Kapittel 8. Inside the Black Box: On the Concepts 'Teaching' and 'Learning' and the Connections between Them

Abstract: This paper discusses the concepts 'teaching' and 'learning' and investigates the conceptual connections between them. Starting from the view on teaching and learning expressed in *The European Qualifications Framework* (EQF), I analyse three theses on the concept of teaching: the Dewey-thesis, the Standard-thesis and the Hirst-thesis, identifying problems in the established definitions. Following Hirst, I contend that teaching is an intention, hence a potential, having learning as its possible realisation. That the learning is only "possible" is the papers main argument, since it helps explain how and why (the quality of) input is vitally important in educational settings. This idea is in direct opposition to the view in the EQF. In consequence, I argue that the connection between teaching and learning is teleological as opposed to mechanical, as the EQF would have it. By way of contrast, I also distinguish my understanding from Ryle-like analyses of teaching as task and learning as achievement of which there are several in the literature, and I argue that on a teleological understanding, teaching might be considered an achievement in its own right.

Keywords: Teaching, learning, Hirst, EQF

1. Introduction: Background, Problems, Purpose, Structure

In practical terms, *The European Qualifications Framework for Lifelong Learning* (EQF) is the overarching framework for European higher education; in technical terms, it is a Recommendation of the European Union; in philosophical and educational terms, it is highly problematic.

The EQF is the outcome of two trans-European educational initiatives, The Bologna-process and The EQF-process. The Bologna-process is an attempt to formulate a common framework for the understanding of teaching and learning in European higher education, thereby instigating a European Higher Education Area (Bologna Declaration 1999). The EQF-process is the attempt to formulate a common European framework for the description of qualifications, regardless of type and level (Ministry of Science, Technology and Innovation [MSTI] 2005; European Communities 2008). After being initiated in 1999 (Bologna) and 2004 (EQF), and after converging, the processes culminated in the EQF in 2008. The European states were then advised to formulate *National qualification frameworks* (NQFs) modelled on, and referring to, the EQF, something which most European countries have now done.

The purposes of the EQF are several, but the official documents highlight creating a tool for translating qualifications as a main purpose (MSTI 2005, 57ff). This is to ensure the comparability of qualifications across the European national borders and, thus, the mobility of students and labour-force. To this end, the EQF bases itself on **learning outcomes**, which it opposes to educational **inputs** (for example length of study). "The EQF … emphasises the results of learning rather than focusing on inputs: [a learning outcome denotes] what a person holding a particular qualification actually knows and is able to do" (European Communities 2008, 4). Learning outcomes have been called the fundamental building block in the EQF, a common currency in relation to which qualifications can be compared (Adam 2004, 3; 6).

The principal idea in the EQF is that all education at all levels is a matter of qualifications expressed in terms of learning outcomes. But this idea raises several questions. First, how can student's learning outcomes be determined in advance? An outcome-based education necessitates starting one's educational planning with the results of learning. But how, and in what sense, can the results of learning be known before the fact? Second, outcome-based education presupposes backwards planning. Even if backwards planning is to the point when making and/or designing something, or even when teaching vocational subjects, there are good reasons to believe it functions limiting if applied in every educational setting. This line of question quickly leads to matters more general. What precisely are the connections between teaching and learning? Is the EQF-model, focusing on outcomes, to the point? Are other models more tenable? This in turn leads to an inquiry into the concepts 'teaching' and 'learning' themselves.

This paper is a discussion of, and an attempt to substantiate, the claim that the assumptions of the EQF is philosophically and educationally problematic. The strategy in the paper is indirect – if what I suggest about the concepts of teaching and learning is sound, the EQF-model cannot be correct. This explains why the paper revolves around discussions of teaching and learning, and not around the EQF. I shall be utilizing some Aristotelian notions in my discussions below. The main idea in the paper is that the relation between teaching and learning is best understood in *teleological* terms. This idea is not new (Frankena 1965). However, I have not seen it elaborated elsewhere to the extent attempted here. The

ambition in the paper is to throw some light on the teaching-learning issue, not to offer a positive conclusion. Still, I do intend to show that, and how, the notions in the EQF are too simplistic, even if I only do so indirectly.

The structure of the paper is as follows. I start with a review of authoritative parts of the literature pertaining to conceptual analyses of teaching and learning. I then investigate the conceptual relations between the two concepts, and I offer a teleological analysis of the relation. Then I distinguish my analysis from Ryle-like analyses of teaching (as task) and learning (as achievement), before I contrast my analysis with the view of teaching and learning found in the EQF. Towards the end, I shall summarize and offer some tentative conclusions.

