Case Study

ISSUES IN E-LEARNING IN KUWAIT

Eisa Al-Doub and Robert Goodwin

Information and Engineering Flinders University of South Australia, South Australia

ABSTRACT

The current cultural, technological and educational situation in Kuwait is discussed highlighting the ready availability of Information Technology, the gender differences resulting from the culture and the differences between the public and private education systems.

A preliminary survey of both sectors was conducted using questionnaires. The survey results showed that 100% of the private sector and 94% of the public sector students own personal computer(s) and that 98% of the students in the private sector and 89% of students in the public sector use computers daily. The results also show that there are significance differences in computer use between genders in the public sector but there are no significant differences in the private sector. Nearly all students in both sectors use computers for entertainment or personal reasons.

Finally the implications of the findings for implementing E-learning in both sectors in Kuwait are discussed.

Key Words: Cultural issue, E-learning, Kuwait, higher education, students.

Corresponding Author: Eisa Al-Doub
E-mail: aldo0011@flinders edu au

Robert Goodwin
robert Goodwin@flinders edu au

INTRODUCTION

The E learning revolution is spreading around the world and many countries are planning for E-learning. In some countries many students are aware of the new technologies, are computer literate and have ready access to ict technology prior to enrolling in higher education institutions. In other countries computer literacy and access to ict technology may be limited.

E learning for novice computer users (Students) is a challenge. Students must know how to use a computer (Desktop or laptop) and be familiar with computer applications and ict facilities to be able to take an E-learning course (Pirani, 2004). The expanding use of ict has created students experienced in using computers, 'At school and home, E-learning will be a fact of life for those students[1].

Educational institutions need to be aware of the knowledge and skills of their students when they start tertiary studies if they intend to implement E-learning as part of the teaching strategy

A study[2] found that most of the students in the survey had prior knowledge in using ict technology and that they had used E-learning facilities without any problems. Students in the higher education sector have reliable experience in E-learning[3]. Students who have used a range of ict applications do not need to spend much time learning to use E-learning applications.

In this paper the current situation in kuwait is investigated to determine what assumptions can be made when implementing E-learning in kuwait. The results will benefit higher education institutions in kuwait and other muslim countries in the region in determining how to use ict for appropriate E-learning in teaching information technology in a culturally acceptable way

E LEARNING AND E ASSESSMENT IN KUWAIT

A. Education in kuwait:

Kuwait is a small country located in the arabian gulf region. The population is 2.4 Million as estimated in 2006; kuwaitis comprise 45% of the population and the rest are other nationalities such as other arab countries 35%, indian&pakistani 9%, iranian 4% and others 7%. It is estimated that 85% of the population is educated[54]. Education is compulsory until k12 and many high school graduates continue their higher education locally or abroad. Scholarships are provided each year by the government of kuwait for specific majors.

The tertiary education sector of kuwait consists of three universities: kuwait university (Public), gulf university (Private) started in 2002 and the american university (Private) started in 2004 and the public authority for applied education and training (Paaet) which supervises 5 academic colleges and 8 training institutes. One of the academic colleges offers 4 year degree programs, the

remaining 4 offer only 2 year programs (Diploma). The australian college, started in 2004, offers 2 year programs (Diplomas) and is the only private college in kuwait.

The secondary education sector in kuwait consists of private high schools and public high schools. Students at the private high schools are taught in english by teachers from overseas, mainly american, english and canadian. In the public high schools the teaching is in arabic and the teachers are mainly kuwaitis and from other arabic countries.

A survey of the use of ict in the private high schools in kuwait was conducted by the[5] newspaper in 2007. The survey indicated that 41.2% (N=162) of the students would prefer to use E-learning in education when they commenced study in the higher education sector. The public high schools were not surveyed.

E-learning is used in some of the private high schools but not in the public high schools.

B. Learning and assessment:
At the public higher education institutions, instructors in information technology are still using traditional learning methods, conducting lectures and practical classes. Some instructors use equipment such as overhead projectors, television and videotapes or a computer with a data show to present their materials. The practical classes, conducted in computer laboratories, are for teaching application software and computer programming.

