Faculty Members' Attitudes Toward Online Learning: The Case for Higher Education Institutions in Jordan

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Abstract

Online learning is gaining increased attention at the Hashemite University in Jordan. For a successful implementation of such technology, an attention need to be forwarded toward faculty members, which are a key players in utilizing instructional technology in the university classrooms. Based on that, the primary purpose of this study was to determine the attitudes of faculty members at the Hashemite University toward online learning. A random sample of 220 faculty members participated in the study by completing the 14-items researcher-designed questionnaire. The results indicated that participants have positive attitudes toward online learning, thus fostering its implementation in the classrooms. Furthermore, based on t-test and ANOVA analysis, significant differences were not found in faculty members’ attitudes based on gender, years of experience, and type of faculty. However, significant differences were detected based on academic rank. The study ended by offering a number of practical and theoretical implications for the field of study.

Keywords: Online Learning, Higher education, attitudes, and Jordan
Introduction and Theoretical Framework

Much of the world today appears to be embarking on massive and accelerating change. This affects many of our attitudes, beliefs, expectations, behaviors, organizations, and management styles (Al-Ghamdi, 1982). In fact, the turn of the 21st century is a time of change and development in which societies are witnessing some of the greatest technological, economic, and social alterations (Irma & Schmida, 1998). All of this rapid growth and change is emphasized in technological terms. In particular, the accelerated progresses in the fields of computers and communications have altered our perception of the world and, thus, the world itself (Ginsburg, 1999). Computer technology is the predominant technology of our time. The central role of computer technology is at the heart of modern organizations and systems, as well as in science and daily life (Innes, 2004). The proliferation of the personal computer, combined with the development of the Internet, has precipitated far-reaching changes in society. Electronic and digital networks are transforming the way we work and are reshaping inter-personal communications and entertainment (Anderson & Falsa, 2002).

Recently in the realm of higher education, the concept of online learning has gained popularity among full-time students who holds jobs. Online learning offers flexibility and self-paced learning which offers students with utterly dissimilar experience from traditional on-campus courses (Neal, 1999). In fact many institutions of higher education have adopted online education as next logical step in educational delivery systems. Online learning has become an important instructional delivery medium for universities (Akdemir, 2008). An important distinction between traditional classroom face-to-face instruction and online course is that the online learning places the responsibility of learning on the student much more so than traditional learning. Using online learning as an alternative method raises questions to what kind of student will have success using online learning.

Online learning demands a high degree of self discipline, self-organization, and self planning (Nichols, 1996). The alterations in the work environment have made it necessary for individuals to learn new skills and information to keep them up-to-date (Akdemir, 2008). The introduction of the life-long learning concept has prompt the need for more affordable education choices and population shift to various geographical locations (Wilson & Mosher, 1994). The fact that more people want to obtain training and education credits on their time schedule and at their designated location have prompt the need to online learning. One educational approach that has emerged to meet this need is distance education. Higher education is no longer constrained to place "campus" or time "class period" (Cole, 2000). Education-on-demand is no longer future scenario--it is now a reality. Distance education is being called upon to meet some of the needs in countries all over the world (Sharma, 2000). The nature of needs varies from country to country, depending upon the stage of development. The necessity for distance education is being recognized both in developed and developing countries for a variety of reasons, some of which are common to all, while others are specific to particular countries depending on their individual requirements (Lumumba, 2004).
According to the international journal for leadership in learning, nearly 3.2 million students were taking at least one online course during fall 2005 and the online tuition revenue totaled $7.1 billion in 2005, up from $2.4 billion in 2002 (Hass, 2007). This proliferation of online degree programs has had a tremendous and dramatic impact on society, particularly in the field of education (Mehlinger & Powers, 2002). Realizing the impact of online learning on individuals and society as a whole and schools and colleges have included computer technology as an integral part of students’ learning and experiences and as a way to equip them with the skills and knowledge necessary to succeed in the 21st century (Kay, 1999). The exponential development of increasingly sophisticated communication technologies has prompted universities to experiment with alternatives to the traditional classroom teaching strategies; thereby leading to the evolution of a wide range of online courses. Skepticism towards this virtual “means of communication” is still common. Faculty members play an important role in the success of online courses in such educational environments.

