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Abstract: This presentation will look at the findings and conclusions of my PhD research thesis entitled Situated learning, poly-contextual boundary crossing and transfer: Perceptions of practitioners on how competence is transferred across different work contexts. The aim of the research was to understand how people adapt to new learning and work contexts as the change jobs or when their jobs change. The findings suggest that there are four types of activity involved: reconnaissance, enactment, exploration and consolidation and that practitioners move between these different types of activity as part of their structured interaction between the technical, learning, social, physical, emotional and organisational contexts which comprise the workplace. The research also identifies the metacognitive skills and knowledge which enhances this interaction and argues that formal education does not necessarily do enough to ensure that graduates understand the nature of work and workplaces and the survival skills which are required.

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This presentation will look at the findings and conclusions of my PhD research thesis entitled Situated learning, poly-contextual boundary crossing and transfer: Perceptions of practitioners on how competence is transferred across different work contexts. The aim of the research was to understand how people adapt to new learning and work contexts as the change jobs or when their jobs change.

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The research which forms the basis of this paper was in two parts. The first stage of the research involved eighteen workplace training practitioners, describing, though a semi-structured interview process, their perceptions of how people transfer what they know and can do across different work contexts. The analysis of this material resulted in a tentative model of how this process of transfer and adaptation might be perceived. The model identified four distinct stages which, at that stage of the research, were called:

- access to new skills and knowledge
- internalisation of skills and knowledge
- validation and integration against existing skills and knowledge
- application in a new context (Down 2001a; 2001b; 2002)

A grounded questionnaire, completed by 90 vocational education and training practitioners, was used to collect data in the second part of the research process. This stage aimed to validate and enhance the data from Stage 1 of the project. Analysis of the data collected showed general support for the model constructed on the basis of the Stage 1 research. However, there was a strong view expressed that the model was too simplistic in that it did not foreground the role of the context in the process and that it could be interpreted as a set of sequential stages instead of the much more holistic process which characterises learning.

As a consequence the model has been recast into a metaphoric framework – or a simple narrative image which can be used to support the transfer of knowledge and skill across work contexts. This paper outlines this framework.

Nature of learning concerned
Much of the formal learning which occurs in our schools and tertiary institutes is learning about. This is especially true of secondary schooling and many university undergraduate programs which use assessment for sorting, grading and transition purposes. This places the emphasis of learning on remembering and recalling, and promotes a view of knowledge as a commodity which is passed from teacher to learner. Such knowledge can be abstracted from its context so as to be discrete, impersonal and generalisable – a collection of information and understandings developed from legitimate research activities, whose origins and history is known (albeit, sometimes disputed) and which can only be changed in the light of further recognised research. Thus, in ‘learning about’ paradigms of learning, theory precedes application and learning activities are focused around comprehension and remembering.

School and university examinations, by asking for the correct answers and explanations, reinforce a focus on learning about. Normative-referenced assessment rewards those who can recall and remember and penalises those whose understanding diverges from the accepted academic view.

In contrast, the formal learning of early childhood and in the lower levels of vocational education and training is predominantly focused on learning how. Thus the aim of the learning is a performance or set of performances which are acceptable in certain contexts. Such learning is usually criterion referenced – as when a child is able to read at a level associated with average 10 year-olds or when an apprentice hairdresser is deemed capable to cut and shape hair according to the industry standards and the criteria used are contextually specific.

Learning how has, therefore, a specific context and a specific set of criterion against which the performance is measured. The paradigms of ‘learning how’ rely on learning experiences which are centred around action and which usually involve the construction of theory by the actor as a result of engagement within diverse forms of action including action within contingent situations. Learning how involves access to role models and the enactment of demonstrated techniques, attitudes and processes.

Assessment of ‘learning how’ is usually evidence based, which the assessor making an informed judgment on the evidence available against an appropriate set of criteria. Logically, such an assessment can only result in a “satisfies the criteria/does not satisfy the criteria” outcomes and cannot be used for purposes of comparison.

