Blended Learning: The Perceptions of First-year Geography Students

PHILLIPA MITCHELL & PIP FORER
School of Geography, Geology and Environmental Science, University of Auckland, New Zealand

ABSTRACT Focusing on Digital Worlds, a first-year geography blended learning course at the University of Auckland, this paper gives voice to the students, examining how they perceived e-learning versus traditional learning mechanisms; how e-learning mechanisms have affected their learning behaviour; and why certain e-learning mechanisms offered in the course were more appealing than others. It demonstrates that students’ views are determined by their individual learning styles and how they perceive the university experience. Information and communication technologies were recognized to provide complementary learning benefits, especially when other factors inhibited learning, but traditional mechanisms such as lectures were still greatly valued.

KEY WORDS: Blended learning, e-learning, tertiary students, information and communications technologies (ICTs)

Introduction

The past quarter century has seen increasing attention paid to the potential role of information and communications technologies (ICTs) in tertiary learning, with the prominent debates of the 1980s and 1990s centring on the impersonality of computers (Hiltz, 1986) and practicalities involved in using ICTs effectively for teaching (Chou, 2002). Particular attention also focused on such use in distance learning, a practice now well recognized (Haythornthwaite & Kazmer, 2002). The last decade, with its increasing abundance of ICTs, has seen the focus of e-learning discourse broaden. Greater focus is being applied to the institutional embeddedness of e-learning, something sparked by the neoliberal agendas of the 1990s which drastically altered tertiary funding around the world (Vandenberg, 2005; Davis & Fill, 2007; Martin & Treves, 2007). Increasing attention is also being given to modelling the effectiveness of e-learning mechanisms, including factors such as the use of online assessments, students’ attitudes to e-learning mechanisms and the application of different teaching methods (Carver et al., 2004; Sivo et al., 2007; Chang & Tung, 2008). These latter two concerns underlie the agenda of this paper, and geography provides a useful arena in which to explore these because of its diverse content and eclectic forms of teaching methods (Martin & Treves, 2007, p. 774).
Blended learning courses provide a particularly interesting focus for research into the evolution of e-learning. Such courses involve a mixture of traditional and e-learning mechanisms and are typically run on campus (Stubbs et al., 2006). According to the Centre for Educational Research and Innovation (CERI) (2005) blended learning courses are gaining in prominence globally as ICTs are deployed to complement rather than replace traditional forms of tertiary learning. Our paper considers such a deployment through a first-year blended learning course in geography at the University of Auckland, New Zealand (Digital Worlds). This positions it in a system that has undergone notably rapid and comprehensive neoliberal reforms (Bray & Walsh, 1998; Dalziel, 2002). The paper will illustrate both how these changes influenced the tertiary sector’s development of e-learning initiatives and the ramifications of these changes in the institutional context of the University of Auckland.

Within this context the Digital Worlds course is utilized to reveal the students’ experiences and perceptions of undertaking a blended learning course. Three topics are examined: how students perceive e-learning versus traditional learning mechanisms; how e-learning mechanisms are affecting students’ learning behaviour; and why certain e-learning mechanisms in Digital Worlds are more appealing than others. By giving voice to the students this paper builds on a small but increasing body of work that values what they have to say as an important means to “extend our knowledge of e-learning” (Gilbert et al., 2007, p. 562).

E-learning in New Zealand

By the mid-1990s the neoliberal reshaping of New Zealand’s tertiary sector had restated the primary purpose of tertiary education to be “the acquisition of marketable skills” (Boswell, 1995, p. 19), implying a much narrower educational focus than the traditional ‘liberal’ university education and justifying a shift of costs to the beneficiary. Student fees increased drastically, fundamentally altering the tertiary learning experience, particularly as interest was accrued during study (Barr, 2004). This was an elemental culture shock with profound impacts on attitudes to tertiary study and solvency in New Zealand.

