A study of final Year Education Studies Undergraduate Students' Perceptions of Blended Learning within a Higher Education course

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Abstract

This paper reports on a study of final Year Education Studies Undergraduate Students' Perceptions of Blended Learning within a Higher Education course. Blended learning uses a mixture of online and face-to-face teaching which has the potential to meet the diverse learning needs of students. An online questionnaire, incorporating closed and open questions, was used to gain the views of students. Analysis of the data revealed that students viewed aspects of e-learning in a positive light, but also felt that traditional style learning with face-to-face contact with the lecturer was important in some instances. The data did not uncover any significant gender differences due to the small sample size, and imbalance of male and female participants.

Students revealed a positive attitude to ICT in general, and particularly value how it helps them with the university work. The effectiveness of this can, however, be affected by the level of lecturer engagement with the relevant technologies. The study reveals that students appreciate blended learning as it offers the greatest level of choice to them, particularly in allowing them to work form a location convenient to them and avoid travel costs.

INTRODUCTION

In the 21st century, any university without Information and Communication Technology (ICT) may be depriving their students of opportunities to develop their skills for the future (Dawson, Heathcote and Poole, 2010). In this context, we use the term ICT as an all-encompassing term that covers a range of hardware as well as software (Gillespie, 2006). In addition, we regard ICT as a 'complex tool that can be used by teachers and by pupils in teaching and learning' (Higgins, 2001, p. 164). The use of this complex tool can facilitate new forms of communication between students and alters the environment in which students and teachers work (Delgado-Almonte, Andreu and Pedraja-Rejas, 2010). In addition, being able to effectively use ICT is a

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key skill in modern society (Bustos and Nussbaum, 2009) and many employers expect graduates to have a good understanding of the uses and capabilities of ICT as well as being able to flexibly adapt to new technologies (Delgado-Almonte, Andreu and Pedraja-Rejas, 2010). This increase in the use of ICT means that it has impacted on all sectors of education. (Stacey and Gerbic, 2007)

In this context, students in higher education can now encounter a wide range of learning experiences, ranging from traditional lectures and seminars to synchronous and asynchronous online lectures, from taking lecture notes in formal lectures to interactive sessions involving innovative ICT use. This has led to the development of a wide range of terms referring to the use of technology, many of which can be easily confused and potentially overlap. To ensure clarity in the rest of this article, it is worth briefly considering the key terms here before proceeding.

E-learning

With the rapid advances in the technology available to universities, most have decided to use it in some form to support learning. As resources and activities move online, the concept of e-learning emerged, but there is no general agreement on the meaning of this term (Sangrà, Vlachopoulos and Cabrera, 2012a) and new e-learning models are continually emerging as technology develops. (Dutta, Mosley and Akhtar, 2011) The situation is further complicated by the fact that 'different understandings of e-learning are conditioned by particular professional approaches and interests.' (Sangrà, Vlachopoulos and Cabrera, p.145, 2012b) As such, it is important to investigate the views of specific users, such as educational studies students below, to avoid generalising.

At its simplest, Fei *et al*. (2014, p,49) define e-learning as 'any electronically assisted instruction, and is often associated with instruction offered via computer and the internet.' To achieve this, JISC (2004) suggest it involves using a wide range of technologies such as desktop and laptop computers, mobile and wireless devices, electronic communication tools, videoconferencing, virtual learning environments (VLEs) and a range of software. In using these technologies, however, it is important to note that the "delivery of e-learning implies much more than a simple technical exercise in which some materials or processes are simply transferred from the offline world to some readymade online realm …" (McPherson and Nunes, 2008, p.433) This is important as Albert and Johnson (2011) posit that students tend to use e-learning systems as a means to access information, but then print the material rather than using it online as perhaps intended (Gilbert, Morton and Rowley, 2007). To move beyond this rather limited use of technology, lectures needs to take advantage of what Rana, Rajiv and Lal (2014) label the key attributes of e-learning:

- Many-to-many (i.e. group) communication;
- Any place (place independence);
- Any time (asynchronicity, time independence);
- Text, enhanced by multi-media; and
- Computer-conferencing (i.e., computer mediated messaging)

In this article, the term 'e-learning' will be used to encompass '…any learning that uses ICT…encompass[ing] flexible learning as well as distance learning, and the use of ICT as a

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communications and delivery tool…to support students and improve the management of learning' (HEFCE, 2005, p.5)

