

On the Definition of Learning

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Interview with Knud Illeris

I: When we consider your work as a whole, it has an incredibly broad scope. When looking at your work throughout your life it gives us an idea of the range of the concepts and ideas you have developed. The interesting thing is that in the process, we get pieces of the puzzle, which help us to understand what your engagement with the problem of learning has been all about.

K: I have noticed that something has begun to happen to our conceptions of learning since around the turn of this century (even though my latest book on learning first came out in 2006). Even then, the whole idea of learning was beginning to lose ground to the concept of education. It seems clear to me that what has happened is that when education is discussed, those who aren't in the teaching profession believe that learning and education are identical. Most people seem to believe that if one is educated as something or other, then one has learned everything that stands in the course descriptions and teaching objectives. Whether one has learned the subject matter well, or badly, or not at all, nobody seems to know; what good and poor learning is, again, nobody seems to know; and what is necessary for learning to be useful and used in practice, no one seems to care too much about either. What authorities are really interested in is, how many students complete their courses and graduate, and perhaps, what kind of marks and test results they have achieved, for they believe that gives a concrete indication of what they can do. In my opinion, this supposition has no basis in reality.

I: You say that the concept of learning has largely been replaced by "the concept of education". How does the idea of competence fare in that connection?

K: It has suffered the same fate. If one reads all the OECD literature on the subject, the discussion actually ends on a note of agreement. The Ministry of Education has made what is called the Danish set of quality standards. As far as I can tell, there is about 10,000 different kinds of competence named in the standards, but these find no real equivalents in what the current system of education actually qualifies one to do. That one becomes qualified in relation to certain competencies means

little more than that the curriculum attached to a particular course of study is supposed to provide people with these abilities. The whole thing is quite technocratic... Of course, students have passed some tests, and one can not deny the fact that they may have acquired certain competencies. But, firstly, that is no guarantee that they in fact possess them, and secondly, the question can be asked, on what level they have them. Originally, when the notion of competence first made its appearance, it meant what one was actually capable of in praxis. But when one lines up 10,000 competencies neatly in a row, what is going on is little more than a form of self-deception, where one comes to believe that one is capable of almost anything.

I: Yes, and in some sense the notion seems to be taken out of context. As I understand the term competence, context is an important part of it.

K: That's certain. Whether something is learned well or not is not unimportant... Bertel Haarder (a former Danish Minister of Education) often used the criteria of whether learning was better or worse. He actually used the term "learning" sometimes. But he unequivocally identified the quality of learning with test results, for example, with PISA results.

I: How could we approach and understand learning. Is it a process whereby we are "informed", or is it a process where the learner is active? Could you comment on that? These conceptual differences and developments are in themselves quite interesting.

K: I am currently doing some historical work, and I see that one actually began to use the former term in the first half of the 1990's; the concept was sort of just thrown into the ring at the time. Learning conceived as the process of receiving knowledge implies the notion that something is inserted or put into us; linguistically, it puts the learner in the position of receiver. I argue strongly for the term learning, understood as an active process. There is nothing or no one that can teach anything into me, not even the best teacher in the world. I am the one who learns, who takes it in.

I: Back in the 70's, in your books on project work, you seemed to employ the term learning more in the sense of "being informed". But

you probably meant learning in the sense in which you employ the term today?

K: Yes, that is right. But the word “learning” did not exist in the Danish academic literature at the time. One can say that it is an anglicisation, that is, a term taken from English. I do not know how it happened, but I do know, that when I read the word learning a dozen times or so, I thought it actually works better.

I: It is also more precise in relation to the point you make in your books, that is, that students need to be active in some way if they are to learn anything, and make it their own, isn't that right?

K: You are absolutely right with regards to the notion that one should be active; the idea began to make its appearance already in the 1950's, but only first really came to stay in the '70's. The shift towards using the concept of competence happened somewhat later, even though its original meaning is entirely in keeping with the above mentioned conception of learning.

I: Yes, instead of the concept of qualification one adopted...

K: The concept of qualification is kind of a middle thing which existed in a phase of transition, and I was very fascinated with the term at the time. But when competence appeared as an idea, I was not hard to convince, though many of my good colleagues still kept their distance from it, similarly with regards to its supposed place of origin. One thought at the time that the idea had something to do with OECD, and that got people on their toes. But that the notion originated there does not necessarily mean the idea is bureaucratic. In the meantime, that point of the term has been lost.

I: You point out something in your books... I'm thinking about the three parameters or axis you see in relation to the concept of learning. Learning seems always to have a societal dimension, something that is bound up with concrete contexts, isn't that right? I see the same feature present in the notion of competence. Is it also present in the more passive sense of learning as “receiving information”?

