between students and the teacher, the exchanges among students, the tools embedded in the activities (Allal 2007). A reflexive relationship implies that processes of self-regulation govern students' engagement (or lack of engagement) with the affordances present in the teaching/learning context and that these affordances, in turn, support and constrain (or sometimes fail to support and constrain) students' self-regulation. Put more simply: it is postulated that the progression of student learning results from a process of co-regulation that entails interdependency between self-regulation and socially mediated forms of regulation.[5]

In order to study the co-regulation of student learning in the classroom, the most obvious situations are those involving one-to-one or small-group interactions in which the behaviour of each actor (student, teacher) is directly contingent on that of the other(s). But what about collective lessons, in which the teacher interacts with an entire class? Since this remains the most widespread format of teaching, it is important to understand how co-regulation may or may not occur when the teacher interacts with a large group of students. In many whole-class lessons that consist largely in teacher talk and actions, student self-regulation is at best quite passive and may be directed to other activities (daydreaming, disturbing one's neighbour without being caught, etc.) than to subject-matter learning. However, when students are actively involved in whole-class lessons that entail dialogue with the teacher and with other students about an object of knowledge, it is possible to identify processes of co-regulation conducive to learning. I will briefly mention two examples of studies conducted in primary school classrooms in Geneva. The first example concerns a study of whole-class discussions taking place before a text-writing task in three fifth-grade classes (Allal, Mottier Lopez, Lehraus, & Forget 2005). Our observations showed that the way in which students participated in a series of teacher-led activities, which included brainstorming about text content, elaboration of a writing guide, discussion of what it means to revise a text, had a significant effect on the texts they subsequently produced and on their text revisions. The final texts reflected both the means of regulation constructed collectively (e.g. goals specified in the writing guide) and the students' self-regulation (e.g. students' interpretation of a goal or priority given to a goal when revising his or her text). The second example comes from a year-long study of mathematics problem solving in two third-grade classes (Mottier Lopez & Allal 2007). On the basis of a detailed analysis of whole-class discussions and of students' worksheets, it was possible to trace the ways in which both the teacher and the students contributed to the construction of the 'taken-as-shared meaning' of norms (e.g. what is an 'effective' problem-solving procedure) and the subsequent appropriation of these norms in work carried out by students in small groups or individually. Both of these studies showed that although the teacher's pedagogical and didactical choices about how to organise and direct the lessons are crucial, the actual content produced – expressed orally, written on the blackboard, incorporated in documents – depends to a large extent on the students' contributions. Researchers in didactics use the term 'knowledge text' (*texte du savoir*) to refer to

the subject-matter content embodied in what is said and done in the classroom and which constitutes the enacted curriculum of classroom learning. Our findings suggest that the meaning given to subject-matter knowledge results from and, in a cyclical manner, further propels the co-regulation of learning.

What are the implications of the concept of co-regulation and how can it be related to the TLRP principles? I do not see co-regulation as an extra principle to be added on to the TLRP list. Rather I would consider it as an underlying concept that can link together several TLRP principles. In particular, I see it as a way of linking Principle 4: 'Effective pedagogy requires learning to be scaffolded' and Principle 6: 'Effective pedagogy promotes the active engagement of the learner'. The presentation of Principle 4 tends to suggest that scaffolding is something teachers 'provide' to support and regulate learning, rather than something that is constructed through teachers' transactions with learners. In the classical article by Wood, Bruner, and Ross (1976), as in Vygotsky's writings about the zone of proximal development, scaffolding is a process that is elaborated on the basis of what the learner's does and says (given his or her current developmental level) rather than a pre-existing support structure that an expert prepares, introduces and later withdraws. The elaboration of scaffolding cannot take place, in this perspective, without the active engagement of the learner (Principle 6). Active engagement relies on self-regulation that has both metacognitive and motivational dimensions (as described, for example, in the dual-processing model of self-regulation proposed by Boekaerts (1996)). Although enhanced self-regulation can be seen as the end product of scaffolding, in the sense that externally supported forms of regulation are progressively internalised, the learner's initial level of self-regulation is what allows him or her to enter into the activity of scaffolding. In summary, we can consider scaffolding and learner engagement as two interdependent faces of the process of co-regulation of learning.

A concluding perspective

The TLRP principles are designed to orient the actions and decisions of teachers and policy-makers. As such, they specify what teachers and policy-makers can *do* to promote student learning. It would be useful, however, to formulate a second inventory composed of concepts, grounded in theory and in empirical research, that constitute links between the TLRP principles. Co-regulation of learning would be, in my view, one such concept. Other key concepts present in James and Pollard's contribution include: alignment (of teaching, learning, curriculum, assessment), learner and teacher agency, construction of individual and social identities. An enlarged framework for teaching and learning would thus be composed of two dimensions: action-oriented principles and concepts that form conceptual strands linking the principles.

Notes

1. I use the word 'transaction' to include direct face-to-face interactions between students and teachers, as well as more indirect forms of communication (e.g. marks and comments written by teachers on student work) and exchanges mediated by materials in the classroom (e.g. a system of folders students use to file finished work and access new assignments).

