

The Extent of Al-Balqa Applied University's Students' Perception of the Importance of Means of Information and Communication Technology in High Education in Jordan

Abdallah S. Al Zou'bi¹ & Sabah Al-Onizat¹

¹ College of Education Sciences, World Islamic Sciences & Education University, Amman, Jordan

Correspondence: Abdallah S. Al Zou'bi, College of Education Sciences, World Islamic Sciences & Education University, Amman, Jordan. Tel: 962-772-000-414. E-mail: dr.azoubi@gmail.com

Received: February 2, 2015 Accepted: March 6, 2015 Online Published: June 29, 2015

doi:10.5539/ies.v8n7p229

URL: <http://dx.doi.org/10.5539/ies.v8n7p229>

Abstract

This study aimed to identify the effectiveness of using information technology and communications' means in the academic education from the perspective of Al-Balqa Applied University's students. And to achieve this goal, the researchers prepared and developed a questionnaire as a tool of the study including 26 items. The population of the study, which consisted of all the students of Al-Balqa Applied University, was (10434) male and female students according to university's statistics for the academic year 2013-2014 and the sample of the study which consisted of 500 male and female students was selected by the simple random method.

The results of the study showed that the degree of the students' perceptions of the effectiveness of using information technology and communications' means in the academic education was high where the total average of the items was (4.02) and it is considered a positive average that indicates a high degree of perception. The results also showed that there were no statistically significant differences attributed to the faculty and the academic level variables on Al-Balqa Applied University's students' perception of using means of information technology and communications in the academic education, and there were statistically significant differences attributed to the gender in favor of females. And in light of these results, the researcher presented some recommendations

Keywords: information and communications technology, academic education

1. Introduction

The revolution of information and communications has made changes in the educational process with all its factors and there is a need to be aware of these changes and to respond to them appropriately and because of the scientific progress and technology development at the end of the twentieth century and the beginning of the twenty-first century have changed greatly the educational process, the traditional education was no more able to meet the requirements of the educational institutions in a century characterized by the speed of the knowledge and technology skills especially in the field of preparing and training human resources and the specialized technical skills plus the latest trends in the education field and improving learning outcomes (Salim, 2004).

The university is the major source of building the human resources that respond to the requirements of the comprehensive social development as its role is to prepare the generations: mentally, emotionally and physically. Leaders of the society in different fields are mainly university graduates so the more the university teaches and trains the human being on the use of scientific method in solving the problems, taking decisions, adapting to developments, being able to choose from different alternatives that appear in light of the information and communications revolution, the more the society moves forward and develops (AL-Gharaiba & Gharaibah, 2001).

The interaction between means of information and communications technology and the educational system in a century characterized by the knowledge and information explosion will lead to great changes in this system. Some of these changes affect greatly the form and the content and every factor of the operation's factors. And so the university has to revise its philosophy and develop it to deal with the changes and challenges that face in the coming period and to determine steps to be used in applying this philosophy in light of the changes that will take place because of the technical revolution in the means of the information and communication technology in the

new universal system characterized by globalization and information (AL-Bor'I, 2002).

Mastering the basic skills which are necessary to use information technology has become one of the important necessities in education for its great role in facilitating communication and obtaining information plus preparing studies and researches. Lack of mastering these modern skills reduces the interaction between the teachers and their students in addition to the access into the necessary resources of knowledge for the education process. Teaching and providing the information that the students need using the computer and other means of technology to be line with the latest developments in the educational process especially many resources and references are stored electronically and the possibility to use them many times requires a skill of using the modern technology and so the traditional sources of knowledge are no longer sufficient to get the educational content and it becomes necessary to get help from modern banks of information that store knowledge electronically. It has become a necessity for the teacher and the student in the university to master the skills that enable them to find out the information and use it easily (Shomali, 2007; Siemens & Conole, 2011).

The means of information and communication technology created new types of learning as open learning and long life learning. Additionally, these means help in finding an integrated learning that overcomes all the different obstacles plus it helps in finding new patterns of learning as: CMI, CIA and CBE. Internet is considered a major reason in creating different and new educational types and patterns and it is an important mean of information and communication technology and it is a very rich source of knowledge (Sa'da & Sartawi, 2003; Gabr, 2011). Aboud and Sha'ban (2009) pointed out that one of the most important issues that the researchers should be aware of is the educational hinges concerning the development in the field of information and communication technology which will determine the future of the educational institution status and the environment of teaching and learning. And there should much attention paid to the user of this technology especially the student. Al-Balqa Applied University is one of the universities that seek to use the means of information and communication technology and activate them in building its students' knowledge. This study aims to reveal the extent of Al-Balqa Applied university's students' perception of the importance of using means of information and communication technology in the academic education.

