

Can Social Learning Theories Contribute Significantly to Making Virtual Universities a Successful Reality?

Robin Taylor

Abstract

The logical extrapolation of distributed online education in the tertiary field is a completely virtual university taking the place of a current conventional campus based university. However, despite the rapid advance of modern information and communication technologies, the effectiveness of learning in this mode as being equivalent, or even better than conventional instruction, is still very much open to debate. This essay explores whether the answers to this failure to deliver by modern technologies can be found in socio-cultural analyses. Three models of such analyses are presented: legitimate peripheral participation; activity theory; and actor network theory. All these approaches are found to be valuable in being able to dissect an online distributed flexible course as to why it does (or does not) succeed or why it may (or may not) do so in the future. However, none of these approaches are of any assistance in being able to be utilized in making pedagogic decisions in the construction of an online distributed flexible course. It is argued that this is because there needs to be an epistemological enquiry as to what needs to be learnt by future students, in order for a course to be more effectively designed.

Introduction

This is an essay that considers the viability of the 'Holy Grail' of open, distributed and flexible tertiary learning the 'virtual university'. Although many of the same arguments could be made for distributed learning at any level, this treatise considers only tertiary learning and in particular that of a university (instead of a technical college, or vocational college such as nursing), in order to keep the argument succinct. The 'virtual university' is a university in which there is no physical campus, students do not meet face to face either with themselves much less their lecturers, tutors and lab assistants. The virtual university is far more flexible, can potentially reach more people and can, with the right equipment, become open to anyone globally. Notwithstanding the very real concerns that authors have expressed about the globalisation and hegemony of university education across the world (Perraton, 2000), the question is, for the moment, whether in principle an effective virtual university can be built. If it can, then the question of cultural monopolies and ethical principles of educational globalisation can, and should be debated and tackled.

The distinguishing feature that appears to make this tertiary institution a possibility is the advent of relatively cheap, and relatively reliable modern *information and communication technologies* (ICTs). Unlike traditional technologies such as print, correspondence and even latterly radio, audio cassette and television, ICTs can engage students with significant interaction, either in real time or in an asynchronous manner. ICTs have also progressed to the point where it is not just written information that is presented

but also audio and visual information across the same medium and often embedded into the same portal'. Crook (Crook, 2002), makes a convincing argument that ICTs lead one naturally to think of their fullest expression as a virtual university. Hence the title and focus of this essay.

The initial enthusiasm of using modern information and communication technologies (ICTs) to solve or significantly enhance learning has waned with the realisation that simply placing a student in front of a computer monitor with access to information on the information superhighway, or with increased interconnectiveness across the globe, does not necessarily come true. There is now an awareness that the epistemological study of knowledge and learning that knowledge is required to help educators understand what information and its presentation 'means' to pupils and learners. A further complication has been the increasing *post-modern* interpretation for just about every aspect of the humanities with the result that epistemology must at least be considered as being embedded with a constellation of concepts such as *social norms* and *culture*. And if knowledge and truth can only every be relative concepts embedded in a social, historical and cultural context, then any significant attempt to construct an effective² virtual university must consider the same contexts as a springboard for the building process.

And yet the evidence suggests that ICTs 'appear' to provide a radically new way of looking at the way a University can operate.

Definitions

There is some significant irony that the terminology that is used in post-modern arguments are themselves bound by the language and socio-historical cultures that use them. In particular, the terms *social* and *cultural* pose particularly problematic concepts because they overlap to some degree for most people, and to others they are essentially synonymous. Both are adjectives for *society* and *culture* respectively. Culture cannot exist without being housed within a society. Society cannot exist without there being a culture associated with it. Some commentators believe that behaviour that is *social* reflects more proximate determinants of what is and is not acceptable, and that *culture* is more distal. However, trying to define what belongs in the realm of proximate vs. distal causes can in most cases prove to be without foundation. Part of the problem lies with an association of history and tradition with the term *culture*; whereas *society* is often used to connote notions of current events and immediacy – neither of which is true. Without wanting to quibble over semantics this essay will confine itself to considering both of these as pragmatically synonymous whilst accepting that philosophers may deem differences do nevertheless exist. This essay will use the term *socio-cultural* as the adjective that considers what is considered shared values by a self selected group of individuals, or that of a third party that deems the grouping of individuals to have practical value. This follows on from the definition of the word *culture* as defined by Matsumoto (Matsumoto, 1996).

