

## Why Reflect in the Process of Learning (with particular reference to experiential learning)?

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### Resources:

- 2004 A Handbook of Reflective and Experiential Learning
- 2006 Learning Journals, a handbook for reflective practice and professional development
- 2008 Critical Thinking, an exploration in theory and practice
- All published by Routledge. London
- Other publications are listed at [www.cemp.ac.uk/people/jennymoon.php](http://www.cemp.ac.uk/people/jennymoon.php)

### What I am going to cover in order to answer my question.

- Some initial points (the implication of constructed terms; learning and the representation of learning).
- How I see learning
- How I see reflective learning (my definition, reflective learning as learning; learning from reflection).
- Experiential learning (how it relates to learning and mediation).
- How reflective learning might relate to experiential learning and vice versa.
- Why reflect in the process of learning from experience
- A comment about helping students to improve their capacity to reflect.
- An addendum!

### Some initial points

Reflective learning, experiential learning and learning and ‘experience’ are **constructed terms**. We, as teachers or relatively sophisticated thinkers, can deal with the idea that these terms are constructed, but younger learners cannot understand why there can be several theories to account for one phenomenon or different definitions for the same idea. For example, here are three comments that imply views of experiential learning:

- **‘The insight gained through the conscious or unconscious internalization of our own or observed experiences which build upon our past experiences or knowledge’ (Beard and Wilson, 2002:16);**
- **‘The contrast between non-experiential and experiential learning is one between more and less abstract and more and less linguistic sets of symbols that are employed in the transactions in which learning takes place....’ (Tumin, 1976: 41);**
- **‘...experiential learning means that learning that occurs when changes in judgments, feelings or skills result for a particular person from living through an event or events’ (Chickering, 1976:63)**

Can we really see how they are all comments about the same activity? We should be particularly careful in how we discuss these terms with less sophisticated learners. In terms of this lecture, I need to be clear that I talk about the definitions I use for generic learning (learning processes in general) and the more specific reflective learning and experiential learning. Obviously in the short time of a lecture I can only skim over the ways in which I researched ideas in order to build my definitions. The 2004 book contains the reasoning.

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Another idea that I want to put forward at this stage is that when we talk of learning, we usually imply two processes – **learning** and the **representation of learning**. If I am learning from a book, looking at me, you would not know if I am learning anything or not. It is not until I talk about my learning, write about it, draw pictures to represent it, do a dance or in some way enact my learning (etc)...that you could know that I have learnt anything. Learning happens in our heads. The further representation of it is an important process. We assess students on the basis of the representation of their learning. I may be excellent as a learner but poor in a particular form of representation. A dyslexic student may be very able as a learner, but very poor at writing, though better at talking etc. A point I will make here is that we learn from the process of representation of our learning. Furthermore representation of learning provides us with a form of **feedback**. Response to feedback is another opportunity for learning. The roles of representation of learning and dealing with feedback are particularly important for reflective and experiential learning.

## How I see the process of learning

I draw particularly on the book by Marton and Booth, 1997.

I have always been surprised that most other writers do not relate experiential and reflective learning to the learning process in general. I make sense of them in that context. You will see that I think that the idea of experiential learning involves some reflective learning and reflective learning involves learning from experience and both are elements in meaningful learning. They overlap.

I start by being clear that learning and teaching are different. Learning was and sometimes still is seen only as what someone is taught (ie in terms of teaching). Partly because of that we do not always have appropriate vocabulary around it. To talk about learning and teaching processes, I developed words **material of teaching** and **material of learning** to describe what is taught and what is learnt. Apart from providing useful vocabulary, they enable us to be clear that even in a taught situation, what is taught is not necessarily the same as what is learnt. A learner engages in the learning process. The teacher may enable or facilitate that learning in various ways but of course learning can happen despite teaching. I use the word **mediation** of learning to imply any support processes for learning, one of which might be formal teaching. I come back to this.

I use an example of students learning about a specific flower in order to illustrate how I see learning. With respect to this process, there are two more concepts to introduce (derived from Marton and Booth, 1997). Relating these definitions to the flower, **external experience** is the learner's perceived features of the flower as sensed and as noticed. The learner cannot focus on everything about the flower at the same time and the student artist might notice colour, the student florist, the structure of the flower in relation to others, the botanist, the structure of stamens etc. The **internal experience** of the flower is the prior knowledge and prior experience of that flower which will relate to these disciplines, will relate it to plants that are like it, plants in general, any emotional connotations of this plant (perhaps the scent reminds the learner of a wonderful moment), the colour reminds her of a dress etc. Prior experience can be derived from material of teaching, knowledge derived from print, television, direct experiences etc. '**Cognitive structure**' is a term that means more or less the same as internal experience and below I use both terms.