Whatever technologies are used, however, one of the key changes is to facilitate teaching and learning both on a campus setting and beyond. The effectiveness of this can be constrained by the availability of adequate Internet connections, but, certainly in the United Kingdom, advances in both the availability and speed of Internet connections in the general population mean that 77% of adults have access to broadband, either fixed or mobile (Ofcom, 2014). At university level, this facilitates a mode of study where physical presence on campus is not always required (Pachler and Daly, 2011), although evidence suggests that a lack of face-to-face contact can be detrimental to the learning experience (James and Hopkinson, 2009). Reisslein, Seeling and Reisslein (2005) found that students displayed positive attitude towards online collaboration for projects, but would have been more satisfied if some of the work had been face-to-face. Indeed, O'Neill, Singh and O'Donoghue (2004) concluded that technology may enhance the learning process, but cannot replace the lecturer. They argue that there are three key components for success with e-learning: prior ownership and experience of using technology (also supported by Buzzetto-More, 2008; Tagoe, 2012; Keller and Cernerud, 2002); the technological infrastructure; and the lecturer. The latter is also supported by Keller and Cernerud (2002), who noted that students found e-learning more beneficial when the lecturers interacted with the system and promoted the use of it. Overall, it is imperative that 'quality principles that underpin successful online teaching and learning are exactly the same as those that underpin successful face-to-face teaching' (Oliver 2003, p. 9 cited in Masoumi and Lindström, 2012).

In addition, some studies have suggested that gender may also play a part in the successful adoption and use of e-learning. For example, Keller and Cernerud (2002) found a statistically significant relationship between gender and students' attitude to e-learning. They found that women were more positive than men in regards to ease of use and flexibility in study. They suggest that male students may have anticipated more from the e-learning platform than they actually received and so were consequently disappointed. This finding was also found in subsequent studies, suggesting that perhaps males are generally less satisfied with e-learning due to unrealistic expectations as a result of higher previous use of ICT (Buzzetto-More, 2008; González-Gómez et al, 2012), although other studies have found the opposite (for example, Lu and Chiou, 2010).

Blended learning

Despite such mixed views, the combination of traditional face-to-face lectures with web-based content has become increasingly popular. This arrangement has become known as Blended learning (Concannon, Flynn and Campbell, 2005; Sharpe et al., 2006), or to use Bleed's (2001) more prosaic description, 'bricks and clicks'. It potentially offers many advantages for both students and lecturers as it provides greater flexibility and responsiveness, can overcome limitations of time and space, and can support novel ways to learn exploiting the performances of ICT (Hua, Goodwin and Weiss, 2013) In addition, Vernadakis *et al.* (2012) found that blended learning has the potential to meet the diverse learning needs of students. In part this is due to the ability of blended learning to 'create a myriad of educational possibilities that reflect its pedagogical richness' (Mortera-Gutiérrez, 2006, p.317), but to realise these possibilities, lecturers need to to re-think pedagogy (Jimison, 2011) If this rethink is successful, Giannousi *et*

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al. (2014, p.99) suggest that 'both face to face and online learning are made better by the presence of each other.'

Achieving the potential of blended learning, however, is not without its challenges. The first of these, and perhaps the most fundamental, is the lack of an agreed definition, although a common theme is the combination of virtual and physical environments. (Poon, 2013) Even this apparently straightforward distinction is, however, more complicated than at first appears as both physical and virtual environments can take many forms, each using a wide variety of resources. For the present paper we use a simple definition where blended learning combines face-to-face classroom methods with computer mediated activities, combining technology with pedagogical principles for the benefit of student learning. (El-Mowafy, Kuhn and Snow, 2013) Another challenge for blended learning is that 'the differences and similarities between online, traditional distance and physical-based teaching have been little understood, leading to confused notions of the panacea of 'blend''. (Salmon, 2005, p. 202)

Poon (2013) provides a useful summary of the benefits and challenges of blended learning in table 1 below:

Table 1. *Summary of the benefits and challenges of blended learning*

Benefits	Challenges
• Enhanced student learning outcomes • Greater flexibility for students and teachers • Improved autonomy, reflection, and research skills • Reduced student withdrawal rate • Ability to foster a professional learning environment • Potential cost and resource savings	• Unrealistic student expectations • Student-perceived isolation • Technological problems for students • Invasiveness into other areas of life • Time commitment • Technological problems for institutions • Lack of support for course redesign • Difficulty in acquiring new teaching and technology skills

The success or otherwise of many uses of blended learning will, however, depend on finding the effective balance between face-to-face and virtual interactions, both synchronous and asynchronous. Osguthorpe & Graham (2003, p. 228) suggest that

> The balance between online and face-to-face components will vary for every course. Some blended courses, because of the nature of their instructional goals, student characteristics, instructor background, and online resources, will include more face-to-face than online strategies. Other courses will tip the balance in favor of online strategies, using face-to-face contact infrequently. Still others will mix the two forms of instruction somewhat equally.'

