

On the Definition of Learning

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Introduction

Ane Qvortrup, Merete Wiberg, Gerd Christensen & Mikala Hansbøl

Since the end of the last century the phenomenon of learning has received increasingly more attention. Both nationally and internationally there is a political focus on learning and a “call for harnessing knowledge about learning and applying it more systematically to education” (Dumont, Istance & Benavides, 2013). This development changes both the main purpose of education and its modes of delivery. The education system has witnessed a shift from content-based to outcome-based curricula, and schools have become heavily influenced by pedagogical concepts such as ‘visible learning’ (Hattie 2009).

According to A. Hargreaves (2003), the change can be linked to globalization, the emergence of ‘the knowledge society’ and an enhanced focus on innovation and creativity. Knowledge and learning are considered as fundamental resources for future development. Sustainability, learning in terms of learning outcomes, and lifelong learning have become increasingly recognized as important factors in the ‘global competition’ (Jarvis 2007). The focus on education, however, took off in the Western world already in the early part of the 20th Century. The so-called ‘second industrial revolution’ demanded an educated work force and this led to a view of workers as ‘human capital’ (Becker 1964; Mincer 1958). In the Western countries in the post war period, the interest in education was closely connected with the development of the welfare state. As illustrated our interest in education and learning can be considered as closely connected to the diffusion of a variety of ideas about the kind of society and world humans live in: Today, concepts are the global world (Giddens 1991, 1994), the competition state (Pedersen 2011), the network society (Castells 2010), the knowledge society (Jarvis 2007), the learning society (Hargreaves 2005) – just to mention a few widely used. In relation to developments in society, new concepts of education and learning have also appeared, such as ‘lifelong learning’, ‘informal and non-formal learning’, ‘digital learning’, ‘work place learning’, ‘blended learning’, ‘cooperative learning’, ‘responsibility for

his own learning', 'facilitation of learning', 'evidence-based education', etc.

Parallel to these changes in education and learning, and in the net of social relations, a variety of theories of learning have evolved. The field of research on learning has become very complex, with different foci, founders and proponents, schools, and disciplinary approaches (Qvortrup & Wiberg 2013). Thus, the phenomenon of learning as it appears today is manifold. It has emerged as an evolving object, with multiple connections to various disciplines of research and fields of interest.

Within the multi-faceted landscape of theories and definitions of learning, there exists no general agreement on what learning really is, or on what is demanded of a definition of learning. Some proponents of theories of learning tend to advocate their own viewpoint and to consider learning theories as mutually exclusive and therefore incompatible. Some try to unify the field of learning into *one* comprehensive theory of learning (Illeris, 2006; Jarvis, 2006), while others claim to focus on particular aspects of learning (e.g. creative learning), on places for learning (e.g. workplace learning), or on perspectives on learning (e.g. individual, social, child, adult, organizational learning).

This indicates that learning cannot be defined once and for all. Instead, the field must be considered as a collection of perspectives on and conceptualizations of learning. Conceptualizations of learning often base themselves on particular metaphors, such as learning as 'acquisition', 'participation' and/or 'knowledge creation' (Sfard 1998, Qvortrup & Wiberg, 2013). Furthermore, different conceptualizations of learning often imply different and definite assumptions about the relationships of subject and object, individuality and context, inside and outside, thinking and action, cognition and body, and knowledge and practice. Thus, it is important to be sensitive to the variety of concepts and theories of learning in the field, and to continue to cultivate that variety. However, currently there doesn't seem to be a way to locate theories of learning within a unified field of research, where concepts of learning are thoroughly and systematically discussed across the field. There seems to be a lack of mutual discussion and inspiration among the different fields, interests and positions. As a consequence, the development of strong theory building is inhibited.

An important aspect involved in building a strong field of learning theory is to clarify how learning concepts and theories can prove useful

in relation to different contexts, interests, problems and situations. This aspect can be judged in terms of whether it is 'viable' (von Glasersfeld, 1996), 'operationally useful' (von Foerster, 1984) or if it takes the form of 'ideas as plans of operations to be performed' (Dewey, [1929]1990) or of 'instruments of finding one's way around' (Terhart, 2003). Any concept of learning must be considered in the light of the empirical studies it is based on, and the various definitions and conceptualizations of learning it adheres to.