2. The Study's Problem and Its Questions

In its development plans, Al-Balqa Applied University adopted the latest technological innovations of programs and networks in serving the academic and administrative affairs because of the importance of adopting these innovations in the educational process by integrating information and communications technology in the academic education. Therefore, there is a need to identify to what extent the success of the educational development plans which Al-Balqa Applied University adopted. And because the student is the core of the educational process, this study aimed to identify the efficiency of using means of information and communication technology in the academic education from the students' perspective.

The study aims to answer the following questions:

1st question: what are Al-Balqa Applied university students' perceptions of using means of information and communications technology in the academic education?

2nd question: do Al-Balqa Applied University students' perceptions of using means of information and communications technology vary according to the college?

3rd question: do Al-Balqa Applied University students' perceptions of using means of information and communications technology vary according to the academic level?

4th question: do Al-Balqa Applied University students' perceptions of using means of information and communications technology vary according to the gender

3. Significance of the Study

The significance of this study lies on providing information about the efficiency of using information and communication technology through the students' perceptions which will give the university academic staff a feedback about their teaching using these means in one hand, and it will help them to evaluate these means as a method for teaching through its efficiency on the other hand. And the significance of the study also lies in providing information to decision makers helping them to take the appropriate decision concerning employing technology in general and means of information and communications technology in particular plus this study is in line with the international attitudes of the educationalists in integrating information and communications technology in the educational process.

Procedural definitions:

- Means of information technology & communications: the means which the students employ in the learning process including internet, the computer, data show, video conference sand mobiles.
- Perceptions: set of affective reactions for concepts and beliefs that the individual owns towards a specific issue of a particular phenomenon and his evaluation to it. Limitations of the study:

The study is limited to the following:

- Spatial and human resources: the study's results are limited to the students of Al-Balqa Applied University in Jordan.
- Time: the results of this study are limited to the period of time when this study was conducted which was in the first semester for the academic year 2013-2014.

4. Theoretical Frame and Previous Studies

Communication is a psychological and social process that has a great importance to the human and his daily life and this process depends on a sender, receiver and a communication channel as using language, signs and symbols. And as a result for the development and change in the field of knowledge and society, there was a need to new means and patterns of communications (Nasrallah, 2001).

The world has witnessed recently a great development in the means of information and communication technology for example, the traditional telephone, telex, and video were developed and the century of Satellite, Internet and e-mail started and so communication becomes more complicated as the number of radio and television stations increased, more modern communication means appeared and other different services appeared to meet the individuals' needs to information as personal computers, digital communications, microwave, direct connections with data bases, video conferences and e-mails (Hijab, 2000). Because the learning and teaching process is a communication process, the information and communication technology affected the student as he became the core of the educational process and he is no longer a receiver but a receiver and sender at the same time. these means also affect the teacher and change his role from a sender to a designer to the educational environment and a planner to the work style plus a leader to the class discussion and therefore, the quality of education is improved, the students' attention was motivated, student' need were met, their experience was increased, their creative thinking was developed, time and effort were saved (Salama, 2001). Using means of information and communication technology in the universities can achieve many benefits as: individualizing education, increasing creative thinking, improving students' ability in solving the problems, in addition to increase the students' awareness of this big world. Moreover, these means provide more communication with the colleagues through group discussions via chat rooms and e-mail lists and they help in applying programs of distance learning in the universities (Hamdan, 2003; Al-Zahrani, 2005; Al-Freig, 2005). Additionally, these means provide more opportunities for educational interaction and provide new educational materials and they help the academic staff to present integrated educational experiences to the students and the student will be responsible for his learning (Benne, 2004).

The student's extent of perception of the development of the means of information and communication technology especially in internet lies in his ability to recognize the importance of using e-mail and discussion group, using internet un video conference, identifying and using the appropriate and the available technology and software through the educational institutions plus to his ability to use the e-references as: encyclopedias, e-dictionaries, e-data bases (Hamdan, 2003).

4.1 Previous Studies

Al-hazani (2013) conducted a study aimed to identify the effectiveness of e-social networks in developing the female students' process of learning in King Saud University and its influence with the academic level and the academic specialization. The study was applied on an accidental sample consisted of 33 female students. Results showed that 73% of the female students used social networks and about 72% of the sample agreed on the importance of social networks in learning, education and scientific research.