The learning which occurs when a person transfers and/or adapts his/her knowledge and skill across different contexts is generally learning how. Inevitably, learning about will also occur, generally in conjunction with the exploration of the context and the nature of the work performed. Such learning about is occurring in an informal learning environment.

There is a second distinction between the nature of the learning designed to occur in formal learning situations and that which occurs through work. This is the distinction between bounded and non-bounded learning. As Engeström explains:

Standard theories of learning are focused on processes where a subject (traditionally an individual, more recently possibly also an organization) acquires some identifiable knowledge or skills in such a way that a corresponding lasting change in the behaviour of the subject may be observed.
It is a self-evident presupposition that the knowledge or skill to be acquired is itself stable and reasonably well-defined. There is a competent ‘teacher’ who knows what is to be learned.

The problem is that much of the intriguing kinds of knowledge in work organizations violates this presupposition. People and organizations are all the time learning something that is not stable, nor even defined or understood ahead of time. In important transformations of our personal lives and organizational practices, we must learn new forms of activity which are not yet there. They are literally learned as they are being created. There is no competent teacher. Standard learning theories have little to offer if one wants to understand these processes.

(Engeström 1999, p.6)

It is this latter learning which is important in transferring one’s competence across differing workplace contexts. Engeström refers to it as expansive learning and it occurs in both formal and informal learning. Unfortunately, in formal learning situations, it is not (and cannot be) specified in the curriculum and is, therefore not assessed. In work and other informal learning situations, it may be critical to a person’s survival in that context. While it is not possible to “teach” expansive learning, it is possible to “teach” the learning skills and attitudes which enable people to successful learn in unbounded learning situations.

Knud Illeris (2002)argues that ‘learning is fundamentally conceived of as an integrated process consisting of two connected part processes which mutually influence each other’ (p. 16). The two interconnected part processes, identified by Illeris, are the interaction process between the learner and his/her environment and the internal psychological acquisitional and elaborative process which leads to a learning result. In addition, Illeris argues that ‘learning simultaneously comprises a cognitive, an emotional and psychodynamic, and a social and societal dimension’ (Illeris 2002, p. 19).

Illeris’ theory views learning as a complex integrated process which occurs as a result of tension between the cognitive, emotional and social aspects of our work or life contexts. Thus:

Fundamentally learning is a process mediating between man as a biologically and genetically developed species and the societal structures developed by man. Learning develops knowledge, abilities, emotions and sociality which are important elements of the conditions and raw material of society. But societal circumstances also develop into independent structures with a character of given frames that set the conditions of both the knowledge, the abilities, the emotions and the sociality that can be displayed.

(Illeris 2002, p. 239)

Participants in both stages of the research acknowledged the complexity of learning and that a learning result is composed not only of new knowledge and skills but also knowledge about what it is societally acceptable to know and/or express. Many of them also commented that institutionalised learning is too focused on the acquisitional learning of content and not sufficiently focused on the development of competence in learning.
An evolving model of learning

The feedback from the Stage 2 research, whilst providing strong support for the model constructed on the basis of the Stage 1 data, suggests three ways in which the model might be improved, namely:

- the use of a representation which does not suggest a hierarchical or one-way linear movement
- the use of alternative names for the “stages” and a consequential modifications of the activity at each of these
- a more holistic representation of the process.

This suggested that what was needed was some sort of memorable framework to guide learners to transfer and adapt their competence as they moved across different work contexts. To fulfil this need, it was obvious that the framework should be based on a sustainable metaphor in the form of a short story, similar to the concept behind “Who moved my cheese” (Johnson 1998).

So I went back to the use of the metaphor of negotiating a swamp (Scott 1992pp. 48 - 52) which Scott used to describe the issues involved in teaching and learning. As Scott wrote “the swamp analogy … is a useful analogy because it identifies both the dynamics and the many elements which make up the overall process”(p. 48). Scott identified the characteristics of the process of negotiating a swamp which also apply to teaching and learning as:

- constantly changing and shifting
- uncertain and somewhat unpredictable
- value-laden and subjective … misinterpretations and different reactions are common
- comprising a mixture of individual action (acting on thins which they can influence) and drift (trying to cope with factors beyond their control)
- requiring an ability to ‘read’ (or interpret) the significance of a constantly changing and extremely complex combination of influences, people and factors and to respond appropriately in the light of this ‘reading’
- involves not just having an initial map or plan of action for focus, but also the ability to modify the map in the light of the unexpected events that occur when trying to put the plan into action.