According to Brian, Donohue and Stagier (2008), a survey was conducted by Sloan in the years 2002-2003 shows that 40 percent of faculty at U.S. degree-granting institutions do not accept the value and legitimacy of online education. In their study of faculty member’s view of distance learning, Selani and Harrington (2002) found that distance education places different expectations on faculty members. Faculty members tended to be most concerned about quality issues of learning outcomes, faculty training, and selection, academic misconduct, and teaching loads. Moreover, Lee (2002) and Keenan (2007) emphasized that faculty members’ perceptions were different with regards to instructional support for distance learning; technical support for distance learning. As a result, online learning has become more and more important in the educational environment. Towards this step, the Hashemite University in Jordan established an e-learning center to develop e-learning infrastructure, training, course/curriculum development, and support practices. Therefore, this study lays down a pioneering work for assessing, the attitudes of the faculty members in higher education institutions in Jordan with regard to online learning.

**Statement of the Problem**

Online learning is gaining attention in higher education institutions in Jordan, especially at the Hashemite University. For a successful implementation of such technology, an attention need to be forwarded toward faculty members, which are a key players in utilizing instructional technology in the university classrooms. To the researcher best knowledge, no study in Jordan touch base the attitudes of faculty members regarding the value of online learning. Therefore, the main purpose of the study is to investigate faculty members’ attitudes toward online learning. Secondary purpose of the study was to determine differences in attitudes based on selected demographic variables.
Research Questions

The following research questions were formulated to achieve the main purpose of the study:

1. What are the attitudes of faculty members at the Hashemite University toward online learning?
2. Are there significant differences in faculty members’ attitudes toward online learning based on the following demographic variables: gender, years of experience, academic rank, and type of faculty?

Significance of the Problem

Online learning has become an increasingly popular topic worldwide due to its benefits to the university, the staff, the student, and the nation as a whole. The outcomes of this study is expected to provide a deeper insight of the possible implementation of online learning in the university classrooms. By identifying and explaining the faculty's attitudes toward the use of online learning, it is possible to identify ways and methods to improve the educational process, enhance the educational system, and redesign Jordan’s higher education policy.

Research Methodology

Population and Sample

The target population for this study was all faculty members at the Hashemite University for the academic year 2008/2009. A list of faculty members was obtained from the registrar office to determine the population frame for the study. According to the list, the target population was 560 faculty members. A simple random sample of 250 faculties was drawn from the established population frame. A total of 220 usable instruments were returned with a response rate of 88%. The sample distribution was 150 males (68.2%) and 70 females (31.8%). With regard to years of experience of faculty members, 81 (36.8%) had an experience less than 3 years, 67 (30.5%) had an experience between 3-6 years, 46 (20.9%) had an experience between 7-10 years, and 26 (11.8%) had an experience above 11 years. University faculties were classified as follow: the Social Sciences Faculties: 101 (45.9%) and the Science faculties 119 (54.1%). There were 28 (12.7%) instructors, 143 (65%) assistant professors, 29 (13.2%) associate professors, and 20 (9.1%) professors.

Instrumentation

The instrument used in this study was developed by the researcher after an extensive review of related theory and research and following survey design procedures founded in the literature (Alreck & Settle, 1995; Gaddis, 1998; Leady & Ormrod, 2001; Long, 1998). Items in the instrument were drafted by the researcher and submitted to several content judges for review and to determine the face and content validity of the instrument. These
judges had expertise in the field of educational technology, instructional design, instructional technology, and research methodology. This panel of content judges included university faculty members and field professionals. The researcher instructed this panel to check the instrument items for clarity, length, time to complete, difficulty in understanding and answering questions, flow of questions, appropriateness of questions based on the research topic, any recommendations for revising the survey questions (e.g., add or delete), and overall utility of the instrument.

Based on their feedback, items were added, dropped or reworded where necessary. A preliminary questionnaire was pilot tested with a group of 30 faculty members whom were not included in the final sample of the study. Feedback from this pilot test led to minor modifications in the wording of several items. Long (1998) considered peer reviews to be a form of survey pre-testing. All items in the instrument used a five-point Likert-type scale with values ranged as follow: 1 “Strongly Disagree”, 2 “Disagree”, 3 “Neutral”, 4 “Agree”, 5 “Strongly Agree”.

