



**Queensland University of Technology**  
Brisbane Australia

This is the author's version of a work that was submitted/accepted for publication in the following source:

[Alharbi, Awadh & Middleton, Michael R.](#) (2012) The relationship between academic library usage and educational performance in Kuwait. *Library Management*, 33(1/2), pp. 86-94.

This file was downloaded from: <http://eprints.qut.edu.au/48275/>

**© Copyright 2012 Emerald Group Publishing Limited**

**Notice:** *Changes introduced as a result of publishing processes such as copy-editing and formatting may not be reflected in this document. For a definitive version of this work, please refer to the published source:*

<http://dx.doi.org/10.1108/01435121211203347>

# The relationship between academic library usage and educational performance in Kuwait

Awadh Alharbi<sup>1</sup> and Michael Middleton<sup>2</sup>

<sup>1</sup>Queensland University of Technology, Australia, Faculty of Science and Technology, Email: awadh.alharbi@student.qut.edu.au

<sup>2</sup>Queensland University of Technology, Australia, Faculty of Science and Technology

**Abstract:** University libraries play an important role in contributing to student and faculty members' academic achievement. This study examines perceptions of university library usage to consider factors that influence achievement of students, academics and administrators. A thorough review of relevant literature examined approaches to determining user satisfaction of students and faculty, and factors that influence library usage. It highlighted the value of usage on educational performance. It enabled development of a theoretical framework leading to the Factors of Academic Library Usage (FALU) model, which was developed to investigate the effect of usage factors. FALU was tested in Kuwait university libraries. The study used validated questionnaires from 792 students, 143 academics and 121 administrators to measure five library factors. Interviews were conducted across the three University libraries. The findings are useful in measuring the correlation between the current academic library usage and educational performance.

**Keywords:** Academic libraries, university students, academics, university administrators, library collections, information technology, academic performance; Kuwait; evaluation models.

## 1. Introduction

In a world where information resources are rapidly changing and increasing in number, university libraries need to play important roles that respect the missions and philosophies of their particular institution. Several studies have claimed that usage of libraries affect educational performance in a positive way. As high levels of educational performance are considered to be among the primary objectives and goals of higher education, academic libraries play an important role in the progress and development of students, academics and administrators. In support of the performance objectives it is also worthwhile to develop cooperation between the library and the faculty to which the student belongs, as well as a good understanding between the library and university administrators.

In order to effectively influence factors that improve the educational performance of users, library administration needs to understand better the factors that influence library usage. A number of studies indicated a correlation between academic library usage and perceived educational performance of students or academics (De Jager, 2002; Hiscock, 1986; Robertson and Jones, 2009; Whitemire, 2001). Studies such as those of De Jager, (2002) investigated the effects of borrowing materials on academic improvement. However, the effect of library usage is multidimensional, and therefore cannot be inferred by a single factor. Therefore, this study explores library usage factors that directly impact students and academics. The five variable factors used are library training, information technology, library collection (printed or electronic), library physical environment, and facilities and equipment.

The State of Kuwait is a sovereign emirate on the coast of the Arabian Gulf, enclosed by Saudi Arabia to the south and Iraq to the north and west. It has a population of approximately 3.5 million, and a large part of the population are foreign nationals (U.S state department, 2011). This study will investigate three academic libraries, namely Kuwait University (KU), American University of Kuwait (AUK) and Gulf university for Science and Technology (GUST). In comparing all three Kuwaiti university libraries with those of successful universities in America, Britain and Australia the study found that there were many similarities between the institutions, such as modern equipment and high-quality technology. A difference in Kuwait university libraries is the addition of Gender only study areas which are not found in western libraries. This study is carried out in all three of the libraries, but the majority of the questionnaires and interviews took place at KU library.

## 2. Literature Review

While this study attempts to investigate the relationship between library services and teaching and learning outcomes at universities, a number of other studies have addressed a similar topic in the past. Mainly in Australia, Great Britain, Germany and the USA, researchers have measured the correlation between the library use and educational performance. An early study was that of Barkey (1965) who attempted to find out the relationship between students borrowing books and their grade point average at universities. A similar study conducted by Lane (1966) explored the correlation between student characteristics and borrowing books.

Hiscock (1986) investigated the relationship between the usage of libraries and academic performance. The study aimed to explore whether students who used the library frequently showed a higher academic performance than those who did not use the library.

