How useful are concepts of learning approaches to thinking about early professional learning?

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Approaches to learning are concepts that I have found useful in thinking about both my own academic learning and the subject learning of my pupils. I cannot help myself from wondering how useful they might be to this project. So this may be as much an attempt to get this out of my system as anything else. At any rate, at this stage the paper is regarded as a few rough ideas to be tested at this team meeting. What happens to the ideas will be influenced by this test. However, I'll try more formally to justify exploring the possible use of these concepts.

Why consider these concepts?
The focus of this project is on “What and how new teachers learn?” I wonder just how much the second part of this question (the ‘how they learn’) is a precursor to the first (‘what they learn’). Our data has thrown up stark differences between the experiences of our probationers, and these almost certainly affect what they are learning, but we need also to remember that people may learn differently from the same, or similar, experiences. This becomes more obvious if we think in terms of understanding rather than learning. I am sure that we have all been surprised in our teaching by the different ways that our students have understood (or misunderstood) a topic that they have covered together in the same class or seminar.

Approaches to learning are concepts that arose initially from the interest of two Swedish researchers (Marton and Säljö, 1976a, 1976b) in the above question of variations in learning outcome from the same learning activity and context where they talk of deep and surface level processing. Gradually, through the process of academic debate, approaches to learning became the accepted term that encompassed these and similar concepts developed by other researchers (Biggs and Rihn, 1984). They originated mainly in research into learning in higher education and remain influential in this context, although not without critics1. Proponents claim that they can be identified in a range of learning activities such as lectures, problem solving and essay writing (e.g. Hodgson, 1984; Hounsell, 1984; Laurillard, 1979, 1984; Ramsden, 1984) and with secondary school pupils (Selmes, 1985, 1986). The concept also seems to be applicable to primary school children's approaches to learning to read (Francis, 1984). It has also influenced or been applied to the analysis of research problems and/or results in a number of other research projects covering such diverse areas as training of nurses (Trigwell and Prosser, 1991), learning in the third world (Wilson, 1987), study methods used by university students in relation to various forms of outcome and/or success (Entwistle and Waterson, 1988; MacLelllen, 1996; Thomas and Bain, 1982; Van Rossum and Schenck, 1984), preferences by students for methods of instruction (Jones and Jones, 1996) and children's thinking about their own learning (Pramling, 1988).

For myself, there are also some intriguing similarities between approaches to learning and concepts developed elsewhere. In particular, the distinction between the goals which learners approach learning tasks as being either performance goals or mastery (learning) goals (for example, Ames, 1992; Dweck, 1986; Greene and Miller, 1996), or student involvement in learning as being task involvement or ego involvement (for example, Graham and Golan, 1991; Nicholls 1984). However, Bong (1996) notes that although these latter two dichotomies are essentially equivalent, it is not clear if they are rooted within the same theory of intelligence and she argues that it would be helpful for work to be done on their integration and a similar caution applies in any comparison of these concepts to that of approaches to learning.

However, from our own point of view, we are dealing with adult learners in a situation in which outcomes can be discussed using terms such as understanding, personal meaning, interpretation of the context by the learner, and so on, and these are also the terms associated with approaches to learning. Given their influence, and possible similarity with other research concepts, we should at least consider if they help in our analysis. In addition, they might also help us further to explore the explicit/implicit distinction, as they seem to me to be a way of analysing explicit learning. For the future, they may also provide conceptual tools that could be given to new (or any?) teacher to use in reflecting upon and taking more control of their development. It is in this role of encouraging reflection on their learning by older pupils that I have found them useful in school. So, what do I hope to achieve more immediately in this paper?

Aims.
To go back to the first (and most basic) draft of the implicit/explicit-learning model of professional learning offered previously for discussion.
To outline the concepts of approaches to learning and fit them onto the implicit/explicit model.
To offer an interpretation of these as they might apply to learning to teach.