This coincided with a growing expectation for tertiary institutions to adopt increasing levels of ICT use in teaching. Cheaper and more advanced technology and increasingly student demand for convenience learning certainly fuelled this expectation. Within the e-learning discourse there has been concern that neoliberal motivations encouraged the deployment of e-learning as a means of cost reduction, with little concern for the implicit pedagogic effects of technological delivery (Peters & Roberts, 1998). Vandenberg (2005) argues that one way for the discourse to reject such thinking is to recognize the embeddedness of technologies in tertiary institutions. This is a significant point given that very little coordinated attention was paid to e-learning in New Zealand until 2001 when the Ministry of Education formed the E-learning Advisory Group to develop a coherent national strategy and provide a tertiary e-learning web-based portal through which information and services could be accessed (E-Learning Advisory Group, 2002).

The Ministry of Education has only recently begun to collect data on the state of e-learning in New Zealand’s tertiary institutions; Table 1 provides summary figures from the preliminary data (Ministry of Education, 2006). Focusing on Bachelor’s courses the data is categorized by institution type and distinguishes university geography courses to provide a context for the Digital Worlds course. Four levels of e-learning were identified by the Ministry. Those where there was no web access at all. Those that were web
supported, i.e. where a paper or course provided students with optional access to limited online materials and resources. Those that were web enhanced, i.e. where a paper or course expected students to access online materials and resources as a major contribution to study. Finally those that were web based, i.e. involved mandatory access to online materials (Ministry of Education, 2006). Table 1 demonstrates that many courses still have no online content, but there is a trend towards web-supported or web-enhanced courses, particularly in geography.

The figures in Table 1 reflect wider international trends. In 2005 the CERI compiled a range of information on the emergence of e-learning at the tertiary level in countries throughout the Organization for Economic Cooperation and Development (OECD). Involving 19 tertiary-level institutions from 13 countries (including New Zealand) the study found that most tertiary institutions were developing “some form of central strategy for e-learning” (CERI, 2005, p. 13) but argued that e-learning has not lived up to its hype, that physical campuses are not being replaced by virtual ones, and the economic benefits of e-learning have been overstated. Like Table 1 the CERI study also categorized courses according to the degree of online component involved; however, the study used five categories.¹ The CERI study showed that the major growth area for e-learning at tertiary institutions globally was those courses where the percentage of online presence was enhanced or significant. The Asia Pacific region, under which New Zealand falls, in particular showed a high level of this type of e-learning with 21.8 per cent of courses offering significant online components, appreciably more than the other areas such as the UK (15.5 per cent) and Canada (14.5 per cent).

Until 2006 the University of Auckland’s response to e-learning has been haphazard with various arbitrary e-learning initiatives arising, most failing due to lack of support and funding. Restructuring eventually led to the establishment of the eLearning Design and Development Group which prioritizes improving staff skills to deliver e-learning mechanisms to students.² Despite adhering to national politics the group’s development was not directly precipitated by the national processes.

Cecil, a learning management system, initiated by the Business School as early as 1996, was the one exception to the university’s haphazard response (Sheridan et al., 2002). Cecil is now the university’s mandatory tool for course administration and the primary vehicle for the institution-wide e-learning mechanism. Students can access an interface containing

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**Table 1.** The levels of online content offered at all tertiary institutions in New Zealand by full-time Bachelor’s degree, with specific detail on geography courses

<table>
<thead>
<tr>
<th>Type of Institution/Discipline</th>
<th>Percentage No Web Access</th>
<th>Percentage Web Supported</th>
<th>Percentage Web Enhanced</th>
<th>Percentage Web Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute of Technology or Polytechnic – All¹</td>
<td>57</td>
<td>32</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>University – All¹</td>
<td>34</td>
<td>30</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>Total University and Institutes – All²</td>
<td>37</td>
<td>31</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>University – Geography</td>
<td>36</td>
<td>25</td>
<td>39</td>
<td>0</td>
</tr>
</tbody>
</table>

¹ All means inclusive of all fields of study the tertiary institution offers
² This total is provided as a comparison to the OBHE and CERI studies as they took into account both Universities and Institutes of Technology and Polytechnics

a real-time profile of their papers, marks, course communications and so forth. Academics can use it to upload a range of materials and administer the course. Over 28 000 students attend the university and during semester time generate over 125 000 log-ins to Cecil per week (Cecil, 2008). This paper demonstrates that both the origins of Cecil in the Business School and the vacuum of wider institutional e-learning strategies have had ramifications for how Cecil is used and perceived by students.