Instructors assess students formatively by giving exercises, assignments, quizzes, tests and projects or conducting class discussions. A traditional theory exam at the end of each course provides the summative assessment.

In practical work students learn to use application software and write computer programs on standalone computers in computer laboratories.

Practical exams are given to students in computer laboratories to test what they have learnt.

Feedback on progress is given by the instructor; an electronic communication medium such as email is not used.

Kuwait is considered one of the technologically developing countries in the region. Millions of dollars are spent yearly by the government of kuwait on enhancing educational technology, providing schools, colleges and universities with the latest equipment and services. All government ministries, industries and businesses now use computers in the workplace. E-business, e-banking, e-commerce and e-government are being adopted and used both locally and abroad without any barriers. The use of the internet in kuwait has increased 55% during the last five years[6]. Most of the students in kuwait of age 5 years old and above are computer literate and use computers to access the internet for personal uses such as surfing the web, chatting, email, forums and games or to use some application software. There is now a trend to accessing the web through the mobile phones which are becoming common. Most of the families who live in kuwait own one or more computers (Desktop and/or laptop) at home connected to the internet through dial-up, dsl, or wireless.

Even though technology has been widely adopted kuwaitis still live by islamic regulations. Female students are separated from male students in k1-12 classes in the public schools. They continue to be separated in the higher education institutions, either separated by geographical location or by different classes at the same location. Most of the instructors in k1-12 teach only children of the same gender but in higher education institutions, due to the lack of female instructors, most male instructors teach both genders. The culture does not allow male instructors to have any contact with female students out of school hours.

Many families are concerned about their female students (Daughter/wife) studying in higher education. They must be back at home immediately after the end of their classes. Females do not have the same freedom in public as males in kuwait society to preserve their reputations; they are only allowed to socialize with their family and relatives outside the family home. Male students usually socialize outside the home. The number of young females accessing the internet exceeds the number of males[7]. However when they use a computer at home they cannot chat or discuss education issues with males as peers or even with their male instructors.

At the public institutions in kuwait such as the colleges supervised by paaet (Public authority of applied education and training), students are taught in arabic. Female and male students attend classes at different geographical locations. Female students are instructed by both male and female instructors but male students are instructed by male instructors only. The colleges close at 5pm and students can not obtain any learning resources related to their courses after this hour. The only resources available to students are their instructors and some extra books in the college library. There are no E-learning facilities available for students.

At the private institutions in kuwait, students are taught in english and predominantly come from private high schools which teach in english and use computers in the curriculum. Male and female students attend classes at the same locations but are separated into male and female only classes. Either gender may be instructed by male and female instructors.

The different pre higher education experiences of students in kuwait suggest there may be significant differences in their readiness to use ict for E-learning at the start of their higher education. A preliminary survey was conducted to determine the similarities and differences between male and female students in the public and private sectors and to determine the similarities and differences between the two sectors.

PRELIMINARY SURVEY ANALYSIS

A preliminary survey was conducted at the gulf university (Gust) and the college of business studies (cbs) in the teaching year 2006/7 to investigate the access to and knowledge of information and communication technology of the students before starting their first information technology course. A course in kuwait is equivalent to a subject in australia. A computer course (Subject) is divided into sections (Groups of students). A section is taught both the theory and practical work by the same instructor; each instructor may take one or more sections.

The gulf university was the first private university in kuwait specializing in science and technology[8].

The college of business studies (cbs) is one of the public colleges that are supervised by the public authority of applied education and training (Paaet) in kuwait[9].

The participants at gulf university were students who have enrolled in an it course (None were computer science or it majors) and they were selected from 5 sections. At cbs, the participants were students who enrolled in an introduction to computer course (None were computer science or it majors) and they were selected from 4 sections at the female college and 2 sections at the male college. Participation by students at both universities was voluntary.

