Video and screen capture technology education essay

The use of technology within education is increasing, with teachers take advantage of the benefits to students. The use of e-Assessment is being used in many areas to evaluate skills and knowledge. This can range from students completing a simple quiz to an on-screen test that automatically mark students' tests. My own experience completing an online e-assessment was for a Microsoft exam. I found this at the time stressful. The e-assessment marked in a particular way and wanted you to do tasks the way the study material had shown you. It did not take into account that there are different ways of completing the same task. As a result I found it difficult as I had not covered many of the study tasks as I was already aware of how to do certain tasks in Excel. On the other hand you didn't then have to wait to find out if you had passed or failed, as the results were made available to the centre immediately on completion of the test, which I felt was a bonus. This Microsoft exam was gained using a company called Certiport solution provider who provide online material to study which included practice exams, you then went to a centre to take the online exam. In addition I have used Walled Garden with many students who were studying City & Guilds courses. The courses used GOLA tests. Many schools use GOLA assessments from EDI which have been designed to measure students' performance and progress. I use e-Assessment with my students as it allows a more interactive approach to evaluating my student's skills and knowledge through the use of text, sound, video & animation. E-assessments can give instant feedback and can be used for diagnostic, formative and summative assessment. This information on students' performance can then be used to inform planning. In addition I have experience of other exam boards such as

Edexcel, OCR and AQA using e-Assessment for end of course examinations, for English, Maths and IT qualifications. I used these with Learndirect students and college students. However Gibert, L, et al points out that e-assessment in not yet embedded in many institutions'... it seems that because e-assessment is not yet embedded in the exam structure and processes for many departments or institutions, delivery issues are a time-consuming concern for practitioners.' Gilbert, L. et al (2009) Report on Summative e-Assessment Quality (REAQ)However from my own experience Learndirect has been using e-assessment with students since 2000 successfully. They have helped more than 3. 5 million people improve their skills with more than 500, 000 of them achieving skills for life passes via online tests. I used these e-assessments with students back in 2004 with Learndirect. I found the course content and the tests on the whole to work satisfactory, occasionally there would be problems, but these were usually due to internet problems. I found that most student were on the whole very satisfied with the whole learning experience. (Learndirect, 2012) Learndirect took advantage of developing technology back in 2000 to deliver online learning with the use of e-Assessment as part of their courses and qualification such as English and Maths and IT. Students used course material containing e-Assessment to test knowledge and skills throughout the course and then for the final qualification used a system called GOLA, this may have changed since I left 8 years ago. Another experience of using this technology is in the H800 Technology-enhanced learning: practices and debates course. It has used this technology by getting students to complete some quizzes at various stages of the courses to test knowledge. Examples

of quizzes used in H800 were in week 7 and 16 and can be found at:

http://learn2. open. ac. uk. libezproxy. open. ac. uk/mod/quiz/view. php? id=

13539 and http://learn2. open. ac. uk. libezproxy. open. ac.

uk/mod/quiz/attempt. php? attempt= 93886In addition I have also used

resources Yacapaca to gain a baseline for year 7 secondary students. This is

a free online resource for teachers. Teachers can set assignments from the

resources bank for their classes which, are then automatically marked.

Teachers can then analyse class results which in turn can be used to inform

planning. Many packages are now available for teachers to buy and use with

their schools VLE. These packages usually include quizzes and end of module

tests which informs students as they complete the assessment what mark

they achieved and the teacher is then able to analyse the results and

compare against other groups and again use to inform future planning.

