

FACTORS MEDIATING THE ROUTINISATION OF E-LEARNING WITHIN A TRADITIONAL UNIVERSITY EDUCATION ENVIRONMENT

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Abstract

Technology-enhanced or Computer Aided Learning (e-learning) can be institutionally integrated and supported by learning management systems or Virtual Learning Environments (VLEs) to offer efficiency gains, effectiveness and scalability of the e-learning paradigm. However this can only be achieved through integration of pedagogically intelligent approaches and lesson preparation tools environment and VLE that is well accepted by both the students and teachers.

This paper critically explores some of the issues relevant to scalable routinisation of e-learning at the tertiary level, typically first year university undergraduates, with the teaching of Relational Data Analysis (RDA), as supported by multimedia authoring, as a case study. The paper concludes that blended learning approaches which balance the deployment of e-learning with other modalities of learning delivery such as instructor-mediated group learning etc offer the most flexible and scalable route to e-learning but that this requires the graceful integration of platforms for multimedia production, distribution and delivery through advanced interactive spaces that provoke learner engagement and promote learning autonomy and group learning facilitated by a cooperative-creative learning environment that remains open to personal exploration of constructivist-constructionist pathways to learning.

Keywords: E-learning, computer-aided learning (e-learning), blended learning, routinisation, pedagogic business models, pedagogic practice logics, learning autonomy.

1 INTRODUCTION

Human Computer Interfaces are of course an integral issue in designing e-learning packages. Much research has explored the design of advanced interactive systems to provide for a high quality use experience. For e-learning it is important to develop advanced interactive spaces that enable the users to evolve their own conceptualisations of the learning material and follow individualised pathways through interactive constructivist-constructionist learning with maximum learning autonomy unhampered by hard-wired learning styles and pathways. The advances in electronic communications, the Web and the Internet and associated technologies have motivated the widespread adoption of e-learning to improve access for learners to higher education and employee training in the workplace. This paper is concerned with the issues to be resolved for best integration of e-learning support tools within a managed e-learning environment. This is explored, additionally, in the context of a case study

relating to the usability of an e-learning environment for teaching and learning of Relational Data Analysis (RDA) at the undergraduate level.

This paper also reports on the uses, actual and potential, of the computers in such teaching packages. It concentrates on the impact which computers have had in the teaching (and practice) of computer-aided courses for e-learning and e-learning based applications.

Computers are now commonly used for storing and manipulating data to assess the student's performance. The same software and hardware can be used as a vehicle for teaching most of the computer-aided based courses.

The educational material in an e-learning system has to be very carefully structured so that the student can follow a sensible path through the lesson. E-learning systems have evolved into complex systems; so that it can often be difficult for a teacher/ developer to know the best regime to follow when starting to develop an e-learning system.

2. HISTORICAL BACKGROUND TO EDUCATIONAL TECHNOLOGY ADOPTION

The role of technology in education today has been greatly influenced by the history of ICT adoption into the education sector.

In the 1960s it was predicted that programmed learning would revolutionise classrooms. This prediction was fairly optimistic but the presence of computers in the classroom was not widespread at that time. Tucker (1997) examined the reason for this; and found that with the increasing use and knowledge of computers, many teaching programmes were produced for all contexts without sufficient research in pedagogic content delivery. One important observation from his study was that an effective e-learning system motivated students into the library to investigate relevant areas of their study rather than fully depending on e-learning.

Thelwall (2000) believes that the earlier problems were learned from and hence in recent years the quality of software and program has improved and the benefits of having computers in the classrooms are being felt.

According to Amzi(2004) E-learning is a mode of teaching and learning that comprises many new technological tools and those tools can be used to support learning across space and time. Some of these tools will improve the teaching of complex learning content and other tools offer new possibilities for communication between learners and teachers.

The vision is that e-learning will provide resources that support interactivity, performance support and structured learning activities. Further on an individual basis technology-based learning is seen as leading to improved employment prospects and on a collective basis ICT-based education is expected to lead to economic competitiveness. From this perspective, lifelong learning is seen more accurately as a lifelong re-skilling of the workforce.

2.1 Significance of Computers in education

Barnard (1998) emphasised that the main attributes of computers today is the ability to store and retrieve large amounts of data and information, and also to allow the programmer to write programs that can present this information in an easily understandable form, which is a frequent requirement and in addition performs at a very high speed. Hang (2003) agrees that these and some other attributes make it an ideal medium for use as a teaching machine (an aid, not a replacement for the teacher). This is said to be in part due to the proliferation of the computer, the rise of the internet, advancement in technology capabilities, declining hardware and software costs, pressures to economise on faculty

teaching time, and the belief among educators that e-learning is as good as more traditional teaching formats, if not better, (Liberian 2002, p.44). Liberian (2002) also performed a comparison of interactive tutorial and computer-assisted instruction (CAI) by conducting surveys on students and concluded that both interactive tutorial and CAI are effective teaching formats.

