# Putting Learning in Its Place

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Educational policy, over the last twenty years or so, has been dominated increasingly by the economic turn, too often, seemingly, to the detriment of educational values. This paper argues that common, but erroneous, assumptions about learning have helped to smooth the way for the ongoing dominance of the economic turn in educational policy. These common, but questionable, assumptions about learning will be shown to centre on viewing it as something (some *thing*) that is located inside of learners. This view of learning will be criticised and rejected. An alternative understanding of learning as a complex relational web that is an ongoing process of change will be proposed. Although this is a less simple conception of learning than common sense intuitions might favour, this paper maintains that any productive rethinking of educational policy will require a more sophisticated, timely and accurate understanding of learning.

In recent work I have questioned the undue influence of common metaphors about learning (Hager and Halliday 2007, Chapter 5). Major examples of these metaphors are acquisition, possession and transfer. Accompanying these is the mind as a container metaphor (Hager 2005). These ideas about learning put the focus on the *products* of learning as items to be stored in the mind. In so doing, they deflect attention from the *process* aspects of learning. The significance of viewing learning as a process will become apparent later in the paper.

All of these common metaphors about learning are complicit in its being thought of as a commodity to be bought and sold. In encouraging the spread of this dubious thinking, it needs to be said that education systems generally have not helped with some of their common nomenclature and terminology that has been unquestioningly and uncritically deployed and disseminated for decades. For instance, we in higher education talk about *delivery* of courses, course *providers*, course *offerings*, course *load*, student *load*, etc. All of this fits neatly with the notion of education as a market in which students are consumers of the products that are sold by teachers as salespersons. Further, as Ozolins notes, this fuzzy thinking says something about the nature of what is learnt:

> It follows logically that what is exchanged must be material and quantifiable; it is not something which is intangible or immaterial.
>
> (Ozolins 2003: 4)

This paper will be arguing that learning is something that is intangible, elusive and immaterial. It is not a series of discrete items located in specific places at specific times. The main focus of the paper will be the common, largely unquestioned assumption about learning that accompanies much of the above thinking. This is the assumption that learning is something (i.e. some *thing*) that resides in the head of the learner. The connections here with the mind as container metaphor are obvious.

Now it might be thought that such coarse thinking is only associated with educationally unsophisticated ideas, such as the public perception that quiz show champions, with their minds seemingly crammed with information, represent ideals of an educated person. However, there are plenty of more respectable versions of the mind as mental filing cabinet

assumption. For a start, it needs to be recognised that it is inescapable that thought about learning takes place largely in metaphors. (For a discussion of the reasons why this is so, see Hager and Halliday 2007, Chapter 5). This being so, even sophisticated educational thought often includes versions of the mind as container assumption. For instance, starting from the idea that the prime purpose of liberal education is to expand an individual's mind (e.g. Berlin 1969), proponents of liberal education have often deployed arguments that centre on an inner/outer distinction. Such a distinction locates valued learning within the learner, in contrast to merely instrumental learning, which is tainted with outer connections (e.g. Bagnall 1990). This valuing of the inner as against the outer has several dimensions. Firstly, motivation to learn should come preferably from within the individual, rather than from outer considerations. Thus, educational goals are viewed in terms of their perceived value to the individual, i.e. they should be non-instrumental, hence having no direct connection to external rewards. Secondly, the value accorded to learning something for its own sake is associated with the inner, as against the outer connotations of learning it for some other reason.

It was precisely these kinds of inner/outer theses about liberal education that Bailey (1984) attacked in his influential and much-discussed proposals for reanimating liberal education. Bailey (1984, p. 80 ff.) was concerned that liberal education had been portrayed too often been presented as narrowly focussed on theoretical knowledge as "bodies of true propositions". He insisted that it should also include ".... areas of human 'goings-on' which are the actions, makings, doings, dispositions, expressions and interactions which give meaning, point and significance" to the true propositions. So, according to Bailey, liberal education must include important components of 'knowing how', which he argued is something richer than mere performance. Hence in Bailey's work, the tendency to identify liberal education with the inner is largely destroyed.