Similarly there is a package called SAM Learning which is used by many

schools including my own. It is used to help assess students understanding

of what they have learnt. SAM Learning is an online eLearning service used

for revision and exam practice that covers the primary and secondary

curriculum. The SAM Learning survey report of 2011 conducted amongst

SAM Learning subscribers of over 34, 000 students over a 22 month period

looked at students experience of using the site, to what they felt needed

improvement. 32. 5 % of students answered that they liked using SAM

Learning and 21. 6% said Love it. 11. 7% said they hated it and 5% that they

didn't like it. When asked if they felt that SAM Learning helped to improve

their grades 76. 4% said yes. (SAMLearning, 2011) (Appendix 1) The majority

of students seem to enjoy using SAM Learning as it provides a fun way of

testing their knowledge though fun quizzes, short answer questions, drag and drop exercises are some examples of activities used. It provides activities which are accessible for the majority of students as the activities allow for visual, auditory and kinaesthetic learning styles. There are many barriers to the use of e-Assessment for teaching and learning. There are now many packages available that can be brought which contain material that can be used with students. These packages can be costly, many have subscription attached so will have a yearly cost implication to them. Questions that need to be considered before using a package are how easy and accessible it is to the student? Does the package work with the current system you already have in place, will training be required by staff to use the package? If training is needed how much time will be required? How adaptable is the package, can they be modified? Hench, Thomas and Whitelock, Denise (2010) see that e-assessment is a pressing goal for academic institutions. As this is a tool which monitors both students' performance and conceptual change which leads to improved learning? Research by Chapman (2006) as cited by Hench, Thomas and Whitelock, Denise (2010) found that 38% of the Awarding Bodies surveyed used e-Assessment to deliver up to 60% of their assessment programme. The benefits identified being ease of administration, time flexibility and the improved accessibility for students. Dr Mark Russell developed an e-assessment toolkit which is used to assess and give feedback. This has ultimately increased the module pass rate considerably according to Russell. He states that the key to the success has been the speed in which it has collected responses and provided feedback. The aim being to make teaching

much more focused on student learning. The toolkit has now been applied to other modules and has attracted attention in countries around the world. Dr Mark Russell gives updates via twitter @MarkRussell of his work. (Russell, 2012)

Video and Screen Capture technology

Screen capture allows the recording of action on the computer desktop, including the mouse movement and mouse clicks. In additional you can add voiceover narration or captions. It can be used to create tutorials an example of which is ' how to create a table in word'. The recording can guide the learner like a face to face teacher would but with the benefit of flexibility. Students can watch screencasts anywhere anytime. They can watch them online or download to playback offline, they could also use on mobile devices. Whichever method the student chooses to use they can pause and replay as often as required. My own experience of using this technology is with the Open University and Learndirect. They both use screen captures technology to demonstrate how to use software. This is especially helpful as with distant courses you do not meet your tutor and often don't attend any classroom session. The use of video capture allows the student to see what menus and buttons should be clicked to complete a task without needing to go to a lesson. You Tube has a wonderful collection of tutorial resource which have been created for anyone to use, along with many other websites such as http://www. teach-ict. net/videohome. htm which has a wide selection of video tutorial from using Microsoft Office, Photoshop to Mission Maker, a game making software. Software I have used to create screen captures for use with my students are Camtasia studio from TechSmith, which does have

a cost involved, however software such as Camstudio (www. camstudio. org) is available as a free download. Camstudio only allows for simple videos to be created whereas Camtasia which I use has more features available such as adding captions to help my students as well as zoom in feature which allow you to zoom into particular parts of the screen making it easier for the student to see. The materials I create are saved in a movie format these can then be viewed by computers or portable device. In addition Screen capture can be used in a variety of ways from the capture of a lecture to the demonstrations of techniques, such as computer-based processes, for example showing how to create an animation. Adding these resources to a VLE or network means that students can access materials when it is convenient, or use it to review or help understand a concept they might find difficult. It is a way of giving them control over their learning by allowing them to stop and start the video when they need to. Furthermore it is a way of accommodating different learning styles and abilities. Videos can be used to show learners how to complete a procedure such as using a piece of equipment safely by using a video camera, or by videoing a learner completing, for example a sport task, so that the teacher can help the learner improve their technique by giving them constructive feedback that the learner is able to understand, as they are able to view what they did, so are then better able to improve. Taplin et al (2011) research paper explores web-based lecture recording technologies (WBLT) for teaching and learning. Surveys gathered data on students' satisfaction and valuation of using this technology. These surveys regarded students' usage, attendance, satisfaction, performance and learning. It was found that overall students