K: I do not know. I will say there were people who were proponents of the term “indlæring”... (i.e. “learning in”). I think I have to say in any case no. The term “indlæring”¹ in Denmark in the 1970’s was used precisely in the same way that one uses the term learning today. I do not know how exactly one came to insert the prefix “ind” in the word. I think maybe it derives from German, but the difference between ‘lehren’ and ‘lernen’ has also been the subject of unending debate. And of course, there is also the difference between teaching and learning, but here we don’t have to worry about any ‘ind’ in these terms...

I: I find that quite interesting, that there was really no difference between how one used the term “indlæring”, and the way one uses the term learning today. Can you elaborate upon that in relation to educational policy, for instance?

K: When I say that it was used in that sense, I simply mean it is the word that was used. The discussion about whether learning should be understood primarily as something receptive, or as something active, is much older. It can certainly be traced back to Dewey, and also to Piaget. I do not know what the equivalent term is in French, but the French concept of learning was normally translated as ‘indlæring’ in Danish. The Danish educational researcher Thomas Nissen wrote a little book called ‘Indlæring og Pædagogik’. It’s by far the best book written in Danish on the subject. In it, he just uses the term ‘indlæring’ - and that’s that! So, in my opinion, the linguistic change refers to a change in understanding. That change in understanding was there at the time, and one can still say today that the situation is somewhat fluid. That is to say, learning around the middle of the past century was understood as something one received, which is also often the case today. One could say that there is more debate around the issue today, but it is the bureaucracy that decides these things.

I: I have also noticed an increasing use of the term in the last two and a half years and it is still thought-provoking that one seems to meet the term ‘indlæring’ more and more often.

K: I had the same thought myself recently, a week or so ago, when I fell over the same term again.

I: *That is interesting, maybe because it indicates there is not the same level of reflective awareness around the terms one employs, and what kind of historical undertones they bring with them.*

K: Yes, either that, or the fact that one wanted to make a clear distinction between learning and 'indlæring'.

I: *If it is done consciously, it does not make it any less interesting.*

K: I really doubt that that's the case. It is more an atmosphere, something that is in the air. And it is really something that hangs in the air today. Whoever you talk to now, whether it be parents, or teachers of whatever kind, seems to have this belief that it is the teachers who teach the students something. And the corollary is, that students are simply receptors.

I: *Hasn't one always seen things that way? Maybe in educational settings one has had the idea that students are responsible for their own learning, and need to be active etc. etc. But in one way or another, parents have surely always thought, that if their child can not do what he is supposed to do, it is the teacher's fault.*

K: I am sure you are right, generally speaking. But in educational circles, where people take a more than everyday interest in pedagogy, for a period of around 30 years, the dominant paradigm had been one which understood learning as the student's active appropriation of the subject matter. I believe that one can still find proponents for this view. It is one of the theories I hold on to hopefully, and which I still hope is so much a part of our blood here in Denmark, that if one went into a Danish classroom, you would see teacher behaviour that was in conformity with this conception of learning. I am especially thinking about the public schools. But I have also recently done some work with high school teachers, and even though they as a group have never been particularly passionate about pedagogy, they also understand what I am talking about here. There is still a contradiction between what is discussed 'higher up' in the system, especially at the political-administrative level, and what is actually going on in schools. But I doubt whether the newly-educated teachers which are entering the field will see things this way.

I: *You referred before to technocracy in connection with the notion of competence, and I started thinking about how, in relation to the influence of context and culture upon learning processes, these shape our concepts in different ways at different times, and how technology, and the material resources that follow in its wake, have significance for how we move in and out of this domain. It is an area I am particularly interested in. When you use the term technocratic, I can not help thinking that some of these matters maybe also have something to do with certain developments that have taken place since the turn of the century. I am thinking of the increased focus on new technology, especially digital technology. Could you say something about this area, as it is not something you have written a great deal about in your work to date.*

K: I feel somewhat on shaky ground here, as I have not had the chance to do work in that area for many years. I have previously worked with the Danish researcher Lone Dirckinck-Holmfeldt, and it is her I would point to as a possible reference. Where I encounter technology is in a high school context, where students have all kinds of small gadgets, which often are a source of irritation. Of course, one can learn through the use of computers, but even then, it is still the individual person who learns; the computer screen is simply the medium which presents the material to be learned.