However, the assumption that all learning resides within or is located around individuals is certainly a near universal one. For example, nearly all higher education assessment practices focus on individual learners. There is almost no concept of valuable learning by a group or team. The assumption, apparently, is that where there is group or team learning, this is all reducible without loss to the learning of the individuals that comprise the team. On this sort of reductive view, the notion of organisational learning is considered to be clearly incoherent, since it is people that learn, not abstract entities such as organisations. However, what is lacking here is cogent argument that there cannot be learning that does not reduce to individual learnings. If learning is thought of as simply residing in peoples' heads, then it seems obvious that the reductive assumption is correct. So no further argument is required. However, if as is argued in this paper, learning does not simply reside in peoples' heads, then non-reductive notions of group or team learning become much more plausible.

In the recent special issue of *Educational Philosophy and Theory* on 'Philosophy of Learning', Clark (2005) was a strong proponent of the view that learning resides firmly in the brain. He presented the key arguments for the view that empirical studies of the brain, in particular the hippocampus, will finally yield satisfactory accounts of learning. However, in the same issue, Andrew Davis questioned the relevance of such empirical data, arguing that the nature of learning is a conceptual matter. He maintained that putative mental powers located in brains are dubious on various conceptual grounds, including the contextuality of learning: "the very existence of some supposed mental powers is open to challenge, at least if these powers are conceived of in an individualist fashion" (Davis 2005, p. 637).

According to Schoenfeld (1999, p. 6):

> …. the very definition of learning is contested, and …….. assumptions that people make regarding its nature and where it takes place also vary widely.

This paper will seek to add to this contestation by considering two broad kinds of arguments that question the assumption that learning is something (i.e. some *thing*) that resides in the head of the learner.

**I The argument from 'travelling'**

Not surprisingly, verbal usage incorporates key common views about learning that have been outlined in the previous section. For instance, while the verb 'to learn' has broad scope in that it covers acquisition of both knowledge and skill, the noun 'learning' is usually restricted to verbal knowledge. Thus, a 'person of learning' is always someone accomplished in propositional knowledge. The result is that while, say, learned judges or learned astronomers are common, a learned bricklayer or learned sculptor is much less likely. For the latter descriptors to be accurate, their subjects would likely need to have detailed understanding of some field other than laying bricks or making sculptures. Hence, while 'learning' as a verb covers more than propositional knowledge, 'learning' as a noun gives primacy to propositional knowledge as the thing that is learnt. The three common metaphors 'acquisition', 'possession' and 'transfer' also come into play. The thing that is learnt has been acquired. So it is possessed by the learner and can be transferred as desired. This simple picture quickly suggests some influential and widely-held features of learning in its noun sense:

1. Learning is an abstract thing: Since it can be acquired, possessed and transferred, it is a commodity of some kind, albeit an abstract thing since it cannot be observed directly.
2. Learning is an independent thing: This independence is manifest in two ways. Firstly, what is learnt is a thing or substance that is independent of the learner, as the notions of 'acquisition', 'possession' and 'transfer' suggest. Secondly, what is learnt is separate from and independent of the context in which it is learnt. That is why it can be transferred readily and intact to any new context. Thus what is learnt becomes a self-contained abstract thing.
3. Learning is located in the learner's head: Since what is learnt is a thing that is acquired, possessed and transferred, yet we cannot see it, it makes obvious sense to locate it somehow 'inside' the learner. Once the focus is on propositional knowledge, the location becomes inside the learner's head, whether this is viewed as being in the mind or brain.
   Thus what is learnt becomes a self-contained abstract thing located in the learner's head.
4. Learning is associated with movement: Learning apparently involves movement of a thing or substance from place to place. For instance, when the self-contained abstract thing comes to be located in the learner's head, or again when the learner transfers the learning to some new situation after it has been learnt.

Thus common English usage conspires with the three widely-used metaphors to suggest that learning is essentially cerebral, a phenomenon characterised by the four features just outlined.