1 E.g. Haggis, 2003. For the purposes of this paper, I shall ignore her (and any other) criticisms for the moment. However, for whatever it is worth, on a quick reading I seem to find myself in agreement with a substantial proportion of her comments on values and also the vagueness of the nature of understanding and meaning, and have already tried to deal with some of them in my own way (Smith, 1998). I also have a great deal of sympathy with her antagonism to any (implied) view that constructs learners as passively constructed by past or present experience, along with her preference for an apprenticeship model of higher learning – indeed any educational learning. Actually, many of the points she makes could also be made in the context of attempts by academics to tell schoolteachers how to use constructivist based teaching approaches (Smith, 2004).
To see how (and if) George and Rachael fit into the model of EPL that begins to emerge.

**A model of professional learning.**

Figure 1 arose out of a combination of events. It was obvious from early meetings and the first visit to the WebCT that the university side of the team was already engaged in discussing forms of learning (*tacit, implicit, explicit, formal, and informal*). I happened to be reading Macphail (1998) at the same time. The model that I offered as a result was, and remains, speculative. However, we discussed at one recent meeting the need to generate our own conceptual frameworks that, in the absence of others specific to our purpose, can be tested against our data.

Macphail reports on both his own research and on substantial reviews of the literature on animal and human learning that lead him to argue that humans have two learning systems. One he calls the *implicit learning system.* We share this system with, at least, all other vertebrates. It is not readily accessible to consciousness in the sense that we think or talk about it at the same time as it is operating. It works largely undirected by the conscious intentions of the organism itself.

### Table: Possible lexicon of explanatory/descriptive terms in context of professional development

| Explicit system | Conscious system | Intentionality (belief, intention, etc.) goals, aims, hypotheses, self-concept, propositional knowledge, language, values, living theories, action theories, practitioner theories, constructivism (all forms?), policies, curriculum, metacognition, intentional learning, meaning making and so on. | Autobiographical, biographical, themes, qualitative, grounded theory, |

| Implicit system | Unconscious system, tacit learning, associative learning. | Associations, events, stimulus, response, context structure, outcomes | S-S, R-S, S-R, events analysis, behavioural analysis, systems analysis, organisational analysis/ theory. |

**FIGURE 1:** Learning as involving explicit and implicit systems.
Macphail suggests that the implicit system has an important evolutionary purpose— to represent causal links between repeated conjunctions of events. Events can be either stimuli for an organism or its responses. This may conjure up images of simple behaviouristic theories of learning but seemingly we have moved beyond that, even for this implicit system. Thus, we can have S-S associations, R-S associations and S-R associations. We can also identify situations where previous associations hinder or aid the formation of new ones. We could speculate what sort of events in the school and classroom would constitute the basic types of associations. Taking this further may be necessary if we want to understand better the role of implicit learning in professional development but is not the purpose of this paper. However, it is worth noting that Macphail claims that although the workings of the implicit system are not available to consciousness, its outcomes sometimes are².

In Macphail’s view, the explicit system is unique to humans and runs in parallel with the implicit system. It depends upon language and involves a region of the brain called the hippocampus, an area important in memory. The hippocampus is not unique to humans. However, in humans, language and the hippocampus together allow for the development of the self-concept and then autobiographical memory. These form the basis for explicit learning.

We need to remember that Macphail’s aim is to produce an argument concerning the evolution of consciousness. His interest in the concepts of implicit and explicit learning is in this context. For example, he devotes a number of pages aiming to demonstrate that prelanguage infants only have the implicit system. It is the emergence of language that leads inevitably to the self-concept and the development of autobiographical memory. When these develop, we can then intentionally recall events in our lives and reflect upon them—explicit learning⁴. In considering our use of the concepts, we have to take into account the context to which Macphail applies them.³ He has nothing to say about the sort of learning situations we are concerned with in this project.