I: *So it is just an instrument like so many other things?*

K: Fundamentally, as I understand things, it is only the mode which mediates the flow and form of input that has changed. At the same time, I would be the first to insist that the context in which learning occurs is also a part of the learning process. And if the context is shaped by the texts or the pictures one is supposed to learn something from, as a kind of substitute for a teacher, or by the social media such as Facebook, or by similar media which permit a kind of communicative exchange, I do not really have anything specific to say about how these factors might eventually influence learning. I have not worked with these things in practice. The whole of the development of my theory of learning has taken place in conjunction with practical experience. And this experience has largely been derived from my work with vocational

courses of study, partly first from Vocational Education² (EFG), later from the 10 years I was at Adult Vocational Training Centres.³ There, one had the opportunity to experience first-hand some of the things most theoreticians do not have much knowledge about. And this has contributed to an understanding of learning that has many facets to it.

I: Yes, you also speak about the affective dimension of learning, for instance, the significance of the emotional aspect in education. It allows us to speak about what can be called resistance-to-learning.

K: I refer both to motivation in the positive sense, as engagement, but also to resistance and defence. Not the least my experience in the area of vocational education has taught me its' significance.

K: The fact that the content, the context, the situation, and the emotions connected with them are part of an integrated whole, and that this finds expression in learning outcomes, is, in my opinion, the most ground-breaking insight found in my understanding of learning. It is not just that motivation is seen as the catalyst of learning, motivation is part and parcel of the *way* an individual learns; hence, it also becomes a part of the results of learning. I remember the time when this first hit me; there was a fellow called Furth, who had plucked 3 of Piaget's formulations taken from different places in his work, and he set them up, one after the other. It was plain to see that they represented 3 slightly different understandings. Piaget's understanding of the significance of the emotions had changed over time, without he, or anybody else, noticing it. So, one could ask the question: what is the correct understanding in this instance? The correct interpretation is that the emotional or motivational dimension always is an integral part of the result(s) of learning. Piaget has the example of two boys, who both learn that two and two makes four, just simple mathematics really. Both will be able to use what they've learned in a similar way, both would get the same results in a PISA test, but for one of the boys, mathematics is simply essential to his understanding of the world, while for the other, it is just a pile of crap that he's been forced to learn. And it is true enough what Piaget writes, that two and two still are four for both of them, but the contexts in which they can use that knowledge, and what they can use it for, differs greatly.

I: *Yes, and likewise in regards to their future development (or lack thereof) as mathematicians... Another thing I'd like to ask about concerns the concept of activity. When you say that students must be active in order to learn, it has often hit me that there are many different concepts of activity that come into play. There is the concept of activity that Piaget works with, which involves cognitive activity, and, of course, also activity in relation to primarily a material environment. Then, there is the concept of activity you use in connection with the pedagogy of the project-form, which in addition implies that one addresses a societal problem of some kind, at the same time that one does something in practice. Could you say something about these different notions of activity?*

K: I am willing to acknowledge that pure cognition does not appear to me to be what the term implies. The classic example is the person who is trying to solve some kind of a mathematical problem. You can call it, if you wish, a purely cognitive activity, as the person is actively trying to solve the problem. It is still an activity, but of course, not of the same kind as a practical activity. But there is an affective dimension present in both cases. The boy is enthusiastic about solving math problems, just as another could get just as excited doing crossword puzzles. The other possible association could be likened to a kind of slavish experience. I sit down and work on this problem because I have to; it does not really interest me in the least. I will try and get the right answer, because of the consequences of a wrong one, but what the actual result is, I could not care less. These kinds of examples represent extremes, but what I really would like to use them for is to say, that the active aspect of learning is always present. So the tendency to distinguish between the active and the passive can quickly become linguistic hair-splitting. Activity is always present. One can learn something even if one is not at all interested in the subject matter, but in that case, it is only superficial learning that is going on, and what is learned is much more likely to be forgotten. An important criterion for measuring the quality of learning is when, or in what situations, one thinks about it, which is something different than what PISA measures. It is the transferability problematic that comes into play here. I would like to use the example of reading the newspaper. For up to half the articles, a chemist might get associations that would remind him of various kinds of pollution; for very many of

our daily activities, a chemist would be able to use his knowledge of chemistry, where 99% of the ordinary readers would be unable to do so. This implies, that if one has appropriated and learned chemistry in this way, it has become part of one's identity, and so much so, that one can think of the chemical consequences, or implications, of observed relations in a wide variety of situations, where we others can't. I think we all have learned some rudimentary chemistry, but how many of us think of chemistry when we are standing at home cleaning the kitchen table? Some of us may think of hygiene, but that is not the same thing. We may know more or less about hygiene, but a chemist thinks of hygiene in terms of formulas. So the quality of learning, its true aim, is expressed in when, and how often, one thinks about it, when and in which situations one makes connections to what one has learned.