Al-Shonaq (2011) conducted a study aimed at identifying the status of using electronic media in the teaching sciences in UAE from the teachers' perspective. the population of the study consisted of 284 male and female teachers who taught scientific subjects and the sample of the study consisted of 154 male and female teachers. Results showed that the most significant electronic media used were respectively as follows: the computer (89.5%),internet (79.9%) and data show (76.6%) while using the following was low; e-mail (29.9%), mobile (23.8%) and video conferences (12.3%).

While the study of Al-Jarah (2011) aimed to identify the attitudes of University of Jordan students in high diploma in information technology and telecommunications towards using Blackboard strategy in their learning. The study was applied on 365 male and female students. results revealed that there were positive attitudes towards the students' use in their learning as the members of the study assured that the blackboard strategy helped them in facilitating learning process and increasing their class participation.

Siemens and Conole (2011) conducted a study to identify the students' beliefs and attitudes towards e-learning according the gender, age and computer knowledge variables. The sample of the study consisted of 110 male and female students in Tahrn University. Results showed that students got positive beliefs towards e-learning and 68% of the students' perceptions towards e-learning were affected by gender, age and computer knowledge variables.

The study of Sife, Lwoga, and Sanga (2007) which was conducted in one of the Tanzanian universities in Africa aimed to the teaching practices in the academic teaching and their relation to the modern technology as information technology and telecommunication in developing countries and the teachers' level of possessing the skills of teaching using technology. The study also discussed the most important challenges face integration process between technology and universities' curricula. Results showed most significant applications of technology used in high education were represented by internet, computers, video, audio, CDs and DVDs, and mobile technology facilities. The study recommended the universities' adoption of technology and distance learning applications to develop the process of learning and the necessity of training the teachers on the skills and technology competencies that integrate Information and Communication Technologies in teaching and learning practices.

Al-Gorf (2006) conducted a study aimed at identifying the efficiency of using Information and Communication Technology in teaching English in the university in Saudi Arabia the sample of the study which consisted of 113 female students in the first level (English major) in the Languages and Translation College King Saud University was distributed into two groups; the control group consisted of 51 and taught traditionally and the experiment group consisted of 62 and taught by a combination of online instruction and traditional in-class instruction. Results showed significant differences between students in the experimental group and those in the control group who were exposed to traditional classroom instruction only in favor of the experimental group. The results also revealed that using technology at their homes any time improves the weak students' ability in English writing.

While the study of Al-Moteri (2005) aimed to reveal the status of using internet by the students of Colleges of Technology in Jeddah in Saudia Arabia. The sample of the study which consisted of 493 students was selected randomly. Results showed that most respondents used internet, half of them has a home subscription, half of them also has e-mails and most of them use internet four times a week. Results also showed the most important reasons for the use of internet were: knowledge, personal research, writing researches, communication with friends, and entertainment. Results showed statistical significant differences in the degree of students' use of internet attributed to the specialization and electric technology came in the first rank and there were also statistical significant differences attributed to the student's academic level.

Al-Sharefi (2004) conducted a study aimed to identify high studies' students' use of internet in King Adalaziz University and to identify the most benefits that students got from internet plus to identify difficulties that faced the students in using internet. The sample of the study which was selected randomly consisted of 206 male and female students. Results showed that 49.5 % of the high studies' students use internet continuously, 44.7% use internet non-continuously, 83.5% have internet at home and 49.5% use it daily. The significant benefits of using internet according to the students were send and receiving messages via e-mails to do their assignments. Results also showed that there were no statistical significant differences in students' getting benefits of internet attributed to gender or college or university schedule variables and there were no statistical significant differences in the field of difficulties that face student in using internet attributed to gender, or college or university schedule.

Ababnah's study (2003) entitled by: "using internet as a source of learning by higher studies' students and obstacles facing using it" aimed to reveal the extent of the higher studies' students' use of internet in Jordanian universities and the benefits they get, in addition to identify the obstacles facing their use of the internet. The sample of the study which was selected through Quota method consisted of 334 male and female students. results concluded that the highest proportion of the students (46.6%) use internet daily and the most significant benefits from internet were wasting time, looking for universities that provide scientific scholarships and searching for means for immigration. Additionally, results showed statistical significant differences in getting benefit of internet attributed university variable in favor the university of Jordan while there were no statistical significant differences of the extent of getting benefit of internet attributed to gender, academic schedule and the

college variables and item: “the teachers were not guided towards using internet” was an obstacle to a high degree.