The number of participants in the gust survey was 85, 45 male and 40 female students. Their average age was 20 years old. At cbs, a total of 146 students, 105 female and 41 male students were surveyed. Their average age was 19 years old. The number of females in each female section exceeded the number of males in each male section.

A. Ownership of computers:
The survey findings in gulf university showed that all of the students (100%) had access to either a desktop or a laptop computer or both at home and 98% of students had used a computer before starting higher education studies.

The survey findings in the college of business studies showed that 94% of students who responded had access to either a desktop or a laptop computer or both at home and 89% had used a computer before starting higher education studies.

Question: "What type of computer do you currently own (Desktop/laptop)?".

Of the students who owned a computer at the gulf university 46% of the students owned a laptop computer and 45% owned both a laptop and a desktop computer. Only 9% had just a desktop at home. At cbs, the results showed that 42% of students own a desktop computer. 37% Owned a laptop and 21% owned both. These results indicate all the higher education students surveyed owned at least one computer with the private university students more likely to own a laptop.

Question: "How often do you use your computer?"

The survey findings indicated that the students at the gulf university use computers daily for an average of 3 hours per day. At cbs the students use computers for an average of one hour daily.

B. Accessing the internet:
Question: "if you are using the internet, how do you access it (Dialup/broadband)?".

For gust students the results showed that 52% access the internet through a broadband connection, 42% through a dialup connection and 6% use both types of connection. Some even use the latest mobile phone connections to access the web. For cbs students the results show that 30% access the internet through a broadband connection, 67% through a dialup connection and 3% use both types of connection. These results indicate all the higher education students surveyed had access to the internet.

Question: "what device do you use to access the internet (Desktop/laptop/mobile phone)?"

For gust students the results showed that most of the students (55%) use a laptop computer to connect to the internet, 21% use both desktop and laptop computers, 11% of them only use a desktop computer, 6% of them use both a laptop computer and a mobile phone, 6% of them use a desktop computer, a laptop computer and mobile phone and 1% use only a mobile phone. At cbs most of the students (54%) use a laptop computer to connect to the internet, 3% use both desktop and laptop computers, 34% of them only use a desktop computer, 1% of them use both a laptop computer and a mobile phone, 1% of them use a desktop computer and a mobile phone and 7% use only a mobile phone.

C. Type of usage:
Question: "Had you used computers before taking this course (yes/no)?" And "If yes: Specify number of hours daily?"

At gust the answers showed that 98% of the students had used a computer, 12% of the students used a comput-

er for less than an hour per day while 82% use it between 1 and 6 hours per day and 6% use it over 6 hours per day. The average was three hours per day. At cbs, the results showed that 89% of the students have used a computer, 61% of the students use a computer for less than an hour per day while 36% use it between 1 and 6 hours per day and only 3% use it over 6 hours per day; the average was one hour per day.

Question: "Specify type of use (Circle your selection; you may select more than one)?"

- Entertainment/personal: games / email / surfing the internet / forums / online discussion / using applications such as microsoft office or others (Please specify)

- Related to my study: Email / Surfing the internet / Forums / Online discussion / E-learning / Using applications such as Microsoft Office or others (please specify)".

The answers to these questions are summarized in table 1 and 2.

1. Gust Results
E-Mail (92%) is the most commonly used application. The majority of students have used it for both personal and educational reasons.

Surfing the web is also popular with 86% of the students. surfing the web. The majority of the students have surfed the web for both personal and educational reasons.

Only 28% of the students had taken part in an Online Discussion.

Forums are ranked last among all the services used by students at 22%. The major use was for personal and entertainment reasons

Almost half of the students 47% indicated that they are using computers and/or mobile phones to play games but they did not specify the source of the game, whether they are using web games, stand alone games, or both.

Microsoft Office is used by 74% of the students and 30% are using other applications. Microsoft Office is used equally for entertainment/personal reasons and educational reasons.

The results indicate students use other applications for either entertainment or personal reasons or for learning with few students using them for both.