As with any technological development the use of computers has the possibility of dehumanising the learning process. Hwang (2003) investigated whether there is evidence to prove that the effect of computers on the personality of students is significant, especially for the more nervous students

However Letterie (2003) has observed that typically only a small percentage of students from both the upper and lower ends of the education stream receive any personal attention from the teacher, and direct interaction between teacher and many students up to secondary level, and in some cases beyond that level, are limited or non-existent. Therefore, there is a supportive role that e-learning, if properly integrated, can play to eliminate to the mutual benefit of all stakeholders

2.2 The role of authoring system in e-learning

The use of computers, by teachers, to transfer information to their students has hitherto required the acquisition of considerable computer-programming skills. This has proved to be a stumbling block in the acceptance of computers by teachers as an instructional resource. Authoring systems have been able to provide a bridge between teachers and computers that formerly did not exist. The quality of e-learning depends on the quality of the course material and the degree of sophistication of the user interface. Once the author has decided on the content of a program, its format and the strategy of presentation, then the challenge is to author the pedagogic content that would best deliver the teaching programme in a way that can remain open to variable learning styles and pathways in the context of self-managed study. The options open to the courseware author will include using a high-level programming language, authoring languages, lesson/exercise generators and authoring systems.

Although many teachers have mastered the skills of computer programming, they may still lack expertise in the area of human-machine interaction design, in the context of computer presentation of their subject matter. Moreover, the question of productivity is vital, since most of the material produced by teachers has to be prepared in parallel with their current instructional duties in the classroom.

To remedy the difficulties inherent in the preparation of e-learning material, and to embrace some of the possibilities associated with e-learning, the use of audio-visual peripheral devices; authoring facilities, including author languages have been developed, are generically referred to as authoring-systems.

2.2.1 Authoring Systems

The impact of the mediation of an e-learning delivery system on the teacher-student relationship, e.g. the role of an authoring-system, can be depicted in the contrastive illustrations of figures 2.1 and 2.2 below:



Figure 2.1 interactions in conventional learning

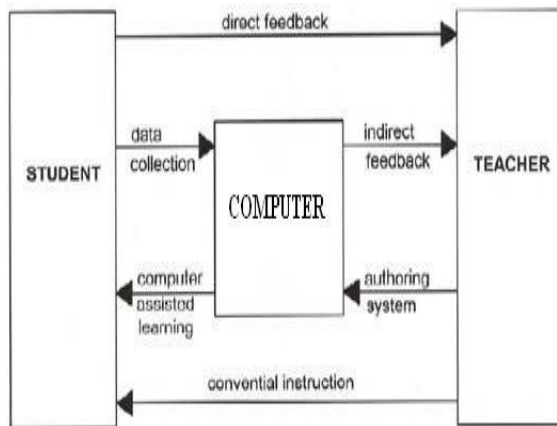


Figure 2.2 interactions in mediated learning

In the traditional instructor taught situation there potentially exist multiple flexible degrees of freedom for direct communication only limited by resources (including teacher time) available per student.

Thelwall (2000) observed that the situation is changed when the computer is introduced into the relationship as the third entity, the computer filling the role of surrogate-teacher for the duration of the teaching-program, undertaking some part of the complete educational process.

By means of an authoring-system the author is able to organise e-learning resources, together with the specification of conditions governing their utilisation, and systematically monitor the responses made by the student.

Authoring-systems allow decision rules to be incorporated within the program to control the learning-process.

The frames that comprise a lesson are made up of text and/or graphics and can be regarded as a database built using the authoring-system. Some authoring-systems rely on the use of author languages, and in the main these are easy to use, having a syntax that is easy to learn, and which permits the teaching strategy of the author to be implemented automatically. Some different strategies include 'tutorial-mode', 'drill and practice', 'diagnostic-testing', 'inquiry-mode', 'simulation', 'calculation' and 'problem-solving'.

The use of authoring languages makes possible the distribution of information, the collection and analysis of data, and the automatic operation of peripheral devices, e.g. audio-visual equipment.

2.3 The Learning Environment

The student acquires knowledge by receiving information from his/her surroundings and organising it to allow retrieval of specific items and make generalisations and extrapolations.