I: Yes, and is that what is implied in the notion of learning by experience, at least partially?

K: Learning by doing is based on the same thought, just said 'in other words'.

I: When one discusses different forms of teaching, one can also mention the situation where students simply sit down and listen to the teacher, where they are not really active. It seems it is necessary for them to do something if learning is to be optimal.

K: Students who sit in the class and listen dutifully to their teacher probably learn to some degree what is being taught. But depending upon their level of engagement and their intellectual prerequisites, what is learned can vary considerably. Let us say, there are 30 students sitting in the class, and the teacher talks for half an hour, and this results in 30 different outputs, 30 different learning outcomes. The contents of what is learned in each case also differs, which can also be reflected in differing test results, which in turn may also contain other qualitative differences that a test can't bring to light.

I: In your latest article, you mention that your work has been met with both discussion and criticism. That is of course unavoidable in a long career. Were you able to use the critique constructively?

K: I have received very little criticism with regards to my conception of learning. I have never met anyone, and by that I mean anyone, that has come up and said to me that my model of learning is mistaken. But I have been met with some critique of the contextual relations I set the model into. The criticism is based in one way or another upon the understanding that sees learning as essentially the learning of a curriculum.

I: *More precisely, you mean that...?*

K: ...that the consequence of curriculum-based teaching is not a particularly intelligent way of encouraging learning. I argue that point more or less directly, and indirectly, and there are, of course, some to whom that assertion does not sit well with. Some think that 'of course, that is the way it is', while there are others who, deep inside, have a sense that 'that is not the way things are'. But the pedagogical critique I have received has aligned itself with a traditional understanding of learning. And, of course, political interests also come into play. I employ my conception of learning in a variety of contexts, some of which have political over-and-undertones. There are, of course, others who desire something else again, and who think that people should learn something other than what I think they should learn. This tendency has grown very strong over the last few years. The competition-state's conception of learning centres, in the final analysis, on the production of competencies that can be used to bolster our competitive position internationally. First, I simply disagree with the premise, that that is what we should be striving for. Secondly, that approach to education is certainly not one which looks at things from a human point of view. That deficiency in itself may have negative effect on our ability to compete. A much more creative school, a much more active school. A school much less concerned with evaluation and grading and compiling statistics would be steps in the right direction; if one loosened the reins, and returned to things as they were 20 or 30 years ago, one would get a far greater return on one's investment in upgrading the qualifications of the working force. In addition, it would have the consequence that there would be more individuals who could use their creativity in the workplace.

Something I have often noticed, and commented upon, is that the people who do not like my conception of learning are either those

who take a very academic approach to the subject, or they are technocrats. Businessmen, on the other hand, especially those from the productive sectors, look at it with much interest. I worked for 10 years in the organization 'Project Plan', where we focused upon the learning environment at the workplace, and our approach was very much in line with the thinking of progressive business professionals. What I really want to say, is that all of those people who believe in measuring everything according to whether it contributes to our ability to compete internationally, never actually get around to creating a school and a system of education which will live up to that standard, because they believe, for example, in the power of incitements. I think the enormous significance marks have received at the high school level results in poorer learning; what one learns is how to get good marks. If what you want is for people afterwards to work creatively with more advanced courses of study, then high school has to do things differently. The funny thing is that it actually has begun to develop in that direction.

The high school is not so much concerned with rote and repetition as it once was, but we are seeing some signs of change now where marks again are placed in the foreground, a step in the wrong direction in my view.

I: You said something about learning becoming impoverished before, as well as something about good and bad learning, and about defence mechanisms and resistance. Can you elaborate on what you mean by good and bad learning, and why, for example, it is so important to focus upon the phenomena of learning resistance?

K: I think you have found a citation that deals precisely with motivation, haven't you? It is there where I point out the connection between education and learning: "The most important question a teacher or a counsellor can ask himself is "what significance does this subject matter have for people's lives and situations?" (Interview with Illeris on transformative learning (2013), 2015: <http://runningwithnolegs.com/knud-illeris/>)

