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3. ON LEARNING (HOW) TO LEARN

INTRODUCTION

'Learning how to learn' is a mantra which is often advanced by politicians and administrators. From an administrative and educational-organisational perspective, it would be very convenient if learning was something which students could learn. If it were possible to train a general ability to learn, it would make the learning of specific subjects much more controllable and therefore more efficient. But the fact is that it is far from easy to gain any clear picture about what learning (how) to learn really means – and it is probably also wrong to understand the concept as a first mover of learning which reveals the secret essence of learning.

If it were possible for a person to answer 'yes' to the question: 'Have you learned to learn?' what might the answer be if you continued your question and asked: 'and how would you describe how you learned to learn?'

'Learning to learn' is a problematic concept for several reasons. First we briefly recapitulate what we take to be serious problems with this concept, problems which have been pointed out already (see e.g. Winch, 2008). However, instead of adding more critical points following the direction already indicated, we develop arguments for a more fruitful concept of 'learning to learn' along two different paths. These arguments are presented in sections 3 and 4. In section 5 we extend our critical stance towards the concept of 'learning to learn' into a more positive account by pointing out a number of concrete abilities and capacities on which 'learning how to learn' relies, such as literacy and numeracy, which can only be understood and brought into play function against the background of the reflective capacities of the person concerned. We emphasise, however, that the flourishing of such capacities and abilities also critically depends on the development of personal traits and virtues as well as social ('civic') virtues. Section 6 deals with this issue.

Here are two main lines of argumentation for a useful concept of 'learning to learn' in a condensed form:

1. 'Learning to learn' lends a potentially fruitful meta-perspective on learning, a stance from which we can reflect on the limits and potentials of first-order processes of learning, including learning taking place at a non-conscious mental level, i.e. without any conscious effort from the subject. In this sense *learning* is understood here as the task of learning, rather than the achievement of something which is

A. Qvortrup & M. Wiberg (Eds.), Dealing with Conceptualisations of Learning, 25–35.

learned. In addition, the literature on second-order mentality such as the 'desire to desire' (e.g. Frankfurt, 2003) and the 'thought of thought' (e.g. Rosenthal, 2005) may constitute an interesting path with respect to the investigation of 'learning (how) to learn'.

2. Secondly, whereas it probably does not make much sense to understand 'learning' from a general perspective, e.g. as a discourse of 'effective learning' (and the complicated, not clearly understood interplay between conscious and non-conscious processes of learning adds to this picture), we argue that 'learning to learn' indeed makes sense as a discourse on how to achieve valuable lives on an individual and a communal level (see also Göhlich & Zirfas, 2007). In other words, questions about 'learning how to learn' aren't seen from the perspective of students becoming more effective learners. Instead, the question is how we are to identify general learning abilities which can help individuals to achieve a valuable life for themselves and for society in general.

'LEARNING TO LEARN': A PROBLEMATIC CONCEPT

'Learning to learn' is a problematic concept for several (well known) reasons. For one thing, it gives the illusion that such a general ability to learn exists. Furthermore, it gives the impression that learning is a formal and general ability which can be separated from concrete learning. 'Learning to learn' is used as a slogan by policymakers who argue (in the name of democracy and inclusion) that if schools and educational institutions train children and students in the ability to learn, it will help them obtain opportunities in society and contribute to the creation of a fairer society. Inspired by the ideas of Hattie, four municipalities in Denmark have launched a project entitled 'Alle elever skal lære at lære mere' [All students should learn to learn more]. On the other hand, learning to learn in a lifelong learning perspective is also used in the name of efficiency, the aim being to create efficient and flexible workers for society.

Michael Young (2015) has also pointed out that 'learning' is not a generic phenomenon – hence 'learning to learn' is problematic or makes no sense if it means that learning is independent of what is learned.