On the other hand, it is not unusual to find that concepts developed to explain one phenomenon are useful in explanations of others (Ellis, 2003)⁵. More particularly, similar concepts have arisen in the project discussions, and it may help to both clarify these and provide them with additional provenance if we can relate them to a wider research context. This seems particularly true to me if we think of EPL (indeed any form of educational learning) as being concerned in some sense with aiding the development of the self-concept and a sense of controlling this through our autobiographical memory. The model also seemed useful to me to show the possible origin of some value conflicts that we experience in teaching and which Whitehead (for example, 2000), sees as central facet of our professional learning and which we have also considered to be an issue. So, can we integrate concepts particular to educational learning generally and, if so, is this integration any use to explaining and intervening in EPL? It is time now to outline the concepts of approaches to learning and see if they can be fitted to the model in figure 1.

**Approaches to learning.**

The history of these concepts, as noted earlier, is usually taken to begin with a study carried out by Marton and Säljö (1976a, 1976b) and can be traced through the literature and applied to different ages, learning activities and educational contexts, although their influence is greatest in higher education. However, perhaps the easiest introduction to them is to describe the original study. The subjects were university students. They were asked to read an article with a strong argument, having been told that they would later be questioned about it. This questioning began with a request to summarise the article briefly, and was then followed by more content specific questions. Marton and Säljö found that they could identify two qualitatively different ways the students adopted in reading the article that led to qualitatively different outcomes.

Some students had an intention to cope with the task so as to reproduce the points they expect to be asked about, and so they engaged in what the authors called *surface level processing* based on rote learning strategies. Other students wished to make sense of the intentional content of learning material. That is, they set out with the intention of understanding what the author meant (1976a). This approach utilises *deep level processing* in which the argument is related to previous knowledge, other topics and personal experience. The intentions adopted by the students are not seen as characteristic of them as individuals, but depend upon the

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² See first attempt at this in discussion section of WebCT.
³ In fact, he describes some experiments that lead him to reject the involvement of the explicit system in some learning situations when it might have been suspected that it would be.
⁴ Interestingly, Lewis (2003) identifies a form of intentions developing at this age that are related to how the self views itself, the world and its actions in the world. These are the same form of intentions that adults use and Lewis calls them *self schema intentions*. They run in parallel with *primitive intentions* that are due to the operations of the body machinery. Personal pronoun use is one factor (although not necessarily the first) involved in this development. This description of intention seems similar to that used by proponents of approaches to learning. Perhaps, also, these two forms of intention are another way of describing explicit and implicit learning.
⁵ Remember Nick’s comments on the origin of concepts during the meeting of 12/01/05.
⁶ Indeed, Ellis goes further and argues that concepts that do this are not just useful constructions or tools but are words for real things.
ways in which they interpret what is expected of them on a particular occasion (1976b). Entwistle and his colleagues (1979) noted that Marton and Säljö’s work described learning in terms of three elements: intention, process and outcome, and that the descriptions of levels of processing included both intention and process and suggested that that the terms ‘deep and surface approaches’ were preferable which, as we noted earlier, became accepted.

<table>
<thead>
<tr>
<th>Approach to learning</th>
<th>Features (depending on context/nature of learning activity) (Entwistle 1987)</th>
<th>Motivation</th>
</tr>
</thead>
</table>
| Deep approach        | • Intention to understand  
                       • Vigorous interaction with content  
                       • Relate new ideas to previous knowledge  
                       • Relate concepts to everyday experience.  
                       • Relate evidence to conclusions  
                       • Examine the logic of the argument. | Intrinsic |
| Surface approach     | • Intention to complete task requirements  
                       • Memorise information needed for assessments  
                       • Treat task as an external imposition  
                       • Unreflectiveness about purpose or strategies,  
                       • Focus on discrete elements without integration,.  
                       • Failure to distinguish principles from examples | Fear of failure |
| Strategic approach   | • Intention to obtain highest possible grades  
                       • Use previous exam papers to predict questions.  
                       • Be alert to cues about marking schemes.  
                       • Organise time and distribute effort to greatest effect.  
                       • Ensure conditions and materials for studying appropriate. | Need for achievement |