**Digital Worlds**

The Digital Worlds course originated from a desire to develop a course on current social changes related to new technologies that integrated both social and technical sciences. Simultaneously it investigates how ICTs could be applied to explore these issues with a combination of web support, action learning (such as autonomous field work) and the socially mediated learning you would normally obtain at university. Course content focuses on how spatial technologies mediate our spatial experiences, letting us transform space by making it easier for us to travel, communicate and build complex cities, which in turn may have impacts on the nature of distance and place. One implication of the subject matter is that most students should be sufficiently familiar with ICTs and their use to critically reflect on e-learning mechanisms they encounter.

Since 2004 Digital Worlds has delivered full courses in the university’s six-week-long summer semester, starting in early January. Class background is not documented, but the university prospectus indicates that Summer School is targeted particularly at three profiles: students who want to proceed through their degree faster; students making up failed papers; and students undertaking double majors who require flexibility in their timetable (University of Auckland, 2006). Students are advised that Summer School papers require a high level of commitment as they represent full courses in half the normal period of time. Unfortunately, no formal research has been conducted on the Summer School programme as a whole to identify the mix of students who enrol, but observations suggest that classes are dominated by the three target groups. As a first-year course Digital Worlds has no prerequisites or co-requisites, and enrolment in the course increased annually from 28 students in 2004 to 56, 79 and 170 students by 2007. When the University of Auckland introduced the mandatory General Education programme in 2006 to give students a more holistic learning experience Digital Worlds was included, swelling student numbers and altering the student dynamics in 2007.

Positioning Digital Worlds in terms of Table 1 leaves it poised in between the web-supported and web-enhanced categories but arguably such categories are narrow and overly biased toward the Internet, excluding the role that other ICTs can play in e-learning. Using the term ‘blended learning’ implies the mix of traditional and e-learning components as shown in Table 2. Notably throughout 2006 and 2007 traditional components retained interest, 75 per cent to 85 per cent attending laboratories and around 70 per cent attending lectures. Meanwhile autonomous laboratory or field exercises were featured to provide the students with greater flexibility, independence and interaction with the local geography.

**Positionality of the Researchers and Methodology**

Despite research into e-learning commonly drawing from the researcher’s own courses there has been little reflexive discussion regarding their positionality. Hobson (2001)
identifies, however, that “teachers are perfectly positioned at the intersection between … [being] the insider and the outsider” (2001, p. 10) due to being both a visible influence in facilitating learning, and an agent continuously acting and reacting to what he/she learns. Consequently it was recognized that identifying and analysing the authors’ positionality was crucial to this paper, particularly as the positionality was relatively complex.

Obviously the authors are ‘outsiders’ in respect of the students’ experience of the course. However, the first author was simultaneously a PhD student in the same department that delivered Digital Worlds, and therefore shared the same insider perspective regarding Cecil. As the architect of Digital Worlds the secondary author has considerable insider insight into the intentions and aims of the course and its history. As both tutor and course coordinator the primary author shares this insider position. Minor adjustments made to the course due to this research require acknowledgement, although largely limited to nuances on certain laboratories. The researchers’ position of power over the students was also a factor. The University of Auckland’s Human Participants Ethics Committee has stringent guidelines and processes for investigations involving academics’ students, with particular emphasis on anonymity and ensuring compliance is totally free of researcher influence. Accordingly the Digital Worlds students were provided with Participant Information Sheets informing them of these facts. Compliance with ethical guidelines severely limited the collection of demographic data, which could result in the recognition of particular individuals and this is reflected in the analysis.