Your insight and intuition have enabled you to find the citation which expresses exactly what I want to say. In relation to teaching, it is probably the most important thing of all. Furthermore, it is something I have experimented a great deal with, together with teachers, always

with other teachers. I know a moving story about 3 high school teachers who teach the most hated subject of all at the secondary level - the study of ancient societies, a compulsory subject. Three young men from the provincial periphery of Denmark got together and tried to discuss how to do something about it; after all, it was not very pleasant for them to have to teach the subject, and it was quite likely that, in the not-too-distant future, the course would either be discontinued, or it would cease to be compulsory. It happened that they agreed to look more closely at the curriculum, and what professionals in the area had to say; then, they divided the material in three and went home, and tried to identify the places where the study of ancient societies might have something to say to the life-situations and problems of their students. The first big surprise was that all three came back with a long list of suggestions! There were a lot of possibilities. The second was that when they put it into practice, despite of course varying results, generally speaking the activity level in the classroom rose dramatically. And the third, not unsurprising, consequence was that the students spent more energy on preparation, with the result that they got higher marks in the end. I would say this is a pretty strange and ironic example, because in my opinion, I think we could quite easily live without ancient studies.

This just told me that in almost every context you can think of, there exists the possibility of relating the subject matter to the group of people who have to learn it, thereby creating the conditions for a living engagement with it.

I: *Yes, and for relevance - a sense of relevance.*

K: That idea points to the level of didactics. But in any case it creates the engagement necessary to create qualitatively better learning.

I: *It is also a question about formation, and the relationship between education and learning.*

K: The concept of education is simply capable of multiple interpretations. It both covers something I am crazy about, and something that I can not swallow. I am not an opponent of what one can refer to as the formative⁴ processes in education, because often, when one uses the term formation, one means the same thing as I do when I use the term

competencies. And I mean *real* competencies. Where the substance of what is learned is integrated with a sense of personal relevance and engagement. If that is what is meant by education and formation, then I am all for it. But I do not use the word myself, because it seems to suggest 'high culture' for some, but not for others. Some people use the term to imply that education has to involve the whole person, and if that is the case, it is fine by me; others use it as an expression of quality defined by one's social class, as a way of indicating cultural power.

I: Education is a concept that has become increasingly significant, because one of the things that characterizes some of the ongoing discussions at primary school, is the tendency to employ the concept of learning without explaining more closely what is meant by the term. Moreover, we do not take the time to discuss the reason(s) for our schools' existence. What kind of human beings and what kind of society do we want? I consider these questions to be central to the whole discussion on learning, and the answers depend on what underlying concepts of knowledge you are operating with. In the didactically very technical, result-oriented system we have, it becomes important to take up precisely these issues. Not from the perspective of high culture, but precisely to arrive at more fundamental discussions of education, and our school's 'raison d'être'.

K: If you use the term education in that sense, you are likely to understand learning in a contrary sense. Learning is what can be put to good use on a PISA test, whereas education refers to qualitative formation, to the cultivation of personal qualities, etc. etc. But if learning is defined as mere training and repetition, not only does it reduce learning to 'indlæring', it becomes merely technical - rote learning, or something similar.

I: I also take the term up because I want to look at what it includes. One sense of learning refers to internal processes going on in the human subject. I consider these in reality to be psychological, and they refer to a relationship between the individual and the world. But, moreover, also the discussion of the determination of learning's contents seems important: that is, what the relations are between the fact of appropriation, the content of what we appropriate, and the qualities of that content seen in relationship to the kind of society we want to create. As you say,

there is an appeal to an ideal in relation to the contents of what is to be learned, as well as to the choice of the content itself. Can you say something about the relation between learning and content, and about the relationship of the latter to what we want to accomplish.

K: In the first place, all learning has a content. You can not speak about learning without it being learning something. All content, in turn, bears some relation to the learner, and that relationship is very important for engagement, and thus the quality of learning. Society has an interest that it's members all acquire a certain common corpus of knowledge, as well as that its' professionals and technicians, whatever their kind, appropriate a more concretely defined set of concepts and skills. There can not really be any doubt about that. It's not always the case that this 'content' is in accord with what the learners are actually engaged in learning. But then one can say, that one of the problems is, that the contents found in curriculum outlines are chosen partly out of a qualitative evaluation of what is useful in different contexts, and partly with an eye to traditional and customary parameters which may no longer be valid in reality. I have myself participated in committees whose purpose was to discuss the contents of the curriculum with professionals in their respective subjects. These experts could not do it properly. They had difficulty distinguishing between the parts of their subject which were fair to pour into the heads of their students, from those parts which were not. That is one problem. At the other end of the spectrum, there is the problem which occurs in daily life in the classroom, where teachers have the reasonable desire that the students should learn something that they may not think is worth learning.