2. Aspects of the Concepts 'Teaching' and 'Learning'

According to John Dewey, teaching stand to learning as selling stands to buying. "There is the same exact equation between teaching and learning that there is between selling and buying" (1933, 35ff). I shall call this proposition **the Dewey-thesis** on teaching and learning, and it is easy to see that it is mistaken. Whereas it is no doubt true that selling conceptually implies buying, it is not true that teaching conceptually implies learning. Here is what I call an ordinary language rundown of the logical possibilities of the "teaching-learning-part" of the Dewey-thesis:

(i)   It is possible for Tracy to teach and for Laura to learn what Tracy has taught.
(ii)   It is possible for Tracy to teach without Laura learning what Tracy has taught.
(iii)   It is possible for Tracy not to teach and for Laura to learn.
(iv)   It is possible for Tracy not to teach and for Laura not to learn.

Tracy, both in the rundown above and elsewhere in this paper, stands for *the* generic *teacher*, whereas Laura, *mutatis mutandis*, stands for the generic *learner*. From the rundown, it is clear that the relation between teaching and learning is not that of implication. Rather, teaching *sometimes* leads to learning; and learning is possible without teaching at all. Consequently, if Dewey wanted to define teaching by its presumed end, i.e. learning, this is a failure. Teaching and learning is not the kind of transaction that selling and buying is, since teaching is possible without achieving an end, something that selling is not.

B. Othanel Smith has made a similar point in relation to the Dewey-thesis. After distinguishing four elements in the selling-buying operation, a seller, a buyer, the act of selling and the act of buying, he claims that "learning is not co-ordinate with buying, because the relation of pupil to learning is not the same sort of thing as buyer to buying" (Smith 1969, 14). A buyer, according to Smith, is someone who receives something from a seller in return of payment. A learner, on the other hand, does not necessarily receive learning from a teacher (cf. ii and iii under the rundown above). According to Smith, thus, there is no act in the teaching-learning operation corresponding to the act of buying in the selling-buying operation. To strengthen Dewey's analogy, Smith argues that a notion of *pupilling* would be necessary, defined as "receiving instruction" (Smith 1969, 15). However, as "receiving instruction" does not equal learning (cf. ii under the rundown), the introduction of "pupilling" would at best make Dewey's analogy structurally symmetrical, it would not guarantee a substantive fit.

Smith does not stand alone in rejecting the Dewey-thesis. According to B. Paul Kommisar, this is quite common. He has named this rejection **the standard thesis** (1969, 63) and I shall be following his usage. The claim of the standard-thesis, as opposed to the Dewey-thesis, is that teaching does not conceptually imply learning.

But if teaching does not imply learning, and so is not defined by its end, then how are we to define it? To answer this question, some distinctions are necessary. Kommisar distinguishes helpfully between three senses of the word "teaching" (1969, 68). First, teaching can be the name of an occupation. This is evident if we ask, "What is Tracy doing *for a living*?" Answer: - Teaching. I shall call this **the occupation-sense** of teaching. Second, teaching can be the name of an enterprise. This is evident if we ask, "What is Tracy doing *today*?" Answer: - Teaching (as opposed to reading, researching, etc.). I shall call this **the enterprise-sense** of teaching. Third, teaching can be the name of specific acts. This is evident if we ask, "What is Tracy *doing*?" (upon entering a lecture-hall where Tracy is in the middle of jumping up and down). Answer: - Teaching. I shall call this **the act-sense** of teaching.

It is the act-sense of teaching that interest me in this paper. This is because, to my mind, the profession- and the enterprise-senses of teaching are derivative of the act-sense. Calling an

occupation/enterprise teaching is reasonable only because these are assemblages or aggregates of teaching-acts. So the conceptual structure of 'teaching' is to be found in the act-instance.

3. Teaching as Intention

In defining acts of teaching, I shall take my lead from Paul Hirst. According to Hirst, acts of teaching are characterised by embodying an *intention* that someone shall learn something. "[T]eaching activities … can only be characterised in the way in which we fundamentally characterise all human activities: by looking at their point or purpose" (Hirst 1974d, 104). I shall call the thesis that acts of teaching is characterised by embodying intentions of learning, **the Hirst-thesis** henceforth, and it will be seen that it is very different from the Dewey-thesis. Different how? In at least two ways. First, it is different *directionally*. Whereas the Dewey-thesis defines teaching by what it implies, the Hirst-thesis defines it by what it assumes. Picture an academic session. Tracy is the lecturer. For there to be teaching going on, according to Dewey, (all the) Laura(s in the lecture-hall) must in fact learn. Not so for Hirst. For him Tracy's *intention* that Laura learns is sufficient to mark her (Tracy's) acts as acts of teaching. On the Dewey-thesis, what happens *after* the academic session defines what happens *in* the academic session. On the Hirst-thesis, on the other hand, what happens *before* and *during* the academic session, defines whether teaching is going on *in* the session. This is what I mean when I say that the theses differ directionally. The second way the Hirst-thesis is different from the Dewey-thesis becomes evident if one asks *who*, in the session pictured above, defines whether teaching is going on. On the Dewey-thesis, is seems to be Laura who determines whether teaching *has been* going on ("Tracy's teaching was great today, I learnt a lot!"). On the Hirst-thesis, contrary, Tracy has the definitional power ("Terrible teaching today. It seems only Laura got it."). The last "it" in the previous sentence is placeholder for "what Tracy intended Laura to get". The definitional agent is thus different on the different theses.