In Winch (2008) another analysis of the concept 'learning to learn' is presented. The main point here is that 'learning how to learn' is a superfluous concept because if the only way to achieve an ability is to learn something, there is no use for this special ability called 'learning how to learn' because you must already have the capacity for learning before you can learn anything. Therefore learning to learn doesn't make sense unless it refers to the acquired ability to learn something specific. The only way you can gain an acquired ability is by learning something specific. Hence, Winch's conclusion is that 'there is no general ability to learn how to learn' (2008: 663). Learning to learn is not a prerequisite for learning. Learning to learn, seen from a philosophical perspective, should instead be seen as a set of strategies for dealing with and enhancing concrete abilities, such as (for instance) reading or bricklaying.

In this sense, 'learning (how) to learn' provides a meta-perspective on learning and is not a reference to a specific competence or essential human trait.

Winch's main argument against 'learning how to learn' is that this concept doesn't add anything to various abilities such as reading and numeracy. The overall problem of the concept of 'learning to learn', which is also pointed out by Göhlich and Zirfas, is that 'learning to learn' is a circular statement or vicious circle (circulus vitiosus). To learn (how) to learn implies that you have already learned.

Göhlich and Zirfas argue that learning to learn (lernen-lernen) as a generalised capacity to learn ('Generalisering der Lernfähigkeit') deserves some attention and that 'learning to learn' in this sense has been discussed since Antiquity but especially in the Enlightenment due to the process of modernisation.

According to Göhlich and Zirfas (2007: 191), Wilhelm von Humboldt also pointed to the generalised capacity to learn. They argue that the increased emphasis on 'learning to learn' today is a symptom of an uncertain world/situation (Göhlich & Zirfas, 2007:192). On the one hand they acknowledge the concept of 'learning to learn', but on the other hand they do worry about its use. According to them, it is problematic if the exploration and development of the idea of learning are 'swallowed' in processes of modernisation instead of being understood as being under the influence of these processes.

Even so, 'learning (how) to learn' might be a useful concept when it is understood as a meta-perspective on (first-order) learning processes. Notice in particular that even if 'learning (how) to learn' implies that learning has already taken place, it is still possible that *something else* can be learned from the specific process of second-order learning (on how to learn). If this is the case, there is no vicious circle involved. Learning at a first-order level sometimes takes place without the contribution of conscious awareness (see in particular the seminal work by Reber, 1992). With this in mind, 'learning (how) to learn' illustrates a *general*, theoretical, reflective meta-perspective on first-order learning processes from which their specific properties – in contrast with the properties of the processes of which the learning subject is consciously aware – can be highlighted. Secondly, another possible but more daring suggestion along this line is that a subset of the *concrete* first-order processes of learning actually becomes conscious when reflected on by the learning subject (along the lines of reductive higher-order theories of consciousness which have been discussed extensively in the philosophy of mind, see e.g. Rosenthal, 2005). According to the higher-order theory of consciousness, a mental state M1 in a subject S amounts to no more or less than S simultaneously having another mental state (M2) of a specific type about being in M1. M2 is a thought about being in the state M1, whatever type of mental state this might be. This thought (about being in M1), however, does not need to be a conscious state itself. For example, a pupil who is in a state of desire for playtime can be characterised as having a *conscious* desire for playtime if (and only if) he simultaneously also has a concomitant thought of being in this state of desire (without the thought of having the desire *itself* necessarily being) (cf. Rosenthal, 2005). Thus, if 'S' reflecting on x' sometimes implies that

S has the capacity for learning (more) about x, this opens up the possibility of reflection, with 'S learning how to learn' making non-conscious learning processes conscious for S in a learning task which targets these very first-order processes. This assumption lends a more dramatic sense to the expression in which 'learning (how) to learn' and suggests new paths for empirical investigation.

In the next section we briefly fill in some details about the first of these two potentially fruitful perspectives on 'learning how to learn'.