The computer can be seen as a mediator of the two-way flow of information between the student and the learning environment. Dewhurst and William's (1998) observed that in the learning process there are various kinds of information, facts, feedback and guidance, the information also differs in quality and amount. At one level e.g. when a student is working in a small seminar group or reading a book the information is highly detailed and changes very rapidly. It is very difficult to record and store all the information, which is passed around during a lively discussion seminar. In the longer term this level of detail is unnecessary and a summary of the flow is more relevant, this is another level of representation of the student's activities. The information can be summarised even further, where there is less detail and a slower rate of change of information. In practice the level of information representation that is most effectively employed depends on the individual students and the course.

Different applications of computers to this model of the learning process can be described by the way in which they mediate the flow of information and the levels of detail with which they are concerned.

2.4 Educational Software

Computers can prove to be very powerful for a number of applications. So how did some of those early attempts at integrating teaching software into the education process fail? Plessis (1995) maintains that this was in the main due to sub-optimal integration into the pedagogic process.

A key point here is that clearly teachers cannot depend on programmers or computer specialists to devise educational system alone. An example of high degree of programming skill that makes sophisticated use of technology but is educationally impoverished is computer games that are not meant to be educational. On the other hand educational content set out in dull screens full of print, performing at a slow speed will not be very engaging for the students.

Educational software design needs both educational skill and creative design i.e. close team work between multimedia systems designers and the teachers. The need for greater computer literacy and self-directed learning will probably lead to the greater use of e-learning (Herriot 2003, p.544).

2.5 The Nature of an e-learning System

E-learning is defined as a self-paced constructed response, and immediate feed-back-learning program. E-learning is about organising the programmed delivery of pedagogic content as devolved into pedagogic units. The students are known to respond positively when they are able to access the lessons freely as they wish at their own pace which is what is found to ensure maximum benefit (steyn 1996, p.95).

E-learning offers not so much a short cut to teaching and learning but promotes the restructuring of already acquired knowledge. It provides a student with experience in handling knowledge (using a skill, solving a problem) rather than transmitting knowledge to them (Workman 2000).

Essentially in e-learning, the computer controls a process that is supposed to resemble a tutoring session, which is a session in which a student learns by interaction with a human tutor. It involves using a computer system such as the channel of communication for instructional material. The e-learning environment should be designed and built in such a way that it is able to present instructional material to the student and also gathers a variety of different types of response data.

It is characterised by an interactive dialogue between student and computer, which follows the pattern of a tutorial, a series of exercises or the simulation of some real world situation

Similarly the e-learning system has to assume a supportive background role in which it assesses the student's performance over an extended period of time, makes suggestions as to the route which the student might follow through structured course material, keeping records and reports on performance and progress. Feedback is very important in a e-learning system, since it enables student responses to be monitored and the sequencing of lesson material to be controlled by these responses.

Characteristically, when using the computer as a teaching resource, two basic modes of usage are involved: the author mode and learner mode. In the author mode the computer is used as an aid to prepare the courseware that is to contain the instructional material, which embodies the author's required teaching strategies and also to assess each student's progress. In learner mode, the computer presents instructional material by using sound, graphics, text etc. to the student and monitors the responses produced. In this learner interaction mode, all student responses can be received and subsequently analysed by the computer. The results of the analysis can be passed back to the author/teacher thereby providing valuable feedback on student progress and courseware performance.

Lieberman (2002) explained that the computing used in the learning process does not necessarily reduce the costs of the instructional process, but probably increases quality. The cost involved in e-learning programmes mainly contains cost of programmer's time devoted to program development, material costs, computer usage, video and other audio visual equipment, and overhead expenses. E-learning tends to reduce the use of resources whose costs are increasing, for example, expenditure on those providing instruction. At the same time it tends to increase the use of computing facilities whose costs are declining.

From the study we can infer how the roles of teacher and learner may develop as we change from a traditional to a e-learning environment. The teacher moves from being a prime source of information to a facilitator and manager of learning. The student moves from being a (usually) passive recipient of information to being an active participant in the learning process. His/her participation implies a greater personal responsibility for his own learning and sometimes, in a group situation, for the learning of others. If the organisation and the teacher are to make effective use of e-learning then they must be aware of these changes in roles.

It is important to realise that a decision to adopt e-learning does not mean that existing training materials have to be discarded. Instead, e-learning may be regarded as just another training medium to be combined with other media as appropriate.

3. RESEARCH METHODOLOGY

The research was intended to clarify integration and routinisation challenges for teachers, students and educational institutions in deployment of e-learning systems to the benefit of all stakeholders. In the context of the case study which was an e-learning package covering a typical first year Relational Database course; this was done by investigating this e-learning adoption and routinisation issues amongst the staff and undergraduate students involved at two UK universities. An ethno-methodological approach was followed involving observation, semi-structured interviews and questionnaires.