Table 1: Approaches to learning

One early development was to relate motivation to approaches to learning. This led Entwistle and Ramsden to identify a third approach – the strategic approach. The strategic student adopts a deep or surface approach according to its perceived worth in a particular context. Table 1 summarises the characteristics of each approach based on Entwistle (1987). We should note that not all of these characteristics are necessarily present at any one time. It is the presence of sufficient key ones that indicate an approach.7

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7 I am not sure that these three approaches always cover all the possibilities. In thinking about using them as tools for pupils to reflect on their own learning, there seemed to be a third that I came to think of as the ostrich approach. This includes characteristics like flicking the pages when supposedly studying, constantly reorganising notes when studying, eagerly accepting distractions, and so on.
Figure 2 shows how the concepts of approaches to learning may fit onto the explicit and implicit learning model.

**Figure 2**: Approaches to learning mapped onto Explicit/implicit learning model.

**How might approaches to learning be applied to EPL?**

Table 2 shows a suggestion of how the concepts might apply to learning to teach. A *deep approach in EPL* would imply that the probationer takes teaching itself as something to be understood, thought about, conceptualised⁸. After a class, series of lessons, or topic, the probationer would not only consider what had or had not worked but also seek reasons and explanations. They would think carefully about the purposes of what they were doing and adopt, adapt, or develop a repertoire of teaching activities in line with these goals. In particular, they would be concerned about the relationship between their subject and the lives of the pupils. They would reflect on their experiences and relate or contrast them to previous experiences, knowledge or beliefs about teaching. Perhaps, in this context, we might summarise this by describing them as seeing their self-concept of being a teacher as something to be developed under their own control and by trying to understand the teaching process itself. Advice from others becomes a resource to use in this reflection process.

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⁸ Not necessarily in an academic way
Approach to learning to teach | Some possible features | Motivation
---|---|---
Deep approach | - Intention to understand teaching  
- Vigorous engagement with pupils  
- Relate new experiences of teaching and pupils to previous experience  
- Thinks about the relationship between the nature of subject taught and background of pupils.  
* Uses wide range of role models, according to purpose. | Intrinsic
Surface approach | - Intention to complete task requirements and get through the day  
- Treat teaching tasks as an external imposition  
- Unreflectiveness about purpose or strategies  
- Focus on discrete elements without integration  
- Failure to distinguish principles from examples | Fear of failure
Strategic approach | - Intention to obtain highest possible recognition from colleagues  
- Looks for ‘politically correct’ role models.  
- Alert to cues from PT’s etc as to how teaching will be assessed.  
- Organise time and distribute effort to greatest effect. | Need for achievement/recognition

Table 2: How might approaches to learning apply to EPL?

A probationer taking a surface approach to EPL would see teaching as simply a task – something that has to be done to get through the day. The focus is not on understanding teaching but on avoiding failure. They, therefore, tend to reflect much less on the purpose of what they are doing and will form a less integrated view of teaching strategies. Thus, techniques that ‘work’ (get them through the lesson) may be lifted without much further consideration of wider educational purposes and used as the principle of all their lessons – an example becomes a principle.

The strategic approach has always struck me as being more complex than the others and this case is no exception. Finding someone who takes purely a surface or deep approach seems to me to be relatively less common in real educational contexts than in experiments. Elements of the strategic approach (particularly the desire to be recognised by one’s colleagues) seem to permeate the other two so that we have various combinations of strategic and surface or of strategic and deep. This depends not only on the learner but also on the context. Remember, approaches are not supposed to be fixed characteristics of the person, but the result of how they interpret a particular context’s requirements. Obviously, a context may tend to encourage some interpretations over others and a lot of focus in the literature is on how to devise educational contexts that encourage the deep approach in more students. Also, however, we bring a history of previous learning and one lesson we have almost certainly learned is to take at least a minimum strategic cognisance of what is expected.
around us. Indeed, when someone fails to do so, we probably interpret it as a character fault. So, when we take a deep approach where the context perhaps does not favour it, most of us are careful how we go about it.