(paraphrased from Scott 1992, p. 48)

It seemed to me that this could be a useful starting point for the construction of a new model which provided a more holistic view and the learning/adaptation process which happens when people transfer what they know and can do across different work contexts. So I started with a swamp, complete with crocodiles (as workplaces are not usually benign places) and other hazards. Geographically, the swamp is a complex environment with a number of islands, some of which have sandy beaches while others have rocky shelves and shoals surrounding them. A new inhabitant of the swamp will need to navigate the swamp by canoe, working with other inhabitants to find the best way of working together and ensuring the viability of the swamp. Some of the islands have special purposes and in order to transfer and use what the newcomer already knows and can do, he/she will need to access these islands.
There are four of these special purpose islands. They are concerned with:

- exploration
- enactment
- engagement
- enhancement.

The main island, Enterprise Island is of great value to the newcomer. It is dominated by a high hill (Mount Enlightenment) which enables a person at the peak of the hill to have an uninterrupted view of the whole swamp. All the activities which occur within the swamp can be seen in perspective from the top of the hill. Unfortunately, access to it is very hazardous due to quicksand and poisonous snakes, and the hill itself is steep and rocky and necessitates a hard and hazardous climb for the peak to be reached. It is, therefore, usually climbed by groups working collectively and collaboratively, providing mutual support and learning together.

The main island in the swamp is populated by the swamp community as they work, learn and socialise together. These activities take them all over the swamp in their canoes, stopping at the various islands to reflect on their work, their interactions with others and on community goals and aspirations. The inhabitants may visit an island in a group or on one’s own. Visiting an island is a deliberate and purposeful activity.

**Exploration Island**

A newcomer to the swamp is likely to need to visit Exploration Island often and usually, although not always, in the company of others. The activities which he/she undertakes on this island are concerned with building up a greater knowledge of the swamp community and their work purposes and practices. To use the opportunities offered by Exploration Island, the newcomer must work through the issues of:

- confidence
- learning competence
- affordances
- agency
- motivation.

Exploration Island is the metaphor for the first section of the Stage 1 Model. It is the direction an inhabitant of the swamp needs to turn to, in order to explore what he/she already knows and can do, and what they are expected to know and do in the new context. It is the (virtual) place for scoping the new work activities, the nature of the existing community of practice and the knowledge, skills, attitudes and communal values and ethics which will be needed.

It will be noted, from the map of the swamp (see p. x), that Enterprise Island is comparatively close to Exploration Island and Mount Enabling. This is important to ensure that exploration occurs within the context of the workplace and within a well-founded perspective of the whole swamp. This is necessary if the actions taken by the newcomer are in the interests of the swamp community.
Figure 1: The Enterprise Swamp
Enactment Island

This island is usually visited concurrently with visits to Exploration Island as visits to Enactment Island provide the time and space to enact what is being learnt through the exploration process. It is through enactment that the newcomer or boundary crosser is able to play out what he/she is learning to ensure it fits within the context, is acceptable to other inhabitants and can begin to internalise and adapt the learning.

Enactment provides the activity for trying out and assessing the appropriateness or otherwise of approaches and actions which the newcomer has used in the past. It is also an opportunity for patterning the behaviours of those already resident in the swamp. Such trying out, or enactment, covers both the patterning of the behaviour of those already within the community of practice of the workplace to see how it works for him/her and enacting one’s past behaviour within the new context to determine its fit.

Enactment is an ongoing process that will be used throughout the transition and settling in process and so taking oneself off to Enactment Island to reflect on the effectiveness of enactments and to plan how the enactment might be altered to increase its efficacy occurs throughout the transition and settlement periods.