I agree with Hirst that teaching is an intention that someone shall learn something, so I oppose the Dewey-thesis. Since teaching does not necessarily lead to learning, it cannot be the case that teaching is defined what it implies. Teaching, consequently, should be defined

by what it assumes. The implication of teaching is in any case unknown, something also brought out by the ordinary language rundown above. (Laura: "Today I learnt the true meaning of the word boredom".) There are two further reasons why I find it difficult to assign the definitional power as regards teaching to the learner and not the teacher. First, the learner as often as not, do not know what she is to learn (cf. Biesta 2005, 58). This, contrary, is maintained by the profession, or the discipline, or the *Fach*. Admittedly, one needs to draw distinctions regarding a student age and maturity, interests and motivation in this regard. A motivated postgraduate-student might for example have a fair idea what is expected in terms of learning. Still, it is the *edukator* (by which I mean not only the teacher but also her plan and her discipline), that guards the gates in the city of knowledge, not the student. Second, letting the learner define teaching would in effect mean defining teaching by its results. This would make distinctions between teaching, on the one hand, and indoctrinating, conditioning and propagandizing, on the other, obsolete (cf. Green 1969, 33ff). Results from the two sorts of procedures might not differ. Wanting to maintain these distinctions is another reason to side with Hirst (and other subscribers to the standard thesis) in defining teaching by teacher intention.

4. Problems with the Hirst-thesis

When Hirst goes on to specify teacher-intentions, however, things get a bit more problematic, at least ostensibly. Here is what he argues. The intention of teaching, as noted in the Hirst-thesis, is to bring about learning. Learning, he defines thus: "some specific achievement or end-state" (Hirst 1974d, 107). In other writings, Hirst specifies the achievement or end-state in terms of "forms of knowledge" (Hirst 1974, 39ff). One could argue, perhaps, that this means Hirst sides with Dewey after all. If teaching is defined as an intention of learning, but this intention is the learning of students in the form of an achievement or end-state, it would seem the intention depends upon this end-state, viz. students learning, to the extent that the difference between the *assumption* of teaching and the *implication* of teaching is merely verbal. Here is a quote from Hirst seemingly supporting this, "[O]ne must start at the other end of a logical chain of relations, with an understanding of the end achievements to which everything is being directed" (1974d, 108). I do not think, however, that the issue here is merely verbal. As I understand Hirst's idea, the point is to

clarify the conceptual structure of 'teaching'. Doing this involves identifying intentions, as opposed to implications, as the concept's central feature. The intentions are, of course, that students learn, that they achieve some end-state, but it is vitally important to recognize that this is something we, as teachers, *aim at, strive for, have as an objective*, not something that is guaranteed (since it allegedly follows conceptually). Teaching, according to Hirst, has an essential means-end character (1974b, 7). As a teacher, you decide what to aim for, you intend to achieve this aim, and then you act. This, as noted, does not mean that the ends *follow*, that they are guaranteed, it only means that the *intention* of teaching is that these ends be realised.

It is important to note that the intentions of teaching, according to Hirst, are on different levels of generality (1974c, 16). A distinction between **goals**, **aims**, and **objectives** might prove fruitful in explaining this (cf. Allan 1996, 93; Anderson et al 2001, 16f). Depending on the level at which teaching is planned and executed, the intention in question will be more or less general. On program-level, for example, intentions would be in the form of educational aims (more general). In specific lectures, intentions would be on the level of objectives (less general). Part of Tracy's job, according to Hirst, is to translate the more general intentions to more specific ones, and hence, to levels of practice. Note in this connection that the distinctions between goals, aims and objectives corresponds roughly to intentions of discipline, plan and teacher, respectively, thereby further explaining the notion of *edukator* introduced above.

5. On the teleological relationship between teaching and learning

Having reviewed above authoritative parts of the literature pertaining to conceptual analyses of teaching and learning, I will in this section present and discuss a teleological conception of the relationship between the concepts. Following the Hirst-thesis, I contend that teaching is a question of *intending learning*, and I argue that teaching, therefore, is best understood in terms of potentiality. Learning, on the other hand, I see as the possible actualization of this potential, and I argue, hence, that the relationship between teaching and learning is teleological. The aim of this section is to express this idea in more detail.