Al-Gomeid’s study (2003) aimed at identifying degree of using internet as a source of learning by the students of university of Jordan and Yarmouk university. The sample of the study which was chosen purposefully consisted of 341 male and female students who use internet. The researcher used a questionnaire as an instrument that consisted of 7 fields includes 72 items. Results showed the students’ degree of using internet was moderate and the degree of using internet applications was low. Results also showed statistical significant differences in using internet as a source of learning attributed to the language of the study in favor of the students who studied English language.

The study of Burgss (2003) aims at identifying the university students’ acceptance of WebCT’s applications as a tool for e-learning via internet and at identifying the obstacles facing their use of these applications. The sample of the study consisted of 57 male and female students. Results showed that 94% of WebCT users for the first time believed that their understanding for the scientific material increased and concerning the obstacles facing these applications about (41%) of the respondents needed technical help and training to use these applications and (52%) of them did not mention any problems. Regarding the benefits achieved through using WebCT, the students pointed that they acquired more new information and technological skills, more communication with academic staff.

The study of Fleck and Mcqueen (2002) aims at identifying the students’ use of internet in the American colleges and universities. the tool of the study which was a questionnaire consisted of 22 items was distributed via internet to 6000 male and female students in 13 American colleges and universities and about 16% were retrieved. Results showed high use of internet especially in the fields concerning the students’ areas of study especially in the educational field and the students pointed to one of the obstacles facing them during using internet which is the design of the websites as some of these websites have many scientific mistakes.

4.2 Summary of Previous Studies

Addressing the previous studies which related to the study’s subject we find most of these studies focused on employing information and communication technology in learning and education more than the individuals’ understanding and their perceptions to it and this what distinguished this study from other previous study.

5. Method & Procedures

Method: this study adopted the analytic descriptive approach for its appropriateness.

5.1 Sample of the Study

The sample of the study which was chosen randomly from a population represented 1044 male and female students according to the university’s statistics for the year 201-2014, consisted of 500 male and female students of Balqa Applied University–the center. Table 1 illustrated the distribution of the sample of the study according to the study’s variables.

Table 1. Distribution of respondents according to variables: college & level

Variables	Levels	Freq.	Prop.
College	Scientific	15	3.5%
	Human	416	96.5%
Level	1 st year	93	21.6%
	2 nd year	170	39.4%
	3 rd year	86	20.0%
	Fourth and higher	82	19.0%
Gender	Male	370	74%
	Female	130	26%

5.2 Instrument of the Study

The researchers developed a questionnaire as an instrument to collect data according to the following steps:

- Revising the researches and the studies related to the environmental awareness.
- Getting benefit of the academic experts in building the instrument.
- Developing the initial image of the questionnaire consisting of 30 items.

The items of the questionnaire were scaled according to lickert as follows: always (5), mainly (4), sometimes (3), rarely (2), never (1). The mean of the responses was calculated. And for the purposes of perceptions' classification, the researchers adopted the following standard which was used in the studies of Al-Jorf (2006), Al-Materi (2006) and Al-Hazani (2013):

- High perceptions if the mean was more than 3.67
- Moderate perceptions if the mean was between 3.66-3.34.
- Low perception if the mean was less than 2.33.

5.3 Instrument Validity

The questionnaire was presented to a committee consisted of 8 academic arbitrators who were chosen from World International Scientific and education University The arbitrators' notes were taken into consideration in terms of adjustment, addition and deletion. The final copy of the questionnaire consisted of 26 items.

5.4 Instrument Reliability

The researchers used test and re-test method to check the reliability of the instrument on an initial sample consisted of 40 university students. The researchers used Pearson Correlation to calculate the reliability which its value was 0.91 and it is considered appropriate for the purpose of the study.

5.6 Statistical Treatment

The researchers used the following statistical methods: frequencies and proportions were used to answer the first question; means, standard deviations and T test for independent samples were used to answer the second question, and One-way ANOVA to answer the third question.

5.7 Study's Variables

Independent variables:

- Specialization with two levels (scientific & human colleges).
- Academic level with four levels (1st, 2nd, 3rd and 4th and more).
- Gender (male, female).

Dependent variable: degree of Al-Balqa students' perceptions of using means of information and communication technology in academic education.

