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User perceptions of ICT at the American University of Kuwait Library

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Abstract

Purpose – The purpose of this paper is to describe the student perceptions of Information and Communication Technology (ICT) in the American University of Kuwait Library (AUK).

Design/methodology/approach – The study uses a quantitative research method in order to investigate the perceptions of a wide range of students who use the academic library. The sample consists of 95 student volunteers, who provided data that were then analyzed and compared with literature from other authors in this subject field.

Findings – The study found that the quality of the ICT equipment provided by the AUK library is very good, however training in how to use the library's ICT is lacking.

Practical implications – The findings suggest that the academic library looks into the possibility of changing the layout of the library to incorporate more computer terminals, as clearly many students feel there are currently not enough. The academic library must offer a greater amount of ICT training for students, preferably relating to the use of electronic resources and journals for new students.

Originality/value – This study adds to the current literature on academic libraries in Kuwait, and is one of the first studies to look at students' perceptions of ICT in a private university institution.

Keywords Academic libraries, Kuwait, Students, Communications technology,
Electronic information resources, User perceptions

Paper type Research paper

Introduction

Technological advances made over the last 20 years have had a huge effect on teaching and learning in an academic setting, changing the style of student learning. Universities have embraced new technologies, as have academic libraries. Information and Communication Technologies (ICT) is just one of the many services academic libraries are expected to provide for their users. "ICT" is commonly defined as any computer, device or program that is controlled by a computer terminal. This study examines the ICT services at one academic library in Kuwait, using questionnaires as the primary method of data collection. The study was undertaken at American University of Kuwait Library (AUK), which was founded in 2003 and opened to the Kuwaiti public in September 2004. The university is privately owned and receives no funding from the government of Kuwait. The educational system at AUK is based on an American model and all teaching is conducted in English.

This study makes significant contributions to the literature about private universities and academic libraries in Kuwait. Very few studies have been completed and published on public educational institutes in Kuwait, and very few use student perceptions as the primary data source. This study aimed to offer an evaluation of the ICT services offered by the AUK Library, and possible recommendations on future studies and improvements were made based on the evaluation results.

Review of previous studies

ICT is a continually changing and developing field and its uses within academic libraries continues to evolve. ICTs challenge started with Parasuraman *et al.* (1988) that their assessment service will depend on a comparison between users' expectations and their perceptions of the library services. In the past two decades, service quality of academic libraries was meeting or exceeding customer expectations and feels a service firm should provide (Nitecki and Hernon, 2000).

Brophy and Bawden (2005) examine the way in which university students collect references and information when writing assignments, focussing primarily on the use of the search engine Google. The authors state that the majority of university students now complete assignments almost entirely through the use of search engines, leading to students having a lack of knowledge about how to collect high-quality materials. The author found that using library databases provides students with higher quality materials; a combination of Google and library databases produces the highest quality work.

Ali (2005) analyses the uses of ICT and software and the reasons why students fail to use certain of the library's ICT services. The study was carried out in Indian university libraries, which at the time were considered underdeveloped. A lack of trained staff was one of the main reasons in which students did not use the ICT services frequently, as well as a lack of printing facilities.

Mahmood (2009) examined the use of ICT within an academic library and the demographics of library users. The study found that although female respondents had a more positive opinion of ICT than their male counterparts, they used ICT far less than male respondents. The study suggests that the vast majority of students were using the ICT for educational purposes only, not for social or recreational use.

Cullen (2001) examined the divide in ICT skills between students from cities compared to those from rural areas. The study found that at the time there was a definite divide in the general ICT skills of students due to the interactions students from the city had with computers on a daily basis. The reason for this was because of a lack of ICT infrastructure in the rural areas of the countries involved.

Popovic *et al.* examined the perceptions of the users of an academic library in the USA between 1986 and 2005. The study examined both male and female students and found that although initially there were differences in perceptions based on gender, perceptions have become more similar over time. Previously, female students had anxieties regarding ICT use in the past but in recent times have become as comfortable at using ICT as males.

Conole *et al.* (2008) evaluated the ICT at three separate university libraries in the UK. The study suggests that students have a wealth of ICT facilities to use, all of which are of high quality and feature the latest software. They found that at the time of the study almost all students were completely comfortable with ICT and used the internet as their first port of call regarding any information they needed to find.

Schmidt discussed the importance of teaching students the differences between information sourced from Google and information from the library's electronic resources. Informing students about what make resources useful and informative is the job of librarians. Moreover, librarians must advertise the library's electronic resources to students in order for them to know they exist, what they are and how to use them.

Taie and Mohamed (2009) used 4,000 student responses to examine user perceptions of a digital library collection in an Egyptian academic library. The study found that

nursing students were the most frequent users of the digital library. The study also noted that one drawback to using the digital library was that there was not enough training provided in using the digital journals, making searching for information difficult for students.