THE PROBLEMATIC A PRIORI CONCEPT OF CONSCIOUS LEARNING

The presence of conscious awareness no doubt plays a central role for cognition and behaviour, although the issue of the causal roles of consciousness is highly controversial (see e.g. Block, 1995; Rosenthal, 2008). Through the conscious apprehension of objects, events and situations, possibilities for cognitive and bodily actions become available which differ with respect to a number of features from the more automatised behaviour and in various respects limited scope of cognition that we exhibit when we are merely aware of elements in the world in a non-conscious way (see e.g. Lahav, 1993; French & Cleeremans, 2002). Today there is a large body of empirical evidence for the existence of non-conscious mental processes, achieved in particular in clinical and experimental (neuro)psychology (de Gelder, de Haan, & Heywood, 2001; Weiskrantz, 1997). One might accordingly expect that the difference between conscious awareness and non-conscious awareness would be a relevant and important issue in the efforts to understand the various forms and mechanisms of learning and education. This is clearly not the case, however. Conscious awareness *itself* is rarely explicitly addressed in disciplines dealing with questions about the education and learning of experiencing individuals, and the same thing is true of the duality between non-conscious awareness and conscious awareness. Even if we allow that certain mental phenomena exist, non-conscious *learning* does not have the prominent role it deserves in learning theory. Non-conscious learning does not mean that the learning subject isn't conscious as a subject (i.e. in a state of coma or sound asleep). It refers to situations in which subjects who are fully awake learn without being aware of what they are learning. Thus the dichotomy between conscious and non-conscious learning is a dichotomy between situations in which the learning subjects are aware of what they are learning and situations, where they are not aware of what they are learning. The dividing line is not always sharp here. Thus, our claim is not that *all* instances of being aware of something fall precisely on either side of the line dividing conscious and non-conscious instances of mental processes. This boundary is perhaps fuzzy. There are cases of 'fringe consciousness', peripheral vision, tip-of-the-tongue phenomena, and many others, which are not easily treated as instances of either being consciously aware of something (in a thematic sense) or merely being aware of something. These complicated issues are not in our focus here.

Our point here is simply that by implicitly ignoring non-conscious instances of learning, conscious learning is often *treated* as if it was the default mode of learning.

This is of course not the same as downright *denying* the existence of non-conscious learning, but it might give a distorted view on learning processes. Illeris (2007) acknowledges the existence of non-conscious learning, and this may be a useful example to consider here. He recognises that research in learning has focused predominantly on conscious learning. But despite Illeris' acknowledgement of the fact that non-conscious processes relevant for learning take place, he deliberately avoids dealing with this issue 'as research on this is rather limited' (2007:19), as he explains. Despite this claim, it is not entirely true that the extent of the research into non-conscious learning is 'rather limited'. For instance, the well-defined research field denoted 'implicit learning' has been under steady development since the mid-sixties (Reber, 1992; Berry & Dienes, 1993; Reber, 1993; Shanks & St. John, 1994; Stadler & Frensch, 1998; Reber, Allen, & Reber, 1999).

Some of the results and methods of implicit learning are certainly disputed, but to deny that there is an established research field here would be mistaken. The problem is, however, that there is no clear connection between this experimental research field and the typically more mundane discussions of learning and theories of learning related to concrete educational and didactical questions.

Secondly (and more tellingly), without reflecting on the distinction itself, Illeris refers to conscious as well as non- and un-conscious aspects of the assimilative and accommodative dimensions of learning in his treatment of Sigmund Freud, Jean Piaget, David Kolb and other central figures in learning theory, leaving a number of ambiguities in his wake. In his 'learning triangle' (see Figure 1), different dominant