tended to use the recording to supplement the face to face lectures. Furthermore the research showed that generally students consider WBLT improved and enhanced their learning experience and quality of their education. In a student survey of 815, 79% felt WBLT facilitated and enhanced their learning. At the University of Western Australia they found that 99% of students surveyed rated the recordings as either ' essential' or ' very useful'. In addition many of the students who took part in the survey believed that all lectures should be recorded. (Taplin et al 2011)However there are a number of concerns raised with the use of this technology. A survey cited by Taplin at the University of Tasmania estimated that there was between 10% and 33% drop in attendance, resulting from the use of WBLT. (McKinlay, 2007) This has been however questioned by other researchers such as Phillips, Gosper, McNeill, Woo, Preston, Green & Preston (2007) and von Konsky et al (2009) (cited in Taplin et al. 2011)In the paper by Gosper et al (2010) some external students saw the use of WBLT as reducing their sense of isolation and a way of connecting them to their lecturers and each other especially when used in conjunction with other social technologies. One comment made by an external student:" Every lecture should be available on [WBLT] and I would not mind if the tutorials were as well... With modern day technology external students could send their presentation taped and have discussion via Skype... So we would not really be 'external'". (Gosper et al. 2010)Research has found that students find WBLT valuable as a backup and a study tool, but they appreciated lectures as motivating as it provided contact with the lecturers and peers. In addition the research indicates different perceptions of the role of lectures

between the lecturers and students. Lecturers indicated the value of WBLT as being able to determine the content received by students. A survey of staff on their perception of the use of WBLT for teaching and learning, found a mixed response, 54% of respondents found the use of WBLT to generally positive, while 26% found the experience to be negative. However despite mixed responses, lecturers did support WBLT for use by external students, and saw it as beneficial as it provided up to date information, increased a sense of belonging and also provided the opportunities for interaction between staff and peers. (Gosper et al. 2010)Gosper, Woo, Muir, Dudley & Nakazawa, 2007 (cited in Gosper et al. 2010) argues that the introduction of any new technology has an effect on teaching and learning context and that WBLT could have acted as a catalyst for change, yet suggested finding show that this has not happed: 43. 2% of staff respondents had not changed their lecturing style; 36. 7% had not changed what they do in their lectures; 74. 9% had not changed the structure of their unit(Gosper et al. 2010)Research by Eurent et al (2011) looked at teaching to the masses and assessing the performance of students' between Lecture Capture (LC) vs. face-to-face course delivery. This has come about due to the challenge of how to deliver quality services to students in ever-larger class sizes combined when institutions facing financial burdens. The use of lecture capture (LC) instruction offers a cost-effective method of dealing with current financial restrictions and large class sizes. Eurent, Martin, Moskal, & Moskal study is an attempt to provide evidence of whether LC instruction is as effective way of transferring knowledge to students as the traditional face-to-face delivery. The results of the study indicated that there was no significant difference in

students' final course grade between the delivery modes. (See figure 1)Figure 1: Summary of student performance data across semesters and delivery modalities (Eurent et al. 2011)

Digital technologies: your recommendations

Why use e-assessment

The potential of e-assessment within the secondary sector (11-16 year olds) is that it can add value to assessment for learning if used in an appropriate way. E-Assessment allows educators to gain evidence of both cognitive and skills based achievements. Evidence indicates that well designed and well-deployed tests and assessments can raise more effective learning for a wider diversity of learners. Assessment for learning allows educators to identify what support learners might need. I have used quizzes from www. teach-ict. com to test knowledge and understanding with my learners. Using student feedback I have found out what they think of using these interactive assessment quizzes which allow the learner to play a game as a reward for getting answers correct. In the learners feedback they are asked questions such as " They found the following parts of your practice particularly help their learning…" This information helps to inform my planning so that I can adapt teaching. I use quizzes and games from teach-ict as the learners enjoy the game quizzes as starters and plenaries in my lessons. In addition to this website I also create my own. One online site that I use is Socrative (www. socrative. com) . It allows the creation of quick exercises, where you can use multiple choice, true/false, short answer questions that can be marked online and then a report is then sent to the teacher in an spreadsheet format, which means that you can then analysis it if you wish. I also use what they call an

exit ticket in Socrative, which I have adapted to find out what went well (WWW) and even better if (EBI) during the lesson, so I can see what the student have learnt and what they feel they still need to learn. Student logon to your quiz by a code which you give them, you then select the quiz from your bank of quiz and set up the one you want to use with the students. As learners complete you are able to see when they have completed in real time and then check learners understanding by using the report that is generated. The report is stored for you on the site which you are able to then download or have it emailed to you when you close the quiz or at a later date. E-Assessment allows a more interactive approach to evaluating learners' skills and knowledge through the use of text, sound, video & animation. Learners can be given instant feedback and teacher can use it for diagnostic, formative and summative assessment. This information on learners' performance can then be used to inform planning. In addition to being used by teachers many exam boards such as Edexcel, OCR and AQA use e-Assessment for end of course examinations. Furthermore companies such Learndirect have taken advantage of this technology and use e-Assessment as part of their courses and qualification such as English and Maths where learners use course material containing e-Assessment to test knowledge and skills throughout the course and then for the final qualification using the GOLA system. The use of e-assessment means that you can adapt existing questions from paper-based assignments or introduction new questions. The mathematical teaming team at the University of the West of England, Bristol (UWE) has been using e-assessment for over 15 years in their mathematics and engineering