The result of such variety of practice is that there remains a lack of understanding of how student characteristics affect the success of blended learning. (Hood, 2013)

The current study

In order to explore the impact of these many 'blends', and to acknowledge that different user groups have different understandings of blended learning, this study explores the attitudes of one cohort of final year undergraduate education studies students' perceptions of blended learning and what aspects were useful in comparison to more traditional methods of teaching. In particular it explores the following questions:

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- *What are students' views of traditional style university learning?*
- *What are students' attitudes towards ICT?*
- *What are students' opinions of e-learning?*
- *What are students' perceptions of blended learning at university?*

The study was conducted at a post-1992 university and focuses on one joint honours degree in Education Studies and a chosen pathway. All students study core, compulsory education studies modules, but also follow core modules in their chosen subject alongside other students from different programmes and schools. Their experience of ICT as a means of instruction was almost exclusively gained from lectures in the core education studies modules. Within these lectures students had experienced a very wide range of use of ICT in teaching and learning. All of the taught modules would make some claim to use blended learning, as all use a VLE, but, in reality, some represent one end of a 'continuum of conceptions and approaches, [where] the focus is on using technologies in teacher-focused and content-oriented mode 'as a medium to provide information'. (Lameras *et al*., 2012, p.142) At the other end of the continuum, students had also experienced a specific module focusing on ICT pedagogies studied in their final year. This module explicitly modelled a 'student-focused and learning-oriented mode as a medium for engaging in communication–collaboration–knowledge building.' (Lameras *et al*., 2012, p.142) The module used a blended learning approach as discussed above to examine different theories of learning in relation to ICT and how this applied across different age groups for many years to adult learning. Lectures included:

- **whole year group lectures** in lecture theatre, including using voting devices ;
- **small group lectures and seminars** in teaching rooms using range of interactive technologies including interactive whiteboards, podcasts and mobile technology;
- **synchronous (real-time) virtual lectures** in location of students' choosing but in timetabled slot
- **asynchronous (recorded) virtual lecture** in location and time of students' own choosing with associated online task
- **directed online tasks**
- **group Blogs**
- **electronic submission**
- **Personalised formative feedback** through comments and spoken feedback on assignment

As such, they had experienced all of Oliver and Trigwell's (2005) possible 'blends' below mixing:

- e-learning with traditional learning,
- online learning with face-to-face interaction,
- different types of media,
- different contexts such as work and study,
- different theories of learning,
- learning objectives such as those concerning skills as opposed to knowledge or pedagogic approaches such as distance and campus-based learning.

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It is therefore suggested that they had experienced a range of both virtual and physical environments and, in addition, a range of activities and technologies (including mobile technologies both in face-to-face sessions and to access virtual lectures, social media and podcasting) within each. This experience, along with the conceptual understanding of blended learning developed in the ICT module, allowed them to offer an informed opinion in the work that follows.

Given the fact that some students studied on different campuses for different subjects it was decided to conduct an online survey. Mertler (2002) notes that online data collection is an efficient and convenient alternative to the traditional method of gathering information from students and it also has the potential to collect large amounts of data from a target population efficiently within a short time period (Lefever, Dal and Matthíasdóttir, 2007). In addition, collecting research data through traditional pen and paper methods can be costly (due to printing) and time consuming (Sue and Ritter, 2007). Using an intuitive online survey system (with support available within the University in the event of any problems) made the actual production of the survey straightforward and 'simplified the process of collecting and inputting data' (Alessi and Martin, 2010, p. 122). An added consideration is that online questionnaires ensure data is not lost and allows for easier analysis of the data once it has been collected (Ilieva, Baron and Healey, 2002).

There are, however, important factors that were considered prior to utilising an online questionnaire. Firstly, respondents need an internet connection is required, and a device with a connection to the Internet (Lefever, Dal and Matthíasdóttir, 2007) - although all students in this study had access to the Internet at university should they choose to use it.. Secondly, their attitude to technology may affect the sample as the students who choose to participate may be more technologically minded and feel more comfortable using technology than those who choose not to engage with the survey (Sax, Gilmartin and Bryant, 2003). Furthermore, other participants may lack an ability to effectively use the technology (Lefever, Dal and Matthíasdóttir, 2007) or may forget about the survey and therefore not complete it. Nonresponse bias may also be an issue with online surveys, as Sax, Gilmartin and Bryant (2003) note that students may fail to engage with the survey. Online questionnaires do, however, allow respondents to participate at their own convenience and at a time and place that suits them.