These results confirm that most of the students at the Gulf University in Kuwait are computer literate. They access the internet for personal uses such as surfing the web, email, online discussion, forums and play computer games and use application software.

2. CBS Results
Surfing the web (77%) is the most common application at CBS. The majority of students surf the web for personal reasons.

E-mail is used by 52% of the students. Again the majority of the students have used it for personal reasons only

Online Discussions are used by 29% of the students. It was almost the same as GUST, but the majority of the students have used it for personal reasons, unlike GUST students who used online discussions for both personal and educational reasons.

Forums are used by 44% of CBS students. It was an unexpected result when compared with GUST students, because it was double the number of students at GUST. The major use was for personal and entertainment reasons.

Almost half of the students 52% indicated that they use computers and/or mobile phones to play games, which is similar to GUST students.

Microsoft Office is used by 29% of the students. Other applications are used by only 15% of students and are more likely to be used for educational reasons.

The results confirm that most of the students at the College of Business Studies (public) and the Gulf University (private) in Kuwait have used computers prior to undertaking a topic involving e-learning. There are however some significant differences between the two groups as to how they use computers. In particular the public sector students are less likely to have used computers for educational reasons. CBS students are more likely to need training in use of computers and E-learning.

D. Male and Female students
Because of the cultural differences between male and female students outlined earlier in this paper, their use of information technology prior to using e-learning facilities was compared. As the data is quantitative and involves independent samples, the Mann Whitney U-test was used. Table 3 and 4 summarizes the results.

1. GUST Results
The results indicated that despite the cultural differences there are no significant differences between male and female students at the private university in their use of computers.

Games are used only for entertainment purposes by 40% of female and 53% of male students. The students

have not mentioned in the survey whether they play standalone or internet games.

2. CBS Results

The findings showed that cultural differences have an influence on the use of computers by gender in the public sector. The results indicated that there are some significance differences between male and female students in using computers prior of commencing studies at the higher education institute.

For instance, 24% of female and 24% of male students use E-mail for entertainment/personal reasons, 6% of female and 6% of male students for learning and for both 10% of female and 30% of male students. Mann Whitney U Asymp. Sig (2tailed) = 0.000; which indicates

that there are significance differences between female and male students. Comparing these results with GUST students, there are no significant difference between genders in GUST and the students of both genders have used email more than CBS students; 98% of GUST female and 86% male students compared to 40% of CBS female and 60% of male students.

Online Discussions are used by 19% of female and 39% of male students for entertainment/personal reasons, for learning by 3% of female and 0% of male students and for both by 2% of female and 6% of male students. Mann Whitney U Asymp. Sig (2tailed) = .028; which indicates that there are significance differences between female and male students.

Table 1: Applications used by GUST students.

Application	Personal (%)	Education (%)	Both (%)	Total (%)
E-Mail	17	6	69	92
Surfing the Web	27	6	53	86
Online discussion	11	12	5	28
Forums	14	7	1	22
Games	47	0	0	47
Microsoft Office	21	21	32	74
Other Applications	12	14	4	30

Table 2: Applications used by GUST students.

Application	Personal (%)	Education (%)	Both (%)	Total (%)
E-Mail	30	6	16	52
Surfing the Web	33	13	31	77
Online discussion	24	2	3	29
Forums	32	3	9	44
Games	52	0	0	52
Microsoft Office	9	12	8	29
Other Applications	5	8	2	15

Table 3: GUST comparison of male and female students.

Application	Personal (%)		Educational (%)		Both (%)	
	F	M	F	M	F	M
E-Mail	20	13	8	4	70	69
Surfing the Web	30	24	5	7	50	56
Online discussion	8	13	15	9	8	2
Forums	5	22	5	9	3	0
Games	40	53	0	0	0	0
Microsoft Office	25	18	18	24	30	33
Other Applications	10	13	10	18	3	0

Table 4: CBS comparison of male and female students.