After the mid 1980s, the number of library and information studies increased markedly. Their studies attempted to investigate a link between academic library usage and educational achievement.

For example De Jager (2002) examined the relationship between overall academic performances of undergraduate students from different faculties of a South African university to their grades.

Brazier and Conroy (1996) aimed to explore the relationship between library usage and the performance of undergraduate medical students.

Whitmire (2001) worked with academic library performance measures and the library usage of undergraduate students and their educational outcomes at 36 colleges and universities in the United States. Students engaging in more faculty interactions, active learning and writing activities showed a higher academic library use. Overall, the relationship between library usage and educational outcomes was shown to be weak. However, the author stated that:

“[A]cademic libraries have several missions, depending on the institutional type. For example, academic libraries at research universities exist primarily to support faculty research and secondarily to support undergraduate teaching and learning” (p. 126).

In her study, Pritchard (1996) summarized the measurements and definitions of quality and effectiveness in academic libraries. The author focused on the assessment in higher education and investigated the correlation between library quality and educational outcomes.

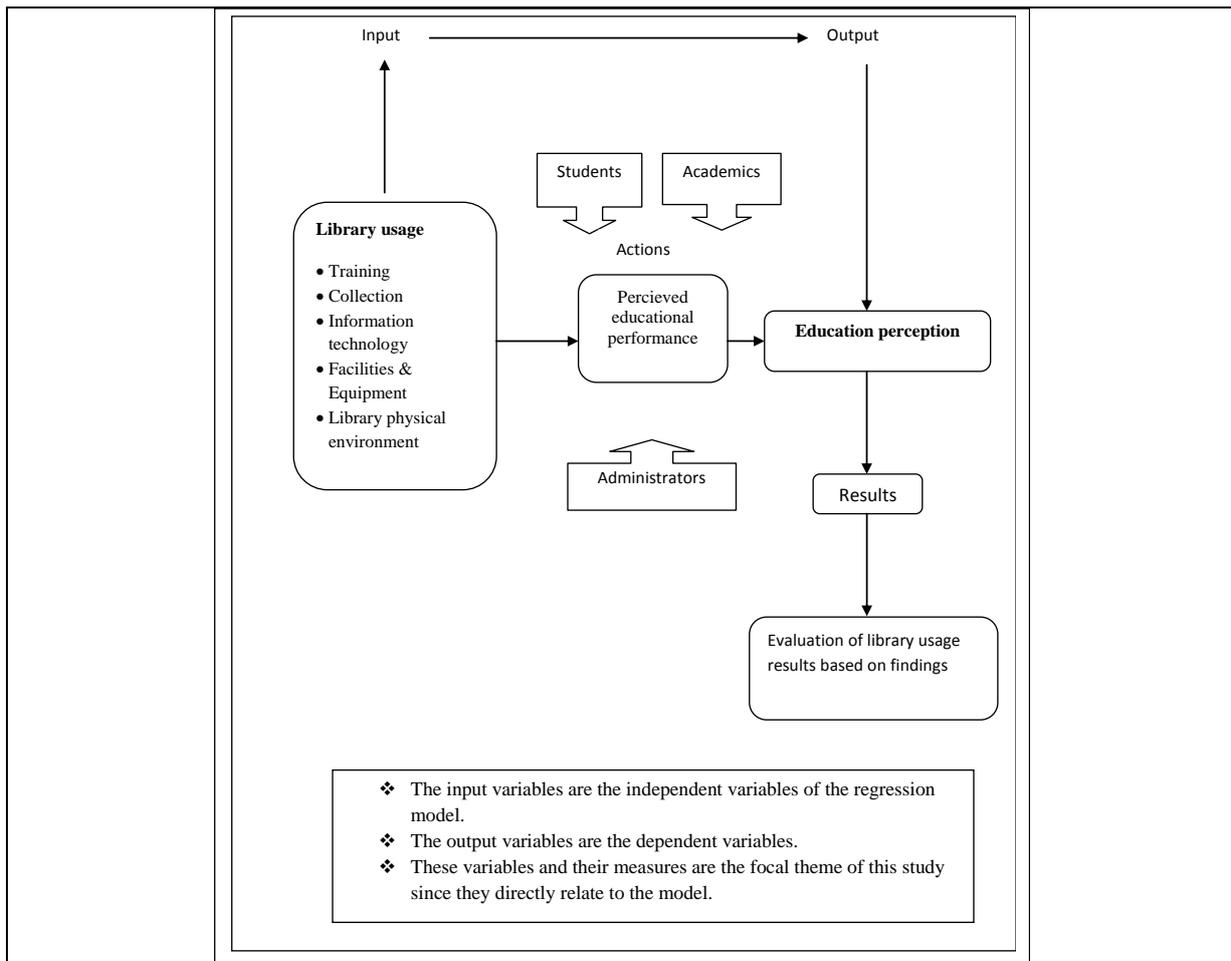
Walters (2003) critically examined the correlation between the library services and student learning outcomes. The author argued that even though quality evaluation systems such as LibQUAL can measure student’s perceptions of qualitative library characteristics, they do not necessarily stand in real connection to educational performance.