However, the point about the strategic approach is that in the pursuit of recognition, the learner tends to adopt the stance of those around. In the most characteristic cases in academic learning, it would be an almost cynical attempt to give back to the lecturers their own views and arguments. Translating that to EPL, it would be adopting role models or teaching processes they have observed or had suggested to them, but with the main aim being to please those doing the assessment, rather than to develop as a teacher. Depending on what they are encouraged to do here will influence whether this, in practice, involves taking on processes of the deep or surface approach.

Also important to our study is its longitudinal nature. Since approaches are not purely characteristics of the person, we might expect the same person to take different approaches at different times. On the other hand, and sometimes overlooked in the approaches to learning literature, developing an understanding of something through learning processes involves iterative and recursive relationships. That is, any current way of understanding one has of, say, the nature of teaching and oneself in relation to it and so the way the present is interpreted, takes into account not only the immediate surroundings and experiences but also what has gone before (Smith, 1998). Another way of putting this is to say that there are obviously historical and developmental aspects to both individuals (and their learning) and to contexts. So, to be of use to us, the concepts need to point:

1. towards trends or changes or advances in our probationers’ learning, or
2. help us to highlight instances when different approaches to learning are occurring and what might be the reasons for this, or
3. a combination of 1 and 2 above.

However, let us see if the concepts do give us tools to describe Rachael and George’s EPL.

**Applying the concepts to our data.**

1. **Rachael.**
On reading the transcripts of Rachael’s interviews, her enthusiasm almost jumps out of the pages. The first words that we hear from her suggest to me a deep approach at the time she uttered them in that she is clearly focussed on the pupils and teaching them, not (to any great degree at least) on failing or on the recognition of her colleagues.

*I’ve learnt that no two lessons are the same…no two classes are the same…and I’ve actually enjoyed that….I can see how after you’ve been teaching for several years and teaching the same books it never is the same and things it is changing. So I think that keeps it fresh and alive for you.*

She goes on immediately to confirm that she is thinking about her encounters with the kids as learning experiences. She certainly appears to engage vigorously with them. There are numerous instances discussed – the use of music to provoke awareness of mood, the shy boy, observing them at work, their involvement in making the rules, and so. One phrase sums it all up nicely.

*It all comes down again to knowing your pupils their individual needs and likes.*

What is also striking about Rachael is the focus she places on developing her understanding of herself as a teacher. She knows what she likes but has come to temper this with a realisation that what she likes may have to be modified –for example, the realisation that music may have to be used as a reward to keep her reputation the way she wants it to be. Another instance is when she talks about coming to realise how distracting the way she walked around the classroom was. There are several instances when she seems to have independently

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9 Logan? He is interesting to think about in terms of learning approaches. He seems to me to have features of a deep approach combined with a certain amount of arrogance. In other fields, he may be the scientist with the unorthodox theory, the heretic, or the rebel who has studied something to some extent but come to different conclusions from the norm. Or is it that he applies the deep approach in a limited way- to teaching but not to social relations, including those with his pupils.
10 Just as I suggested when outlining approaches to learning in the previous section that the concepts of deep, surface and strategic do not describe the whole picture of how different pupils may approach school learning at different times, it may be that even if they have some relevance, they may also not fully cover the range for EPL. So we should feel free to look out for what might appear to be additional approaches found in the context of EPL.
11 Especially when the focus is on one off experiments, as in the original Marton and Säljö study.
12 The work of Marton and his colleagues also developed into research into conceptions that students and teachers have of teaching and learning (See Watkins and Mortimore, 1999, for a summary of the forms these generally take). These are thought to underpin the approaches students take.
reached new understandings and these are all suggestive to me that she is taking something like a deep approach to learning about her teaching.

However, there is what might be called a healthy strategic element – she thinks about and is concerned about not offending others. Nevertheless, she does not appear to be overly focussed on doing what they do. The impression given is that their resources and advice are welcome but that she does not use them blindly and only in ways that are appropriate to her teaching goals and style. This again suggests a deep approach to me. Also, the conversations she describes with her fellow probationer indicate a thoughtfulness and preparedness to make connections across her whole experience as she tries to understand teaching and herself as one. This also applies to what she learns from her family – it is adapted to her own situation.