The final instrument was named the “Online Learning Questionnaire” (OLQ) and consisted of two sections. The first section of the instrument included 14 items that measure faculty members’ attitudes toward online learning in a university setting. Examples of the instrument items were “I am interested in dealing with the online learning technology”; and “online learning has a great impact on the quality of education”. The second section of the instrument included items related to demographic characteristics (e.g., gender, years of experience, academic rank, and type of faculty) of respondents. Since this is an exploratory study, eight demographic variables were submitted to a focus group consisting of 15 faculty members who have expertise in the field of instructional technology and asked for their opinion as to the variables that should be included in the study. Their decision was to use the above mentioned four demographics.

Internal consistency coefficient for the instrument was calculated using Cronbach’s alpha and found to be .84. The standards for instrument reliability for Cronbach’s alpha by Robinson, Shaver, and Wrightsman (1991) were used to judge the quality of the instrument: .80 – 1.00 – exemplary reliability, .70 - .79 – extensive reliability, .60 - .69 – moderate reliability, and < .60 – minimal reliability. Therefore, the instrument is regarded as a reliable measure of the attitudes of faculty members toward online learning in higher education institutions.

**Data Collection**

A descriptive research methodology was used to conduct this study. Data were collected from faculty members during the first semester of 2008/2009 academic year. The researcher and his assistants contacted all participants included in the sample either in person or by telephone, explained the nature and goals of the study, and insured confidentiality, voluntaries, and anonymity. The participants were also informed that the instrument will take approximately 10-12 minutes to complete. The participants who agreed to participate in the study were given the instrument and were requested to
complete it within two weeks time-frame. At the end of the two weeks, the researcher and his assistants collected the instruments.

Data Analysis

This study used quantitative data analysis techniques to examine responses to a survey instrument used for this study. The alpha level was set at .05 a priori. Procedures for statistical analysis are discussed by research question. To achieve the first research question, descriptive statistics including means and standard deviations were utilized to describe each of the 14 items and the average of all items. To accomplish research question two, independent t-tests and one way analysis of variance (ANOVA) were utilized to compare if differences exist in attitudes of faculty members based on selected demographic characteristics. In the case where there were two levels of the variable (e.g., gender) the t-test was used while ANOVA was used when the variable has more than two levels (e.g., academic rank). Tukey's post hoc test was used in case differences were detected.

Results

The data collected from all participants were coded, entered to the SPSS spreadsheets, and analyzed using software package SPSS version 11.5. Descriptive statistics of all the variables in this study were examined by using SPSS frequencies. The minimum and maximum values of each variable were examined for the accuracy of data entry by inspecting "out of range" values. An examination of these values showed that no "out of range" values were entered. In addition, missing subjects were not detected either.

Results Pertaining Research Question 1

Question 1 addresses the attitudes of faculty members at the Hashemite University in Jordan regarding online learning. Means and standard deviations were used to answer this question. It is observable from Table (1) that the overall mean value for the 14-item instrument, the (OLQ) was 4.07. This result indicates that faculty members have positive attitudes toward online learning. With regard to the means and standard deviations of the 14 items of the OLQ, the highest mean value of 4.27 was for item nine “I am receptive to the value of online learning in education”. In contrast, the lowest mean value of 3.75 was for item 1 “I value a student-centered approach to learning more than a teacher-centered approach to learning”. Furthermore, it is noticeable that 12 of the 14 items had mean values above four points on a five-point scale (see Table 1).
Table 1

Means and Standard Deviations for each item and the Overall of the OLQ

<table>
<thead>
<tr>
<th>Items</th>
<th>Means</th>
<th>Std. Deviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 9</td>
<td>4.27</td>
<td>.73</td>
</tr>
<tr>
<td>Item 6</td>
<td>4.26</td>
<td>.72</td>
</tr>
<tr>
<td>Item 3</td>
<td>4.21</td>
<td>.78</td>
</tr>
<tr>
<td>Item 14</td>
<td>4.18</td>
<td>.89</td>
</tr>
<tr>
<td>Item 2</td>
<td>4.12</td>
<td>.90</td>
</tr>
<tr>
<td>Item 5</td>
<td>4.11</td>
<td>.88</td>
</tr>
<tr>
<td>Item 7</td>
<td>4.09</td>
<td>.73</td>
</tr>
<tr>
<td>Item 12</td>
<td>4.07</td>
<td>.90</td>
</tr>
<tr>
<td>Item 8</td>
<td>4.06</td>
<td>.83</td>
</tr>
<tr>
<td>Item 10</td>
<td>4.05</td>
<td>.71</td>
</tr>
<tr>
<td>Item 4</td>
<td>4.04</td>
<td>.76</td>
</tr>
<tr>
<td>Item 11</td>
<td>4.01</td>
<td>.69</td>
</tr>
<tr>
<td>Item 13</td>
<td>3.86</td>
<td>.79</td>
</tr>
<tr>
<td>Item 1</td>
<td>3.75</td>
<td>.84</td>
</tr>
<tr>
<td>Overall UBPQ</td>
<td>4.07</td>
<td>.33</td>
</tr>
</tbody>
</table>