In the 5th edition of a widely read textbook on learning theories, learning is defined as "an enduring change in behaviour, or in the capacity to behave in a given fashion" (Schunk 2009, 2). In stark opposition to this, Thomas F. Green has claimed that: "Such a definition … is wholly inadequate to capture what we normally mean by 'learning'. Ordinarily, we would regard change of behaviour at best as only *evidence* of learning … [neither] necessary [n]or sufficient" (1969, 56). Michael Oakeshott, similarly to Green, has suggested that, "Learning concerns conduct, not behaviour" (2001, 36) and that "[l]earning is the comprehensive engagement in which we come to know ourselves and the world around us" (2001, 35). Teaching, according to Oakeshott, is the counterpart of learning in this sense, since it is the "the deliberate and intentional initiation of a pupil into the world of human achievement" (2001, 39). Being a teacher, consequently, is a relational role, according to Oakeshott, since it is "defined by the character of his [the teacher's] partner" (37). Just as a "ruler is partnered by the citizen, the physician by his patient … [and] the the lawyer by his client", the teacher is partnered by a pupil, that is: someone capable of experiencing that "which may be received only by being learned" (37).

Differences notwithstanding, learning is identified as *caused* in the above quotes, as the latter part of a relation. The question that interests me now is not what the first part of the relation is. For present purposes, I consider the discussion above sufficient to render plausible the claim that the first part of the relation is an intention and thus embodies a potential. The question now, rather, is how the relationship between the intention and what it causes (if indeed it does) should be characterised. Before attempting this characterisation, however, I should note that as far as the below discussion goes, I limit myself to teaching and learning in an institutional setting. According to Hirst, it is "only by teaching that they [some forms of learning] can be achieved" (1974b, 10). Oakeshott, similarly, is "concerned … with the learning that is the counterpart of teaching" (2001, 36). To exclude the types of learning that is not the result of teaching (cf. iii in the ordinary language rundown above), which of course are plenty, my discussions makes the same concession.

So – how should the relationship between teaching and learning in an institutional setting be characterised? As noted, learning is identified as caused, in the above quotes, as the resultant of a foregone process (teaching). I will now present two models that are relevant

to explain this causation. The first model is **a mechanical model**. It states that given a certain cause, a certain effect will follow by causal, mechanical, necessity. To use my old example: If Tracy teaches, then Laura will learn; or better, if enough T in the teaching of Tracy, then Laura will get T, that is learn. This model derives its force from the natural sciences, where it has proved highly successful. In a pedagogical setting, it is connected with names such as Ralph Tyler (1949) and Benjamin Bloom (1956), but note also the affinity between the mechanical model and the Dewey-thesis as this is discussed above. The model has its own rationale and its own set of metaphors, primarily derived from an industrial and economic setting. Teaching is seen as input, learning is seen as output, and in between there is a black box in the form of a student, content unknown.

There are many problems with the mechanical model; the most important in this connection is that it is not apposite because one-dimensional. A mechanism is the idea that given a sufficient cause, a particular effect will follow by necessity. Given Tracy's teaching, Laura will learn. But as the ordinary language rundown made plain, Tracy might teach without Laura learning. Further, as the quotations from Green and Oakeshott suggests, if one conceptualises output in terms of behavioural change, this is at best an indication of learning, not learning itself. One could argue, with Hirst, that this is because a mistaken concept of teaching is assumed, and try to correct this by defining teaching by way of learning-intention. But if so, the counterargument is that intentions might, and in fact often do, fail. So just as learning does not follow from teaching, neither does it follow from the intention of teaching. One could try to accommodate *this* critique by investigating into the black box. Assume the following, "It is because we do not know enough about how students learn that we are in this situation. Evidence-based empirical research is in demand. By ascertaining the principles of student-learning, we will be able to plan for and hence guarantee a better fit between educational in- and output." Large parts of the literature pertaining to students teaching and learning have this notion as an operative idea (Bransford et al 1999; Ramsden 2003; Biggs & Tang 2011). The same holds for large transnational educational programs (PISA, AHELO). That fact, however, do not alleviate another fact: that students are subjects, as opposed to objects. As such, they constantly interpret and reinterpret themselves and their environment. Students instigate new causal chains, act, as opposed to react, upon their surroundings. To understand education on the background of

the mechanical model disregards this since it construes causality in terms of mechanical necessity.

6. The Teleological Model

The alternative model I shall call **the teleological model**. The model does not deny that learning is caused, but it maintains that educational causes are of different type (in different dimensions), and that educational outcomes depends upon a complex interplay between these different causes.

The most famous proponent of teleological (models of) explanation is, of course, Aristotle. According to Aristotle, change, both natural and artificial, is to be explained in teleological terms, that is: in terms of the directed, but only possible, actualization of a potential. In accounting for this, he develops the notion of "explanatory factor" (Aristotle 1013a21), of which there are four main varieties. First **(A)** "the material from which a thing comes to be" (1013a22), then **(B)** "the form or pattern of a thing" (1013a24), then **(C)** "the agent whereby a change is first produced" (1013a29), and then **(D)** "the end or the wherefore" (1013a33). (A) – (D) above are known as the Aristotelian causes, of which there are four main varieties: material, formal, efficient and final. Two further points are also important. The first point is that the explanatory factors are reciprocal, according to Aristotle, in the sense that they can function interchangeably as ends and means: "exercise explains good health, and good health explains exercise" (1013b9). The second point is that "the same thing [factor] may explain contraries, for the same thing which by its presence explains a given fact, is 'blamed' by its absence for the contrary fact; for example a shipwreck is 'caused' by the absence of the pilot, whose presence is responsible for the ship's safety. Thus, both the presence and the privation are factors in the sense that they account for some event" (1013b12).