Towards the end of this essay, it will become apparent that an operational definition of 'learning' is required in order to make better sense of this topic. However, in the interests in brevity, this cannot be done here.

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1. As opposed to say a distance education course that has a written booklet, an audio cassette and a multi-media DVD of video.
 2. Of course it's possible to construct a virtual university, but the concern here is will it offer an acceptable, or the same or even a better level of education than a conventional campus university?

Finally whilst there is considerable overlap between educational modes of instruction such as *Open Learning*, *Distance* or *Distance Learning*, and more laterly *Flexible Learning*, this essay will concern itself with any teaching learning environment in which there are significant portions of the course and/or programme that can be completed through the use of ICTs.

Shortcomings ICTs Bring to Distributed Learning

Cornford & Pollock (Cornford, & Pollock, 2002) explain how on one level the business of 'university' can be thought of as the flow of information. From knowledge sources (such as lecturers and library books) to students. If this is the case, then there has been an implicit understanding, or even optimistic hope that ICTs would bring about this flow of information in a more efficient manner. The result would be greater learning, more open style of learning and less labour intensive input from individual lecturers, tutors and laboratory assistants. This follows what Cornford & Pollock have described as a *business process engineering* protocol. The problem being that there are very few organisations, most especially big work environments, in which the such a protocol reflect reality. Students learn not just from their prescribed lecturers, text books and laboratory session: but from friends, classmates, informal mentors (such as postgraduate students and students in the years above), field trips, student union bodies, cross disciplinary fertilisation, sports clubs, eating and drinking out with friends, debating societies and exchange schemes – to name but a few. Crook (Crook, 2002) points out “scant consideration of what students themselves might want” with regard to the desirability of a virtual university (p.155). Of the 45 stratified sampled students interviewed, they all agreed with the ideals and perceived economic benefits of a virtual university, but not one of them wanted to study at a virtual university. These students it should be noted were proficient computer users. Their reasons for not wanting to study at such a future institution were:

1. the social aspects of a learning environment, including their social and recreational aspects
2. the ability for ICTs to be able to deliver rich enough content to take the place of a real university environment;
3. their ability to keep their self motivation high enough to complete courses and programmes
4. and their ability to experience wide variety of lifestyles and the relative independence of each at a campus university setting.

It is the social and relatively unstructured elements of campus life that appeal to the students with the ultimate goal of enhancing the learning experience.

Social Learning Theories Highlight Missing Elements

There is a class of educational theorizing that highlights these potentially missing elements loosely called 'social-learning' theories³ which take their cue from a variety of sources. The most cited is that of Vygotsky who spoke about learning in a tool mediated social arrangement; this has been further elaborated into what is called *Activity Theory* (Russell, 2002). Social-learning theories have also been espoused most significantly in psychology by personality theorist Walter Mischel (Mischel, 1999) which has now been

3. One has to be careful here because there is a forensic theory called *Social Learning Theory*, by sociologists Akers and Burgess that tries to explain delinquency.

labelled *Social Cognitive-Affect Theory*, although it appears as if the educationalists are more influenced by *cultural psychology* (Russell, 2002), which itself is an interesting take on what is thought of as being more meaningful to different academic disciplines⁴. What these theories all share as a central concept is that any behaviour such as learning is an emergent behaviour from the interaction of elements that may be physical objects such as people or computers, but also include socio-cultural elements such as the striving to persevere or the status accorded to someone who achieves a tertiary education qualification. These theories are nevertheless pitched at slightly different levels of analysis so that each brings a slightly different perspective to the notion of a particular online distance educational course or programme.