modules. In a report by Gwynllyw and Henderson they describe their experiences of employing DEWIS an algorithmic e-assessment system approach. They highlight the benefits to students of using algorithmic marking features in e-assessment. The identified benefits to students were saved time as they didn't have to write written reports and students received their marks and detailed feedback immediately at the end of the assessment. Advantages to staff time saved in marking. (Gwynllyw and Henderson 2012)

Recommendations

I would give this a ' medium' confidence rating as there is evidence that e-assessment does benefit students and educators. Benefits to students are that they are able to gain instant feedback without needing to have the work marked. Educators have the benefits that once question banks have been set up their marking workload is reduced. The Sam Learning survey main conclusions were that 83% of students were positive about using SAM Learning and 76% felt that using it helped them to improve their grades. SAM Learning is aimed at Primary to Secondary Students; however this technology is easily adapted to meet the needs of any target audience.

Further Research

After looking at much research I have found that the majority of research seems to be based on higher education. I believe that more research should be conducted in the secondary sector. E-assessment is used for this age group however most research focuses on university learners.

Why use video and screen capture technology

Using screen capture allows educators the ability to create useful targeted resources which can be used in a classroom environment or distance learning environment such as the Open University or Learndirect. The Open University uses screen capture to help its learners, an example is this short demonstration that shows learners how to find ebooks in the online library. http://www8. open. ac. uk/library/help-and-support/getting-started-the-online-library/understanding-ebooksThis technology appear to be used more for however the recording of lectures which can enhance learners experience especially for distance learning and part-time learner, by providing learners who are unable to attend lectures flexibility to watch the recorded lecture. As discussed by Eurent, Martin, Moskal, & Moskal study (2011) and research from Taplin et al (2011). Screen capture software can also be used to give feedback to students by recording the computer screen as a learners' work is being recorded. This way everything you say as you mark will be recorded if a microphone has been attached to the computer. Any text that is highlighted, any comments made about the work, can be recorded on video. This can then be sent to the learner. The learner can then listen and watch the work as it was marked allowing the learner to then re-draft their work based on what has been said. This is a possible way round the face to face issue of feedback for distance learners. Video feedback provides learners with both visual and oral information. The educational benefits of video and screen capture technology are that learners can learn by example as they can see the demonstrations step by step. These can then be downloaded to a portable device or laptop or uploaded to a VLE to use as a resource later or

use as a revision aid. In additional learners can access the learning material when it suits them, giving the learner the power to move at their own pace. The video or screen captures can be easily set up on a VLE for students to use during lessons or as revision aids. I use screen captures so that learners are able to access the demonstration I have done in the lesson in shorter " chunks" allowing learners to stop the video when required, complete the task to that point and then resume the video when required in order to complete a larger task such as creating an animation. It means that learners who are lower ability and unable to retain all of the demonstration information can still access the material in smaller " chunks" and still achieve the task. Learners with lower abilities find it difficult to remember, so being able to break the task down into small " chunk" allows them to complete the task, otherwise after watching a demonstration they would only be able to remember a small position of the whole demonstration. Video tutorial allow learners to become more independent as it enables them to find out for themselves if they aren't sure.

Recommendation

I would give this a ' High' confidence rating as there is evidence that many Universities including the Open University values it use. Taplin et al (2011) research that explored web-based lecture recording technologies (WBLT) for teaching and learning results Showed that, 79% felt WBLT facilitated and enhanced their learning and 99% of students surveyed rated the recordings as either ' essential' or ' very useful'. Furthermore many of the students who took part in the survey believed that all lectures should be recorded. (Taplin et al 2011) My own experience of using this technology isn't for lectures but

for instructional demonstrations. The technology can be used and adapted to suit any target audience.

Further research

Again after looking at much research I have found that the majority of research seems again to be based on higher education. I believe that more research should be conducted in the secondary sector. The use of Screen capture technology is a way of engaging learners at secondary age and helps them to become more independent learner, however most research again focuses on university learners.

