Virtual Learning Environments

Abstract
On-line VLEs are becoming ever more popular (Farmer and Tilton, 2006). The topic of how the content should be presented is therefore being debated

Introduction

All teachers (and lecturers) want the students to succeed. To this end they provide a stage presence, a supportive shoulder, appropriate back-up materials (book, articles and e-learning materials) and a positive environment. A good teacher will see these back-ups as a way of overcoming the 20 minute attention span and memory issues. If we get it right, our charges show they have completed enough of the syllabus for us to pass them.

All of us have our own teaching style based on our preferred learning style. Which tools we emphasise will depend upon our preferences and their availability.

One of the perceived problems with the image of e-learning is that it is seen as a cost cutting exercise and will replace teachers. E-learning will replace teachers in the same way that books replace teachers … at least until AI is brought into the e-classroom (S. Peter, 2012) and a hot topic in the 1980s.

Current Virtual Learning Environments

There is no generally agreed definition of e-learning. For example, Kumar et al (1998) see VLEs as encompassing all the functions a student needs to succeed on a course; from enrolment, through academic and social interaction to completion. Others see VLEs as far more restrictive. Dillenbourg et al (2002) whose paper identified seven characteristics of VLEs. These encompass any form of computerised system used in learning. Extending this, it can be argued that these can belong to one of five categories:-

- Learning aids - Those resources which help students which help students with the business of being a student. They provide self-created resources or access to vicarious learning.
- MOOCs – Systems created to simulate a university experience, including the content and learning management.
- Proprietary systems – Systems created by individual learning institutions to help learners through courses. They are not available to those outside that institution.
- On-line VLEs – These are independent learning environments which provide content (and sometime learning management). Most of these charge organisations (and often individuals) to consume content or keep track of learning.
- Purchased VLEs – These are systems than can be purchased (or acquired for free, but adaptations cost) to provide content to students on courses.

The diagram below gives examples of each of these types of system.

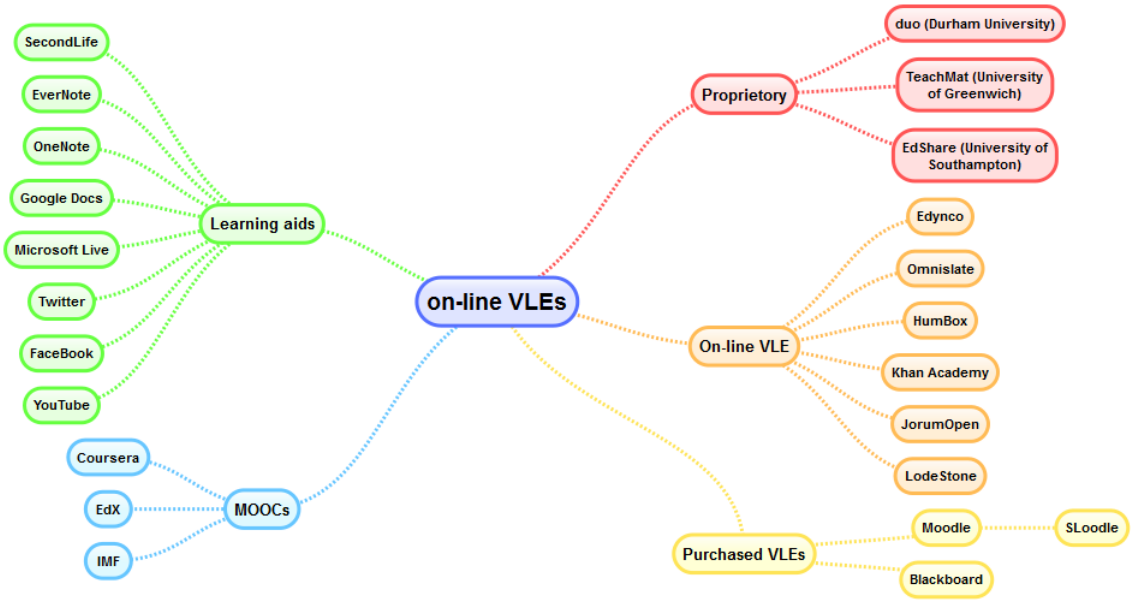

Diagram 1 – Categorisation of on-line VLEs.

So what is a VLE?

Our view of learning is coloured by our experience of education. We have been conditioned to assume that learning happens in classrooms (and we hope it does), but learning can also be acquired in other ways. Vicarious learning occurs when we learn indirectly from those around us. For example, we are on a bus in a new city and hear someone being told that the building ahead used to be the town hall and has recently been turned into flats. This knowledge was not gained in a classroom, we just got lucky by being in the right place at the right time. It would also have occurred when a slightly older friend is complaining about impatience of their driving instructor. We know not to go to that one when our turn comes.

A third kind of learning occurs when we seek new knowledge just because we want to, self-initiated learning. As a child we wanted to know about the world around us. Anyone who has been in charge of a small child has been asked, "What is that? Why is it so big?" and seen the infant put it in its mouth. We were born curious ... and then we get to school.

The curiosity continues as we find hobbies and interests outside of the curriculum. This may be a sport (e.g. rugby, croquet or tennis), a pastime (e.g. sewing, reading or completing puzzles) or it may be something more academic that is not covered by the curriculum (e.g. palaeontology, local history or astronomy). Formal education can crowd out some of these but, unless we are lucky, we return to them (and broaden them) later again.

It could therefore be hypothesised that:-

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Learning = Formal Learning + Vicarious Learning + Self-
                                                initiated Learning
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or in an abbreviated format:-

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L = F + V + S
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However, learning is not the same as education. Education occurs when critical thinking is applied to learning. Learning without critical thinking cannot lead to the application of that learning to new situations. Critical thinking without any underpinning knowledge is biased opinion. This is where sensationalist publicity accusing a minority of crimes or incorrect thinking such as the riots when we changed from the Julian to Gregorian calendar gain traction. School education appears to value learning more highly than critical thinking - and then complains when the students cannot put two and two together. Both learning and critical thinking are required for education to take place, so we would have:-

$$\text{Education} = \text{Learning} \times \text{Critical Thinking}$$

or in an abbreviated format:-

$$E = L \times C$$

The terms would be multiplicative because both are required for education to happen. This could be illustrated with the following diagram:-

Critical Thinking (C)		
Formal Learning (F)	Vicarious Learning (V)	Self-initiate Learning (S)

The width of each of the boxes in the bottom row would show how much of each type of learning has been acquired at a particular point in time. The height of the upper box, critical thinking, would show the ability to apply learning in new situations.

Currently, VLEs in educational institutions only consider F. A real VLE (RVLE) would work for E, i.e. for V, S and C. Vicarious learning implies a social dimension, therefore an RVLE would need that too.

If V and S are required then an RVLE would have to provide learning opportunities outside the classroom. It would also allow individuals control and record V and S. The child interested in dinosaurs or making sewing patterns could also have that documented. Curiosity could be rewarded as well as recorded.

References

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