The enactment process is a trial and error learning process and initially results in superficial learning although that will deepen with the experience a person gains in the learning swamp. Enactment Island may be revisited after visits to the next island, Engagement Island, in which case the aim of the visit will be to plan and reflect on enactments which result from engagement with the workplace and the workplace community. In this case the enactment, and reflection upon it would lead to much deeper learning processes.

Engagement Island

Of all the islands in the swamp, this island is commonly the least visited and, yet, the most important, if the learning is to be transformative rather than just imitative. For it is the planning and reflection which occurs in this wild, dangerous, challenging and rewarding space which enables individuals, working alone or in groups, to embark on a journey of expansive learning within the context of the workplace.

It is through engagement with the workplace and its community and the activities engaged in that people are able to deepen their understandings, to test preferred paths of action. The learning which occurs around engagement is characterised by

- significant unpacking of practices and understandings and their repacking into new, contextually appropriate skills and knowledge
- the dissociation of what has been learnt from the method by which it has been learnt
- an emphasis on contextual and conceptual understanding of workplace practices and issues

It is through engagement and the reflection of such engagement that the development of judgment occurs. Sound judgment depends on the ability to take into account the situational factors and an appreciation of the context when coming to a decision. Such ability is honed by engagement with the context, its environments (physical, intellectual, emotional and social), cultures and community.

Engagement also provides the individual with an understanding of diverse situations and the analysis of the differences between them. This allows for learning through variation or difference (as discussed by Rogoff 1990; Dall'Alba 1994; Marton 1994; Lave 1996; Marton and Booth 1997; Salomon and Perkins 1998; FitzSimons 2000), where the identification and analysis of the difference between contexts and situations becomes the initiator for learning.
The learning which occurs through visits to Engagement Island is essentially focused on practice. Hence approaches to learning, which are centred on interaction with the learning environment, on getting involved with the learning experiences and with reflecting on one’s engagement holistically, are those which enable integrated engagement. These include:

- active learning
- problem solving
- constructivist learning
- the integration of generic knowledge and skills with practical and technical competence
- recognition and involvement in communities of practice
- the use of multiple intelligences especially emotional intelligence
- learning through work.

The learning which occurs through engagement is transformative. In the sense that each person’s learning is unique, because it is framed and understood in terms of their experience, attitudes and current understandings, such learning is also expansive.

**Enhancement Island**

The last of the metaphorical islands in the enterprise (or workplace) swamp is Enhancement Island. It is here that the consideration of, planning for and reflection of application of learning in new contexts or situations occur. This may involve paddling across to other island as difficulties arise or more consideration of the context or situation is needed.

Reaching Enhancement Island often marks the point at which the newcomer to the swamp has fully integrated with the swamp community and is no longer peripheral (in the sense used by Lave and Wenger 1991) to the learning community and its activities. It also signifies the breaking of dependencies on other people (such as mentor, coaches, critical friends, teachers and workplace trainers. The individual is now competent to learn independently and autonomous and equates to an expert in cognitive terms.

Enhancement, like exploration, enactment and engagement is rarely a solitary activity. Workplace learning requires interaction with all aspects of the context (including its physical, intellectual, emotional and social components) in order to better understand and work within it. Whilst learning journeys are unique for those undertaking them, the learner will have company for most of the way and this company will enrich the both the learning process and the learning product.

**Conclusion**

Learning requires effort and persistence. The process of learning will be impeded by impediments and hazards, the majority of which will arise from societal norms and behaviours and the political battles which affect our participation in work and life. These are the crocodiles of the swamp. Obstacles to learning are the hazards. Only by facing and, either, removing or circumventing the crocodiles and other hazards can we learn and participate effectively in the workplace.

The allegory of the swamp is proposed as a framework for understanding the very complex process we execute when we learn from work or from life experiences. Such situated learning is complex and its outcome holistic. The model is an attempt, based on the outcomes of my PhD research to provide a lifeline or framework to help those who may well get lost in the swamp which forms part of our minds. It is not an exact account of how we learn to transfer and adapt out competence when we cross contextual boundaries but it is intended as a useful map to aid our progress.
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