Legitimate Peripheral Participation (Community of Practice)

Lave & Wenger (Lave, & Wenger, 2002) for example have proposed a way of analysing learning from what they call a *community of practice*. The latter maybe anything from skilled labouring, through to professional work, and finally to intellectual domains of enquiry. Starting from the concept of traditional learning in apprenticeship systems, they have tried to provide a heuristic by which they can discern how newcomers to a field start to learn from experts. They have encapsulated this view point with the term *legitimate peripheral participation*. Although they take great efforts to **not** describe legitimate peripheral participation as a school of thought, or a way of devising pedagogies, it seems as if educationalists are trying their best to take their analytical tool as a guide to effective online and distributed course construction. Thus Mary Thorpe (Thorpe, 2002), states that ICTs offer alternative ways that *communities of practice* can be established. Stephen Billet (Billet, 2002) suggests that *communities of practice* for workplace learning can only be established when the co-participation of all workers have a more equitable status. David Guile & Michael Young (Guile & Young, 1998), feel that *communities of practice* has done the invaluable service of diverting attention away from the skill transfer model of education. The latter is quick to point towards the failure to learn as being the fault of either the teacher or the student. However, they then go onto state that *communities of practice* as an approach highlights the need to provide opportunities for joint participation.

These attempts at utilising Lave & Wenger's *legitimate peripheral participation* though appear to fall short in presenting concrete operationally defined pedagogies other than a vague call to arms to provide more opportunities to enable *communities of practice* to form, or to not ignore socio-cultural forces that interact within a learning context.

Activity Theory

Activity Theory which is really a specialised form of *Systems Theory* (Bertalanffy, 1972) has been described by David Russell as a 'lens' which acts as a springboard to ask 'good questions' about learning. However, *activity theory* appears to have had it's roots as an extension of Vygotsky's theorizing on the role of *mediated tools* that enable learning to occur most particularly in *zones of proximal development*. Activity systems which form the basic unit of analysis have technical language associated with it such as *subjects* (the people teaching or learning) which use *tools* (language, print, computers, internet) to act on an *object* (such as an academic discipline) which have *motives* (such as a desire to pass a course). On top of that *subjects* are often

4. Cultural psychology is really a natural reaction to the discipline of *cross cultural psychology*. The former tries to find the *emics*, or unique behaviour that a cultural group displays. The latter looks for *etics* or universal or absolute behaviours between cultures. Neither approach is superior or 'better' in any objective sense. They are simply different ways of looking at behaviour. (Berry, Poortinga, Segall, & Dasen, 1992)

parts of explicit or implicit *communities*⁵ which have explicit or implicit *rules* associated with them. The reason why *Activity Theory* is a powerful 'lens' is in the recognition that there are normally parallel *activity systems* operating simultaneously or in parallel, many times with *contradictions* in their *motives*. It is these *contradictions* that provide a powerful way of teasing apart why a learning context such as online distributed learning is, or is not bringing about genuine learning.

Actor Network Theory

It uses the same notions of emergent properties of what appear to be disparate parts. *Actors* are any aspects of a system that contribute to a learning context. This includes the people involved in the online and distributed learning context, the skills they bring to bear, their socio-cultural values in dealing with dismembered personalities in asynchronous communication, the reliability of the internet service provide, the computer and the ease of use of the operating system and associated software, the demands placed on individuals outside of the formally stated course objectives and so on. Like the schemata of cognitive scientists, *actor network theory* ends up diagrammatically looking like a circuit diagram of interconnected 'black boxes'. What is different though is that *actor network theory* does take account of what becomes taken for granted and is not considered a discrete set of interconnected elements but instead becomes 'black-boxed'. Lea (Lea, & Blake, 2006)

for example points out that 'print' is a technology that most students have 'black-boxed' and therefore do not consider the elements that make up printed material. For that matter, a dramatic example of black-boxing is in the ability to read and write. Until we come across a society that is trying to develop symbolic representation as a way of conveying information, it is almost impossible to think of this as a 'technology' (Fischer, 1997, Oxford studies in anthropological linguistics 14, xix). Morgan & colleagues (Morgan, Russell, & Ryan, 2002) used *actor network theory* more in the vein that both Lave & Wenger (Lave, & Wenger, 2002), and Russell (Russell, 2002) advocate the use of *legitimate peripheral participation* and *activity theory*. They used it to tease apart a novel way of teaching the analysis of literature which was developed by the first author. Essentially the case study reads like a catalogue of disasters which had precious little to do with the remarkably pedagogical ambitious intentions of the first author⁶. All three authors then go on individually and then as a joint commentary to use *actor network theory* to figure out what went 'wrong' and actually what went 'right' through the use of opportunism in the learning context.