Some 200 questionnaires were distributed amongst the undergraduates and 100 amongst staff. A response rate of 90% from student and 26% from the staff were obtained. Some fifteen people were selected for follow-on interview of which five agreed to be interviewed. Additionally some general usage data was also sourced from the Virtual Learning Environments (VLEs) used by the two universities (i.e. Blackboard, Nile)

4. FINDINGS

General agreement was found in that e-learning should be used alongside other approaches to learning to enhance learning and not to substitute more traditional forms of learning.

E-learning was viewed as requiring a teaching approach that needed extremely good preparation, rather than less effort, compared with classroom delivery which requires less preparation and is dependent on the amount of interaction with students.

There were some comments from teachers relating to the “novelty factor” in e-learning. Lecturers felt that many students had more enthusiasm for sitting at a computer and learning via the web, than they had for the traditional methods of self-study such as reading books. It was suggested that this is because the e-learning environment offered opportunities for interactive questions and answers, which of course cannot be found in a book.

E-learning was described as effective in achieving outcomes, but only as an aid not a replacement for other methods. E-mail was considered particularly useful, in so far as it was much easier for a student to e-mail a tutor with a question than it would be to locate that tutor and ask him the question.

It was unanimously agreed that e-learning would never completely replace the traditional method of teaching and learning and that face-to-face student and teacher interaction was required to make learning effective. This is consistent with the view expressed by Tucker (1997) and Hwang (2003) where they emphasised that e-learning involves tutors to view each student's progress, therefore the teacher can concentrate on weaker students. In the student's opinion, this was found to be a most important factor affecting their learning progress.

Whilst there was no real opposition to e-learning it was generally agreed that graceful integration of e-learning with traditional class-room learning i.e. the blended learning approach, made for the most supportive environment for learning.

There was also agreement that e-learning did not make traditional methods seem inappropriate or inadequate. Interviewees were aware of the limitations of both the traditional and electronic forms of learning and generally agreed that both were necessary, and that e-learning would never replace traditional methods but that it could certainly compliment them. It was generally expected that e-learning would develop into m-learning, bringing even greater versatility, flexibility and accessibility to electronic learning.

Advantages of e-learning were considered to be its cost saving, its accessibility, the fact that it is easier to update than paper-based materials and that it allows the students to work at their own pace. Some respondents felt that the accessibility at any time, any place of e-learning made it more suitable for those with difficulties in accessibility and physical disabilities.

The main disadvantages of e-learning were seen to be the perception of detachment from the lecturers on the part of some people who needed the much support to study and basically lacked the motivation and skills for self-managed study.

Such students viewed e-learning as difficult because of the isolation factor. There were also concerns over security, and data integrity; e.g. other people being able to access personal information.

It can be concluded that whilst there was no real strong opposition to the adoption of e-learning environments, there was a general reluctance to opt for regimes that were based exclusively on e-

learning. There was a clear opinion that e-learning could never replace the more traditional approaches to teaching.

The respondent's views about the suitability of e-learning suggested very positive outcomes that can be analysed from the figures below and the facts.

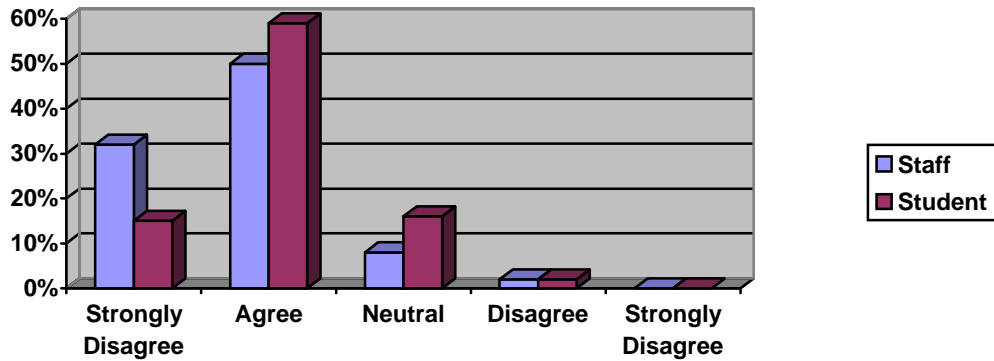


Fig 4.1 shows a graphical representation of responses re e-learning effectiveness.

It can be seen that 94% of respondents which included staff and student agreed that e-learning was an effective educational tool, whilst only 6% of students and staff disagreed with the statement.