Application	Personal (%)		Educational (%)		Both (%)	
	F	M	F	M	F	M
E-Mail	24	24	6	6	10	30
Surfing the Web	28	48	17	3	28	39
Online discussion	19	39	3	0	2	6
Forums	29	39	4	0	9	6
Games	52	52	0	0	0	0
Microsoft Office	9	9	14	9	7	9
Other Applications	5	6	7	9	1	3

Games are used equally by female and male students mainly for entertainment. The students have not mentioned in the survey whether they play standalone or internet games.

DISCUSSION

The Students at GUST uses broadband connection more than students at CBS because the Gust University provides a wireless network on campus. Therefore students at GUST have high demand to use laptop computers.

At the private university (Gulf University), 23% of females are using online discussion for learning compared with 11% of male students. It is a small number but it implies that female students are more likely to use online discussion with peers or/and their instructors (despite the cultural issues) if the university provides it in an e-learning course. It also indicated that the students are aware of such facility for learning.

Comparing the results of using online discussion at CBS with GUST students, there are no significant differences between female students, GUST 31% and 24% CBS, but there are a large difference between male students in the two sectors. Surprisingly 45% of CBS male students use online discussions more than the 24% of GUST students. This result may possibly be explained by the preference of these students for the Arabic language. Language issues need to be further investigated in a repeat survey.

At CBS, forums are used for entertainment/personal reasons by 29% of female and 39% of male students, for learning by 4% of female and 0% of male students and 0 for both by 9% of female and 6% of male. Mann Whitney U Asymp. Sig (2tailed) = .956; which indicates that there are no significant difference between female and male students. Comparing these results with GUST students, the public sector (CBS students) is using Forums more than the private sector because there are many Forums were established in Kuwait and from other Arabic countries, using the Arabic language to be convenient to both genders who do not understand the English language. The survey result indicated that the majority (64%) of students at CBS preferred Arabic language (33% English, 3% either). And if we write the word Forum in Arabic in the "GOOGLE" search engine in the internet, we would get around 100 million hits (Google, 2007). Male students use forums more than female students in both sectors, GUST 13% compared to CBS 42% of female students and GUST 31% compared to CBS 45% of male students

The result of using games in both sectors implies that almost half of students play games. At GUST the number of males who play games exceeds number of females; 53% versus 40% while at CBS the percentages are equal.

The results indicated that students at GUST have more demand to use Microsoft office and other applications than CBS' students.

The survey findings indicated that gender is not a factor in the private sector in Kuwait. There is only a slight difference 1.4% between number of male and female students using the Internet. The number of females exceeds number of male students as indicated[7].

The overall average in the private sector; for using all Internet services for entertainment and personal reasons is 52% for female and 51% for male students and for learning 36% for female and 33% for male students. The overall average for using non internet applications (Microsoft Office and other applications) for entertainment/personal reasons is 34% for female and 32% for male students; while for learning the percentages are 31% for female and 38% for male students.

The overall average in the public sector for using internet services, for entertainment and personal reasons is 37% for female and 58% for male students and for learning 20% for female and 23% for male students. The overall average for using non internet applications (Microsoft Office and other applications) for entertainment/personal reasons is 11% for female and 14% for male students; while for learning the percentages are 15% for female and 15% for male students.

These results were calculated without including the use of games because the students who completed the surveys have not mentioned whether they use internet or standalone games in both sectors. The result indicates that there is a higher demand by students to use the computer facilities for learning in GUST than CBS. This is likely to be because students in the private sector mostly came from private High Schools which use computers in the curriculum for learning. The public High School do not use computers.

Overall average in utilizing ICT facilities including games in the private sector; for entertainment or personal reasons is 46% for female and 47% for male students and for learning is 30% for female and 30% for male students. And in the public sector; for entertainment or personal is 32% by female and 44% by male and for learning is 15% by female and 17% by male. The results indicate that there is a higher demand to use ICT for entertainment or personal use than for learning in both sectors. Female and male students in the private sector use computers equally for learning.