Buarki *et al.* (2011) describe the ICT skills of university graduates and what impact these skills have on their employability after university. The authors mention a lack of instructed ICT training within academic libraries in Kuwait, and state that this lack of training could be considered a reason why students have such varying levels of ICT competency.

The literature review covered various aspects of library perceptions and situational information that applied to Kuwait. Kuwait is a developing country and, in general, its ICT infrastructure is still slightly behind when compared to developed Western countries. Literature about Islamic thinking is also relevant to the Kuwait context as the country is an Islamic state.

Purpose of the study
There were several reasons for carrying out this study, which led to the several research questions in which the study aimed to answer:

RQ1. What is the quality of ICT equipment provided by the university library?

RQ2. What forms of training do students receive from the library?

RQ3. Which electronic resource is most frequently used by students?

The purpose of answering these research questions is that in order for Kuwait to improve the quality of its academic libraries, evaluation of the facilities should be carried out regularly. High-quality ICT facilities and a large and diverse electronic collection are just part of what makes an academic library a useful service for students. Understanding which areas students have a poor perception of will allow administrators to implement changes to improve the academic library.

Method
This study used quantitative methods, namely questionnaires, to obtain data from 92 volunteer students in the AUK's library. Student selection was entirely random, with questionnaires handed out to students as they entered the academic library. The questionnaire included demographic and Likert scale-style questions relating to the ICT services provided by the academic library. To achieve the study objectives, descriptive statistics were deemed appropriate for this study. The data were collected and analyzed for trends and patterns, and cross-examined with demographic data of participants to further enhance the results. The descriptive statistics of the questionnaire data are presented in tables and graphs later in the paper.

The study aimed to reduce bias and error in the questionnaire results by ensuring that participants completed the questionnaires alone without any interference. The questionnaires were answered anonymously, which meant that the answers would directly reflect the student's perceptions of the academic library.

Development of the questionnaire
Questionnaires were used in this study in order to give a large percentage of library users the opportunity to portray their feelings toward the academic library services. Questionnaires were devised based on the findings in the literature from previous

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studies, and aimed to fill in any gaps within previous research on ICT services. The first section of the questionnaire aimed to discover the demographic information of the users of the academic library, to try and gauge the characteristics of the average users of the academic library. The questionnaires use the Likert scales, with five categories for user responses, from strongly agree to strongly disagree.

The objectives of the questionnaire were:

- to evaluate the ICT services provided by a private university library in Kuwait;

- to recognize the key issues affecting students' usage of ICT in the library and suggest solutions for these issues; and

- to compare the results of questionnaires with other studies evaluating the ICT of university libraries globally.

Analysis and discussion

Following the data collection phase of the study, the researcher analyzed the data and explored possible reasons for the results obtained. The researcher noted that AUK has a higher female population than male, therefore for the purpose of analysis separated male and female responses in some of the displayed tables.

Table I aimed to give the researcher an indication of the perceptions of students regarding the quality of the ICT facilities in the academic library. ICT quality can be measured on various levels such as speed of computers and the quality of the internet connection and software (Table I).

Table I displays the five factors deemed vital when examining the quality of ICT facilities in an academic library. Male and female responses differed slightly regarding some factors and in general female users deemed the quality better than male users. Computer speed received very good results from both male and female students, leading to an obvious conclusion that the library's computers are well maintained and are of a high specification. The internet connection quality results were mixed, but were positive overall. This is thought to be due to the varying connection speeds experienced in the country, and the fact the connection speed is quite slow compared to Western countries. A student who may have experienced

	Male/female	Very good (%)	Good (%)	Average (%)	Poor (%)	Very poor (%)
Computer speed	M	43	28	19	9	1
	F	49	29	13	9	0
Internet connection quality	M	19	14	33	28	6
	F	22	19	29	20	10
Computer availability	M	13	20	30	18	19
	F	15	25	33	22	5
Software quality	M	25	29	37	7	2
	F	27	32	32	8	1
Print/copy facilities	M	27	25	35	11	2
	F	36	28	26	9	1
Computer comfort	M	28	24	27	18	3
	F	31	29	25	10	5

Table I.
Overall ICT
equipment quality

better connections in other countries may consider Kuwait to have a poor speed due to this.

Computer availability received varying results, possible due to the visiting times of students having an impact on the amount of computers available at these times. Software quality received positive feedback overall, as the computers are frequently updated, however in the researcher's experience some specialist programs are lacking in quality. Print and copy facilities received positive results, however females showed a far greater satisfaction with the print facilities than males. The researcher notes from personal observation that females often used the print facilities for copying pages from the physical collection to work on from home. Computer comfort was the final section of the question, and positive responses were received from both male and female students. Jiao and Onwuegbuzie (2004) included computer comfort as a key factor in students using ICT facilities, which students declared was an important aspect of computer usage, especially if they are on the computer for long periods of time.

This research aims to understand how students learn ICT skills either during or prior to their study. Table II shows the multiple choice answers as a cumulative percentage.