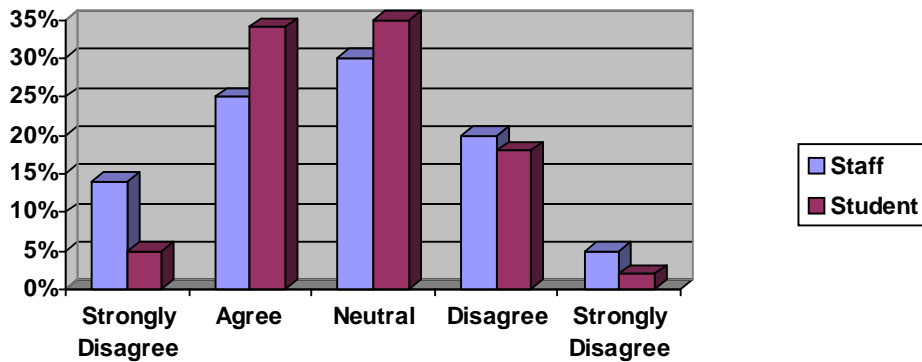


Fig 4.2 shows a graphical representation of responses re e-learning suitability for teaching any subject matter.

The above graph demonstrates that 73% of staff respondents and 78% of student respondents agreed that e-learning could be adopted for teaching any subject matter. On the other hand 27% of staff and 22% of students disagreed.

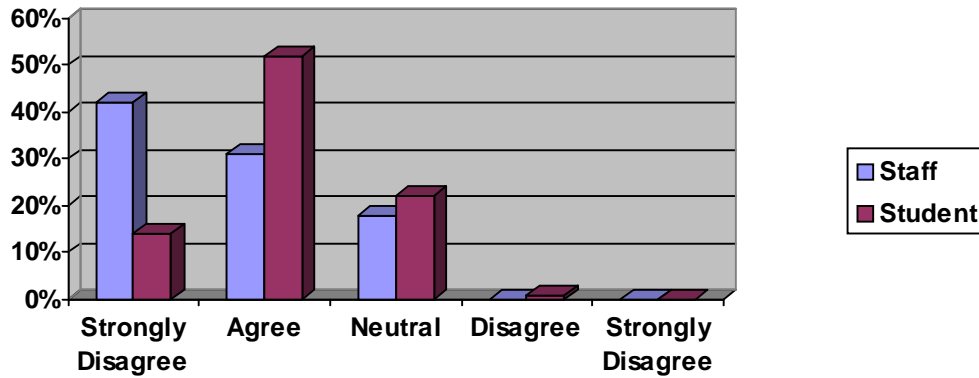


Figure 4.3 shows a graphical representation of responses re the degree to which e-learning can enhance the understanding of specific areas of study.

It can be seen that all (100%) of the staff and 98% of the students agreed that e-learning can be integrated with classroom teaching to enhance the understanding of specific areas of study and barely 2% of students disagreed with the statement.

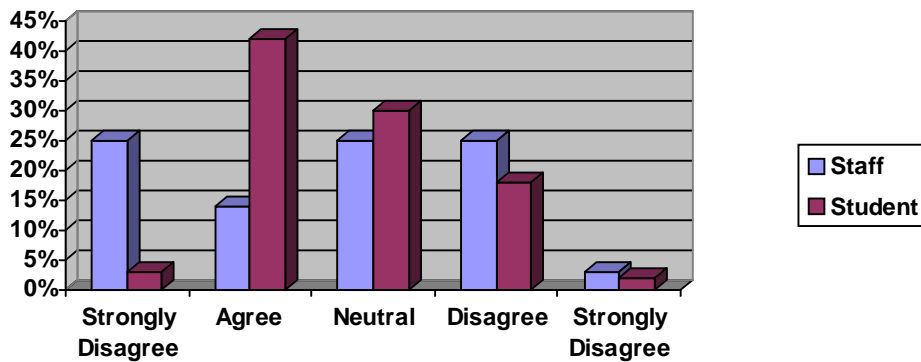


Figure 4.4 shows a graphical representation, of responses re preferences re the choice of E-learning packages vs. books e-books.

The above graph shows that 69% of staffs and 78% of students expressed a preference for e-learning packages rather than books or e-books, whilst 31% of staffs and 22% of students disagreed.

Specifically our investigation focused on the issues relating to strategic questions relating to binary choices; for example Learning Methods i.e. combines both the traditional method and the e-learning approach.