The studies analysed within the literature section all hold relevance to the study. This literature all attempt to prove a link between library usage and perceived educational performance.

.....

### **3. Theoretical Framework**

This study is developed within a theoretical framework, called the Factors of Academics Library Usage (FALU), based on previous studies on the relationship between student’s educational outcomes and library resources. The FALU model is developed to investigate the effect of several factors related to the library on the achievement of the educational objectives of the university. The FALU model provides a survey framework that may be used for evaluation to define the effect of independent variables as a construct which need to be estimated from the collected data.



*Figure 1: Factors of Academics Library Usage (FALU)*

The FALU model is a system with input and output variables. Since a regression model was assumed to underlie the structure of these two sets of variables, the input variables are the independent variables of the regression model while the output variables are the dependent variables. The independent variables are the variables related to library uses, which are referred to as library factors or simply factors. These factors can be divided into internal and external factors.

#### 4. Research Methodology

The first part of the study consisted of responses to separate questionnaires for each of the three examined groups: students, academics, and administrators. The questionnaires were originally written in English but later translated into Arabic in order to overcome language barrier of the participants.

Three types of surveys were carried out differing in the role of the examined groups in achieving university objectives. All surveys used the Likert scale to measure the quantitative responses of the three participant groups. To analyse the quantitative data, SPSS software was used.

Table 1

*The library usage statement questionnaires*

Statement	SD	D	N	A	SA	DK
<b>IT Services</b>						
1. The IT devices (computers, internet,etc) that the library furnishes are of high quality and speed						
2. The online search service is friendly and can easily be accessed on-						

campus and off-campus

3. The library web page is friendly and includes all the information that I need to know about the services of the library
4. When I have a problem using any of the IT services, library staff provide all the help I need

***Collection***

5. I am able to find all the references and resources I need in the library
6. The library contains a large number of resources either in print or e-material format  
The library is subscribed to major local and international journals and
7. periodicals in my field  
The library collection list is continuously updated to include new trends
8. in research and learning material

***Facilities and Equipment***

9. The facilities and equipment (e.g. printers, photocopy machines, meeting rooms ...etc.) furnished by the library cover all the basic study needs of library users
10. The photocopying and printing services are accessible and satisfactory
11. There are enough multimedia rooms and presentation rooms
12. The study facilities in the library including study rooms, meeting rooms, seminar rooms, ..etc. are accessible and suitable

***Training***

13. The library offers adequate learning opportunities to its users to learn about its facilities and services, e.g. via online courses, seminars, workshops, exhibitions, ...etc.
14. The library staff are well qualified and they offer their expertise to library users whenever needed
15. The library provides training to improve my skills.

16. ***Library Environment***

- The library provides a quiet and comfortable environment for studying
17. The library is open for sufficient days at suitable hours
  18. There are suitable areas within the library for relaxing and taking a break.

Note: SD: Strongly Disagree, D: Disagree, N: Neutral, A: Agree, SA: Strongly Agree, DK: Don't know or undecided

Table 1 contains 18 statements regarding the five major influencing factors that users require from a library service. The categories cover all aspects of library use, such as facilities and physical environment.

The second phase of this study concerned semi-structured interviews that were conducted with students, academics and administrators of KU Libraries, GUST Libraries and AUK Libraries. The purpose of these interviews was to explain further the questionnaire results, and to provide insights into the perceived user impact evaluation of university libraries in Kuwait.

Further, the interviews attempted to impart primary concepts and variables of which the interviewees themselves may not have been aware. In addition, the questionnaires helped the interviewees to decrease mistakes, keep misunderstandings to a minimum and find missing data. Students, academics and administrators who did interviews were free to explain and describe more about what they felt and thought was happening at the university libraries. However this paper is confined to analysis of the questionnaires data.