However, as various writers have warned us (e.g. Scheffler 1960, Hacking 1999), metaphors can mislead us just as often as they illuminate. Are there other fruitful ways of conceptualising learning that reject these traditional metaphors? As a way into approaching this question, let us for a moment consider the concept of travelling as a possible parallel concept to learning. (After all, various philosophers have commended the idea that becoming educated (learning) is best viewed as an ongoing journey (e.g. Peters 1965)). The verb to travel is like the verb 'to learn', in that its derivative 'travelling' functions both as a noun and a verb. However, unlike the case of learning, common English usage of the noun 'travelling' does not involve the four kinds of features as set out above for learning.

Firstly, travelling as a noun simply is not plausibly thought of as a commodity or thing (whether abstract or otherwise) that can be acquired, possessed and transferred. Rather it appears to be an activity in which one can participate. Secondly, travelling is not something that is independent of the traveller. Nor is it separate from and independent of the context in which it occurs. Thirdly, we are not tempted to view travelling as something that is somehow located 'inside' of the traveller. While travelling will no doubt leave its traces inside of the traveller, e.g. memories, it seems clear that travelling itself is some kind of complex relational web with both spatial and temporal dimensions, one that connects the traveller and various parts of the wider world. So it would be perverse to locate the travelling inside of someone's head. (In fact, this kind of scenario is perhaps best reserved for dreamers whose material circumstances restrict them to vicarious travel as a substitute for the real thing). Fourthly, whilst travelling, like learning, involves movement, it is clearly not primarily movement of entities into and out of peoples' heads. Rather, travel involves movement of people to and between various and diverse locations.

So the noun 'travelling' has quite different conceptual features from those that, influenced by the common metaphors of learning, we attribute to the noun 'learning'. Likewise, whereas we saw that a learned person is always someone whose head or mind is well-stocked with propositional knowledge, a travelled person is someone who has more than a well-stocked mind. Whilst such a person no doubt has various propositional knowledge and concepts, the origins of which could be traced to their travels, they also stand in complex relations of various kinds to the various places to which they have travelled.

Travelling has another important feature that, by extension, might assist us towards a better understanding of learning. This is that travelling is an activity whose explication requires various and multiple levels of explanation. To appreciate this, consider, for example, one particular instance of travelling, a guided, sightseeing tour in a bus. To gain anything approaching a detailed understanding of what happens on such a tour, we would need to invoke many and diverse levels of explanation. For a start, one can offer a physical description of the workings of the various mechanical and electrical components of the bus during the tour. This description will explain some aspects of the trip, but not many. One can also appeal to the local traffic code and road rules – these will help to explain some other limited aspects of the tour. One can then describe the advertised program and itinerary for the sightseeing tour. These will explain still other aspects of the tour, though the particular guide's interests and motivations, as well as the special requests and desires of various members of the tour party will also likely be relevant here. A description of traffic and road conditions on the day of the tour (i.e. the environment generally) will offer further explanation. And so on. The important point is that there is no one level of description that will explain everything about the sightseeing tour. Any particular example of travelling, such as the tour, is highly situated and contextual. But in principle, we can explain/describe

aspects of it, to extent that we need to for a given purpose, by appealing to the kinds of information already outlined for the tour. However, this will require various levels and types of explanation, as the example of the sightseeing tour illustrates.

The tentative suggestion now is that maybe learning is significantly like travelling (and perhaps other basic human activities such as eating, talking, etc.). There is no one level or type of explanation that is *the* explanation of an instance of travelling. Nor is there any reason to expect that there will be a single, general theory of travelling. Maybe to think otherwise is to fall into the scientistic assumption that because there is one word for something, it refers to a single, unitary object. Rather the kinds of explanations that are relevant to understanding travelling will differ according to the different aspects of the travelling that we are interested in. Perhaps the same applies to learning? If so, the story provided by the acquisition-possession-transfer model is too simplistic. Nor, given the varieties of kinds of learning, should we expect that a single, general theory of learning will be a viable possibility (cf. Winch 1998, pp. 2, 85, 183). Dewey appears to have had something like this complexity and diversity in mind when he maintained that:

> Experience, in short, is not a combination of mind and world, subject and object, method and subject matter, *but is a single continuous interaction of a great diversity (literally countless in number) of energies*.
> (Dewey 1916, p. 167, emphasis added)