This is unavoidable, and the little quote mentioned before, which asks us to find the place where the engagement of the students lie, is the answer to that problem. So, the answer is really two-sided. There has to be some kind of content, but a good part of the content in the majority of courses of study is chosen badly, in my opinion. On the other hand, it is the teacher's task to ensure a correspondence between the contents of the curriculum, and the capacities and capabilities of the students. This task would be easier if there was not so much unnecessary information that professionals have entangled themselves with. I have a short story to tell in this connection. Many years ago, when I was taught mathematics at high school level, I got into

a discussion with a progressive high school principal. We both were members of a committee that was supposed to redefine the curriculum for mathematics at the gymnasium, and there was a subject domain that was called 'imaginary numbers'. Imaginary numbers are what the name suggests, imaginary, numbers that do not exist in the real world. I myself knew, as did my colleagues, that everyone was afraid of getting a question on this subject at exam time; furthermore, we knew that almost anyone who did was sure to break his or her neck on it, because the subject is so abstract that you have to be a real mathematician to find it interesting and comprehensible. I argued against retaining this particular aspect of mathematics, and for the idea that it was necessary to cut down the curriculum. At the end, the principal, who had in any case the power to decide what was included, and what was not, decided "it should remain, because it's such a beautiful piece of mathematics". So, it stayed. And every year, you can be sure there will be students who get low marks when that area comes out as their exam question.

That example expresses unequivocally the circumstance that experts in a particular subject often have difficulty in understanding, that some of the things they believe to be integral and important to their subject, are not for that reason necessarily so.

I: Can't something be important, simply because they consider it important?

K: That view causes a lot of problems. But in all humility, I believe I learned from my experiences at the time, when we also had other subjects to consider, and where I, for instance, sat in on discussions about geography. I felt there was a real dialogue, where we discussed things, each from his own point of view, where we tried to decide what was worth keeping, and what could better be let go. A real dialogue, particularly compared with my previous example, with the postulate that "I'm right because I am a mathematician".

I: Could we talk more about the question of what is good and bad learning, and the theme of the competition-state. This also fits in well with what we have said earlier about the normative dimension - about whether it's a necessary part of all learning. Everything you had a hand in starting with regards to problem-based learning processes also

pointed to the desirability of having critical capabilities, as well as having something one could refer to as 'democratic formation'. I think there are additional dimensions to subject content that go beyond mere intellectual knowledge, which have more to do with being a citizen in our society. And this has relevance in relation to the variety of the good, and not so good, possibilities for learning that exist, yes...?

K: In the final analysis, you can not speak about good or bad learning independently of the context, but the discussions always end up revolving around the relation between content and the kind of appropriation that takes place. When all is said and done, good learning expresses itself in the circumstance that one comes to think about what one has learned in situations where it actually can be put to good use. If one has learned something that has relevance only in contexts one never will meet, it is possibly good learning, but in the end quite superficial.

I: I am led to think about something here that is extremely interesting. If good learning is only a question of being able to recall some definite content, it is pretty close to being a form of manipulation or indoctrination. Doesn't good learning also have to do with preparing and helping those in question to take a critical stance towards learning, and towards the desirability of opposition? To create a person who can both choose for or against things. The crux of the issue, is whether we take pains to ensure that our young people are able to reflect upon the choices presented to them. That seems to be the essence of the logic of competitive thinking, that we all have to run in the same direction in order to reach comparable standpoints, and this seems to have something to do with what you are referring to when you speak of good and bad learning.

K: I am a little in doubt as to which level I should address. There can be disjunctions and discord at many levels. But I mean a standard for determining good learning has to do with when and how often one thinks about what one has learned, for I think this gives us, if you wish, an exact criterion we can use, as opposed to the one offered by tests. It is not a test, it is reality that decides what is good and what is bad learning. Good learning is characterized by the quality that it

is integrated with some kind of engagement, with a positive attitude towards what has been learned. This engagement, or positive attitude, can be acquired by reading in a book. But in the first place, personal engagement would not happen nearly as often when reading a book, as it would if one is placed in a context which encourages one to be active in relation to learning. And even though the material to be learned comes from the outside, it can be presented in a way that is measured and inspiring, so that the material is communicated in a broad variety of ways.

I wish to return to a point I have often made, that people in the world of business, who really are immersed in contexts where the ability to compete means something, are the strongest advocates for the necessity of having employees that can think independently, who are critical, engaged, and all the other positive terms one can come up with. It's not there that the one finds opposition. If we really want to strive for the goal of increasing our ability to compete, then we are going about it in the wrong way. We are simply making a mistake. There is much more to gain in a system that builds on project-work and problem-solving and similar processes; one can, of course, also make demands on this kind of system. For example, that it should deal with matters one finds relevant. This criterion is sometimes not met in practice, where one can see really good projects being done that do not have relevance anywhere, or for anything.