Digital technologies: Design

This course design is being created for secondary teacher. Most have experience of using technology within their practice as they use interactive whiteboard and will use the VLE to a limited extent. Some are more confident in their abilities to use technology than other. The course will be designed to help give teachers the knowledge of how to create e-assessments to use with their students as an alternative to using paper based assessments, cutting down on the time taken to mark assessments and eventually helping cut down on teachers workload.

Learning Outcomes

When you have successfully completed this module you will have developed your ability to: Be familiar with the layout of different e-assessment softwareDesign and implement online assessment using a range of question typesUse different question types available to create subject specific e-

assessmentsEvaluate particular technologies and tools used to create e-assessments

Using Moodle and other software to create e-assessments

Introduction

What different question types are used within your department when giving a paper based assessment to students. How long do you usually spend marking these assessments? As a department are there certain question types used?

Using Moodle for e-assessment

Look at the different question types that are available to use on Moodle. Calculated, Description, Essay, Matching, Embedded answers (Cloze), Multiple choice, Short answers, Numerical, Random Short-Answer Matching and True/False. Each one having a description to give more information about what that question types do within Moodle.

What Moodle quiz is?

Woking with Moodle quizWritten explanation of the quiz features you need to know before starting to make a quiz. These features are: General, Name, introduction, timing, Display, Attempts, Grades, Review options, Security, common module settings and overall feedback. Demonstration video tutorial (using Camtasia) is used to show how learners to set up their first quiz.

Setting up a Moodle quiz

Learners then set up a new quiz topic ready to use for the next activity.

Creating your first quiz

For each of the question types a demonstration video tutorial guide created using Camtasia is used to show how to use each of the question types, how to preview and edit if required. Paper user guides are also available in pdf format to those who prefer to have paper instructions in pdf format which include screen prints.

Question type review:

Calculated – valuable to maths and science input question that needs to be solved. Teacher writes a formula in Moodle and adds a set of specific variablesDescription – not actually a question but a way of breaking up questions, could be some text students will need to read before completed a set of questions. Essay – students will answer in an essay formatMatching – presented with questions, each which has a drop-down list of possible answers. Embedded answers (Cloze) – Fill in gap exerciseMultiple choice – students select their answers from available options. Short answers - students respond with a word or phrase. Numerical – similar to short answers but answer will be in numbersRandom Short-Answer Matching – completely random questions chosen by MoodleTrue/FalseAfter each video tutorial the student can create a question to that question type. These video tutorials can then be used as help guides later if any of the question type set up are forgotten.

Saving the questions

Once questions have been saved a question bank will have been created. This activity will show how questions can be added to the quiz and how the

test can be previewed. Demonstration video tutorial and written instructions in pdf format are available to use to show how to put the questions together into an e-assessment.

How to get the e-assessment results?

Results features in Moodle. Demonstration video tutorial tutorial and written instructions in pdf format will be available. Features available in Moodle for resultsResults tableDeleting attemptsExporting dataResults graphRegradeManual gradingItem analysisEach feature will be explained.

Using your Moodle quiz knowledge

Students to design and implement an e-assessment in Moodle using the question types shown, that could be used in their subject area.

Other technologies available to use

This activity looks at some free software called Socrative, online based software that can be used to create exercises and games which can then be used via smartphones, laptops and tablets. It is a quick way of creating engaging activities.

Using Socrative to create quizzes

Students are shown how to create a Socrative account using a demonstration video tutorial. Each question type is demonstrated. Students are then shown how results can be downloaded or emailed to them. Feature of Socrative such as sharing exercises with others is also shown.

Using your Socrative knowledge

Create a quiz using Socrative that could be used with your learners.

More technology available to use for free

The Hot potatoes suite is freeware software that comprises of six applications can be downloaded and used to create interactive multiple-choice, jumbled-sentences, matching/ordering, short answer, crossword and gap-fill exercises. These can then be imported into Moodle.

Using the Hot Potatoes Suite

Students are shown how to create the various question types using demonstration video tutorials and written instructions which are available in pdf format. Additional video tutorials are used to show how these quizzes can then be imported into Moodle.

Editing Hot Potatoes Source Files

(For the more confident users – optional)This video tutorial demonstrates what Hot Potatoes source files are, what they do and how to edit them to change the appearance and behaviour of Hot Potatoes. To do this activity you'll need to use a text editor (such as windows Notepad) and a little experience editing HTML code.