The survey findings in the public sector indicated that there are significance differences between female and male students in using Email and online discussion which indicates that cultural issues are important in the public higher education sector. However, in the private sector, the results indicate that there are no significant

differences between male and female in utilizing ICT. In the private sector the number of female exceed number of male students using the Internet as indicated[7] but the results for the public sector showed a contradictory result, males use the internet more than female.

The survey has shown that most students in the higher education sector in Kuwait have prior experience in using information technology as expected when they start courses at higher education institutions. The survey results show that 100% of the private sector and 94% of the public sector students own personal computer(s) and that 98% of the students in the private sector and 89% of students in the public sector use computers daily. The results also show that almost all students use computers for entertainment or personal reasons in both sectors as expected. These results indicate that most higher education students have access to the technology for e-learning but some need training to use the technology.

CONCLUSIONS

As a result of the culture of Kuwait we expected to find significant differences between male and female students. The results have shown that there are significance differences between genders in the public sector but that there are no significant differences in the private sector. The differences between the two sectors may be explained by the fact that private university students generally studied at private high schools where they are taught in English by British, American and Canadian teachers. Public sector university students attended public high schools where they are taught in Arabic by Kuwaiti instructors and instructors from other Arabic countries. The survey result indicated that the majority of students at CBS preferred Arabic language; therefore many students at the public sector when they start tertiary education are unable to speak English fluently.

The implications for e-learning in Kuwait are that the public sector must have a different implementation strategy to the private sector. In particular for the public sector the e-learning materials need to be in Arabic as indicated earlier. More emphasis needs to be placed on ensuring students have the necessary skills and access to the technology for e-learning. Course designers and instructors must be sensitive to cultural issues such as female students cannot participate in online discussions or exchange emails with male students and male instructors.

In the private sector materials can be in English, it can be assumed most students have access to the technology less at home more on campus due to the availability of wireless network at the university by their laptop computers with broadband connection as indicated earlier in the survey' results and they have the required skills. Cultural issues must be recognized but are less significant.

The aim of this study was to investigate how to use ICT for appropriate E-Learning in teaching Information Technology in Kuwait's higher education sector in a culturally acceptable way. The results that obtained by this study were very supportive in suggesting to develop an implementation strategies for the private and public sectors. The strategies may assist higher education institutions in Kuwait and other Muslim countries in the region.

FUTURE RESEARCH

The survey will be repeated in the 2007/8 teaching year to investigate changes from this year's survey. A range of e-learning materials in Arabic to supplement the teaching of a course in computing will be set up at CBS and a survey will be conducted to investigate students and instructors attitudes to E-learning and which types of materials they find most useful. Students and instructors in a computing course using e-learning materials already available in English at the Gulf University will surveyed for comparison purposes.

REFERENCES

1. Jones, A.J. 2003. ICT and future teachers: Are we preparing for E-learning? Conferences in Research and Practice in Information Technology Series 141: 67-69.

2. Concannon, F., Flynn, A. and Campbell, M. 2005. What campus-based students think about the quality and benefits of e-learning. British Journal of Educational Technology 36(3): 501-512.

3. Sharpe, R. And Benfield, G. 2005. The student experience of e-learning in higher education: A review of the literature. Brookes e Journal of Learning and Teaching 1(3).

4. Anonymous. Kuwait Facts and Figures. 2006. http://encarta.msn.com/fact_631504795/kuwait_facts_and_figures.htmlAnonymous.

5. Alwatan Newspaper of Kuwait 2007. http://www.alwatan.com.kw. Accessed 14 Mar 2007.

6. MOC (2006). Ministry of communication, Kuwait. www.alwatan.com.kw. Accessed 12 Nov 2006.

7. Wheeler, D.L. 2003. The Internet and Youth Subculture in Kuwait. Journal of Computer Mediated Communication 8(2): No Pagination Specified.

8. GUST 2007. Gulf University, Kuwait www.gust.edu.kw. Accessed 15 May 2007.

9. Paaet. The Public Authority for Applied Education and Training, Kuwait. 2007. http://paaet.edu.kw/ Anonymous.