In both 2006 and 2007 two anonymous questionnaires were administered to Digital Worlds students at the course’s beginning and end, thus allowing comparisons. Questionnaires were handed out at the end of lecture slots and students were asked to submit their completed forms to a box available in the host department’s Student Resource Centre. Response rates were 44 per cent in 2006 and 40 per cent in 2007. This level of

<table>
<thead>
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<th>Table 2. The blended learning of Digital Worlds</th>
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<tr>
<td><strong>Elements of Traditional Learning</strong></td>
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<tr>
<td>Lectures</td>
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<tr>
<td>• Three one hour lectures per week</td>
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<tr>
<td>Laboratory Exercises</td>
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<td>• Two hour lab slot per week with Tutors.</td>
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<td>• Physically collect lab exercises from the tutors or the School’s Student Centre.</td>
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<tr>
<td>• GIS component to each lab that was only available on Geography computers (computer lab open from 8am-6pm) Mon-Fri</td>
</tr>
<tr>
<td>Contact with Lecturer/Tutors</td>
</tr>
<tr>
<td>• Office hours when students could see the lecturer</td>
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return may harbour some bias but given the relative homogeneity of the group this seems unlikely to be very strong. While statistical testing may yield little, the results are indicative of students’ perception of blended learning, and build on the areas of literature that expressly value the student voice.

**Students’ Comparative Perceptions of E-learning and Traditional Learning Mechanisms**

While the concept of e-learning typically includes the use of ICTs to facilitate a more flexible and open learning environment, it is inappropriate to assume that Digital World’s students had such an understanding. Consequently, the preliminary question for both 2006 and 2007 surveys was: “Have you come across the concept of ‘virtual learning’ or ‘e learning’ and if so what is your understanding of it?” Some 84 per cent of the 2006 class had an elemental understanding of e-learning, 28 per cent specifically referring to Cecil and 40 per cent referring to the Internet or online learning. Several commented on its mission to “ease access” or “replace face to face contact”. In 2007 less certainty prevailed, with only 62.5 per cent stating they had an understanding of what was meant by e-learning. Some 6 per cent queried whether Cecil was e-learning or reported online adverts for it but did not know what its purpose was. This was unexpected, but a likely reason is a major influx of new students from different faculties on a general education ticket in 2007.

The next step focused on students’ relative judgement of lectures and what they would choose between a traditional learning mechanism or an e-learning alternative. Figure 1 illustrates that students consider lectures to be a ‘good way to learn’ with 68 per cent in 2006 and 91 per cent in 2007 agreeing with this statement and citing an appreciation of the extra detail given in lectures and the ability to identify nuances in content emphasis.

![Figure 1](image-url)  
*Figure 1. Students’ preferences when it comes to traditional and e-learning mechanisms (2006 and 2007 questionnaires)*
caveat is that several noted that the ability of the lecturer was critical to the value of attending lectures. Figure 1 also demonstrates significantly varied preferences if asked to choose between a traditional mechanism and an e-learning alternative. Interestingly, cross-analysis of the students’ responses to different aspects of learning revealed no consistent preferences for either direct or virtual arenas. Students mixed and matched choices, for example preferring lectures but wanting to conduct tutorials online (or vice versa), or opting for pure online or on-campus experiences. Table 3 provides further details of the students’ responses, and it reflects the diverse range of the students’ experiences and learning styles. It indicates a small but growing number of students between 2006 and 2007 who sought the combinations of experiences which blended learning offers.

How E-learning Mechanisms have Begun to Affect Students’ Learning Behaviour

Forer (1998) describes learning as a spatio-temporally constrained activity, and argues that e-learning provides greater choice to students juggling study, work, family and recreational activities. In the second questionnaire of both years students were asked to comment on the impact of e-learning delivery on their spaces and times, and they provided some eclectic responses (see Figure 2). Over 60 per cent acknowledged the

<table>
<thead>
<tr>
<th>Preference</th>
<th>Examples from Students Responses</th>
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<tbody>
<tr>
<td>Attend Lectures</td>
<td>“I would choose attending lectures because you can get extra information which is relevant to the topic taught on that day”</td>
</tr>
<tr>
<td>Access Lectures Online</td>
<td>“Receiving it online. I could learn at my own pace and at my discretion; would not be affected by poor timetabling and travel time to campus”</td>
</tr>
<tr>
<td>Both Attend Lectures and Access Lectures Online</td>
<td>“With sufficiently good lecture material – something closer to an HTML textbook than a PowerPoint presentation – would choose online. However I’d still likely need lectures to force myself to study”</td>
</tr>
<tr>
<td>Attend Tutorials</td>
<td>“I would choose attending tutorials because I feel that human interaction is key to learning”</td>
</tr>
<tr>
<td>Online Tutorials</td>
<td>“Online – easier to ask questions without people looking at you weirdly”</td>
</tr>
<tr>
<td>Both Attend Tutorials and Access Tutorials Online</td>
<td>“Attending tutorials for debatable issues and group dynamics but online tutorials for informative sessions”</td>
</tr>
</tbody>
</table>