In summary, from what we have so far, Rachael presents as having an intention to understand her pupils, teaching and herself as a teacher. However, there is no arrogance and a strategic concern not to upset others. She uses a wide range of resources (internet, other staff, her pupils, self-reflection, her family, her fellow probationer) in pursuing her goal of understanding and of finding ways to teach her subject. She seems almost consistently to use a deep approach and the strategic elements are socially healthy.

2. **George.**

George is not quite as straight forward. In the first interview he seemed to have some empathy with the pupils that found themselves in maths against their wills. However, he doesn’t reflect much about what he might do about it. In fact, in comparison to Rachael, he doesn’t reflect and describe lessons to the same degree and is much less proactive in trying to create the atmosphere he wants in the class. That said, however, he obviously has things against him – his youthful appearance, the difficult classes on his timetable, and so on. Again though, his answer seems to be to plod along in the same way class after class and hope that things will get better. If he didn’t start with features of a surface approach (there are some indications of a different approach in one of his teaching practices in the more academic school), they did come along as he settled down into trying to cope with the classes and to avoid disciplinary failures to the point of being afraid to experiment. Although he makes observations about the differences between schools, pupils, departments and so on, there is not the same indications as with Rachael that these are being integrated into a personal stance or understanding of teaching and himself as a teacher. They are treated more as discrete elements and this suggests a surface approach. Similarly, he does not differentiate between taking control of himself as a professional and just having to do things because that is what is expected. If there are strategic elements to his EPL, his own descriptions suggest that they are more directed at avoiding failure in routines rather than at social or personal aspects. However, the PT did refer to how he was slow to ask for help because he didn’t want to fail in her eyes. So again, there is not the sense of control of his destiny that a deep approach or more dynamic, even cynical forms of the strategic approach would lead one to expect.

The lack of integration really stands out when he is talking about his subject and teaching it. He has not for example noticed any change in how he thinks about his subject because he now has to explain it. There is no sense that having taught one topic; lessons are then carried over to another. Instead, each topic is treated in isolation.

\[CS\ldots \text{ and is that becoming easier to do \textendash give these explanations?}
\]
\[George. \text{ Not yet, no, because I haven’t come across anything I’ve taught before…….} \]

He relies heavily on the textbook for examples, although he does refer to sometimes developing or changing them. Also, tactics that others have suggested don’t seem to be being adapted to suit his personality and teaching goals. The impression is that he just tries them in a recipe-like fashion to see if they work. Also noticeable was his lack of planning for the job that I, at least, expected to be there. His tactic was to wait and see what things were like in the school and not to have expectations. This may have been one form of deep or strategic approach if he had then been more proactive when he did find how things are. Here it looks more like a ‘wait and cope with the task as it happens sort of thing,’ more in line with a surface approach.

In summary, George seems to have settled into what is, by and large, a surface approach, although it is more difficult to tell if the reference to enjoying doing the job that he referred to in his very first interview and the trying of experimental lessons that may have indicated a deeper approach has been changed by the context of this school. They may just have been features of a surface approach in a school where these things were more the norm. However, I am not as sure that he fits the description of surface approach as well as Rachael fits that for deep. Perhaps a little more thought is needed as to what the features are in the context of EPL. Or are there a greater variety of approaches than the basic three that some probationers may switch between. Answers may come as we work on other transcripts for both these probationers and the others.

**Conclusion.**
There seems to be some mileage in exploring the application of the concepts of approaches to learning to analysing our data on EPL. However, the descriptions given here of what the features of these approaches are should be taken as being an initial draft. Also, remaining unresolved is the issue of whether other approaches than the basic three can be identified, along with the degree, and how to model this, that they are stable longitudinally. Also, of course, not discussed here is the validity of the idea that value conflicts may arise between the explicit system and the implicit system and how we get at what the implicit system learns\textsuperscript{13}. 

\textsuperscript{13} Or if we need to. There is some consistency between George’s own description and that of his mentor.
Bibliography