#### **4. Data Analysis and Discussion**

For the questionnaires of the study, a total of 792 students were chosen at random from all three Kuwaiti

universities under the study, namely KU (578), GUST (117), and AUK (97) and were asked to complete a questionnaire. These sample sizes reflected the respective number of students in each university. Participant numbers were close to the optimal target sample sizes opted for by the design, as will be explained in more detail in the next subsections. First of all, the study notes that most students visit the library two to four days a week or weekly (458 out of 792). 429 out of 792 students who participated in this study were in their first two years of academic education (sophomore and freshman).

For the variables, Cronbach's alpha is used to provide indications of the reliability and internal consistency of the results. The Highest score achievable is 1, so an alpha a general acceptable score of 0.7 is considered normal. Anything below 0.6 is regarded as non-usable, then ranges of 0.6-0.7 are low acceptable, 0.7-0.8 are respectable, 0.8-0.9 very good and 0.9+ would be regarded as outstanding (DeVellis, 2003).

The outcome variables are specifically designed for each of the three groups of academic library users. There are 10 variables which reflect the different perceptions or level of satisfaction of the library users. The outcome variables are influenced by the five independent variables which are (IT services, Collection, Facilities and equipment, training and library environment).

Table 2:

*Coefficients<sup>a</sup> of multiple regression model for library users*

Unstandardised coefficients						
	B1	B2	B3	std error 1	std error 2	std error 3
(Constant)	9.441	19.702	18.11	0.905	3.568	7.571
IT Services	0.218	0.328	-1.766	0.104	0.273	0.687
Collection	0.327	0.08	-.033	0.095	0.253	0.48
Facilities and Equipment	0.2	0.2	0.587	0.097	0.284	0.56
Training	0.452	0.226	-.178	0.179	0.395	0.764
Library Environment	0.097	0.096	0.09	0.124	0.383	0.567

Table 3

*Collinearity statistics of library users*

Collinearity statistics												
	T1	T2	T3	sig.1	sig.2	sig.3	tol 1	tol 2	tol 3	VIF 1	VIF 2	VIF 3
Constant	10.43	5.522	2.392	0	0	0.019						
IT Services	2.093	1.2	-2.571	0.037	0.233	0.012	0.622	0.742	0.588	1.608	1.347	1.701
Collection	3.457	0.314	.070	.001	.754	.945	.651	.794	.889	.536	.259	.125
Facilities and Equipment	.059	.705	.049	.04	.482	.298	.672	.897	.743	.488	.115	.345
Training	.523	.573	-.234	.012	.568	.816	.653	.875	.863	.532	.143	.159
Library Environment	.782	.603	.159	.434	.01	.874	.701	.807	.893	.426	.239	.12

Key : 1= Student (ex: B1). 2= academics (ex:B2). 3= administrators (ex:B3)

Tables 2 and 3 show that only Library Environment was not significantly related to the outcome variables. This indicates that the addition of questions generally results in another five independent variables which will increase the significance and alpha. If a factor has a significant relationship with the outcome variable, then the corresponding value in the second column (values of B) is an estimate of its effect on the outcome variable. Thus, factor Training has the largest effect on the outcome variable (value .452), and factor library environment has the smallest effect on the outcome variable (value .096).

The target sample sizes of academics from the three universities were 100, 25, and 25 for KU, AUK, and GUST, respectively. The results state that the majority of academics visit the library weekly or fortnightly (88 out of 143). This low frequency can be explained through their different positions within the institution: Academics can access some of the electronic resources from their offices (e.g. through their personal computers). Only one variable, Library Environment, was significantly related to the outcome variables in the academics sample. Collection was classified as acceptable on the Cronbach's alpha classification scale and reached values close to the good level. The remaining variables all attained questionable values.

Table 4 shows the Cronbach alpha of the three different groups included in the study. The Alpha is given as an aggregation, and an alpha of 0.73 for the three groups as a collective was achieved. There were some rouge results which fell below 0.7 in some areas; mainly the administrator's results had a relatively low alpha. Training and facilities and equipment had low alphas throughout the questionnaires, with training not achieving an alpha higher than 0.69 in any of the three groups.