2. The two courses with the word 'pedagogy' in the title deal with particular contexts: specialised pedagogy for children with learning difficulties and pedagogies in countries of the southern hemisphere, such as Paulo Freire's 'pedagogy of the oppressed'. The term 'pedagogical' appears in several other course titles (in expressions such as pedagogical practices, pedagogical uses of technology, pedagogical interventions), but this corresponds to a very small fraction of the course offering.
3. Space does not permit examination of the analogous concept of 'co-regulation of teaching', which would refer to the joint influence of teacher self-regulation and of regulation from other sources (students, curriculum materials, professional development activities, educational policies, etc.) on teacher learning as an outcome.
4. The word 'regulation' in English has two meanings: it can refer to an authoritative set of rules to be followed, or to the action of adjusting the functioning of a system on the basis of information provided by the monitoring of its output. The use of 'régulation' in the French psychological and educational literature refers to the second meaning; the word 'règlement' is used for the first meaning. As a consequence, *régulation* has a dynamic connotation in French, whereas in English the idea of imposed 'rules and regulations' is often the first meaning that comes to mind. The literature in English on self-regulated learning is, however, congruent with the French use of the word regulation.
5. An excellent article by Volet, Vauras, and Salonen (2009) reviews several different uses of the term 'co-regulation (or coregulation)'. These authors tend to equate co-regulation with socially mediated forms of regulation and propose a conceptual perspective that integrates self- and co-regulation. In contrast, my use of the term co-regulation refers to the interdependent relations between self- and socially mediated regulation.

Notes on contributor

Linda Allal obtained a PhD in educational psychology at Michigan State University. After a career spanning 30 years as professor in the Faculty of Psychology and Educational Sciences of the University of Geneva, she is professor emeritus since 2006. Her research and publications focus on the relations between learning, teaching and assessment in classroom settings. Author of numerous articles and book chapters, her recent publications include a book, co-edited with L. Mottier Lopez, on the regulation of learning in the classroom and in teacher training (*Régulation des apprentissages en situation scolaire et en formation*, De Boeck, 2007) and a volume, co-edited with L. Lafortune, on teachers' professional judgement in their practice of classroom assessment (*Jugement professionnel en évaluation*, Presses de l'Université du Québec, 2008).

References

Alexander, R. 2004. Still no pedagogy? Principle, pragmatism and compliance in primary education *Cambridge Journal of Education* 34, no. 1: 7–34.

Allal, L. 2010. Assessment and the regulation of learning. In *International encyclopedia of education,* Vol. 3, ed. P. Peterson, E. Baker, and B. McGraw, 348–52. Oxford: Elsevier.

Allal, L. 2007. Régulations des apprentissages: Orientations conceptuelles pour la recherché et la pratique en education [Regulation of learning: Conceptual orientations for research and practice in education]. In *Régulation des apprentissages en situation scolaire et en formation [Regulation of learning in school settings and in teacher education]*. ed. L. Allal and L. Mottier Lopez, 7–23. Bruxelles: De Boeck.

Allal, L., and L. Mottier Lopez. 2005. Formative assessment of learning: A review of publications in French. In *Formative assessment: Improving learning in secondary classrooms*, ed. J. Looney, 241–64. Paris: OECD.

Allal, L., L. Mottier Lopez, K. Lehraus, and A. Forget. 2005. Whole-class and peer interaction in an activity of writing and revision. In *Writing in context(s): Textual practices and learning processes in sociocultural settings*, ed. T. Kostouli, 69–91. New York: Springer.

Boekaerts, M. 1996. Personality and the psychology of learning. *European Journal of Personality* 10, no. 5: 377–404.

Caillot, M. 2007. The building of a new academic field: The case of French *didactiques*. *European Educational Research Journal* 6, no. 2: 125–30.

Chevallard, Y. 2007. Readjusting didactics to a changing epistemology. *European Educational Research Journal* 6, no. 2: 131–4.

Claparède, E. 1912. *Un institut des sciences de l'éducation et les besoins auxquels il répond [An institute of educational sciences and the needs to which it responds]*. Genève: Kündig.

Cobb, P., K. Gravenmeijer, E. Yackel, K. McClain, and J. Whiteneck. 1997. Mathematizing and symbolizing: The emergence of chains of signification in one first-grade classroom. In *Situated cognition: Social, semiotic, and psychological perspectives*, ed. D. Kirshner, and J.A. Whitson, 151–233. Mahwah, NJ: Laurence Erlbaum.

Dolz, J., and B. Schneuwly. 1996. Genres et progression en expression orale et écrite: Éléments de réflexion à propos d'une expérience romande [Genres and progression in oral and written expression: Elements of reflection regarding an experience in French-speaking Switzerland]. *Enjeux* 37–38: 49–75.

Durkheim, E. 1911. Pédagogie [Pedagogy]. In Nouveau dictionnaire de pédagogie et d'instruction primaire [New dictionary of pedagogy and primary instruction], ed. F. Buisson. Paris: Hachette. http://www.inrp.fr/edition-electronique/lodel/dictionnaire-ferdinand-buisson/document.php?id=3355.

Hameline, D. 1998. Pédagogie [Pedagogy]. In *Le pari des sciences de l'éducation, [The educational sciences wager]* ed. R. Hofstetter and B. Schneuwly, 227–41. Bruxelles: De Boeck.

Hofstetter, R. 2010. *Genève: Creuset des sciences de l'éducation* [Geneva: Crucible of educational sciences]. Genève: Droz.

Mottier Lopez, L., and L. Allal. 2007. Sociomathematical norms and the regulation of problem solving in classroom microcultures. *International Journal of Educational Research* 46, no. 5: 252–65.

Piaget, J. 1975. *L'équilibration des structures cognitives: Problème central du développement [Equilibration of cognitive structures: The central problem of development]*. Paris: Presses Universitaires de France.

Simon, B. 1981. Why no pedagogy in England? In *Education in the eighties: The central issues*, ed. B. Simon, and W. Taylor, 124–45. London: Batsford.

Wood, D., J.S. Bruner, and G. Ross. 1976. The role of tutoring in problem-solving. *Journal of Child Psychology and Psychiatry* 17, no. 2: 89–100.

Vygotsky, L.S. 1978. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Volet, S., M. Vauras, and P. Salonen. 2009. Self- and social regulation in learning contexts: An integrative perspective. *Educational Psychologist* 44, no. 4: 215–26.