Travelling as a complex relational web resonates with Dewey's holistic account of experience. As the previous quotation reminds us, Dewey was loath to sharply distinguish learner from learning, nor either of these from the environment in which they occur. Indeed, it was precisely because of the dubious metaphysical baggage associated with the common sense notions such as learning and education, (e.g. learning as things located inside of heads), that Dewey either avoided these notions where possible or else provided them with technical definitions. In the former case, Dewey stuck with his own preferred terms ('experience', 'growth', 'inquiry', 'reconstruction', 'situation', 'transaction', etc.). In the latter case he defined the common sense notions via his own preferred terms. Hence his famous "technical definition of education":

> It is that reconstruction or reorganisation of experience which adds to the meaning of experience, and which increases ability to direct the course of subsequent experience.
> (Dewey 1916, p. 76)

It is because Dewey prefers his own terminology, that it may not be immediately obvious to the casual reader that for him, learning is a changing relation web that encompasses both the learner and their surroundings. Dewey's central claim is that human experience is an ongoing process or activity in which the supposed subject and its objects are so seamlessly interconnected that any claimed separation is one in thought only, not in reality (see, e.g., 1938, Chapter 2). Now learning is part and parcel of this holistic ongoing activity that Dewey calls 'experience'. This inextricable linkage of learning and experience in Dewey is evident in his technical definition of education, quoted above. Though I will not pursue this further here, Dewey's transactionalism (Dewey & Bently 1949, Garrison 2001, Vanderstraten 2002) also is a rich source for this kind of holistic argument. So learning and experience in Dewey resonate with points drawn from the above discussion of learning and travelling. Incidentally, for Dewey not only learning but thought also takes place, in a strong sense, well beyond the cranium. As Burke puts it:

> Thought, in the most general sense of the term, does not even take place solely within the agent but rather is a kind of agent/world interaction. Thought takes place in the interactive interface between agent and world.
>
> (Burke 1994, p. 164)

An alternative understanding of learning can be seen to be arising during the course of this discussion. It views learning as a relational web that is an ongoing process of change. This relational web connects the whole that is learner and the surrounding world in an evolving way. As well, learning is transactional in the Dewey and Bently (1949) sense that it changes both the learner and the context (a whole), viewed both widely and narrowly. Most generally, learning is a change in the whole that is both the learner and its environment, brought about by action to correct an experienced imbalance.

It rejects each of the four features of the common noun sense of learning (1-4 above), replacing them by something like i-iv as follows:

i. Far from being a thing or substance, learning is a changing relational web. Nor can it be acquired, possessed and transferred, in the way a commodity can.
ii. Nor is learning independent of the learner, since the learner is a part of this changing relational web. Likewise, learning is not independent of its context, since it incorporates that context and is inherently shaped by it.
iii. Rather than being located in the learner's head, learning encompasses the learner and its environment.
iv. Rather than involving movement of a thing or substance into or out of the learner's head, the movement associated with learning mostly involves the learner moving with respect to the environment, as part of the ongoing changing relational web.

Clearly i-iv provide no purchase for the acquisition, possession and transfer metaphors that underpin the idea that learning is located in the head.

In any case, the cosy, common sense, mutually supportive consistency between the acquisition, possession and transfer metaphors and the idea that learning is located in the head is also questioned by recent work in neuroscience. Bennett and Hacker (2003) illuminates the conceptual confusions that become apparent if the findings of neuroscience are placed against 'common sense' accounts of minds and learning. For instance, Bennett and Hacker, point out that it is simply wrong to think that knowledge and information can be recorded in the brain in the same way that they can be recorded in books, card-indexes and computers. Regarding knowledge they state:

> We may say of a book that it contains all the knowledge of a lifetime's work of a scholar, or of a filing cabinet that it contains all the available knowledge, duly card-indexed, about Julius Caesar. This means that the pages of the book or the cards in the filing cabinet have written on them *expressions* of a large number of known truths. In this sense, the brain *contains* no knowledge whatsoever. There are no symbols in the brain that by their array express a single proposition, let alone a proposition that is known to be true. Of course, in this sense a human being *contains* no knowledge either. To possess knowledge is not to contain knowledge.
>
> (Bennett & Hacker 2003, pp. 152-3)

This means that even if learners do possess their learning, that situation does not mean that they contain it. But this is actually the normal situation for human possessions. I can possess a car, a block of land, or a wine collection. But none of these possessions are located inside of me. So why should possession of knowledge be any different?