Results Pertaining Research Question 2

Question 2 concerns the significant differences among the attitudes of faculty members toward online learning based on the following individual demographics of faculty members: gender, type of faculty, years of experience, and academic rank. T-Tests for independent samples were used to examine the difference in means between males and females faculty members and between faculty members from the Social Sciences Faculties and faculty members from the Science faculties on the overall level of the OLQ scores. However, one-way analysis of variance (ANOVA) was utilized to identify whether the variances of the four level groups of experience, the four level groups of academic rank were equal or significantly different.

Table 2 shows that there were no significant differences at the 0.05 level between male and female faculty members on their attitudes toward online learning \((p=.27)\). Moreover, significant differences were not found among the two level groups of type of faculty based on faculty members attitudes toward online learning \((p=.79)\) (see Table 3).
Table 2
The Differences between Male and Female Faculty Members on the Overall OLQ Scores

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Means</th>
<th>Std. Deviations</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLQ Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>150</td>
<td>4.05</td>
<td>.31</td>
<td>-1.09</td>
<td>.27</td>
</tr>
<tr>
<td>F</td>
<td>70</td>
<td>4.11</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3
The Differences between Faculty Members in Scientific Colleges (Sc.) and Faculty Members in Social Science Colleges (So) on the Overall OLQ Scores

<table>
<thead>
<tr>
<th>College</th>
<th>N</th>
<th>Means</th>
<th>Std. Deviations</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLQ Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sc.</td>
<td>119</td>
<td>4.07</td>
<td>.30</td>
<td>.26</td>
<td>.79</td>
</tr>
<tr>
<td>So.</td>
<td>101</td>
<td>4.08</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the other hand, utilizing one-way analysis of variance, as can be observed in Table 4, there were no significant differences among the four experience level groups (< 3 years, 3-6 years, 7-11 years, and > 11 years) of faculty members on the overall OLQ score ($F=1.76, p=.15$). However, as can be observed in Table 5, significant differences were found among the four rank level groups (instructor, assistant professor, associate professor, and professor) on the overall OLQ score ($F=11.79, p=.000$). Tukey’s comparison test revealed that the difference was between assistant professors and instructor for the favor of assistant professors, between associate professors and instructors for the favor of associate professors, and between professors and instructors for the favor of professors.

Table 4
The Differences among the Four Experience Level Groups (< 3 years, 3-6 years, 7-11 years, > 11 years) on the Overall OLQ Score.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>$F$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLQ Overall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.577</td>
<td>3</td>
<td>1.76</td>
</tr>
<tr>
<td>Within Groups</td>
<td>23.596</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.173</td>
<td>219</td>
<td></td>
</tr>
</tbody>
</table>
Table 5
The Differences among the Four Rank Level Groups (Instructor, Assistant Professor, Associate Professor, and Professor on the Overall OLQ Score.

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLQ Overall</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.402</td>
<td>3</td>
<td>11.79</td>
</tr>
<tr>
<td>Within Groups</td>
<td>20.772</td>
<td>216</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.173</td>
<td>219</td>
<td></td>
</tr>
</tbody>
</table>

Discussion and Conclusions

The topic of online learning has received a great deal of attention in the past decade because of its importance as a key factor in improving the quality of higher education, thus leading to competitiveness, innovation, and social and economic development. Locally, research studies concerning faculty attitudes toward online learning is quite limited and to the researchers’ best knowledge, no studies were identified that addressed this topic. Therefore, the primary purpose of this study was to determine the attitudes of faculty members at the Hashemite University in Jordan toward online learning. Secondary purposes of the study were to test for significant differences in faculty members’ attitudes toward online learning based on exploratory selected demographics including gender, years of experience, type of faculty, and academic rank.