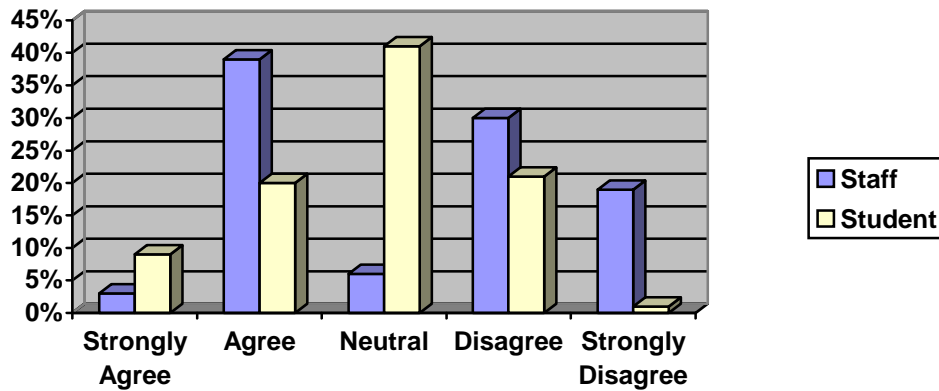


Figure 4.5 shows a graphical representation of responses re the teaching learning strategy re e-learning omission or adoption.

The result shows that 50% of staff and 74% of students agreed that e-learning could replace the traditional method of teaching and learning. Alternatively, 50% of staff and 26% of students disagreed with the statement.

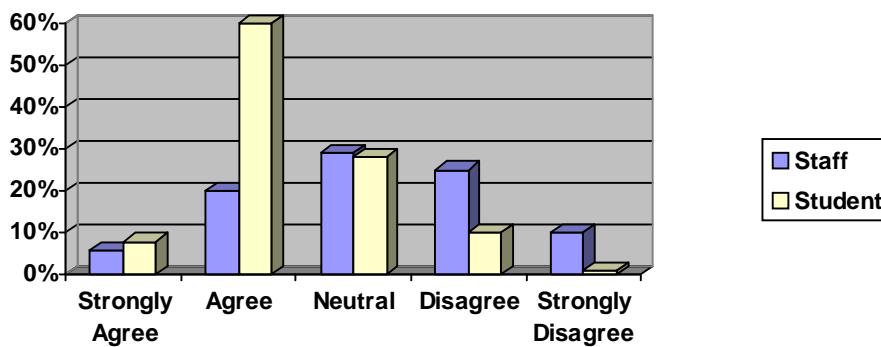


Figure 4.6 shows a graphical representation of responses re the perceived reduction of tutor's workload with e-learning

It can be seen from the above graph that 61% of staff members and 89% of students agreed that e-learning reduces the tutor's loading, while 39% of staff and 11% of students disagreed.

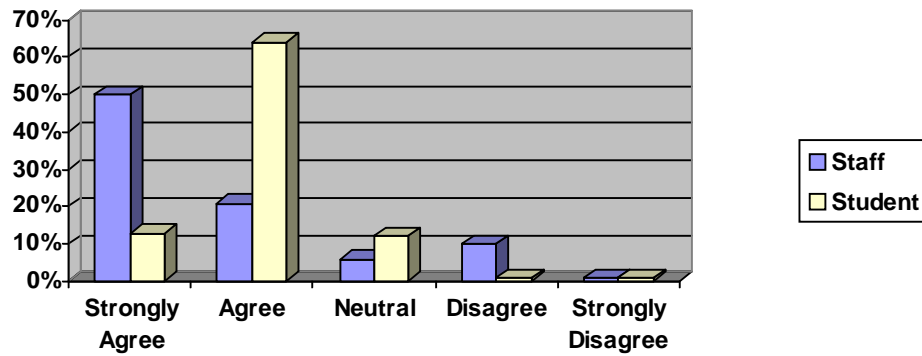


Figure 4.7 shows a graphical representation of the responses re the extent to which e-learning was found as providing better opportunities for self-study.

The results demonstrate that 88% of staff and 100% of students agreed that e-learning provided better opportunities for self-study. Only 12% of staff disagreed with the statement.

On the issues of resources, Table 4.1 shows the data on how cost-effective e-learning was found to be as perceived by the respondents.

| Scale | Staff | Student |
|-------------------|-------|---------|
| Strongly Agree | 34% | 18% |
| Agree | 35% | 53% |
| Neutral | 27% | 29% |
| Disagree | 4% | 0% |
| Strongly Disagree | 0% | 0% |

It can be seen that 96% of staff and 100% of students agreed that e-learning can be cost effective, whilst only 4% of staff disagreed.

Table 4.2 shows the data on perceived time efficiency gains with e-learning from the respondent's viewpoint.

| Scale | Staff | Student |
|-------------------|-------|---------|
| Strongly Agree | 0% | 7% |
| Agree | 27% | 46% |
| Neutral | 27% | 36% |
| Disagree | 38% | 11% |
| Strongly Disagree | 8% | 0% |

As can be seen 54% of staff and 89% of students agreed that e-learning was less time consuming than books and e-books, while 46% of staff and 11% of students disagreed with the statement.