Students' responses to the methods used for learning ICT showed that self-tuition is the most frequent method used for learning how to use a computer. However, the question established how many students have had some training within the academic library, with only 9 percent having received training in the library on subjects relating to ICT. The importance of library training is described by Blummer *et al.* (2010), who state that enhancing students' ICT skills is essential for their academic and professional success. A large percentage of students had received training in high school, which prepares students for study in university. This question was designed in part to answer *RQ2*.

Academic libraries often have a large collection of electronic resources, stored either on the library website or on terminals within the academic library. Understanding how students search for materials is important, as students' skills in information literacy can be gauged by their ability to find quality resources. Table III shows the responses to the multiple choice questions on how students search for digital materials:

The results of Table III indicate a vast majority of students searched for materials by using key words Very few students use journal names as a search method, which could mean that students do not take note of journals of good quality when they find useful resources. The study by Ali (2005) also explains that the majority of students search by key word, which was found in the current results, as well as very few students using journal names when searching for resources.

Method	Percentage (%)
ICT learnt through school/high school	67
Self-tuition	88
Private training courses	7
Library training course	9
Study ICT at University	18
Other	4

Table II.
Teaching methods used for ICT learning

High-quality journals from respected publishers are very valuable resources that students should be made aware of through library training courses. Also very few students searched directly for the name of articles, again meaning many students are searching by trial and error on the internet or the library's website.

After identifying the methods that students use to search for resources, the types of materials used by students were examined. The AUK academic library offers students a variety of electronic materials, such as journals, e-books and e-newspapers. The internet also offers a variety of information. Understanding what students used when writing assignments demonstrates the importance of each type of material for students.

Finding resources on the web was the most frequently used method of collecting information by students, however to what extent students did this cannot be answered by this question alone. Databases recorded high use by students, as well as e-journals. The results show that only 47 percent of students used the available e-resources. However, this result may be due to the current lack of training and the results could be higher if training was provided by the academic library to new users of the library. The trend of poor usage of electronic resources was also reported by Scoyoc and Cason who state that low levels of training in electronic resources as an issue.

E-newspapers were used by 11 percent of the respondents for study; however the usefulness of newspaper articles in writing assignments is questionable due to issues of validity and bias.

Table V is used to demonstrate the main uses of ICT within the academic library. Students were told to choose the three most important ICT services they use, and for the purpose of the study male and female results have been displayed separately for analysis.

The results clearly show that both male and female students use the library most for internet study. Helping students understand the importance of using quality resources for study rather than just the internet would increase the number of students using online journals, and possibly improve the overall quality and academic performance of the students. This sentiment is reinforced by Schmidt, who argues that libraries must advertise their electronic collections in order to increase awareness of new and valuable electronic resources. The results regarding online journal/database usage suggest that females had a slight preference toward using online journals, whereas males preferred to study on the internet. The other result of note was that females used the printing/copying facilities at the library more.

	Number of responses	Percentage (%)
Key word	72	79
Author	51	54
Subject	24	25
Date of publication	9	9
Journal name	21	21
Title of article	17	18
Note: Multiple choice question		

Table III.
Resource search methods

Conclusion and recommendations

After completing the analysis of the data, the researcher has drawn several conclusions and recommendations for future research. The study answered *RQ1* by demonstrating that the physical ICT equipment installed in the academic library is of a high standard. However, the results regarding the internet connection speed and the availability of computers were not so positive. The library has fairly limited space; therefore installing more computers seems to be a difficult task in the current building. The internet connection could only be improved if the library installs a high-speed satellite connection, as Kuwait's current infrastructure cannot supply the higher speeds found in other countries. The study revealed that training in ICT was lacking in the academic library, and very few students had received ICT training in the library, thus answering *RQ2*. The final research question (*RQ3*) was answered in Tables IV and V, which demonstrated that students use internet resources as their primary method of collecting materials. Databases were the main source of non-internet resources used by students.

The researcher recommends that the academic library looks into the possibility of changing the layout of the library to incorporate more computer terminals, as clearly many students feel there are currently not enough. The academic library must offer a greater amount of ICT training for students, preferably relating to the use of electronic resources and journals for new students. Greater impetus should be given to advertising the vast electronic collection that the academic library has invested in. Further research relating to AUK library should be based on the training provided by the library and how it compares with other academic libraries in the country.

The findings shows a low level of awareness regarding ICT among AUK students, this findings highlight the importance of promotional campaigns of ICT facilities. In addition, in the light of electronic resources used by students in the library, the study findings suggest utilizing ICT applications developed for smart devices.

Electronic resources	Percentage (%)
Web resources	79
Database	68
E-journals	47
E-books	41
E-theses and dissertations	33
E-newspapers	11
Others	6

Table IV.
Electronic resources used by students in the library

	Males (%)	Females (%)
Internet for study	34	28
Word-processing	29	26
Online journals/database	13	20
E-mail	4	6
Recreational/social networking	8	4
Printing/copying	12	16

Table V.
Three main uses of ICT

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Further reading

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