Value of Socio-Cultural Analyses for ICTs in Distributed Learning

To return then to virtualisation of university teaching, can these socio-cultural approaches take us beyond being naively convinced that ICTs will provide valuable learning environments and opportunities? The answer seems to be both 'yes' and 'no'.

'Yes' socio-cultural analyses of learning environments and opportunities correctly identify ICTs as tools of the learning trade which is embedded into a contexts of implicit and explicit agents of a larger system.

5. This specialised use of the word *community* is much more akin to the definition of *culture* that Matsumoto uses (Matsumoto, 1996).

6. However, Wendy Morgan pointed out that her students eventually learnt what they were supposed to but only through considerable extra work for the whole class to make up the short falls.

'No', the sheer enormity of an open systems theory means that none of the theories so far can help course designers in constructing a distributed course from start to finish (or even close to it). But these theories can help to ask 'good questions' or sensitize the designers to consider issues such as whether enforcing group work for an element within a course, does not bring about a *contradiction* on a course being touted as 'open' and exploratory; or whether the use of email has become 'black-boxed' enough that it's usage will not detract from the learning that is supposed to be occurring.

In a similar tack, the ambitions of some authors (Thorpe, 2002; Wegerif, 1998; Billet, 2002), that a consideration of course design that encourages *communities of practice*, is considered to be wildly optimistic if these authors believe that this will bring about the equivalent learning opportunities of a conventional campus university. Even those students who were comfortable with ICTs in a learning environment, were not enthusiastic about their own desire to learn in a virtual university (Crook, 2002). In part this is because the sheer variability of different *communities of practice* are unlikely to be offered to the same degree as conventional campus without building technologies that start to look suspiciously like – well a university campus!

Epistemology: a different kind of socio-cultural analysis

The one kind of socio-cultural analysis that can significantly contribute though to avenues and directions in course production is epistemological considerations because it forces educators to explicate 'what' they believe they are teaching (Lankshea, Peters, & Knobel, 2002). Epistemologists of course are entirely aware that 'meaning' and it's construction is entirely bound by the socio-cultural environment in which we live. One of the complications though, lies in the fact that epistemology and the people who work in this field explicitly or implicitly are also *communities of practice*, as well as *actors*, and are both *subjects* and *objects* in *system activities*. Hence Lankshear & colleagues (Lankshea, Peters, & Knobel, 2002), explain how society is starting to construct 'meaning' that is less concerned with any semblance of objective truth, and is more concerned with globalised efficiency. ICTs have in part enabled this paradigm shift to occur because of their global reach, the interactivity and speed of response. ICTs though has brought with it other concerns that make it's use and navigation dependent on how someone can effectively filter the huge amounts of information; how they can use ICTs to draw attention to themselves; how to convey meaning through combinations of print, audio and video; how to ascribe credibility of sources; and how to remain critical of apparently valid sources how despite the best of intentions, still have to make editorial decisions about what information to display and which part of it to hyperlink to other parts of the internet.

Notwithstanding this not insignificant 'wrinkle', until course designers are explicit about what they believe they want their potential students to 'learn', the socio-cultural analyses such as *actor network theory*, or *activity theory*, will never even in theory be able to significantly guide course construction because of this hidden variable. Significant questions arise such as should learning take account of the previously mentioned paradigm shift and instead of teaching future students about knowledge as a means to an end, instruction should be on how to garner and utilize information as the modern 'commodity' (Lankshea, Peters, & Knobel, 2002; Evans, 2000; Perraton, 2000)?

Once these questions are answered, the viability of a totally virtual university becoming a reality will be 'closer', but by how much it is still not possible to say.

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