It was decided that the target population for this questionnaire would have enough previous knowledge and experience of the Internet and computers (or other devices) to be able to successfully engage with the survey - particularly as all had done an ICT module during the year. It also seemed the most appropriate method for the research due to the nature of the topic being discussed – blended learning at university. Using an online questionnaire meant that students were engaging with the type of learning that was being researched, potentially making the research more valid.

This particular research project used *CheckBox* (an online survey software) to design questionnaire, which was securely hosted by the University. It allows the use of a range of question types, including single answer, multiple choice, open text, rating scales, and matrix questions and is simple to use. In order to gain a variety of data a number of types of questions were used in the study below: yes/no type questions, multiple-choice questions, Likert scale questions and an open question allowing respondents to give open-ended and unlimited response, adding a qualitative dimension to the data collection. The online survey software also

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made it unnecessary for the researcher to code the data or have to input results manually to a spreadsheet (Alessi and Martin, 2010). Each participant's responses are anonymous (students are coded in their responses to open questions below), which is one of the main benefits of online surveys. (Hash and Spencer, 2009)

Questionnaire design

Carbonaro and Bainbridge (2000) note that online questionnaires should be easy to complete, be easily accessible, maintain anonymity and only require basic computer skills to complete. In addition, with any online survey it is vital that there is an introductory page with brief information about the study and what the data collected will be used for (Alessi and Martin, 2010). Anonymous surveys such as the one used in this research use implied consent, where proceeding to the questions signifies consent as sufficient information about the study has been provided (Whitehead, 2007). The first page of the questionnaire therefore contained information regarding the nature of the study and issues concerning confidentiality and withdrawal, students were aware that by completing the questionnaire they were providing informed consent for the answers they submitted to be used for the purpose of the research.

The questionnaire design specifically reflected the research aims, but also used specific questions from studies by Dickinson (2005), Keller and Cernerud (2002) and the University of York (2011). These three publications also researched students' perceptions of either blended learning or e-learning within higher education institutions, meaning that some of the questions and types of questions they asked were relevant to use in this study. The questions were grouped into categories which corresponded with the research sub questions, with the themes traditional learning, ICT, and e-learning.

The survey was structured under the following headings:

1. background information (10 sub-questions)
2. attitudes to ICT (9 sub-questions)
3. attitudes to e-learning (12 sub-questions)
4. use of Blackboard VLE (15 sub-questions)
5. attitudes to traditional learning (11 sub-questions)

An example of the sub-questions and layout of the questionnaire is shown in figure 1 below:

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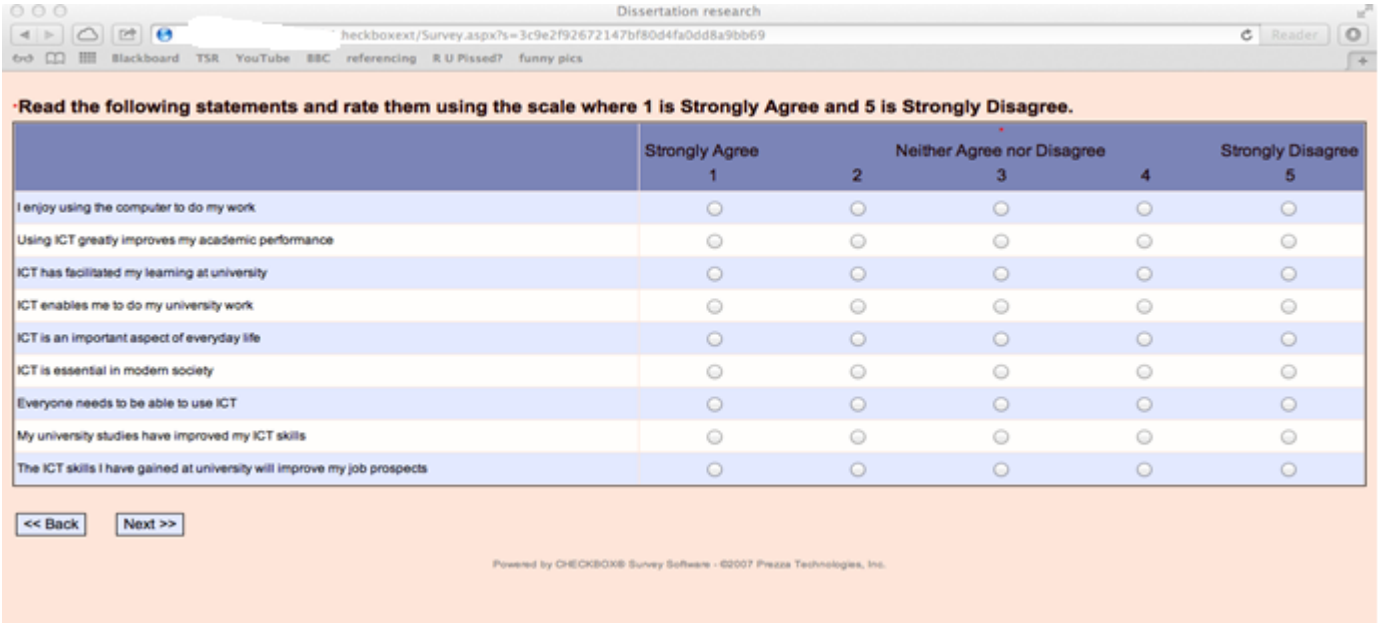