Assuming a teacher, some content and a student as the principal components of teaching-situations (Oakeshott 2001, 36ff; cf. Schwab 1983), the teleological model claims that a valid account of such settings necessitates bringing all the explanatory factors outlined above to bear. Then it claims that the factors are functioning reciprocally in the setting. Lastly, it

claims that how the factors are manifest explain contraries in the situations. Let me try to make this more concrete using, again, my old example.

If Tracy teaches, whether (and what) Laura learns, depends upon (A) the kind of **material** (syllabus) that Tracy envisages as suitable. Reading *The Metaphysics* in original is different from reading (about) it in a text-book rendition. If Laura is 15 years old, a text-book is perhaps preferable (maybe with parts of the original text inserted). If she is 20, on the other hand, letting her grapple with the original work might be the best idea. Then whether (and what) Laura learns depend upon (B) her **formal** properties. How well equipped is Laura, by whatever personal and/or social and/or genetic factors to assimilate, accommodate, transfer and assess knowledge? Jon Biggs has argued that blaming the student for their lack of learning might be true but that it is unhelpful (1999, 58). The focus in (B) is not on the alleged unhelpfulness of claiming that students contribute (or not) to their own learning, but on the truth of the claim. As opposed to Biggs, the suggestion in (B) is that blaming, in the sense of ascribing responsibility *also* to the student for their learning, is both true and helpful. Then Laura's learning depends upon (C) Tracy's agentic properties as regards ability to teach. How good (**efficient**) a teacher is Tracy? Is she like Socrates or like Mr. Smith – famous in my high school for spending his classes reading out loud from the text-book? Is she an exemplary educator, doing what the best college teachers do, or is she satisfied with just delivering her classes? Pending answers to these questions, we do not really know what (and how) Laura is positioned to learn. Lastly (D), whether (and what) Laura learns depends upon whether there is a point or purpose to the proceedings from Laura's point of view, whether she understands the **wherefore**. Human motivation seems to depend minimally on two factors: the attribution of value and the attribution of (the possibility of) success. Consequently, if Laura does not attribute value to learning and does not believe she is able to learn, neither will she.

The claim on the teleological model is that all of these (kinds of) causes must be taken into account when explaining how and what Laura learns or, more generally, when explaining the relationship between teaching and learning. Learning, on this model, is the possible actualization of a potential. The potential is expressed in terms of A, B, C and D above. However, since things might go awry, the potential comes with no guarantee. Again, Tracy

might be like Mr. Smith, or Laura might not see the point. If so, the potential remains unfulfilled. Whether the potential is realised or not, however, the complex interplay between the causes identified above must be taken into account when explaining learning or the lack thereof. The factors are explanatory by both their presence and absence. Clearly, this is different from the one-dimensional account of the mechanical model.

Two consequences of the above analysis are worthy of note. The first is that on the teleological model, Tracy (the *edukator*) is vitally important when it comes to explaining the conceptual connections between 'teaching' and 'learning'. This is so because it is Tracy who embodies both the material, the efficient, and the final causes as regards the realisation (or not) of Laura's learning. As stated, the *edukator* guards the gates in the city of knowledge, a fact that finds expression in Tracy being positioned to assess Laura at the end of her studies. As regards Laura, it would seem she contributes the formal cause to the proceeding in the form of (innate or learnt) ability, character and temperament. And this is true. But at this juncture a further point emerges, namely that Laura's formal properties are not given once and for all, but are dynamic and flexible. This is the second consequence of the above analysis: Dependent upon how and what Tracy embodies in terms of the different explanatory factors and their interplay, Laura might become what she is not. The teleological model is thus capable of explaining not only the connection between teaching and learning, but also provide a perspective on what it means for someone to become educated.

7. Tasks and achievements

In this section, I distinguish my teleological understanding of the connection between teaching and learning from readings claiming teaching to be a task, the achievement of which is learning. The latter, as might be suspected, are readings on the background of Gilbert Ryle's famous distinction. Several of the supporters of the standard-thesis subscribes to such an analysis. I have selected some of the most prominent for discussion below. First, some words on Ryle's distinction.