In these terms, and put simply, learning, then, is the process in which the external experience is assimilated (taken in) and the internal experience is brought to bear in the process of accommodation of prior ideas to new ideas, associations etc. In the accommodation process, there are several possibilities for the cognitive structure. With respect to that flower:

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- what the learner knows is unchanged (nothing new is learnt but ideas may be confirmed)
- new ideas may be added (eg a new observation is made)
- or the cognitive structure may be modified because the new knowledge conflicts with prior knowledge.

When cognitive structure is modified or added to, there is change or development of knowledge of the flower and what was external experience now become integrated as part of the internal experience/cognitive structure which will be brought to bear when the learner looks at other flowers etc.

So far, I talk of internal and external experience as if they are separated. I suggest that in what we might call **meaningful learning**, the internal experience of the flower – the prior knowledge of it, feelings about it, related experiences of flowers etc - guides the processes of accommodation so we do not perceive the external experience of the flower like a photograph presented but we intelligently focus on what it is that interests us, or what is new or significant at this event of learning depending on our discipline etc. So I can now say that we construe the external experience of the flower according to the composition of our internal experience.

## Reflection and learning

Since this lecture is partially about reflection, I need to consider how reflection relates to learning before I continue expanding on learning and learning from experience. In the space of time available, I cannot justify my definition of reflection but this is covered in Moon (1999, 2004). The definition I use was partly developed in my 1999 book:

Reflection is a form of mental processing, like a form of thinking that we may use to fulfill a purpose or to achieve some anticipated outcome. Alternatively we may simply 'be reflective', and then an outcome can be unexpected. The term 'reflection' is applied to relatively complex ideas for which there is not an obvious solution and it largely refers to the further processing of new ill-structured knowledge and/or understanding that we already possess.

I realised that this general definition did not seem to accord well with the use of reflection in academic situations - where students are required to reflect and may be told what it is that they should reflect on, so I added the following:

In academic contexts the notion of reflection has been developed as a tool to support learning. It is likely to involve a conscious and stated purpose for the reflection with an outcome that is specified in terms of learning, action or clarification. The academic reflection may be preceded by a description of the purpose and / or the subject matter of the reflection. The process and outcome of the reflective work is likely to be in a represented (eg written) form and to be seen by others and to be assessed. These factors can affect its nature and quality.

I give you the following quotation from fiction because I think it provides an excellent metaphor for reflection and accords nicely with my definition:

'Harry stared at the stone basin. The contents had returned to their original silvery white state, swirling and rippling beneath his gaze.  
"What is it?" Harry asked shakily.

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“This? It is called a pensieve”, said Dumbledore. “I sometimes find - and I am sure that you know the feeling - that I simply have too many thoughts and memories crammed into my mind.”

“Er”, said Harry, who couldn’t truthfully say that he had ever felt anything of the sort.

“At these times”, said Dumbledore, indicating the stone basin, “I use the pensieve. One simply siphons the excess thoughts from one’s mind, pours them into the basin, and examines them at one’s leisure. It becomes easier to spot patterns and links, you understand, when they are in this form”.

(From ‘The Goblet of Fire’, JK Rowling).

I call this reorganising process in reflection ‘cognitive housekeeping’.

I suggest that there are a number of ways in which we learn from reflection. I list some below:

We learn from reflection:

- in the normal process of learning where material is other than very simple (rote) learning and our intention is for meaningful learning. We learn from reflection because it is involved in the process of accommodation when the cognitive structure is reorganised in response to new material of learning (external experience).
- when we re-organise our cognitive structures without the input of new material of learning (as in the Harry Potter quotation)
- when we represent our learning (ie the content of our cognitive structure) – eg translating thoughts into written form, etc. There is also feedback from the new form.
- we tend to reflect when the material is ill-structured (see below).
- in a number of ways the process of reflection provides conditions that promote good learning. These include the provision of intellectual space, slowing and pacing of learning, and a sense of ownership etc.

What I consider to be the more important aspects of my work on reflective learning concern the notion that reflection can be superficial and little more than description, or deeper and then we have the chance to deepen the quality of our learning.