One difficulty, therefore, involves coming to terms with constantly changing definitions of learning; another relates to the question of how to move from learning, learning objectives and learning theory to educational settings, teaching strategies and teaching theories. Learning theories help us to understand learning as a phenomenon, but they do not reflect upon what, how and why something should be taught and learned in education (Qvortrup & Keiding 2016). However, some researchers claim that a theory of teaching includes both a theory of student learning and a theory of teacher behavior (Hattie, 2009; Terhart, 2011). Biggs and Tang (2007) call for a focus on 'constructive alignment' between teaching activities, learning objectives, and different students' learning through participation. But this is no simple matter, and often the attempts to establish connections between theoretical concepts of learning and teaching are based on educational designs attached to particular views of knowledge and learning. Examples of this can be found in some (social) constructivist theories of teaching activities, which take their point of departure in the view of knowledge and learning as always socially situated, and as arising from collective and personal constructions (Lave & Wenger 1991; Wenger 1998). Manifold teaching or pedagogical patterns (Laurillard, 2012), such as student-orientated inquiry teaching, problem-based teaching, cooperative learning, and computer-supported collaborative teaching, have been conceived and referred to as if they inherently belong to particular social constructivist notions of knowledge and learning. Several of these attempts tend to focus on the teachers' proactive efforts to design teaching activities that facilitate students' learning through encouraging individual and collaborative/cooperative efforts to construct knowledge (Qvortrup & Keiding, 2015a; Hattie, 2009, p. 26, Cobb, 2007, p. 5). The problem with many of these approaches seems to be that the alleged interdependence

referred to above is often only postulated as a claim. As argued in the chapter by Qvortrup & Keiding in this book, the theory is applied in very general form, where the analytical contribution from the theory is neither explicit nor evident (Tight, 2007), but mainly functions as a kind of ideological statement, “empty category” (Koselleck 2004: 187) or “empty signifier” (Laclau 1996: 36–47). Very often there is a lack of thorough investigation of the actual relationships involved in practice between the different ways of enacting education and the intended trajectories of learning.

With the increased emphasis on the capability of educational programs to generate learning results in a globalized world, (ref. OECD, PISA etc.) there is a need to discuss how conceptualizations of learning are put to work in educational contexts. (Richardson, 2003; Sfard, 1998; Cobb, 2007). Furthermore, there is a need to conceptualize the normative aspects of learning in relation to discussions of what is considered worth learning, and to how different forms of learning influence the formative processes of human development. Formational concepts such as ‘Bildung’ and worth-whileness (Peters 1972) can help us discuss the limitations of the concept of learning, by including reflections on the overall aims of education in present day societies.

This book is a first product of the ‘On the definition of learning’ network. It is a result of the network’s first collective efforts to discuss the topics outlined above at a conference held by the network at the University of Southern Denmark on August 28th – 29th, 2014. The network arose out of the aspiration to study the phenomenon of learning in depth and to understand its complex relationship to empirical investigation and teaching. Its aim is to discuss different conceptualizations and theories of learning in a qualified fashion, so that it becomes possible to better understand how concepts of learning influence our understanding of the empirical phenomenon of learning, as well as our sense of the relationship between learning and teaching. At the same time, the network hopes to highlight the need to develop new ways to analyze these matters as both things apart and partially co-existing.

As such, the book grapples with difficult issues related to learning and education in a postmodern, always emerging and highly digitalized world. The book takes the first steps towards actively and critically engaging

the various approaches in the field, at the same time that it emphasizes the complex relationships that exist between conceptualizations of learning and the empirical phenomenon of learning and teaching. All the chapters contribute in various ways to break new ground towards understanding how learning has been investigated in the past through the use of various tools, such as models, concepts and metaphors. Furthermore, they contribute to the discussion of how different conceptions of learning help educators and empirical researchers in their endeavor to optimize and identify learning respectively. The book aims to encourage further development in these areas. As such, it is a call to a heightened awareness of the importance of considering learning and educational constructions as complexly intertwined; that is to say, that different definitions of learning originate in different modes of analyses, they are situated within different fields of research, and have connections to different social interests.