In *The Concept of Mind*, Ryle argues that there are differences between what he calls *task-words* and what he calls *achievement-words*. Both classes of words describe performances, but whereas descriptions by way of task-words describes a performance *completely*,

descriptions by way of achievement-words "are asserting that some state of affairs obtains over and above that which consist in the performance, if any, of the subservient task activity" (1963, 150). Here are some examples of task-words: kick, treat, hunt, look, travel. Here are some examples of achievement-words: score, heal, catch, see, arrive. To kick is a performance that is finished upon completion. To score, on the other hand, while still a kick, is also something in addition to the kick. It is this addition that Ryle calls an achievement. Similar analyses hold for the other words on the list.

Several of the major writers on teaching and learning seem to subscribe to a task-achievement analysis of the concepts. Elliot Eisner, for example, while discussing the Dewey-thesis, states that "the term teach implied an end in view – namely learning. Teaching was [for Dewey] goal-directed and represented, in Gilbert Ryle's terms, an achievement, not merely the performance of a task" (1979, 179). Israel Scheffler, similarly, states that there is a difference "between 'success' and 'intentional' uses of the verb 'to teach'. In the 'success' use, a word refers to more than just the doing of something; it refers also to the successful outcome of what one is doing or have done" (1969, 20). Hirst entertains the same idea, "There is thus not only a task sense to the verb to teach, where trying or intending alone is implied; there is also a 'success' or 'achievement' sense, where in addition to the intention, there is in fact the implication that learning has in fact occurred" (1974d, 106). Closer to our own time, Gert Biesta has argued that, "Using this distinction [i.e. the task-achievement-distinction] we can say that using the word 'teaching' to refer to the task does not necessarily imply that the task will lead to success, i.e. that it is followed by the achievement" (2015, 232).

In all the above quotes, there is a presumption that Ryle's distinction between tasks and achievements fits squarely on the distinction between teaching and learning. Better still, there is a presumption that teaching is a task and that learning is its achievement. But I believe this presumption is mistaken. Teaching is not a task the achievement of which is learning. The case is rather that there is a task-sense of teaching and an achievement-sense of teaching, *and* that there is a task sense of learning and an achievement-sense of learning. Ryle's distinction pertains to the same performance under different descriptions, not to

different performances. Let me try to substantiate this by another ordinary language rundown.

(i)   Tracy may, while teaching, just "go through the motions" (teaching as task)

(ii)   Tracy may teach so that it is possible for Laura to learn (teaching as achievement)

(iii)   Laura may study hard (learning as task)

(iv)   Laura may in fact learn something (learning as achievement)

Clearly, there need be no "physical" difference between what Tracy is doing under instalments (i) and (ii). That is, she might be performing the very same actions in both instances. The same holds for Laura under instalments (iii) and (iv). The descriptions of the actions are different, however, in the sense that the latter instalments (ii and iv) describes something "over and above" the first ones (i and iii). If I call instalments (i) and (ii) combined **A**, and instalments (iii) and (iv) combined **B**, I can express the point as follows: Ryle's distinction pertains to A and B *internally*, not to the difference between A and B.

If this is correct, it seems two more questions are pertinent. First, how can learning be a task (iii)? Is to learn not to be able to understand or to do something that one previously could not, and thus, irreducibly, an achievement? A distinction between learning as *process* and learning as *product* might prove fruitful at this point. On the one hand, learning describes a process, something going on ("Laura is studying hard"). On the other hand, learning describes something that is mastered, a result or product ("Laura did very well. She knew all the answers"). When we use "learning" to describe the process of learning, we use the task sense of learning. When we use "learning" to describe the product of learning, we use the achievement sense of the word.

Second, what is meant by the achievement-sense of teaching? What must hold "over and above" the physical actions for teaching to be an achievement? This question marks, I think, the crux of the matter. On the one hand, it would seem the achievement of teaching (ii) is learning (iv). If so, the writers discussed above, only slightly modified, would seem to be correct after all. Modified how? By way of the claim that in so far the achievement of teaching is learning, this is premised on an achievement-sense of teaching. This would mean denying the difference between (i) and (ii) above on the ground that this (then alleged) distinction collapses when put under scrutiny. On the other hand, we do seem to recognise a

difference between Tracy just going through the motions as teacher, and Tracy achieving teaching. What could this difference be? Here I should like to suggest that the teleological model points in the direction of an answer. This model claims that the relation between teaching and learning is that of potential to its actualisation. This does not *imply* that the potential will reach fruition, only that it *might*. To account for the possible realisation of the potential, the teleological model claims different explanatory factors as necessary. First, Tracy will have to envisage the material best capable of changing Laura. Whether this be books, Power Points, films, props or fieldtrips, Tracy would have to *know* Laura to do this. Only then could she envisage material that is *suitable*. Second, Tracy have to plan and perform her teaching in a way that does not preclude the possibility of change on Laura's part. This could mean different things. Minimally, though, if change implies the possibility of further change, it would seem to rule out indoctrinating and propagandizing as discussed above. Indoctrination and propagandizing might change you once but aiming for specific results is no fertile ground for a change that is developmental. Third, Tracy will have to keep a bird's eye view on the proceedings that are her own teaching: think about it and reflect upon it in the sense of constantly confirming the purpose, the wherefore. This would mean not only balancing the explanatory factors, but acknowledging their reciprocity and complex interplay. This, on the teleological model, is the achievement of teaching.