On factors related to patterns-of-relating to computer as a learning mediator, it was thought that e-learning as supportive tool in the classroom could be advantageous provided properly integrated.

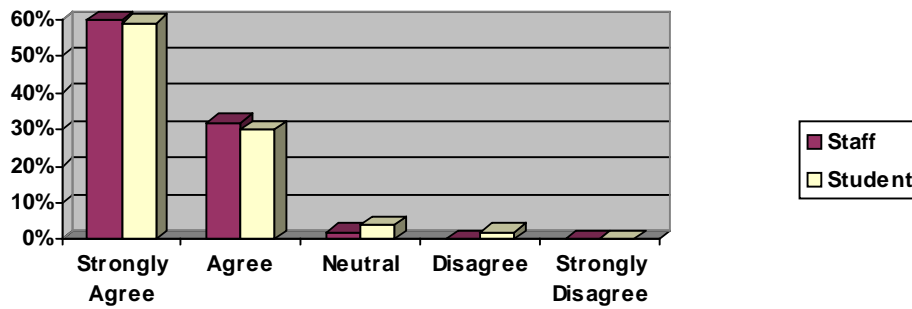


Figure 4.8 shows graphical representation, which states that respondent, is very confident using a computer on their own.

Results from graph 3.8 states that 100% of staff and 96% of students agreed that they are confident using a computer on their own. On the other hand only 4% of students disagreed. Hokanson and Hooper (2000) also mentioned that the use of computers may lead to a surge of enthusiasm for playing with the machine, which can help in the student’s self-development considerably.

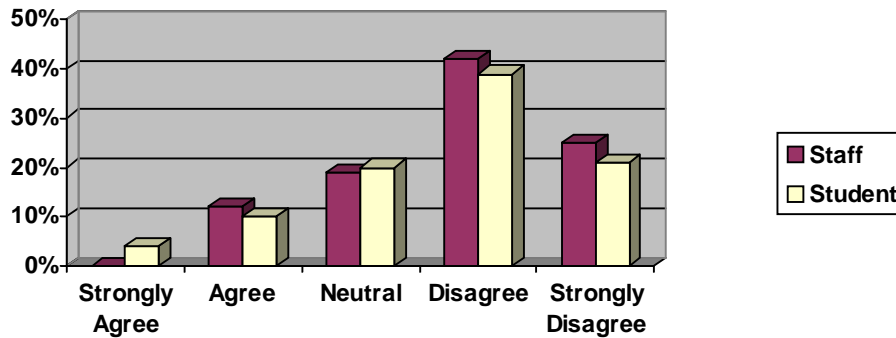


Figure 4.9 shows a graphical representation of response re whether or not e-learning was boring.

It can be seen that only 15% of staff and students agreed that learning from computer is boring whilst 85% of staff and students disagreed.

5. DISCUSSION OF RESULTS

The final part of the questionnaire included some open questions, which provided the respondents with an opportunity to express their views freely about any issues that they personally felt should be considered regarding the adoption of e-learning. On the whole, the issues raised reflected positively on the adoption of e-learning although there were some negative views.

The positive comments re the advantages of e-learning notably included such views as “animation and visual aids can increase effectiveness of learning”, “students can work at their own pace and do not need to rely on the tutor”, “gives good opportunity for self assessment”, “it is quicker to learn using e-learning”, “with e-learning there is no time pressure”, “e-learning is cost-effective”.

The positive comments re e-learning notably included: “doesn’t provide personal interaction”, “the effectiveness depends on the user-friendliness of the system”, “must be used with tutor’s presence as lack of face-to-face feedback would be a problem”.

The findings clearly indicated that e-learning was perceived, widely amongst respondents, as being an effective educational tool.

Most of the respondents also concurred with the view that e-learning is suitable for most of the study areas which contrast with the observations made by Lieberman (2002) which views traditional social interaction is a very important aspect of education and regards e-learning as being a totally inappropriate approach for some areas such as laboratory work. However Letterie (2003) paradoxically views e-learning as having some advantages for the less sociable child - evidence shows that such students prefer interacting with computers than in the normal classroom situation.

The results showed a significant difference between Tutor's and Students' perception of e-learning adoption strategy. The tutor's did not support full implementation of e-learning, whilst the majority of students did support it. It is not if any of this view on the part of the staff was rooted in fears of job security. Hwang (2003) expressed views consistent with the tutors' view in that e-learning is not a replacement for the teacher, because it involves them in viewing each student's progress by using the e-learning package. However Lieberman (2002) supports students' perception by suggesting that for subjects where e-learning well-adopted and integrated it can be as effective as the traditional classroom teaching approaches if not better.