I return now to explore more about learning from experience and in particular the role of mediation in learning.

## Mediation and learning from experience

From what I have written about learning processes, I can say that all learning is learning from experience because we learn from our experience of the external world on the basis of the current experience of our internal world of experience. As an aside I would see rote learning as learning from external experience, but with much less involvement of our internal experience. We just learn the material and add it to what we know without much modification.

So returning to ‘learning from experience’ – all learning is learning from experience. However, from the amount written about it and from the promotion of experiential learning as a ‘good and efficient method of learning’, we are led to assume that there is something more to it. I make sense of it in this way. The usual meaning of experiential learning in education is that learners directly engage and are actively involved with the

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physical material of learning (eg the flower itself) in the relevant context of that topic (eg in the field or garden) and there is relatively little mediation. Educational experiential learning has quite a specific meaning and I designate it 'experiential learning' and from now on it is on this meaning that I will focus.

To explore 'experiential learning' further I need to consider what we mean by mediation. Going back to the learning about the flower, the roles of the teacher in mediating another's learning process may be any of the following.

- In advance of the experience of the flower, the teacher may have described the flower to learners and pointed out special features, helping learners to clarify their internal experience so that they can more easily accommodate their prior experience to the experience of the flower itself.
- She may have given learners guided reading in preparation for seeing the actual flower.
- She may have related the flower to similar flowers.
- She may have shown them a film, given them pictures in a book or lecture on the flower when she may have relied on their imaginations to provide a basis for her descriptions. She might ask learners to look up the flower on the Google. One learner may have already done this without the teacher's guidance.....

(Just to complicate the notion of mediation, is the fact that a teacher may have stood in front of a learner relating the flower to similar flowers, but the learner may have been thinking of his date last night....) Teaching and learning are different!

These (above) are all ways of supporting the development of the learner's internal experience through mediation which in turn will facilitate the appropriate learning from external experience. However which of these could count as 'experiential learning'? There is no right answer. Whether the learner touches a flower or looks at a flower on a video, whether she does or does not actually see the real flower, she has learnt from having an experience and we cannot say that the level of mediation is going to distinguish one sort of learning from another. All learning relies on the translation of perceptions gained in having external experience, into nerve impulses.

### The connotations of 'experiential learning' as an educational experience

'Experiential learning' is not straight forward. This is evident in the discussion of mediation. So the best I can do to provide an identity to it here - in brief is to collect the various connotations implied in discussions of the educational interpreted version of 'experiential learning'. This list of connotations are derived from a review of the literature in Moon, 2004.

- 'Experiential learning' has a connotation of '**goodness**' about it. It is meant to be more substantial learning. It might be, but not necessarily
- Generally speaking 'experiential learning' implies learning outside the classroom with less direct mediation. In a classroom, ideas tend to be organised, and separated from what I will call 'background noise' – or figure from ground (again a term from Marton's writing). In contrast, material of learning in real situations is more likely to be **ill structured** (King and Kitchener, 1992) – ie 'messy' material of learning, not simplified to make learning easier.

- The learner needs to direct her attention herself and distinguish what she needs to know from irrelevant learning (again, herself – operating a distinction of figure from ground). She has to be more **autonomous**.
- **Learning by doing** tends to be associated with ‘experiential learning’
- Usually the learner has to translate her observations into language in reports or the writing of assignments. This is another form of learning – from the **representation of learning**.
- Learning from direct experience can take more effort than sitting in a classroom. We possibly learn more when we **make effort**.
- **Reflection** is involved.

A number of these connotations are linked and to continue this lecture, I will return to a number of them and then come round to the last – reflective learning – that relates to a number of the other connotations. The next few paragraphs generally suggest how ‘experiential learning’ may be seen as a ‘good’ way of learning (see the first connotation).

To function well in the real world outside the classroom, learners need to learn to deal with ill structured knowledge in an autonomous (ie relatively unmediated) manner. It is important for the development of the learner’s understanding of knowledge (epistemological development), and her ability to evolve into sophisticated thinker who can make independent judgements as a professional person.