In the **first part** of the book the field of investigation is concerned with how various theories define and delimit the phenomenon of learning. This inquiry will facilitate a synthesis that moves from individual theories of learning towards theoretical reflections on learning as a central discipline in education research and practice. The first part of the book identifies, clarifies and discusses fundamental aspects of learning in a trans-theoretical perspective. These aspects are considered fundamental to the aim of acquiring a varied and comprehensive understanding of the phenomenon of learning. These aspects include intention, normativity, subjectification, knowledge forms, prerequisites and obstacles to learning.

In the **second part** of the book the field of investigation and discussion is how to use research and knowledge in the field of learning theory to develop theories of teaching on the basis of practice. The chapters in this part of the book discuss the relationships between teaching and learning theory, at first on a meta-level and secondly, with the aim of exemplifying how the insights and concepts of learning theory may contribute to the development of teaching activities.

These discussions in the second part are further qualified and developed in the **third part** of the book. The chapters in this part investigate the interplay between theories of learning, empirical research, and emerging practices of learning. This part focuses on questions like

how various theories of learning can provide us with specific ways of identifying learning empirically in educational settings, as well as in other contexts.

The **fourth part** of the book in a way cuts across the other parts. It discusses theoretical concepts, as well as aspects related to empirical investigation and to teaching. It consists of interviews with the four professors: Paul Cobb, Christopher Winch, Anna Sfard and Knud Illeris, all of whom kindly accepted the invitation to participate in the network. The interviews with Paul Cobb and Christopher Winch took place during network visits to Nashville and London respectively, while the interview with Anna Sfard is based on email-correspondance. The interview with Knud Illeris was conducted in Denmark.

The contents of the book

Part 1: *Theory building within the theoretical field of learning*

As mentioned, Part 1 of the book investigates how various theories define and delimit the phenomenon of learning. It is divided into two sections. The first section, which consists of 3 chapters, identifies, clarifies and discusses fundamental aspects of learning across theories. The first chapter in this section by Esben Nedenskov Petersen, Caroline Schaffalitzky de Muckadell and Rolf Hvidtfeldt discusses the problems involved in defining learning. Clear and precise definitions of theoretical terms are commonly held to be crucial to fruitful theoretical exchanges and development in the humanities, as well as in the natural and social sciences. But while the value of definitions is widely acknowledged, it is often overlooked that there exist different kinds of definitions with different purposes and distinct criteria of adequacy. The chapter examines different types of definition, and argues that the purposes we intend a definition of learning to serve are essential to determining what kind of definition we look for. The argument is illustrated by the authors applying their considerations to the assessment of the particular definition of learning proposed by the influential Danish educational researcher, Knud Illeris.

The second chapter, Nina Bonderup Dohn's "Articulating a base for the development of a concept of learning", also pursues the question of how to define learning. It asks the questions of what a theory of learning must be able to account for; what it must take into account

in doing so; and how much both these criteria must be taken into account in the very concept of learning utilized in developing the theory. The chapter concentrates on the subjects of learning, their relationship to the world (including other subjects), and the ontology of the result of learning. It argues that 4 basic claims about learning must be taken into account, not only in developing the theory, but in developing a particular conception of learning. It further suggests that some theoretical assumptions will be inherent in the concepts used in a theory, and that these theoretical assumptions will develop as the theory is developed. Moreover, it argues that a theory, generally speaking, will typically have a wider theoretical and empirical scope – it will say more about the world – than what is implied in its concepts alone.

The third chapter in the first section, by Merete Wiberg, is called “The normative aspect of learning”. It addresses how normativity, in terms of individual understanding, motivation and valuation, is part of the learning process. In order to understand motivation as more than just a psychological process, we need to conceptualize how motives of learning are constituted from the perspective of the individual struggling to come to terms with what it considers valuable to learn. In this chapter, learning is conceptualized as the interplay between the individual and the world, while the individual – according to Hegel – is considered as standing in between particularity and universality. Inspired by the philosophy of John Dewey and G.W. Hegel, Wiberg considers learning as a process of inquiry, consisting of the continuous evaluation of the individual’s own understanding. The focus on normativity, individuality and learning is not meant to prescribe how learning must be facilitated, but to emphasize the normative aspect that must be taken into account when learning is intended and required.