Hwang (2003) and Lieberman (2002) concluded that in supervised e-learning courses, the role of the instructor changes from teacher to tutor and administrator. They maintain that this should make a teacher's life interesting, because the computer takes over the task of teaching the routine material and leaves the tutor free to deal with such activities as answering learner queries and diagnosing learning problems.

The findings also showed that a large number of student respondents agreed that e-learning provided better opportunities for self-study by allowing them to go through the specific area over and over until they were confident about their learning.

Lieberman (2002) supports this by stating that e-learning allows people to learn at their own pace and eliminates the barriers due to fear of any embarrassment for asking a question in the class room. Dewhurst and Williams (1998) also added that for many young learners, reared on a diet of television and video games, a well designed e-learning method is an attractive training medium.

The findings regarding the resources issues i.e. the time and cost factors showed a low response from the staff about the view of e-learning delivery being less time consuming than preparing books or e-books.

This might be because tutors find difficulty with the multi-tasking that may be required in e-learning development particularly as they may feel that they have little time to keep themselves up-to-date with the required multimedia development skills (Cloete 2001).

On the other hand unlike staff, students as e-learning users believed that e-learning was less time consuming to use than books. The idea that training time is reduced by using e-learning is supported by Friedrich and Karslioglu's (2003) study. They explained that e-learning allows each learner to proceed at the rate which suits them without the stress of a traditional classroom environment. Learners also have to spend less time away from their place of work or home, so there is less disruption to the pattern of work than would be the case in attending a traditional classroom session at a distant location.

Alternatively, Herriot (2003) stated that many of the slow learners would not pass the course, unless some way could be found to provide extra instruction, and this usually demanded overtime work by

tutors. With an e-learning course, the system effectively gives them more time, so many of the potential failures would actually pass.

A large proportion of respondent agreed that e-learning could be cost-effective because it allowed them to learn at any time and anywhere. This saved, the expense of travelling, buying a book, buying computer resources etc.

6. CONCLUSION

The research carried out in this work has in the main concluded that if technology-enhanced learning or e-learning is to be deployed on a mass-scale then the required software platforms for multimedia production, distribution and personalised delivery of learning materials must be integrated within the pedagogic paradigm and the overall subject delivery model practice logic as well as designed to respond adaptively to learners' individual learning style and preferences.

Both primary and secondary data confirmed that a well-adopted e-learning system can be very effective but the data is inconclusive as to whether this is in addition to or as a substitute for of traditional learning practices.

The research reveals that there is a novelty factor appeal to e-learning amongst the young and reluctance towards it among the older population. It certainly has benefits for the disadvantaged and disabled, in so far as it provides those who would probably not consider education, a route back into the education system and an eventual pathway to the working world. The case study of the virtual college is a good example of this. However relying on e-learning as the dominant i.e. routine learning delivery vehicle may expose the early learners to lack of education in the sort of social and life skills that are exercised in the everyday interactions with teachers and peers in the physical world. A balance has to be struck between the virtualised learning autonomy approach and instructor-mediated group learning through what is termed as blended learning which could best enable cooperative creativity in learning.

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Factors mediating the routinisation of e-learning within a traditional university education environment. Article. Full-text available. This paper critically explores some of the issues relevant to scalable routinisation of e-learning at the tertiary level, typically first year university undergraduates, with the teaching of Relational Data Analysis (RDA), as supported by multimedia authoring, as a case study. Factors mediating the routinisation of e-learning within a traditional university education environment - Technology-enhanced or Computer Aided Learning (e-learning) can be institutionally integrated and supported by learning management systems or Virtual Learning Environments (VLEs) to offer efficiency gains, effectiveness and scalability of the e-learning paradigm. The paper concludes that blended learning approaches which balance the deployment of e-learning with other modalities of learning delivery such as instructor-mediated group learning etc offer the most flexible and scalable route to e-learning but that this Shafqat Hameed, John Mellor, Atta Badii, Niyati Pa. Education plays an important role in our life. However, some people consider it only a necessary step in getting a job so they do not want to go to university after leaving school. "Knowledge is power" as the famous proverb says. It is transferred from generation to generation and comprises different facts, skills and information. Through learning people get knowledge and experience accumulated by their ancestors. Of course, higher education is not compulsory, but I strongly feel that going to university is very important to everybody. Education helps cultivate skills and provides mental, moral and aesthetic development. Personally, I prefer communicating with an intelligent person who knows a lot of interesting facts and who can share his or her ideas with me.