Figure 1: Screenshot from online survey

Procedure

Mertler (2002) asserts that using email to directly contact participants is the best way to promote engagement with a survey. Thus an email outlining the research was sent to all students in their final year of the BA (Hons) Education Studies course at the university, with a link to the online questionnaire. Further to the initial email, a second reminder was sent to all students, thanking those who had participated and reminding those who had not that they could still take part. This method of issuing a reminder was a good way to encourage participants to engage with the material (Sue and Ritter, 2007). This approach resulted in a combination of saturation and volunteer sampling, as every member of the target population was emailed to take part in the online survey, but it was up to them whether they wanted to participate. Volunteers, however, may have good intentions, but their views do not necessarily apply to the wider population (Cohen, Manion and Morrison, 2011).

Of the 147 potential participants, 38 students responded creating a response rate of 26%. Response rates vary greatly from survey to survey, however it is generally accepted that anything between 20-50% is adequate (Hamilton, 2009). Sax, Gilmartin and Bryant (2003) found that web-only administration for a questionnaire elicited a 19.8% response rate that they deemed to be acceptable. Of the 38 students who completed the questionnaire, 31 were female and 7 were male, thus preventing meaningful comparisons between genders - although this did reflected gender balance across the programme as a whole.

Results

In questions assessing attitudes, students were asked to indicate their level of agreement with a series of statements using a series of 5-point Likert statements, ranging from 1 (strongly agree) to 5 (strongly disagree). This allowed “a degree of sensitivity and differentiation of response while still generating numbers” (Cohen, Manion and Morrison, 2011, p. 325). In analysing

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responses the mean response was calculated as 'Methodological and statistical texts are clear that for ordinal data one should employ the median or mode' (Jamieson, 2004, p. 1217) – although using Likert scales as ordinal data remains contested (Carifio and Perla, 2008).

In analysing these mean responses, it is important to remember that 1.0 is the highest level of agreement, 3.0 indicates a neutral response and 5.0 would indicate the strongest level of disagreement. In this regard, any statement having a response higher than 3.0 would move into the disagree category. For example in Table 1 below, the response of 3.63 to the statement 'I prefer to use journals in the library instead of e-journals' shows a fairly low level of disagreement. In contrast, the average response of 1.32 to the statement 'Face to face contact with lecturers is important' shows a very high level of agreement. In order to make this more obvious, each of the four tables below have been colour-coded to highlight any positive, negative or neutral responses. The colour coding is as follows:

1.0-1.9: Green (Strongly Agree)

2.0-2.9: Orange (Agree)

3.0: Blue (Neutral)

3.1-3.9: Red (Disagree)

These categories do not go past 3.9 as there were no results with a more negative result than this, meaning it was not necessary to add a category for this. The use of a 3.0, indicating a complete was unexpected but disappearing the data and so is incorporated into these categories.

Results

Student perceptions of Traditional Style University Learning

Students were asked to indicate their level of agreement with a series of statements shown in table 1 below.