Table 3. Extracts from Digital Worlds students’ responses to question regarding their preference for traditional and/or e-learning mechanisms (2006 and 2007 questionnaires)
flexibility and greater range of choices provided by e-learning. There was an increased awareness of other learning spaces, such as the home as a study environment (29 per cent feeling it gave them more time). Interestingly 19 per cent of students in 2006 left this answer blank, which may have resonance with Thrift and French’s (2002) concept of the technological unconscious and the taken-for-granted nature of many ICTs. Possibly these students had overlooked the ramifications of ICTs on their times and spaces, interpreting them as given. In 2007 over 60 per cent again identified increased levels of flexibility and choice, thus underlining students’ growing recognition that learning can occur in multiple contexts, supplemented by valuable points of physical contact. They acknowledge that access to certain facilities will always be easier on campus, but that the how, when and where for accessing others are increasingly flexible and open.

The Digital Worlds students were next asked to reflect on whether exposure to e-learning mechanisms had altered their perspectives or behaviour in approaching learning. In 2006 there was quite a range of responses to this question. The modal group, 41 per cent, identified changes through comments such as “Definitely changes perspective—makes a difference having those resources so readily available. More open to using Internet, willing to explore more” or “Yes definitely. I’m more pro e-learning now and feeling confident to do work online and submit work online”. Different results in 2007 had over 50 per cent of the respondents stating that their perspective and behaviour had not changed. The key reason given was that they already had experience with these technologies on other courses, possibly indicative of a tipping point associated with the influx to the course of general education students from other faculties.

Why Certain E-learning Mechanisms used During Digital Worlds were more Appealing than Others

Text messaging is an increasingly prevalent means of communication, particularly amongst youth (16–24 years old). Recognizing this trend the Digital Worlds main lecturer
(second author) decided to offer students the opportunity to text questions on course material. In 2006 the initial questionnaire asked students whether they would consider text messaging the lecturer questions and to explain their answer. Some 72 per cent responded ‘Yes’ to this option; the pro and con explanations were quite varied (see Figure 3). The second 2006 questionnaire pursued this line by asking if they had actually texted the lecturer and once again to explain their answer. In fact only two of the 27 students (8.5 per cent) had actually sent a message in spite of the fact that all of the students involved in the paper were known to have mobile phones. The responses given for not utilizing this tool varied but the majority 33 per cent stated that they had not needed to ask any questions. The lack of detail was another problem identified.

In 2007 temporary staff changes meant that the initial 2007 questionnaire only ascertained the students’ communications preferences, asking which of email, phone or text message they would consider using to communicate with lecturers on the course and to explain their choice. There was an overwhelmingly negative response to the use of text messages to the lecturer. The lack of detail was again a significant deterrent for the use of text messages but what was particularly revealing was that 39 per cent of the students simply considered it was too personal or informal a way to communicate with a lecturer. This demarcation of ICTs for different purposes is interesting as it reveals that students can be very selective as to which technologies they appropriate for which tasks, an issue that requires future investigation.

Students were also asked about their perceptions and use of Cecil. One of the features Cecil provides is an online discussion forum, effectively a local area equivalent to the online interactions of distance learners. In Cecil this mechanism allows students enrolled for the same paper to discuss issues and it provides a medium for the instructors to initiate discussion about various aspects of the paper. In both 2006 and 2007 just over half of the students who responded had used this mechanism during their time at the University of Auckland, quite a low percentage considering the ubiquitous use of Cecil. Some of the users some found the forum to be a positive experience, identifying that it was a “good way to seek help”, “a good tool for discussion” and “can be helpful as other students are usually going through or experiencing the same problems”. There were also those students who

![Figure 3. Reasons given by those students who responded favourably when asked if they would text message the lecturer (2006 Questionnaire)](image-url)
had a negative experience with the forum. Of particular note within this group were the 12 per cent in 2006 and 16 per cent in 2007 who had begun to use the forum only to find that no one else was, and consequently stopped using it then and in further courses.