Bennett and Hacker then argue that similar considerations apply to the notion that information can be recorded in the brain:

> A great deal of information is contained in the *Encyclopaedia Britannica*. In that sense, there is none in the brain. Much information can be *derived* from a slice through a tree trunk or from a geological specimen – and so too from PET and fMRI scans of the brain's activities. But this is *not* information that the brain *has*. Nor is it *written in* the brain, let alone in the 'language of the brain', any more than dendrochronological information about the severity of winters in the 1930s is written in the tree trunk in arboreal patois.
>
> (Bennett & Hacker 2003, pp. 153).

So the commonly accepted idea that in propositional learning propositions are transferred to the mind or brain is dubious. *A fortiori*, it is even more dubious to try to locate the many kinds of human learning within the cranium. As we have seen, there are still those who think that neuroscience might accomplish just such an account (e.g. Clark 2005). Our earlier example of the sightseeing bus tour, demonstrated that explanations of learning occur at different levels, each of which covers only part of a wider story. Bennett and Hacker's work shows how the sense in which learning records information in the brain is a small part of such learning. A partial account of such learning may be derivable from analysing brain traces. But, as with the process of inferring meteorological information from the evidence within a tree trunk, this will need to be supplemented by an array of theory, other facts and assumptions in order to achieve even this partial account.

I will now consider a second kind of argument against this near-ubiquitous view that learning resides in the head of the learner.

## II The argument from practice

Schatzki (2001) outlines what he calls the 'practice turn' in diverse disciplines such as philosophy, sociology, history, anthropology, cultural theory, and science and technology studies. He suggests that despite much disagreement about details, practice theorists conceive of "practices as embodied, materially mediated arrays of human activity centrally organized around shared practical understanding" (Schatzki 2001, p. 2). For practice theorists, "embodied capacities such as know-how, skills, tacit understanding, and dispositions" displace "once cited mental entities such as beliefs, desires, emotions and purposes" (Schatzki 2001, p. 7).

> This prioritization of practices over mind brings with it a transformed conception of knowledge. ….knowledge (and truth) are no longer automatically self-transparent possessions of minds. Rather, knowledge and truth, including the scientific versions, are mediated by both by interactions between people and by arrangements in the world. Often, consequently, knowledge is no longer even the property of individuals, but instead a feature of groups, together with their material setups. Scientific and other

> knowledges also no longer amount to stockpiled representations. Not only do practical understandings, ways of proceeding, and even setups of the material environment represent forms of knowledge – propositional knowledge presupposes and depends on them.
>
> (Schatzki 2001, p. 12)

There is no mention of learning here, but it is clear that if propositional knowledge has a prior dependence on public practices of various kinds, then learning cannot be primarily a matter of stocking minds with propositions.

Philosophers whose work is cited by Schatzki as being influential in the 'practice turn' include Wittgenstein, Heidegger, Dewey, Hubert Dreyfus, Brandom, and Charles Taylor. Here I will limit myself to a brief consideration of the work of, respectively, Dreyfus and Brandom, with particular focus on how their work can be seen to challenge the assumption that learning is something (i.e. some *thing*) that resides in the head of the learner.

Hubert Dreyfus' work is, of course, very rich and varied. Central to this work is the notion of practice, a notion strongly influenced and shaped by his reading of Heidegger. (The crucial role of the concept of practice to Dreyfus' work is indicated by its prominence in a two volume *festschrift* honouring his work (Wrathall & Malpas 2000), which includes replies by Dreyfus to each of the essays. The following points derive from my reading of these essays and Dreyfus' replies). A main thesis that permeates his work on practice is the following:
Embodied, practical coping in a skilful way with one's surroundings is a fundamental mode of intentionality.

