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Natural, practical and social contexts of e-learning: the use of a critical realist theory to examine structural influences on e-learning

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Background

The effectiveness of learning technology is not determined by intrinsic features of the technology itself; we should understand the contextualised nature of learning with technologies. Much research on e-learning has adopted a 'closed-system' perspective, treating e-learning environments as self-contained, rather than embedded in and interacting with wider contexts, and learners as isolated from their wider social and cultural backgrounds (Li, 2009).

According to Archer (2000), we, as human beings, necessarily and simultaneously live our lives in three orders of reality: natural, practical and social. In being an e-learner one does not cease to be a human being, living one's everyday life in a real world and tackling different relationships between oneself and reality. This ontological assumption is applied to this study of e-learning so that various levels of context are examined as structural influences: learners' personal contexts, the course/institutional context and the wider social and cultural context.

I examine an e-learning programme in China to explore the usefulness of recent theoretical work by Margaret Archer (1995, 2000) in helping us better to contextualise and inform the development of e-learning programmes. I apply her notion of 'Three orders of reality' to identify different contextual levels and her 'morphogenetic approach' to analyse how structural factors affect learners' experiences.

Research Questions

The overarching question is: Is Archer's critical social theory account methodologically and theoretically useful for analysing the structural influences on e-learning through the lens of learners' experiences and, if so, how?

The following specific research questions are addressed:

1. What constitutes a context for learning in an e-learning programme?
2. What are the relationships between different learning contexts?
3. How do learners engage with different learning contexts?

Methods

The case for study is a 2-5 years on-line Bachelor Degree programme designed and hosted by a Chinese university. Multiple data collection methods were used to gather data related to the different contexts influencing the learners' experiences of the programme. A web-based questionnaire was sent to 2,429 learners, with 250 returned, to gather background information about them and their e-learning experience. This was followed by individual interviews (n= 22) and focus groups with learners, tutors and course designers. Eight learners kept an audio diary over one semester, to capture their immediate experiences and responses. These data were supplemented with field observations and course document analysis.

Frame

Because of its human constitution, states Archer (1995), social reality is inseparable from its human component. Thus in examining the contextual influences on e-learning, it is essential to tackle the relationship between social structure and human agency. Although recognising the activity-dependent nature of structure, Archer criticises Giddens' (1984) conflation of structure and agency as 'mutual

constitution' by claiming there are two sets of radically different emergent properties pertaining to agency and structure sui generis, which are irreducible to each other. Because at any moment of time society always pre-exists the individual, structural properties do not depend upon current activities and the knowledgeability of contemporary agents about what they are doing, as Giddens maintains. It is 'the past activities of agents (possibly now dead)' upon which structural properties are dependent. Therefore, two sets of powers work 'out of synchrony':

- (1) Structure necessarily pre-dates the action(s) leading to its reproduction or transformation
- (2) Structural elaboration necessarily post-dates the action sequences which gave rise to it

Based on these two propositions, Archer proposes the analytical tool of 'morphogenetic cycles' that provide a method of catching the interplay between structure and agency over time. This insistence upon ontological distinction and discontinuities in the structuring/restructuring process implies a methodology based upon analytical dualism, which allows examination of structural constraint and enablement on human agency.

Research findings

Learners' commitment to learn reflects the process of negotiation and accommodation of their different concerns arising from their interaction with different aspects of reality. The extent to which a course is able to fulfil both the learners' needs and concerns informs their decision making on how much effort they are prepared to put into the course.

E-learning is constructed in both physical and virtual environments. The tension between learning and other life commitments can be acute when the sophistication of the virtual world may lead to distractions and obstructions for learners.

The learners' motivations and concerns are not mutually contradictory as the Western dichotomy of intrinsic/extrinsic motivations suggest.. They reflect the tradition of the harmonious co-existence of one's internal establishment and external performance as emphasised in Chinese philosophy of education and the current social and economic environment.

Gaps exist between designers' intentions and learners' experience of the programme, suggesting different levels of context do not affect e-learning directly but are mediated by learners' personal power - reflexivity. By exerting their personal power in interacting with structural properties of the e-learning setting, learners bring about significant transformation to the structure over time.

For example, a learning community emerges through the learners' initiatives, using everyday, familiar technologies rather than those of the course, seeking personal contacts and organising their own means of sharing interests and concerns, in order to meet their own personal needs and to fit within the contexts of their lives outside the framework of the programme itself.

E-learning is an emotionally charged, dynamic and changing process in which, for example, learners' motivation and commitment to learn are not fixed but undergo revision through their reflexivity in the light of their experience.

Archer's theoretical and methodological frameworks are powerful tools in the processes of identifying and analysing contextual influences on learners' engagement (and dis-engagement) with the e-learning programme. Their power arises from their capacity to analyse both individual and structural factors in the learners' experiences without conflation of the two or prioritisation of one over the other.

Archer's work is important because it broadens our perspective on the experience and effectiveness of e-learning away from a focus on the technology. It includes the technology as part of the (practical) order of reality that shapes the learners' experiences but places it into wider individual contexts.