Table 1. Student responses to traditional learning questions

Read the following statements and rate them using the scale where 1 is Strongly Agree and 5 is Strongly Disagree Key: Number of responses (% of respondents)						
	1	**2**	**3**	**4**	**5**	**Average**
Face to face contact with lecturers is important	29 (76.32%)	7 (18.42%)	1 (2.63%)	1 (2.63%)	0 (0.00%)	1.32

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I would like more face to face contact with my lecturers	16 (42.11%)	10 (26.32%)	8 (21.05%)	4 (10.53%)	0 (0.00%)	2.00
I think all lectures should be traditional style as a large group	5 (13.16%)	5 (13.16%)	12 (31.58%)	10 (26.32%)	6 (15.79%)	3.18
I prefer to use journals in the library instead of e-journals	2 (5.26%)	6 (15.79%)	8 (21.05%)	10 (26.32%)	12 (31.58%)	3.63
I prefer using books from the library to e-books	12 (31.58%)	9 (23.68%)	7 (18.42%)	8 (21.05%)	2 (5.26%)	2.45
I attend all of my taught sessions	14 (36.84%)	15 (39.47%)	4 (10.53%)	4 (10.53%)	1 (2.63%)	2.03
I enjoy going to taught lectures	7 (18.42%)	17 (44.74%)	9 (23.66%)	5 (13.16%)	0 (0.00%)	2.32
I learn more from a taught session than from Blackboard materials	21 (55.26%)	12 (31.58%)	3 (7.889%)	1 (2.63%)	1 (2.63%)	1.66
Face to face lectures are more engaging than virtual lectures	19 (50.00%)	10 (26.32%)	6 (15.79%)	3 (7.89%)	0 (0.00%)	1.82
I think taught seminars are a good way to discuss ideas in a small group	26 (68.42%)	10 (26.32%)	1 (2.63%)	1 (2.63%)	0 (0.00%)	1.39
I enjoy attending taught seminars	18 (47.37%)	13 (34.21%)	5 (13.16%)	2 (5.26%)	0 (0.00%)	1.76

The mean response shows that students value face-to-face contact with their lecturers and would like more of this time. They find this more engaging than virtual lectures, but prefer seminar groups to large group lectures. Nevertheless, this was not universal as a number of

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students commented in the open question about traditional style learning. For example, ECSF 4 stated *"I prefer lessons taught in traditional style"*, and WF2 said *"I am of the view that traditional methods of teaching have been good enough for many decades"*. One positive view of one-to-one face-to-face interaction between a student and a lecturer was noted:

> *"It is important … that lecturers continue to provide face to face meetings with students, especially individual meetings as we have with our dissertation supervisors. More ideas can be discussed and it's more relaxed."* (ECSM1)

This supports the view that face-to-face contact is important between a lecturer and a student, as the participant has noted that ideas can be talked about and this is something that is not necessarily as easy in e-learning environments.

Student Perceptions of ICT

Overall students appeared to hold positive attitudes towards ICT, as indicated by the absence of any red (disagree) categories in Table 2 below. In this section of the survey, only two statements ('My university studies have improved my ICT skills', and, 'The ICT skills I have gained at university will improve my job prospects') elicited an average response above 2.0 across the whole sample. Out of the four sections of the questionnaire, this produced the most consistently positive responses.

Table 2. Student responses to questions about ICT aspects of learning

Read the following statements and rate them using the scale where 1 is Strongly Agree and 5 is Strongly Disagree Key: Number of responses (% of respondents)						
	1	**2**	**3**	**4**	**5**	**Average**
I enjoy using the computer to do my work	20 (52.63 %)	16 (42.11 %)	2 (5.26%)	0 (0.00%)	0 (0.00%)	1.53
Using ICT greatly improves my academic performance	20 (52.63 %)	15 (39.47 %)	2 (5.26%)	1 (2.63%)	0 (0.00%)	1.58
ICT has facilitated my learning at university	27 (71.05 %)	10 (26.32 %)	0 (0.00%)	1 (2.63%)	0 (0.00%)	1.34

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ICT enables me to do my university work	32 (84.21 %)	4 (10.53 %)	0 (0.00%)	2 (5.26%)	0 (0.00%)	1.26
ICT is an important aspect of everyday life	26 (68.42 %)	8 (21.05 %)	4 (10.53 %)	0 (0.00%)	0 (0.00%)	1.42
ICT is essential in modern society	25 (65.79 %)	12 (31.58 %)	0 (0.00%)	1 (2.63%)	0 (0.00%)	1.39
Everyone needs to be able to use ICT	16 (42.11 %)	20 (52.63 %)	1 (2.63%)	1 (2.63%)	0 (0.00%)	1.66
My university studies have improved my ICT skills	10 (26.32 %)	16 (42.11 %)	7 (18.42 %)	4 (10.53 %)	1 (2.63%)	2.21
The ICT skills I have gained at university will improve my job prospects	12 (31.58 %)	14 (36.84 %)	6 15.79%)	6 (15.79 %)	0 (0.00%)	2.16

These responses indicate a positive attitude to ICT in general, particularly for completing university work which elicited a mean response of 1.26, which shows the highest mean level of agreement in this section. They also indicated (1.34 with no neutral or disagreement responses) that ICT had helped to facilitate their learning. The importance of ICT outside of education in modern society is also acknowledged with a men response of 1.39 (with no neutral or disagreement responses). These responses help to contextualise later responses to blended learning.