6. Results

Results concerning 1st question: what the perceptions of the students at Al-Balqa Applied University of using the means of information and communication technology in the academic education?

To answer this question, means, standard deviations and relative importance were calculated to every item, and Table 2 illustrated this:

Table 2. Means, standard deviation and relative significance of the items

Rank	Item	Mean	Std	Relative Siq.
1	Helps in transferring the student to the society	4.35	.859	87.0
2	Helps in saving time	4.35	.896	87.0
3	Helps in varying methods of teaching	4.32	.879	86.4
4	Helps in developing students' thinking skills	4.28	.849	85.6
5	Expands distance learning	4.24	.961	84.8
6	Helps in developing students' research skills	4.23	.893	84.6
7	Helps in making learning interesting	4.22	.975	84.4
8	Helps in transferring the world news into the class	4.21	.961	84.2

9	Encourages students to use the source of knowledge	4.16	.898	83.2
10	It enriches the education process	4.14	.940	82.8
11	Increase the students' opportunities to communicate socially	4.12	.985	82.4
12	Makes learning effective	4.12	.996	82.4
13	Change the student's role from reliever to knowledge to a researcher	4.12	.928	82.4
14	Change spoken content to visual one	4.08	1.037	81.6
15	Long last learning	4.06	.984	81.2
16	Acquire skills of expressing himself	4.00	.992	80.0
17	Acquire long life skills	3.96	.989	79.2
18	Motivate students	3.96	.928	79.2
19	Help the students to choose the educational activities	3.91	1.066	78.2
20	Increase the student's achievement	3.86	1.011	77.2
21	Increase the student's responsibility in the educational process	3.84	1.028	76.8
22	Increase students' self evaluation	3.84	.995	76.8
23	Encourage students to cooperate in the learning process	3.73	.990	74.6
24	Increase teacher and student interaction	3.68	1.063	73.6
25	Help in filling the gap of the qualified teachers	3.49	1.206	69.8
26	Aware of the students' individual differences	3.32	1.068	66.4
	Total average	4.02	0.973	80.4

Table 2 showed the means, standard deviation and the relative significance of the items which were ordered according to their means in a descending order, and Table 2 illustrates the following:

- The means ranged from 3.32 to 4.35 and item: "it helps in transferring the student into a developed society", got the highest mean (4.35) while item: "it takes into count individual differences between students" got the least mean (3.32) and the total average of items was (4.04) which is a positive average that indicates a high degree of perception.
- Items which got the highest perceptions according to the criteria used were: help in varying methods of teaching, increase students' high thinking skills, expand distance learning system, develop the students' research skills, transfer the world's news into the class, make learning interesting, encourage students to communicate with international resources of knowledge, make learning process more effective, change the student's role form receiver to researcher for the knowledge, increase the period of learning impact, the students acquire the skill of expressing himself, increases the students' level of achievement, increase the students' responsibility in the educational process, increase the opportunities of self-evaluation, increase the teacher and students' interaction. And the previous items' means range from 3.68 to 4.35.
- Items which got moderate perceptions according to the criteria used were: fill the gap in the shortage of the qualified teachers educationally and scientifically and be aware of the students' individual differences. the means of these items range from 3.32 to 3.49.

Results concerning 2nd question: "Do Al-Balqa students' perceptions of using the means of information and communication technology vary in academic learning and educational because of the difference of college?"

To answer this question, the researchers used independent sample T-test, and the following tables illustrates this.

Table 3. Results of T test regarding college variable

F	T	FD	Siq.	Difference between means
.256	.640	429	.523	.0811

It is clear from table 3 that the value of F is 0.25 at the level of significance which is more than ($\alpha \geq 0.05$) indicating lack of statistical significant differences attributed to the college difference.

Results concerning 3rd question: “Do Al-Balqa students’ perceptions of using the means of information and communication technology vary in academic learning and educational because of the difference of academic level?”

To answer this question, One Way ANOVA was used, and table 4 illustrated this.

Table 4. Results of analyzing One Way ANOVA

	Sum of seq.	Fd	Means of seq.	F	Sig.
Between groups	.587	3	.196	.842	.471
Within groups	99.198	427	.232		
Total	99.785	430			

It is clear from Table 4, that the F value was 0.842 at the level of significance which is more than $\alpha \geq 0.05$ which indicates lack of statistical significant differences attributed to the difference of the academic level.