So, one can say, that through these processes one can develop 'generally' one's critical sense, or something like that. I am not so sure about that. The critical sense that develops and grows in relation to something concrete has more to offer in the long run, I think. It is certainly not the case that what is desired is something one-dimensional. If you have to produce thumb tacks, maybe it is possible to find one way that is the best. But that is not the way it is with human understanding and qualities, which involve reciprocity and interaction. Partly because of humanistic reasons, and partly because of political reasons, we need our courses of study to encourage more personal development, or more autonomy, or whatever you want to call it. And we need these things both in the sphere of human culture, and in the competitive arena. The contradiction lies in another place. It is between those who think only in terms of productivity and making better and bigger sausage factories, and those who really understand what it is all about.

Something that always happens to someone like me, when I insist that learning should contribute to personal development, is that people believe I am excluding the possibility of it having a real content. That is just nonsense! There is no contradiction between the two, they go hand in hand.

A new edition of my book on learning is going to be released in the spring 2016. I have in the course of recent years written a series of books on the subject of learning, and I have now tried to distil the essence of what I have written, and put that in the new edition. There are already some things I think I should have done a little differently, but that is always the way it is.

I: Is there something we have not talked about yet that you want to mention now?

K: There is something about competence, something about transformative learning, and something about the competition-state. These are the things I have most recently been engaged with. We have not talked yet about transformative learning.

I: One thing that hit me when I tried to look over your activities over time had to do with the perspectives of people with limited education, a group sometimes referred to as “low-skilled”. It seems like this group somehow interests you; more recently, you have looked closely at vocational education, and have focused upon barriers to learning, and upon different conceptions of it. It’s not these things which occupy a central position in modern learning theory or didactics. I think it could be interesting to hear you speak more about some of these things.

K: I am happy to hear that. For actually the question of barriers to learning, or “non-learning” as Jarvis calls it, is at least as important and worthy of attention as learning is, and maybe even more so. Maybe teachers need to know more about why there are always some who do not learn what they should, and that can always be unfolded in more detail. I think it is important to distinguish between three kinds of barriers to learning. There is incorrect learning, which springs from misunderstanding, and there is that which comes from inadequate attention - the latter can be remedied if the need arises. I still makes

reference to a very old investigation that showed that all people carry around the results of faulty learning, which is no serious misfortune; if one happens to need some of it, and it is flawed, one can always make the necessary corrections. But I include that type here, because if you listen to the conversation of teachers in their staff rooms, it is almost always faulty learning they are referring to, or 'mislearning' as I term it in my writings. But this is not very problematic, because such learning can rather easily be corrected if it should be necessary. The important kinds of learning barriers are 'learning defence', which is extremely widespread today and has to be so because we are overloaded with so much information that we cannot possibly take all of it in, and 'learning resistance', which we practice when we are confronted with something which is personally unacceptable. It was actually fairly late in the game when I first began to distinguish clearly between these three maintypes of non-learning or faulty learning. It was actually in connection with my first book on learning, which came out in 1999.

Erecting defences against learning is absolutely necessary for us. So much information is thrown at us; just go home and listen to the news tonight, and your head will be filled with all kinds of information about so many things, stuff which, by and large, is pretty insignificant if you look at the bigger picture. On top of that, we are ceaselessly bombarded with things we could learn, but do not; and those who are unable to mobilize their defences end up in a psychiatric ward really quickly. They are vulnerable, and they are unable to distinguish between what is useful and what is not. That is a threatening situation. If you go back to the roots of it, this problem was discovered partly by a French philosopher by the name of Lefevre, and later on in the 1950's developed further by German Thomas Leithhauser. My thesis is that it was first during that period that the ordinary working man, farmer, or housewife began to be so bombarded with all sorts of information that they no longer were able to deal with it all. These two researchers called this phenomenon 'everyday consciousness'. This state of affairs has developed to such an extent that we all need to have a form of well structured defence that clears the field, so to speak.

There are some things that are captured by one's defences that could well have been put to good use. One must accept that, because it is necessary to have the capacity for defence, and it has to work, more or less automatically, most of the time. Also for the reason that we do

not have the capability of deciding, for example, as we are watching the news, “Is this something I can put to good use?” The stream of input/information just keeps on coming, and one’s automatic defence mechanisms keep much of it at a distance, but once in a while one comes to say “hey! there was something that interested me”. To the extent that things work more or less that way, it becomes enormously important that we have the capacity to defend ourselves. Of course, there is the case of teachers of certain subjects, who are of the opinion that too many students have an overly-active set of defences with regards to their own subjects, geography for example, probably for the reason that a good many students find the subject not especially interesting. As long as they know that New York is located in America, they know enough to get by.