Even if I have not proved the Ryle-like analyses of teaching and learning to be mistaken, I think I have demonstrated that the matter is more complex than these analyses presume. Teaching is not a task, the achievement of which is learning. Teaching, rather, can be both a task and an achievement, as can learning. The performance might be the same under both descriptions, but there is a sense to teaching as something over and above a task, as there is a sense to learning over and above a task.

8. On the European Qualifications Framework

According to the *European Qualification Framework*, European education is to move away from considering the inputs of education, towards considering the outputs of the educational enterprise. As stated in the introduction, it is what a student "knows and is able to do" (European Communities 2008, 4) that is important according to the EQF, not what she

has had to do to get there. This is carried further in the various *national qualification frameworks*. *The Norwegian Qualification Framework* for example, reads as follows, "The basic element in the Framework is that qualifications are described by learning outcomes and not through input factors" (Kunnskapsdepartementet 2011, 5; my translation). The specification of input-factors are in terms of "what the student has had to do to get there [to the end of her education]" (2011, 9; my translation).

To recommend turning away from considering the inputs of education and towards considering educational outputs, is a recommendation in stark contrast to the result of my above analysis. According to my analysis, the relation between teaching and learning is teleological. Hence, outputs are possible realisations of inputs and not understandable without a clear grasp of the factors mediating (or not) this possible realisation. In consequence, one must consider different causes when trying to come to terms with the concepts of teaching and learning. The above analyses point to the teacher as vital in this regard. This is because it is the teacher who "holds it all together": both the what of education, the how, the why and the unknown, the yet to be. The understanding of education in the EQF on the other hand is in terms of what I have called a mechanical model. This, even, is only one part correct. The EQF focuses exclusively on the outputs of education, to the explicit descaling of input factors.

Several strategies are possible in response to the EQF. One is to rely on my above analysis. The argument would then run something like this. Since teaching is a teleological process and the EQF denies this, then the EQF is mistaken. This is the strategy of this paper. A possible problem with this strategy is that it assumes that the relation between teaching and learning really is teleological. But it is, of course, up to the reader to decide whether my above analysis sufficiently demonstrates this. A different alternative is to investigate, in empirical detail and on the background of the distinctions developed above, whether the four causes are necessary, or at least helps, to understand the complex known as teaching and learning. This alternative might consist of a thick description of an instructional session, where the aim is to investigate the extent to which the notion of output makes sense without explicit and detailed descriptions of (A) the content of Tracy's teaching, (B) who and how Laura is, (C) who and how Tracy is, and (D) the purpose of the whole enterprise. Even

on the mechanical model, an output is not something that hangs in the air. An output is the resultant of an input. A third strategy, partly related to the second, is to underscore that learning in an institutional setting entails learning particular things, as opposed to just anything. It is the teacher, and the plan, and the institution that decides what is relevant, what one should learn. Focusing solely on outputs, disregards that learning necessarily is learning of *something*. It is the *edukator*, as opposed to the *edukand*, who decides what this is.

My analysis shows how and in what sense teaching, as a teleological process, is multidimensional, something the EQF does not seem to acknowledge. My analysis suggests that the teacher is the key in this connection. As indicated above, this is because the teacher is the one who negotiates and/or embodies the factors necessary to explain the teleological relationship between teaching and learning.

9. Summary and Tentative Conclusions

In this paper, I have analysed the concepts teaching and learning. By way of a review of relevant literature, I have ventured that what distinguishes acts of teaching from other activities is that it embodies intentions of learning. As regards the connection between teaching and learning, I have argued that this is teleological. Teaching is a process of potential, the possible actualisation of which is learning. The word "possible" is important in this connection. Since not only material, formal, efficient and final causes must be taken into account when explaining the relation between teaching and learning, but also how these causes are reciprocal and, therefore, able to explain contraries, a certain outcome is not guaranteed. It is on this background that I criticise the EQF for being one-dimensional.

My argument, thus, amounts to an explicit upscaling of the importance of the inputs of education in explaining the concepts of teaching and learning. As opposed to the position of the EQF, which "emphasizes the results of learning rather than focusing on inputs" (European Communities 2008, 4), my argument is that inputs are vitally important.

In the introduction, I posed several questions for discussion in the paper. The first was this: Can students learning outcomes be determined in advance? As the analyses of this paper

demonstrates, the answer to this question is "no". The reason is that outcomes are not guaranteed, might not be realised, since learning is only a *possible* actualisation of a potential, not a necessary one. Tracy might teach and Laura might not learn (cf. (iii) under the first rundown above) – since learning might be a *task*, and is not necessarily an *achievement*. On the other hand, I argue above that there are *several factors* mediating the successful fruition (or not) of the potential that is teaching. Pending answers to the questions whether the material, formal, efficient and final causes are conducive or contrary to Tracy's learning, we are in no position to ascertain whether learning be realised. Students learning outcomes, then, cannot be determined before the fact.