Two further questions were asked to identify whether this limited enthusiasm was specific to Cecil. One enquired if they had experienced non-Cecil chatrooms and the other asked whether, if an independent (non-Cecil) online course forum was set up, they would use it. In 2006 68 per cent and in 2007 63 per cent of students had used such online chatrooms outside Cecil. When asked if they would use an alternative forum to Cecil, 44 per cent in 2006 and 59 per cent in 2007 stated that they would. Significantly, of these students several added the qualification that others had to use it, emphasizing that the degree that the chatroom is used by others is a critical factor in its sustained success. The majority of those who stated they would not use an alternative chatroom tended to prefer face-to-face contact anyway, providing comments such as, “No, personally I don’t really like talking to people that I don’t know” and “No I’d prefer to talk to a tutor or fellow student in class or in an office hour [sic].”

**Discussion and Conclusion**

The focus of the e-learning discourse has begun to shift away from the practicalities of e-learning towards how it is being received by tertiary students. This paper has contributed to the small but increasing body of work that values giving voice to students’ perceptions and understandings of e-learning. As several commentators argue (Vandenberg, 2005; Davis & Fill, 2007; Martin & Treves, 2007; White, 2007), the initial driver for blended learning courses was often the neoliberal reforms of the 1980s and 1990s. New Zealand’s tertiary sector underwent significant changes as a result of these reforms and this has been reflected in the delays and changing intentions associated with e-learning,
something also reflected at a lower level by the University of Auckland’s approach to e-learning.

Courses such as Digital Worlds that merge active online components with traditional learning forms are now becoming increasingly prevalent worldwide (CERI, 2005). Such blended learning caters to a range of learning styles and expectations. This paper has shown this in three ways. First, when asked to compare traditional and e-learning mechanisms students gave a range of opinions, many of which were driven by their learning styles and previous encounters. Traditional mechanisms such as lectures are still popular, but students nevertheless appreciate the choices and flexibility of having a range of learning mechanisms. Second, the increasing range of options that the blended learning of Digital Worlds provides is beginning to subtly alter students’ behaviour. They are becoming aware of alternative learning spaces and appreciate the greater temporal flexibility online components provide. They also felt as if their perspective and learning behaviour was changing in response to the increasing number of learning options to which they were gaining access. Lastly, the types of e-learning mechanisms that students adopt are highly contingent on their previous experiences and preconceptions of the appropriateness of a particular technology. While text messaging appeared to be an ideal form of communication for the students they were discerning enough to recognize both its bandwidth limitations and excessive informality as a form of communication with course staff, a concept that raises interesting questions about the social constructs surrounding the role of individual ICTs. Student’s reluctance and bad experiences with Cecil also illustrated the fundamental importance of previous experiences in influencing their behaviour and demonstrated the consequences of any failure to embed the mechanism into the wider institutional approaches to e-learning.

Tertiary learning has been engaged with ICTs for some time, sequentially utilizing the nascent internet, online libraries and globalized knowledge bases. This interaction invites innovative research. Within this field this paper joins a small but growing body of work providing empirical evidence to assess students’ perceptions of ICTs and how they contribute to their learning experiences. It provides an entry point into this question, revealing that what is occurring is tied up in students’ learning styles and how they perceive the university experience. As the CERI (2005, p. 15) study concluded:

... even if IT does not induce any change in the classroom, it is changing the learning experience of students by relaxing time and space constraints as well as providing easier access to information (online journals and e-books; student portals; etc.) and greater flexibility or participation.

It is plain that the future of e-learning has to embrace more than the acquisition of knowledge through the use of technology. Learning involves developing social skills and structures, exercising critical thinking and developing a range of communications skills, something that current ICTs are not as yet providing.

Notes
1 The five categories used were None or Trivial, Modest—i.e. course outline/lecture online, Significant—i.e. active elements online but no reduction in face-to-face time, Web Dependent—i.e. largely online, and Conducted Online.
References