Table 4

*Reliability results for the library usage factors for library users data*

Factor	Number of Variables	Cronbach's Alpha Students	Cronbach's Alpha Academics	Cronbach's Alpha Administrators
IT Services	4	.811	.740	.752
Collection	4	.733	.796	.787
Facilities and Equipment	4	.731	.688	.667
Training	3	.69	.685	.663
Library Environment	3	.722	.704	.685

The third sample consisted of university administrators, who completed 126 questionnaires at the three Kuwaiti universities. The majority of the respondents visited the library monthly (35 out of 126), whereas 33 came to the library weekly. 29 administrators came to the library fortnightly (twice per month) and 14 visited rarely. According to the data analysis, few Administrators see the library as a useful tool. Only IT Services was significantly related to the outcome variables, IT services showed and acceptable Cronbach's alpha. The remaining variables were classified as questionable and non significant.

In general, the results of the statistical analysis of this study's research questions require attention. All the research questions were chiefly about the effect of library usage factors on educational achievement. Related studies with the Kuwaiti universities situations found out that the correlation between library usage factors and the perceived educational achievement is low. A low effect of library usage factors on the educational achievement situation was expected (De Jager, 2002; Hiscock, 1986; Walters, 2003; Whitmire, 2001).

A limitation of the study is that it did not include library staff as participants, although they gave a lot of strong opinions for the library evaluation during the research period.

## 5. Conclusions

Former research has shown that the correlation between library usage factors and the university educational achievement in Kuwait is low. However, the results of this study show that the situation is a lot worse than expected. Only for a minority of students, academics and administrators, the university library plays an

important role in their lives. According to previous studies, one can assume that these figures are quite lower than those of similar universities around the world. Thus, higher education institutions in Kuwait should put a greater focus on the academic library and its library services and improve their performance for all library users.

The researcher recommends taking the following points into consideration:

- It is important that a library offers a wide variety of training courses. General training in how to use all the library facilities would make it more accessible to users. Training can improve student learning and output, but also courses in how to avoid plagiarism would help students pass rates.
- An academic library needs to offer a wide variety of IT rooms which meet the needs for different teaching and studying purposes. In addition, the library needs to provide users with different types of hard- and software suitable for each type of study, for example high-end computers and professional software for creative projects.
- University and college libraries should provide flexible space for individual and group study as well as social activities. Offering services beyond the basic academic library services such as coffee shops and common rooms.

Further research should identify if university leaders need to increase the importance of their libraries to achieve overall goals and objectives through activities and programs, particularly information literacy, and the focus on the relationship to academics. Librarians that play an active role on campus can help to achieve the university's objectives through the collaboration with academics.

---

## References

- Barkey, P. (1965). Patterns of student use of a college library. *College and Research Libraries*, 26, 115-18.
- Brazier, H & Conroy, R, M. (1996). Library use and academic achievement among medical students. *Medical Education*, 30, 142-147.
- De Jager, K. (2002), "Impacts and outcomes: searching for the most elusive indicators of academic library performance", *Proceedings of the 4th Northumbria International Conference on Performance Measurement in Libraries and Information Services*, Association of Research Libraries, Washington, DC, pp.291-297
- DeVellis, R.F. (2003). *Scale development: Theory and applications. (2nd ed.)*. Thousand Oaks. CA, Sage publication.
- Hiscock, J.E. (1986), Does library usage affect academic performance? *Australian Academic and Research Libraries*, 17, 207-213.
- Lane, G. (1966). Assessing the undergraduates' use of the university library. *College & Research Libraries* 27(4), 277-282.
- Pritchard, S. M. (1996). Determining quality in academic libraries. *Library Trends*, 44(3), 572-594
- Robertson, M., & Jones, J. (2009). Exploring academic library users' preferences of delivery methods for library: Webpage, digital game, and other modalities. *Reference & User Services Quarterly*, 48(3), 259-269.
- U.S Department of State. (2011). *Bureau of Near Eastern Affairs: Background note: Kuwait*. Retrieved March 25, 2011, from: <http://www.state.gov/r/pa/ei/bgn/35876.htm#defense>
- Walters, W. H. (2003). Expertise and evidence in the assessment of library service quality. *Performance Measurement and Metrics*, 4(3), 98-102.
- Whitmire, E. (2001). The relationship between undergraduates' background characteristics and college experiences and their academic library use. *College & Research Libraries*, 62(6), 528-540.