Clearly there needs to be a role for learning in this embodied practical coping. However, for Dreyfus, cognition derives from practice, rather than the other way around. Practices are public social skills that converge and are interconnected. As well, practices cannot be made fully explicit, nor can they be adequately explicated theoretically (so, skilled performance cannot be reduced to rule following). Thus, learning a practice might be thought of as establishing a relationship with something that is public and social, rather than mental and private. However, Dreyfus claims that rather than asking how people are related to their practices, it is more helpful to say that people *are* their practices. So perhaps on this account learning becomes a public way of being. None of this means that practices are static. Dreyfus fully accepts that skilled practitioners can respond creatively and imaginatively to new, different or unexpected cases, where a routine response would be ineffective or unsatisfactory. So these public and social practices, that resist theoretical explication, are refined and developed over time. If we ask 'where is the learning here?', it would seem that it has to be in the "materially mediated arrays of human activity" rather than in the head (or body) of any individual practitioner (learner).

Robert Brandom's work (1994, 2001) centres on an account of the use of concepts and propositions that rejects traditional representational views. Brandom displaces such theories with an account of conceptual understanding which bases it on inference and judgement. For him, items of understanding are not relatively independent of one another as claimed in representational accounts. Rather, according to Brandom's inferentialism, concepts are mutually dependent upon one another in chains of inferences. Thus, they are constantly revisable as there is further development of understanding.

Influenced by Sellars' (1956) rebuttal of 'the Myth of the Given', Brandom provides an account of conceptual objectivity that locates it in the normative context of the human social practice of "giving and asking for reasons" (Brandom 2001: 83), rather than in some supposed formal, abstract, universal realm.

> Grasping or understanding a concept is simply being able practically to place it in a network of inferential relations: to know what is evidence for or against its being properly applied to a particular case, and what its proper applicability to a particular case counts as evidence for or against. Our capacity to know (or believe) *that* something is the case depends on our having a certain kind of know-how: the ability to tell what is a reason for what."
>
> (Brandom 2001, p. 82)

Hence, according to Brandom

> …. concepts are broadly inferential norms that implicitly govern practices of giving and asking for reasons.
>
> (Brandom 2001, p. 84)

As Derry (2000: 2) suggests:

> …. the realm of reasons, (the normative context) that makes knowledge possible, exists outside individuals in the world itself, that is the social world which individuals inhabit.

So, knowledge and concepts derive from the human practices of inference and judgement, which are set in a social space of reasons, a space that is independent of individual learners. Thus learning is not primarily about forming abstract concepts in heads. It is about engaging skilfully in practices in a social space of reasons. Being social, these practices have a history, one which with hindsight, Brandom argues, can be interpreted and reconstructed as rational in the Hegelian sense.

**Conclusion**

This paper has challenged common sense notions about where learning is located. It has outlined two kinds of arguments for rejecting the popular idea that learning is essentially located in individuals' heads. There are other lines of argument that might have been followed to reach the same conclusion. For instance, it has become abundantly apparent that so-called generic skills or attributes, much beloved of policy makers in recent times, are significantly dispositional, social and contextual, thereby creating tensions with the traditional exclusive focus of education systems on individual learners in formal learning settings (Hager and Holland 2007).

The economic turn in educational policy making has centred on common, but erroneous, assumptions about learning. As such, the failure of much educational policy making is guaranteed in advance. Learning is something that is much more holistic and contextual than is widely believed. Nor is the exclusively atomistic focus on individual learners consonant with the complex nature of learning as a process. For any attempt to rethink the aims of education to be successful, it will require a more sophisticated and accurate understanding of learning, one that encompasses the role of learning beyond formal classroom settings.

Csikszentmihalyi (1996, pp. 23-28) asks where creativity might be located and concludes that

> ….creativity does not happen inside people's heads, but in the intersection between a person's thoughts and a sociocultural context. It is a systemic rather than an individual phenomenon…. Creativity is any act, idea or product that changes an existing domain, or that transforms an existing domain into a new one.

I have argued that we should make the same point about learning.

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