Student perceptions of the use of their ICT skills in later careers was positive, but less than perceived usefulness in university. For some students, though, there was a direct link between university and work, such as the response that *"…it [university] has made me realise the importance of ICT, especially for my future career which will be a primary school teacher."*

ICT is able to offer a multitude of options, as noted by one respondent who stated that *"I appreciate the wide resources ICT offers in an individuals' learning",* suggesting that students find ICT useful within university learning settings.

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Student Perceptions of e-Learning

Virtual lectures, e-books and other general aspects

Given the positive attitudes to ICT in general, particularly in their university work, it may be expected that attitudes towards e-learning would also be positive. Students' views (as shown in table 3) on various aspects of e-learning, however, appear to be mixed, suggesting they do make distinctions between specific uses of ICT.

Table 3. Student responses to e-learning aspects of learning at university

Read the following statements and rate them using the scale where 1 is Strongly Agree and 5 is Strongly Disagree Key: Number of responses (% of respondents)						
	1	**2**	**3**	**4**	**5**	**Average**
I enjoy having virtual lectures	13 (34.21 %)	12 (31.58 %)	4 (10.53 %)	4 (10.53 %)	5 (13.16 %)	2.37
All lectures should be virtual	4 (10.53 %)	2 (5.26%)	3 (7.89%)	11 (28.95 %)	18 (47.37 %)	3.97
Electronic submission is an important tool for my studies	13 (34.21 %)	11 (28.95 %)	8 (21.05 %)	5 (13.16 %)	1 (2.63%)	2.21
I am able to use electronic journals effectively	11 (28.95 %)	19 (50.00 %)	4 (10.53 %)	3 (7.89%)	1 (2.63%)	2.05
Online databases are an essential tool for completing my university studies	14 (36.84 %)	14 (36.84 %)	6 (15.79 %)	3 (7.89%)	1 (2.63%)	2.03
I prefer using e-books to actual books	9 (23.68 %)	8 (21.05 %)	4 (10.53 %)	8 (21.05 %)	9 (23.68 %)	3.00

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The use of e-learning has facilitated my studies	11 (28.95 %)	20 (52.63 %)	5 (13.16 %)	2 (5.26%)	0 (0.00%)	1.95
I find it easy to engage with e-learning	9 (23.68 %)	21 (55.26 %)	4 (10.53 %)	4 (10.53 %)	0 (0.00%)	2.08
I think the e-learning resources available at the university are sufficient	12 (31.58 %)	19 (50.00 %)	6 (15.79 %)	0 (0.00%)	1 (2.63%)	1.92
Email communication enables me to keep in contact with lecturers about assignments and any queries I have	28 (73.68 %)	9 (23.68 %)	1 (2.63%)	0 (0.00%)	0 (0.00%)	1.29
I have emailed a lecturer with a query	31 (81.58 %)	6 (15.79 %)	1 (2.63%)	0 (0.00%)	0 (0.00%)	1.21

Perhaps unsurprisingly, given their preference for face-to-face lectures, the strongest level of disagreement across the whole questionnaire (3.97) was with the suggestion that all lectures should be virtual. Attitudes are positive, however, towards the use of e-learning resources, although the use of e-books invoked a neutral response (3.0). On a more pragmatic note it is worth highlighting the positive response to using ICT to communicate with lecturers. Indeed, virtually all of the students reported having emailed a lecturer with a query, which led to the average response of 1.21, the most positively rated statement of the whole questionnaire. This suggests that email is a vital form of communication between the students and their lecturers. Of the students surveyed, just one had had a meeting via Skype with a lecturer.

Students' comments in the open questions were generally positive when referring to aspects of e-learning. One student said *"I have enjoyed experiencing e-learning for the first time at university and it has made me realise the importance of ICT"*. Not all students, however, were completely positive about their experience of e-learning in higher education. For example, one student said:

> *"I feel that while e-learning is very important for university it is not always effective. For example there have been numerous occasions when trying to access and [sic] e-journal when the link is unavailable of [sic] very difficult to access."* (PF2)

Student ECSM1 positively suggested that *"E-learning can be a useful tool, especially when you have financial struggles as I do."* Student ECSF1 also stated that *"I find E learning an effect [sic] way to deliver education".* However, PF1 notes that *"e-learning at university is largely affected*

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by the lecturers ability and willingness to support and promote it". The issue of lack of lecturer engagement with learning technology also appeared when considering the use of VLEs and this could suggest a call for more support for lecturers to implement e-learning resources in the most effective manner.