Using your Hot Potatoes knowledge

Create a quiz using Hot Potatoes that could be used with your learners.

Conclusion

Evaluation of Technologies

Students will now evaluate the three technologies used with learners.

Using e-Assessments with learners

Use the three technologies to do e-assessments with your learners and gain feedback about how they feel about using this method of assessment. Evaluate how you feel about using this technology.

Digital technologies: individual and collaborative learning

I feel that there is a place for both individual and collaborative learning. H800 Technology – enhanced learning: practices and debates has been a course that has required both individual and collaborative learning. In Sfard article (1998) metaphorical mapping table has shown me that to be a successful learner both metaphors are required. I have looked at it from both a learner view and an educator's view. I can see how both are needed to be successful. Most courses will require learners to independently study course material and research tasks. H800 has made students use skills required as an individual learner, such as time management. It has also made students use skills required for collaborative learning. Students have needed to work together to discuss and complete tasks. The course has used forums to discuss and ask questions and share knowledge. Courses where you go to a class it is easy to see the individual and collaborative learning taking place. Distance learning you would image that it would be only individual learning, however this is not the case with the advances in today's technologies. However many people take distance learning course because they offer individual learning, as they allow learning to take place at a time convenient for you. Distance learning course allow flexibility for leaners that are unable to go to a class. I chose the Open University to study for my degree at it allowed me the flexibility to do my study when I had time and at a time that

was convenient for me, so if I wanted to write my essay or do my research at five o'clock in the morning I could. I didn't have to go to lectures; I could still work my shifts, and not worry that I would miss a class. The way that H800 Technology – enhanced learning: practices and debates has worked means that you cannot fully be an individual, as you are not learning totally independently. We were asked to work collaborative with fellow students, reading material before then using Elluminate to share ideas. The forums have been another way of sharing ideas with fellow students and asking each other for help and ideas. In week 3 & 4 of H800 Elluminate was used to discuss different papers that we needed to read, session were arranged for this that meant that for those who had problems because of work found this difficult to arrange. Before the session we had an activity that gave us a chance to try out Elluminate. We found that in week 5 we needed to do a ' catch-up' session as many were unable to attend week 3 & 4 sessions. The tutor then produced some brief notes of the Elluminate ' catch up' session and posted these on the forum for those who didn't take part to that particular session. Elluminate was also used for collaboration with member of other tutor groups to develop short presentation related to different to contexts in which we work. This was to help us explore different models for online activity design. Throughout the H800 course each week the forum has been used to discuss different aspects of what we had been studying that week to help use bring our thoughts and ideas together and at certain time during the course a time to look back and reflect. In addition the forum was used by students to post questions we might have about TMAs. This was practically helpful as you could look at the posts to see if anyone else had

the same question. Wiki groups were also set up and used related to course activities, this allowed students to go in and edit the Wiki related to course tasks. Using Elluminate and the H800 forum meant that throughout the course students were about to draw on the thoughts and ideas of member of their tutor groups all who have a wide range of experience and knowledge just like you would if you had attended a class and had a group discussion. The benefits of H800 delivery means that the conversions are recorded, so that as a student you are able to go back and check what was discussed, which can be more difficult remember a group discussion in a class, unless it was recorded in some way. Individual learning is when you have insufficient interaction with peers; it requires self-discipline and a focus of perhaps personal success. Many distance learning make learners feel isolated and many may have insufficient knowledge to draw on. However there are positive aspects for some learners, those who are shy or introvert learners who may feel safer in this environment and free from peer pressure and they are able to work at their own pace and when they want, without the pressure of needing to attend a taught class. I have found that due to work pressure I have not been able to take part in some of the forum and Elluminate discussion, so my learning experience has not been as complete as it could have been. In the past when I have worked on other Open University courses having to add to forums and making particular times to do things like Elluminate sessions have not been an issue. Since I started courses with the Open University in 1998, the way in which courses have been delivered has changed greatly. It seems that technology is being used more and more. Before the start of the course I couldn't wait to get my books that I would

need to read, and would often start to read them as soon as I got them. Now many sources of information are available on the internet and unless you print them out you are stuck at your computer screen or other mobile device. You are also restricted as if you have time you are unable to work ahead more than a few weeks as material isn't made available.