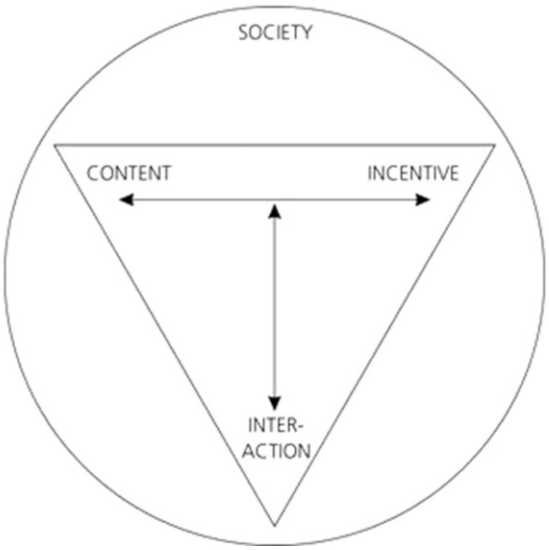

Figure 1. The three dimensions of learning (Illeris, 2007)

theoretical approaches to learning are plotted according to their relation to three main dimensions of learning: 'Content', 'Incentive' and 'Interaction', each of which forms a point in the triangle (Illeris, 2007).

In this triangle, it appears that there is an intimate, dynamic relation at the axis between the content and the incentive dimension. But notice that the conscious/non-conscious bifurcation is clearly orthogonal to this axis. Indeed, under 'content' Illeris lumps together 'knowledge', 'understanding' and 'skills' (Illeris, 2007:25). Skills are typically exercised without conscious awareness that they are being exercised, and knowledge can be exercised consciously as well as non-consciously. Similarly, with respect to the other end of this axis, we are told that the incentive dimension 'functions largely unconsciously' in assimilative learning, whereas in accommodative and transformative learning it 'is typically more conscious in nature' (2007:95). Thus, a conscious/non-conscious distinction is acknowledged, but it does not figure in the triangle and is not discussed as such. Notice that there is a question here as to whether or not the author interprets Piaget correctly.

This is only one example of a tendency in many discussions of learning: that learning processes predominantly and implicitly are understood as conscious processes – the learning individual is consciously aware of what is being learned. This is an *a priori* assumption about learning processes which is both natural and innocent. We do not deny, of course, that tacit dimensions of knowledge and learning processes have been acknowledged (e.g. in Polanyi, 1958, 1966; Schön, 1983; Dreyfus & Dreyfus, 1986). Our point here is that the emphasis on the conscious dimension of learning is absolutely dominant when it comes to considerations on learning from educational, didactical and teaching perspectives. It is a very natural assumption to make, taking all the politico-educational issues about evidence, effects, aims and didactical methods surrounding discussions about (institutionalised) learning into consideration. These aspects are handled, controlled and reflected upon – which certainly appears to demand the complicity of conscious thinking. Hattie's programme on 'visible learning' (Hattie, 2009) is no exception to this, with its emphasis on the importance of teaching that enhances pupils' ability for metacognitive and verbalisational tasks. The *a priori* assumption about conscious processes is also innocent in the sense that much learning certainly *appears* to take place in a conscious mind, meaning that I am aware of the object of learning. This is a standard 'property' of conscious processes: they appear to take everything into their domain and remain silent about what is not presented within the charmed circle of consciousness (cf. Dennett, 1991). In other words, we are not conscious of what we are not conscious of. We believe that the concept of 'learning (how) to learn' is helpful.

To learn (how) to learn means either to step back and reflect on the properties which characterise first-order processes of learning, or to develop virtues and habits that assist in further learning. Focusing on these factors may enable us to learn about them and come to a thorough understanding with respect to the vexed questions about which learning processes are 'deeply' unconscious (i.e. never available for

consciousness), the capacities of unconscious learning of various types of skills, and the interaction between non-conscious and conscious processes and so on and so forth. And *after* coming to a deeper understanding of these questions related to the 'twilight zone' between conscious and non-conscious mentality – *after* beginning to 'learn (how) to learn' – we might of course reevaluate our managerial-educational questions about means, aims, methods and effects. So in *this* sense (and probably only in this sense!), learning (how) to learn (more effectively) *can* be a first mover after all, provided that we acknowledge that it means building on capacities for learning which we have already acquired, some of which will have to be acquired in the early years of formal education (see section 4 below), and others through various kinds of non-formalised situations of everyday life and in non-formal and informal situations in the workplace.