In the list of connotations, there are two references to learning from the representation of learning. The first is in the connotation that the learner tends to be actively engaged (doing) in the learning situation and the second is that she is likely to have to talk about or write about her learning. I have described already how learning from the representation of learning – translating internal understanding to a format for communication is an important source of learning. And associated with this is the enablement of feedback either to one’s self or from another. As an example of the learning from the representation of learning, I return to the flower. Learners are asked to dissect a flower and write an account of what they see:

- In doing the dissection, they will be getting a form of feedback from the success and failure of their knowledge, revising some ideas, confirming others.
- They have to transform the knowledge – which may be quite disorganised - into a written form. They will learn more from the process of reorganising those ideas.
- They will potentially get feedback from the account that they have written – have they missed something, used the wrong term, not been sufficiently clear.
- etc

## Reflection in experiential learning

So now I come back to the title of this lecture and consider why reflection is necessary in the processes of educational ‘experiential learning’. I think that by now you will be seeing that there are many ways in which I would say that reflection is involved in experiential learning. I return to the list of ways in which I suggested we learn from reflective learning. We learn from reflection:

- in the normal process of learning where material is other than very simple (rote) learning and our intention is for meaningful learning. We learn from reflection because it is involved in the process of

accommodation when the cognitive structure is reorganised in response to new material of learning (external experience).

- when we re-organise our cognitive structures without the input of new material of learning (as in the Harry Potter quotation)
- when we represent our learning (ie the content of our cognitive structure) – eg translating thoughts into written form, etc. There is also feedback from the new form.
- we tend to reflect when the material is ill-structured.
- in a number of ways the process of reflection provides conditions that promote good learning. These include the provision of intellectual space, slowing and pacing of learning, and a sense of ownership etc.
- And I said that deep reflection enables us to deepen our learning.

I can now suggest how reflection is involved in ‘experiential learning’ – and indeed, is essential if there is to be a reasonable quality of learning.

- Almost by definition, the material of learning of ‘experiential learning’ is ill-structured;
- In deliberate situations of ‘experiential learning’, there will be the intention by the learner for meaningful learning. This involves reflection not only in terms of enhancement of the conditions for good learning but in particular, reflection allows us to deepen the quality of that learning through reviewing how the new learning relates to what we know already and the ‘cognitive housekeeping’ mechanism of thinking it through again (without new external experience).
- I have said that direct mediation is relatively lessened in ‘experiential learning’ and this puts more reliance on the learner to make sense of the situation using reflection.
- I have associated practices of learning ‘by doing’, the practices of writing or talking about the learning achieved and the availability of feedback with ‘experiential learning’. All these involve learning from the representation of learning and this involves reflection.

So I would say that reflection is an essential element of ‘experiential learning’ in the educational context where the intention is for meaningful learning. That process of learning is enhanced when we are asked to represent that learning in writing or speech or another form. An example of such representation might be a learning journal, the giving of presentations or the writing of one-off reflective pieces.

## **A pedagogical issue - helping learners to learn to reflect**

When we ask learners to write reflectively two things usually happen:

Some learners have no idea what we mean by reflective learning. (This applies also to some teachers)  
 Most learners will write very superficially and as a consequence will tend to learn little.

I use a structured exercise – called a graduated scenario to get over these problems. The exercise involves learners in reading short pieces which represent someone reflecting on an event. There are four versions of the same piece written at four increasing depths of reflection. In essence participants see examples of reflective writing at increasing depths and they have a chance to discuss and share their learning of what changes between superficial descriptive reflection and deep reflection. The exercise is based on a well researched framework that they ‘take home’. The framework can guide their subsequent reflective writing. The self instruction version of this exercise will be available to you electronically (or e-mail me if it is not!).

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## An addendum: Mirror Neurones

I want to mention one thing that I encountered towards the end of my writing of my book on the use of story in higher education (2010). As a concept, it needs to enter the world of education theory and it has direct relevance to experiential learning and reflection. It gives an important role to processes of imagination. The material concerns fairly recent discoveries of 'mirror neurones' in the human brain. I came across this in a reference in New Scientist (Slack, 2007) and in Mar and Oatley, 2008. Mirror neurones fire when the subject observes an action and again when she enacts it. This immediately seems to be an explanation for why yawning seems to be 'infectious'! But as I have thought further about it. Without going into the physiology I speculate that mirror neurone systems may hold the key to the manner in which we learn from them through vicarious experiencing when listening to story or a lecture or when watching someone do something. It may have implications for the notion of 'engagement' in a story or lecture or for the value of observing others doing something. A general introduction to this material is in Rizzolatti, Fabbri-Destro and Cattaneo (2009) and an overview is found in Wikipedia.