The second section of part 1 investigates how various theories define and delimit learning. The first chapter in this section, chapter 4, is called “Realism and Learning” and is written by Oliver Kauffmann. Oliver Kauffmann argues for a realistic approach to learning. In this case, the realistic approach mean a defense of two assumptions: (i) that learning from an epistemological point of view to a large extent involves asymmetrical processes of knowledge- and skill-acquisition and; (ii) that acquired knowledge and skills cannot be understood without reference to a mind-independent world to which the subject

has cognitive access. The argument in the chapter initially points out a number of possible problems with the epistemological underpinnings of so-called “radical constructivism”, proposed by Ernest von Glasersfeld. Secondly, the chapter argues for the claims of realism as an approach to learning, by taking advantage of insights taken from the field of implicit learning and cognition, as well as from the supervenience approach to the relation between body and mind.

The second chapter in this section, chapter 5, is called “How we learn” and is written by Steen Beck. The chapter looks at some depth into the theories of Piaget and Vygotsky, who are often seen as the founders of two very different approaches to learning and teaching. Piaget considered rational knowledge to be the result of the individual’s spontaneous cognitive activity and a process of equilibrium. Vygotsky’s method of analysis focused particularly on instruction, as it combined with the ways in which scientific concepts emerge in the asymmetric relationship between teacher and student in the Zone of Proximal Development. In this chapter, differences and similarities between the two positions are discussed by analyzing the two theoretical pioneers’ fundamental postulations about learning and teaching, as well as their reactions to each other. The main thesis presented in the chapter is that the two theories of learning and teaching are less antagonistic than is often thought. The equilibrium process with its stabilizations and changes of scheme from “within” can be seen as the mechanism that facilitates social learning in the Zone of Proximal Development. In recognizing this, we are made to realize that human learning is not by nature either biological or cultural, but that an understanding of both psycho-genesis and socio-genesis is vital if we want to understand how we learn.

The third chapter in this section, chapter 6 of the book, “‘Situated learning’ – beyond apprenticeship and social constructionism”, is written by Gerd Christensen. The chapter discusses the theoretical and philosophical fundament of Jean Lave & Etienne Wenger’s theory of ‘situated learning’. In Denmark, the theory has been categorized as a theory of ‘apprenticeship’ and as ‘social constructionism’. The chapter outlines these perceptions, and argues that the comprehension of the theory has significant implications for how it is viewed as contributing to the understanding of learning and to analyses of learning in actual contexts. The chapter can thus be considered as not only a contribution

to a more specific discussion of ‘situated learning’, but also to the wider discussion of how to conceptualize ‘learning’ as such. In addition, the chapter discusses some of the analytical perspectives, which are presented in some of the other chapters in this anthology. To give one an idea of the range of perspectives, we can note that while Klaus Nielsen uses Lave & Wenger’s theory for his analysis, Ane Qvortrup and Tina Bering Keiding try to analyze its impact; Helle Plauborg uses Karen Barads approach in her analyses, while Steen Beck looks at the theory of Vygotsky.

Based on work in the field of situated learning and on Honneth’s work, Klaus Nielsen’s chapter (chapter 7) “On defining learning from a social-ontological perspective” aims to develop a social-ontological approach to learning in which Honneth’s focus on the struggle for recognition is central. The chapter reads Honneth, as well as Lave and Wenger’s work in keeping with a tradition from humanistic psychology, in which ontology is considered important when addressing issues of learning. In this context, the notion of a social-ontological approach to issues of learning is used to formulate a critique of the tendencies found both in the current regime of homo economicus, and in theories of learning with strong focus on technology and instrumentality. Following this critique and inspired by the analyses of Honneth and Lave and Wenger, the chapter tries to develop an understanding of what a social-ontological perspective on learning would look like. It concludes by returning to the notion of homo economicus, to analyze what kinds of critical questions it will be possible to pose through a social-ontological perspective on learning.

Part 2: Building relationships between the field of learning theory and teaching theory.