This study is extremely important to researchers and practitioners in Jordan as well as to the international education community. To elaborate, Jordanian economy will be nurtured if universities utilize advanced online learning technologies in the teaching-learning process, which ultimately may lead to improvements in the national economy because of the quality of graduates produced. On the other hand, the international community may have a clear picture of the attitudes of faculty members in Jordan toward online learning, which may help in decisions of partnership and exchange services.

Faculty Members’ Attitudes Toward Online Learning

This study utilized a descriptive research methodology were a questionnaire was developed and validated in Jordan to better fit the purpose of the study. A random sample of 220 faculty members participated in the study. The findings of this study revealed that faculty members at the Hashemite University have positive attitudes toward online learning technologies in the university classrooms. These results are consistent with the studies of Alshehri (2005) and Alghoneim (2005) who found that university faculty members in Saudi Arabia have positive attitudes toward online learning technologies in the university classrooms.

According to results, faculty members are receptive and interested in using online learning technologies in the university classroom because they feel comfortable with using such technology and have knowledge and experience with these technologies.
Huyer (2003) emphasized that notion in that the interest and comfort level of instructors may provide a positive learning experience for them. Moreover, faculty members perceive that the university has provided training, resources, technical support, team effort, and an infrastructure to support the use of online learning technologies in the classrooms. These results may be one of the factors that formed a positive attitudes about online learning, which is consistent with the fact support received from the institution may be a key factor in the forming of the attitude (Roger, 1995). Further, faculty members believe that online learning has a great impact on the quality of education; online learning is better than traditional learning; and that online learning improves students’ learning and performance. These results are consistent with the study of Oder (2001).

**Demographic Variables and Group Differences**

The second research question was to determine if significant differences exist in the faculty members’ attitudes towards online learning based on the following demographics: gender, years of experience, type of faculty, and academic rank. The results of the study indicated that there were no significant differences at the 0.05 alpha level due to gender, years of experience, and type of faculty. These results might be justified. With regard to gender, there is an equal opportunity for both male and female faculty members. Moreover, years of experience had no impact on the results of the study because there is an established culture within the system of the Hashemite university that encourage all faculties regardless of their experience to engage in many forms of online learning to improve students’ learning and performance and the reputation of the university as a whole. Furthermore, by the same token, the culture of the university has encouraged all faculties regardless of their major to engage in this process of online learning.

With regard to the academic rank faculty members, significant differences were detected. Assistant professors, associate professors, and professors at the Hashemite University had more positive attitudes than did instructors (earned only a master’s degree). This result might be justified with the assumption that they are more involved with online learning for promotional purposes than do instructors. These results open the door for more demographic variables to be included in further research.

**Recommendations**

This study adds up to the growing field of literature on online learning and the following theoretical and practical recommendations can be suggested.

**Theoretical Recommendations**

- More research is needed with a larger sample of universities in Jordan.
- There is a need to explore the attitudes toward online learning between private and public universities in Jordan.
- A mixed-method research design of both quantitative and qualitative research should be used to gain a deeper understanding of individual, institutional, and environmental factors that may influence faculty members’ attitudes toward online learning.

**Practical Recommendations**
- Leaders of higher education should establish a university-based center in all public and private universities in Jordan to training all their faculty members to integrate online learning technologies in all university courses.
- Jordanian universities should seek to partner with international universities to delivery online instructions to students.
- The Ministry of Higher Education should provide incentives for universities who deliver instruction via online.

**References**


Alghonaim, H (2005) Attitudes, barriers and incentives of Saudi College instructors and administrators toward impolication of online instruction. Doctoral dissertaion, University of Kansas


“The Online Learning Questionnaire”

1. I value a student-centered approach more than a teacher-centered approach to learning.
2. Online learning has a great impact on the quality of higher education.
3. Online learning requires a team-effort to be successful (e.g., faculty, administrators).
4. Online learning is better than traditional learning.
5. My university has a good infrastructure to support online learning.
6. Online learning can be used with all types of university courses.
7. I have a good knowledge about online learning technology.
8. The use of online learning technology will improve students’ learning and performance.
9. I am receptive to the value of online learning in education.
10. I feel comfortable dealing with online learning technology.

11. My university supports faculty members to teach online courses.

12. I am interested in dealing with online learning technology.

13. My university provides training related to utilizing online learning technology in my course.

14. My university provides help when needed to deal with the technical difficulties of online learning technology.