Some of the students commented about virtual lectures as an aspect of e-learning. Student ECSF5 said *"Virtual lectures have proved to be a great feature of my learning experience at university"*, and this is supported by PF2 who said *"I feel they [virtual lectures] are interesting and provide a new method of engagement for learning but I do not feel that they should replace traditional teaching."* Sometimes a student may have a mixed view of virtual lectures:

> *"I prefer e lessons if the session is only for an hour. It saves time going in. However I find online lectures can take a while to set up especially if there is a lot of people in the learning group."* (ECSF1)

It is possible to see that there are mixed views of e-learning, perhaps influenced by individual lecturers' engagement with the technology, but the data revealed a positive attitude towards elements of e-learning.

Student Views Regarding Blended Learning

From the opinions students provided in the open question in the survey, there seems to be suggestion that a blended approach to learning at university would be most suitable and preferred by those students surveyed.

> *"I think a good balance of both virtual and actual lectures is best. This is because I tend to get distracted in virtual environments but sometimes there isn't a need for an actual lecture."* (SF1)

Student ECSF2 supports this by saying *"I think it needs to be a combination of both [e-learning and face-to-face lectures] for effective independent and supported learning."*

Students appear to remain positive towards the idea of blended learning and student WF2 said *"Perhaps we should incorporate both ways of teaching into a new method? Traditional style teaching which includes threads of e-learning in it?"* It appears evident that she is aware that a combination of both traditional and e-learning methods would be beneficial, and, even if she was not familiar with the 'label' of blended learning, she does provide a concise definition of the concept.

Limitations

The results above reflect the opinions of a group of students who have experienced a fully blended approach in only one module in their degree. As such, they are aware of the potential of this approach but are reflecting on their experience of the degree as a whole. This does not, however, invalidate their opinions as they are making judgements based on a continuum of blended learning. This very range of experience comes from a very diverse range of lecturers in their degree studies. This study did not set out to examine differences between approaches taken in individual modules as this would inevitably mean asking students to reflect on the individual lecturers who had taught them. Although this would have provided more nuanced

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response, it was felt that the negative aspects of this would outweigh the benefits. As such, there are inevitable limitations to the data. Further limitations result from the decision to use only an online survey to collect data, rather than supplement this with interviews – although opportunities for positive responses provided in the open-ended free text response. The use of surveys only, however, is in line with international studies of student attitudes toward blended learning in different disciplines, for instance, Farley, Jain and Thomson (2011) in economics, Mitchell and Forer (2010) in geography, Melton, Bland and Chopak-Foss (2009) in health, and higher education students in general (Zuvic-Butorac *et al*., 2011)

Conclusion

What is interesting in existing studies of attitudes towards blended learning, for example those above, is that there is no consistent message from students in different disciplines about the balance of blended learning and traditional learning. The economics and geography students above indicated a strong preference for more traditional learning methods, while in the health courses a blended course delivery was preferred over a traditional lecture format. The general student population study reported varied results depending on individual components of the 'blend', with those considered higher achieving favouring it the most. Given this variation we cannot take it for granted that blended learning will be valued by all students, however common it may be, or even perhaps taken for granted in some universities. It is thus important to establish the attitudes of educational studies students and, although this study only focused on students following one course at one institution, its findings support the use of a blended learning approach in such programmes.

Data have revealed that although students view aspects of e-learning in a positive light, they do continue to value face-to-face interactions with lecturers, which led to the view that blended learning (combining both facets) is beneficial. This finding may be influenced by the fact that students in this study had a positive attitude to ICT in general, and particularly value how it helps them with the university work. The effectiveness of blended learning can, however, be influenced by the level of lecturer engagement with the relevant technologies. Nevertheless, the students' positive attitude should encourage lecturers that their efforts will be appreciated. The findings of this study reveal that this sample of education studies students appreciated blended learning as it offers the greatest level of choice to them, particularly in allowing them to work from a location convenient to them and avoid travel costs.

Overall, this small-scale study supports the notion that when considering using a blend of traditional and more innovative technology. One student summed this up as

> *"Both have their merits and negatives, so I believe that they work best together to enhance learning. … by mixing e-learning with traditional styles I believe students will remain engaged better." (Student ECSF3)*

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