LEARNING HOW TO LEARN IN TERMS OF ACQUIRING AND REFINING HABITS OF LEARNING

If the 'concept of learning (how) to learn' is referred to as habits of learning, as pointed out (for instance) by John Dewey with the equivalent 'learns to learn', it is possible to view 'learning (how) to learn' as a reflection on processes of learning that have already happened (Dewey, 1916/1985: 50). Following the argument advanced in the section above, reflection on unconscious as well as on conscious processes of learning might have an improving role for these processes, as well as for processes of learning in the future. For example when a musician practises a piece of music and finds out during the session that one method is better than another. Another example is a child in a 'learning to read' process who experiments with various methods that contribute to her understanding and deciphering of the meaning of a text. These examples indicate that 'learning to learn' is better understood as reflection on already acquired habits of learning, which might lead to better and hopefully more meaningful processes of learning because of breaks in and a refinement of habitual ways of living. In other words, it is all about learning to learn more effectively.

This indicates in turn that learning to learn is an outcome of reflection and refinement of what a student has already done. Consequently, according to this understanding 'learning to learn' refers to conscious awareness and consideration during or after a process in which the student (perhaps supported by a teacher) has been struggling with a problematic task or situation, such as learning to read, play or practise something.

If 'learning (how) to learn' is taken to mean reflecting on learning, which might lead to the transformation of a person and their habits, it is relevant to compare it to the concept of 'Bildung' and 'Allgemeine Bildung' (general formation). Allgemeine Bildung in the Bildung tradition refers to non-disciplinary experience, knowledge and reflective competences, such as judgment of moral and ethical issues, which have become incorporated in an individual and therefore function as acquired personal knowledge, ways of reflective thinking and skills, in the sense that they form an

attitude and approach of the student. The concept of Bildung developed by Wilhelm von Humboldt focuses on the relationship between individual and world and how the mediation between individual and world in terms of an interplay between receptivity and self-activity might lead to a valuable life for humanity: "What man needs most, therefore, is simply an object that makes possible the interplay between his receptivity and his self-activity" (Humboldt, 2001:60). In a school setting, the concept of Bildung involves discussions of values such as freedom, self-determination, autonomy, responsibility, democracy and community. In this sense the concept of Bildung focuses on moral and ethical issues and the general question of how to lead a good life for the individual as well as for other human beings. The ability to discuss and reflect on these issues might be seen as a general capacity related to the development and formation of individual character. Since it refers to generalised knowledge and skill attained during the student's dealings with various disciplines, it contributes to the formative process of the student. 'Allgemeine Bildung' involves the development of virtues which (for example) enable the student to cooperate with other students and to participate in democratic processes. We will come back to the development of virtues as an important part of learning (how) to learn.

From a Deweyan and a 'Bildung' perspective, it is not possible to isolate general dimensions of learning because they will always be part of processes of experience in which something specific is learned, such as reading, riding a bicycle or solving a mathematical problem. Therefore it is only in a logical sense that we can isolate general dimensions of learning. With regard to developing the 'means' to support learning, it should be stressed that the phenomenon of learning in the task sense of this word involves actual processes of experience undergone by a person. The process of learning might be prepared (taught) and supported by a teacher, with knowledge and expertise of a disciplinary area or practice being necessary, but the person in the midst of learning must undergo and deal with the subject herself, directly or indirectly. According to Dewey, learning can be described as a flux which consists of a combined and entangled process of active experimental trying and passive undergoing that turns into learning if the experience is loaded with significance (Dewey, 1916/1985). In this sense, learning is personal but socially situated. Therefore, learning (how) to learn, if we follow Dewey's definition of learning, happens while dealing with specific subject matter. It might be of a theoretical or practical orientation.