The second line of questions in the introduction was this: What are the connections between teaching and learning – and is the EQF/mechanical model to the point, or are other models more tenable? The main conclusion of the above analyses is that teaching is a directed potential, the possible actualisation of which is learning; or, in a word: that the connection is teleological. Tracy (or broader: the edukator) defines the potential in terms of intentions of teaching. Laura's learning, on the other hand, is the possible actualisation of this potential. As discussed above, learning in institutional settings is the learning of *something*, not just anything, and this *something* is in the hands of Laura, in the form of her intentions. Tracy's realisation of the intentions is by no means certain, it is precisely a potential, but it is, in any case, dependent upon the intentions of Tracy. This is what I mean when I say that the connection between teaching and learning is *directed*.

There are interesting questions to be asked about the relationship between the two models introduced in the paper: the mechanical and the teleological model, and the three theses on teaching that I discussed above: the Dewey-thesis, the standard-thesis and the Hirst-thesis. The Dewey-thesis, it will be remembered, is the proposition that "There is the same exact equation between teaching and learning that there is between selling and buying". The Standard-thesis, on the other hand, denies this: "It is not possible to equate the relationship between teaching and learning with the relationship between buying and selling". The Hirst-thesis in some ways cuts across this opposition since it is limited in terms of both *object* (acts of teaching) and *scope* (teaching, not the relationship between teaching and learning): "Acts of teaching is characterised by embodying intentions of learning".

As the above analyses demonstrate, I find the Dewey-thesis insufficient as an attempt to characterise the connection between teaching and learning. In so far, I side with the Standard-thesis: teaching is not akin to selling and learning is not akin to buying. A possible interpretation of the Dewey-thesis, in the light of this paper, is that it fails to recognize the distinction between the task/achievement-senses of teaching *and* the task/achievement of learning. It seems, rather, that the Dewey-thesis amounts to the position that teaching is a task whilst learning is an achievement. This position I criticised above, on the ground that it does not recognize that teaching can be both a task and achievement, as can learning. In any case, I hope to have demonstrated that the arguments against the Dewey-thesis are strong. As to the Hirst-thesis, I stated above that I agree with Hirst that acts of teaching are characterised by embodying intentions of learning, and I argued that the Hirst-thesis differs from the Dewey-thesis directionally. By introducing now the two models discussed in the paper, the mechanical and the teleological, respectively, it is possible to suggest what this directional difference amounts to. On the mechanical model, the account is one-dimensional and it puts the results of a process before the process, the realisation of intentions before the intentions themselves. On the teleological model, the account is multidimensional and it recognizes that results in educational settings are on the background of teacher-intensions; or broader: the intentions of the edukator: the profession, the discipline, the *Fach*. To learn is to learn something. As I stated above, Tracy guards the gates in the city of knowledge, while Laura is trying to get in. But she cannot get in if there are no gates by which to enter.

I find two things in particular striking about the results of the above analyses. The first can find expression in the following question: How can the EQF, the overarching plan for European higher education, disregard educational inputs in modelling the European Higher Education Area? If the above analysis is accurate, it would seem this is hasty – to say the least. To try to account for this, several candidate explanations seem to my mind plausible. I shall here just name them, but I thereby mean to signpost possibilities for future research. **Candidate 1**: The *learnification/commodification* of higher education. Gert Biesta (2005; 2006) might serve as an emblematic name in this connection, the idea being that European higher education is *learnified* as described by Biesta. **Candidate 2**: EQF is really about policy, not about education. The main purpose of the EQF, underscored in official documents, is to

"create more explicit systems that map and explain the purpose and relationship between different qualifications" (MSTI 2005, 32). In the Norwegian footprint of the EQF, The *Nasjonalt kvalifikasjonsrammeverk for livslang læring*, (work-force) mobility is highlighted as a main purpose behind the EQF (Kunnskapsdepartementet 2011, 8). It is not exactly a stretch from statements such as these to the proposition that the main drives behind EQF are other than educational. **Candidate 3**: Since everything is now a market, higher educational is a market and so higher education must adopt to the transactional logic that is the order of things. Michael Sandel (2012) might serve as an emblematic name in this connection, as might Rune Slagstad (2012). It is interesting, in this connection, to note how a transactional logic seems to operate in the Dewey-thesis. It is interesting too, to contemplate the so-called TINA-thesis and wonder as to what room for alternatives there actually are.

The second thing that strikes me as about the results of my analyses is that they are, in a certain sense, *unsurprising*. The best teachers know that their input is vitally important, that how they negotiate and embody in terms of the explanatory factors and the factors' reciprocity, can make all the difference in the world. They know this because they recognise that their students are subjects – and thus subject to educational change.

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