That is probably OK. But the geography teacher does not agree, because he or she feels their job implies something else. I consider this form of defence against learning not only as something necessary, but also as something good for both teachers and students, something they need to get a handle on. And we do that by discussing the more significant types of educational decisions, so that we clear the field, and get a grip on the things that really matter. Of course, there will always be some individuals who are better at managing their defences than others, and how exactly one can improve in that regard is a good question...I think the first precondition is becoming aware of the problem.

I: And to acknowledge that there is one?

K: Yes, that is exactly what I mean. Get a grip on it, admit that it is there. I have pointed out in other places that most people, those with limited education included, are for the most part open to reasonable arguments. They are actually in most instances interested in discussing what they themselves find worth learning. They would like for their parents to say to them, that there are things worth making an extra effort to learn. Especially if the parents are sometimes able to say that, “that stuff there, you don’t need to worry too much about”.

I: Then you have resistance to learning.

K: Resistance, well, that is something else again. The capacity for

defence is simply there, and a lot goes on, and some things get simply caught in the process. Resistance is something that springs up when you get in a situation you feel called to resist, and which you cannot accept...where you encounter something you believe is not good for yourself. There are, of course, individual differences. Some have low thresholds, others have high thresholds etc. etc. Both in everyday life, and in the school system, we can say it is important, that one both has and uses the power of resistance, and that we are aware of this to such a degree that we do not uncritically accept whatever comes along. It is naturally uncomfortable for the teacher when he or she meets real resistance. In that case, it is important to be able to distinguish between the kind of resistance for which there are good reasons, and the kind of resistance for which there are not.

I have an example that I often resort to, it has to do with a high school student who I once interviewed. She said about one of her teachers that "I can not learn anything from that man". Why is that?", I asked. She replied, "He reminds me a lot of my older brother". A totally personal reason. And though I could see that that explanation didn't help her in any way, she really was caught in a hard position. She had a know-it-all for a brother. But in other cases, resistance can be in its place; and then the teacher can learn from the fact that there is resistance against one thing or the other, something which is real, and fantastically characteristic of the learning process as a whole. There are teachers who can handle that, whom I know, and it is they who are capable of understanding that resistance bears engagement within itself, and that that kind of engagement often provokes and encourages significant learning - maybe another kind of learning than what was originally intended. I have met teachers who, the first time around, when they met resistance, at first rejected it, but who then afterwards approached the student in question and initiated a dialogue about it. And I have an example of an adult vocational training teacher who had the ability to deal with opposition, and the persons who effectively resisted, in such a way that it was integrated, which led to the result that both they, and the others in the class, got a lot more out of it, because the resistance in some way was accepted and worked through. That is probably one of the most demanding of the challenges one can meet as a teacher... I do not believe there is an awful lot of teachers who master it.

I: *But it does happen?*

K: Yes, it does, and it is a wonderful thing to experience, how it is possible to tackle resistance so well. And by tackling a situation of resistance, I do not only mean that one makes things work despite opposition, but that one turns it around, so that it proves to be useful to the learners.

Notes

- 1 The Danish term is 'indlæring' (in-learning/learning in) which if taken literally refers to learning as something which comes into the student. Until the 90's there wasn't a Danish equivalent to 'Learning'. In the 90's the Danish word 'læring' appeared and to some extent replaced the concept of 'indlæring'. [eds.]
- 2 In Danish Erhvervsfaglig Grunduddannelse (EFG)
- 3 In Danish Arbejdsmarkedsuddannelser (AMU)
- 4 Formative processes/formation refer to the Danish concept 'dannelse' which is the same as the German concept Bildung[eds]

References

- Illeris, K. (2003). *Three Dimensions of Learning: Contemporary learning theory in the tension field between the cognitive, the emotional and the social*. Frederiksberg: Roskilde University Press.
- Illeris, K. (2007 [2006]): *How We Learn: learning and non-learning in school and beyond*. London: Routledge.
- Illeris, K. (ed.) (2014): *Læring i konkurrencestaten – kapløb eller bæredygtighed*. Frederiksberg: Samfundslitteratur.
- Illeris, K. (2015): The Development of a Comprehensive and Coherent Theory of Learning. *European Journal of Education*, Vol. 50, No. 1, p. 29-40. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/ejed.12103/epdf>

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