CAPACITIES AND ABILITIES TO LEARN

What, then, are the capacities and abilities that enhance our ability to learn? The ability to learn effectively depends on the development of a certain degree of independence on the part of the learner. Such independence presupposes the powers of reflection on one's own learning described in the previous section, but it also depends on the acquisition of certain highly specific abilities: those that make it possible to attend to the tasks of learning without the aid of others.

Foremost among these abilities are those associated with literacy and numeracy. It is no accident that the acquisition of literacy and numeracy is among the principal aims of elementary schooling. Successful learning in secondary school depends, among other things, on acquiring the ability to engage in independent study and practice. It is noteworthy that in many developed countries the universal acquisition of literacy and numeracy in elementary school is still far from being achieved. One should add here that it is not merely the ability to read literal meaning or do arithmetic at an elementary computational level that is involved. Students also need to be able to re-organise, infer, evaluate and appreciate material that is presented to them, as well as acquiring the ability to develop strategies for searching for what they need to know (Beard, 1987). Likewise, the ability to use mathematical techniques effectively involves being able to correctly put a problem into a mathematical formulation that allows it to be solved.

There is evidence that these abilities are not always taught effectively, even though some success has been achieved with, for example, elementary computation and reading for literal meaning (see Polya, 1954 with regard to mathematics). Success in this area depends on teachers who are able to develop the pedagogical techniques necessary to enable students to work in groups on complex text-related tasks, and to discuss strategies for problem solution. These abilities in turn require the ability to take turns, to listen to others, to accept criticisms of one's views and to negotiate one's preferred solution. Such abilities are different from technical aids and require the development of powers of reflection on one's own learning ability described earlier in this chapter.

THE DEVELOPMENT OF VIRTUES RELATED TO LEARNING

We need finally to take into account the personal characteristics that are necessary for learning to be successful, that is, for the task of learning X to result in actually knowing or being able to do X. It is helpful to begin by making the point that learning is not always easy and that tasks may seem so frustrating that we give up or seek an easy but ineffective solution to a problem. Effective learning depends largely on the ability to overcome difficulties in learning, both individually and collectively. What can be said about this? It is obvious that overconfidence in one's abilities can lead to carelessness and faulty strategies. Likewise, too little success can lead to a lack of confidence and to discouragement, which leads to a fatal cycle of failure. It is evident that these two potential dangers for students should be avoided by teachers – but how?

There can be no easy or straightforward answer to this question. It is clear, however, that teachers at all levels of education need to be aware of these difficulties and to engender in their students attitudes that are neither over-confident nor under-confident. In particular, they need to be able to develop resilience in their students, virtues of patience, self-discipline and attendance to detail, which Kerschensteiner calls the 'bourgeois virtues' (Kerschensteiner, 1964). Similarly, those kinds of

learning which depend on the co-operation of others also need to be developed, which Kerschensteiner calls the 'civic virtues'. Kerschensteiner's ideas have been incorporated into contemporary German VET curricula, usually under the guise of 'personal and social competences' respectively. It may be that some possession of the bourgeois virtues is necessary to acquire these civic virtues, and teachers will need to think carefully about the opportunities that they provide for students for co-operative work and when they are ready to undertake it and to what degree. Without some possession of these bourgeois virtues it will be difficult to acquire the ability to learn effectively, either in school or in professional situations in adult life.

CONCLUSION

The concept of 'learning to learn' may refer to two different things. On the one hand it can be used by policymakers and administrators to refer to a capacity which (if developed) contributes to efficient processes of learning; and on the other it may be a concept which helps us to understand the means of learning from the perspective of the learner who is in the midst of learning, and from the perspective of the teacher who supports the students' reflections on processes of learning. We have argued that learning (how) to learn is a meaningful concept if (and only if) it is understood against the background of a number of conscious, reflective acts, enabling individuals to develop such concrete abilities as literacy and fluency. Furthermore, the advancement of such reflective capacities is intimately related to bringing virtuous capacities to life, benefiting both the individuals concerned and society as a whole.

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