Part 2 investigates the relationships between the field of learning theory and teaching theory, and it consists of two chapters. Chapter 8, “The mistake to mistake learning theory with didactics”, is written by Ane Qvortrup and Tina Bering Keiding. It discusses and explains how the concept of learning in a teaching context can be understood, and how learning theories may contribute to teaching. It shows, especially in the Denmark, how broad concepts of constructivism and socio-cultural learning theories seem to have replaced educational theory and didactics as conceptual frameworks for reasoning on teaching and choices of design in the Scholarship of Teaching and Learning in Higher

Education. The chapter also illustrates how and why didactical theory and practice cannot be deduced from learning theory, and discusses the possible consequences of an over-reliance upon learning theory. Finally, the chapter argues that both learning theories and didactics are fundamental for a systematic reflection on teaching and learning, and that the two cannot be replaced by each other.

Chapter 9 is entitled "Student notes as a mediating tool for learning in school subjects" and is written by Torben Spanget Christensen. This chapter presents data from an empirical ethnographic field study, which examined the role of student note-writing in the transition from Danish lower to upper secondary school with regard to its potential as a tool for learning. The impetus for the study was an observed disparity between the significance that students in this transition phase attach to note writing, and the actual quality of their notes. The chapter presents two male students and their note writing, and addresses two central research questions: Can note writing serve as a mediating tool between everyday language and subject discourse language? And furthermore, can it function as a tool for a change in identity from pupil to student? These two proposed learning strategies are considered as closely related, but each with a key contribution to make to the overall learning process. Note writing as a mediating tool is considered as a way to capture and acquire the subject discourse, while note writing as a tool of identity change is considered a way to participate in the academic and disciplinary social community of the class and school.

The third and final part of the book investigates the relation between learning theory and empirical research on learning practices. The first chapter, chapter 10, is entitled "What's space to learning?" and is written by Rie Troelsen. In this chapter, preliminary findings from a small-scale research project are presented with the aim of exploring ways of investigating learning from a spatial perspective. The research project focuses on teachers' perceptions of the impact of space on their personal experiences of learning. By using a threefold method, consisting of investigations of how teachers act in, conceive and perceive the impact of space on learning, the results from the project indicate that teachers include space as a didactical category in their planning and conducting of learning activities. It is, however, important for the teachers to feel a sense of ownership of learning

space in order for space to become a didactical category. In a time where many learning spaces at university are rebuilt, renovated and redesigned, this is an important point. Moving from traditional spaces, like the lecture auditorium, to more flexible learning spaces, like those employed for project-based activities, point at new and different ways of learning. One possible consequence is that many teachers could become uncertain and lose their sense of ownership over learning space. Another possible consequence is that teachers might plan and conduct their teaching on the grounds of theories of learning more relevant and suited to the new learning spaces, than the ones they used while teaching in traditional spaces.

The second chapter in the final section of the book, is called “Learning from a social practice theoretical perspective” (chapter 11) and it is written by Maj Sofie Rasmussen. It addresses the use of learning theories in the educational field, and discusses a theory of learning that distances itself from institutionalized definitions. Based on a case study in lower-secondary school at *Fryshuset* in Stockholm, Sweden, it argues that an understanding of learning may be developed into a theoretical framework of social practice, which would allow us to empirically discover and explore learning as expansive, meaningful mo(ve)ments (Mørck, 2014) that take place in and across particular situations and social settings. This approach suggests and introduces theoretical distinctions into the landscape of learning. In a social practice theoretical understanding, learning is connected to the learner’s understanding of himself or herself as part of a community (or as an ‘outsider’), as well as to his or her participation in changing social practices (Lave, in press). In addition, learning is seen in relation to significant, expansive and/or constraining mo(ve)ments involved, e.g., in becoming a more (or less) recognized member of different communities of practice. This is an essential point when studying transcending and potentially marginalizing processes in schools.

It is a pleasure for us to be able to present the work of these researchers in this first book from the network ‘On the definition of learning’. We wish to thank all the authors for their very interesting, strong and groundbreaking work presented in the book, and for their contribution to the network in general. Furthermore, on behalf of several of our contributors, we would like to thank the anonymous reviewers for their

effort. Finally, we are grateful to Anna Sfard, Paul Cobb, Christopher Winch and Knud Illeris for providing us with very interesting and stimulating interviews. Discussions like these are what propel us to continue our work in the field.

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