Results of the fourth question: “Do Al-Balqa students’ perceptions of using the means of information and communication technology vary in academic learning and educational because of the difference of gender?”

To answer this question, T test for independent sample was used as it is illustrated in the following table.

Table 5. Results of T test (gender)

Gender	Freq.	Mean	Std	Fd	T	F	Level
Female	130	4.17	0.962	498	2.685	85.273	0.001*
Male	370	3.97	0.623				

It is clear from Table 5 that F value was 85.273 at the level of significance which is less than $\alpha \geq 0.05$ which indicates statistical significant differences attributed to gender.

7. Discussion

7.1 Results Concerning the 1st Question

Results of this 1st question showed the Al-Balqa applied University students’ perceptions of using information and communication technology in learning were high (80.4%). Item: “means of information and communication technology help in transferring the student into a developed society,” came in the first rank with a relevant significance (87.0%) and this result may explain the students’ feeling of the university’s effort in providing the infrastructure to transfer the student to more developed and technological society as the university’s administration tried its best through the development projects to provided whatever it needs to use latest development in the field of technology because they become an international necessity for the cognitive, mental and social communication among nations and to supply the learners with the necessary skills and knowledge for the life in 21 century plus to provide educational outcomes that are capable to cope with nowadays challenges. While item which came in the second degree was: “help in saving time and effort” and this may due to the real effect of means of information and communication technology in saving time and effort. Concerning items: “help in varying the methods of teaching and enrich the educational process” they got a high degree of perception (86.4% and 82.8% respectively) and this may attribute to importance of technology as many studies and researches revealed and at the same time the university’s administration worked on introducing this modern technology in the educational process and this result agrees with the result of the study of Benne (2004) which showed that means of information and communication technology help academic staff to present integrated and purposeful educational experiences to the students whether this was inside the class or through distance learning and so more time and efforts were saved. The relative importance of item “help in developing the students’ high thinking skills” was (85.6%) which indicates high degree of perception and this may due to the great role of technology which is based on information and communication technology which makes the educational process flexible and transfer the learner’s role from receiver of knowledge to a researcher for it and this result with the

Al-Gharayba's (2001) study which showed the contribution of the participation of the information and communication technology in using the scientific method in solving the problems and taking decisions, adaptation to developments and the ability to choose out of many alternatives. And item: "expansion in the distance learning" has a relative significance (84.8%) and this may due to the employment of internet and video conferences whereas the items: "develop the students' research skills and encourage the students' communication with the sources of knowledge" got high relative importance (84.6% and 83.2%) and this may attribute to the students' perception of the importance of means of information and communication technology and their role in the research process for knowledge from different resources and this agrees with Ali's study (2001) which pointed that means of information and communication technology as internet enable the users to access into databases, different references and documents that could be saved in the libraries all around the world which develop the students' research skills. The items: "help in making learning interesting, help in making learning effective, increase the students' motivation towards learning, increase the students' achievement" got respectively the following relevant importance (84.4%, 79.2%, 81.2%, 82.4%, 77.2%) and this may due to the impact of these means on the performance of the teachers, students and their achievements inside and outside the class. Technology helps generally in developing interaction process between the teacher and the student and motivating the students' positive participation through supporting and enhancing the learning process and these results agree with the Hamdi's (1999) study and Al-Dbasi's (2003) study which stated that means of technology participated in providing means that aim at developing methods of learning and teaching and encouraging the use of creative educational methods, achieving the self learning concept, providing incentives and increasing the retrieved information. regarding item: "help in transferring the world's news into the class" got the a high degree of perception (84.2%) and this may due to the students' perception of the importance of means of technology that allow them to keep an eye on the latest world news via internet and other means. And this result agrees with the study of Al-Freig (2005) which showed that distance learning through new means of technology helps in developing and educating women in the developing countries because these women face difficulties as low level of education and social problems.

While items "means of information and communication technology increase the students' opportunities for social communication with others, they help the students acquire self expressing skills" got a very high degree of perception with relevant importance (82.4%, 80.0%) respectively and this may attribute to the students' realization of the importance and the goal of communication itself because it aims to the ability of participating and interacting with others, exchanging ideas and opinions and the information which increase the individual's opportunity of success and control his surrounding circumstances and this agrees with Mbslat's study (2005) which showed that means of information and communication technology are used as new mean in interacting and communicating about the students' studies and homework.

Items: "means of information and communication technology help in changing the student's role from a receiver of knowledge to a researcher for it, the students acquire long life learning skills, allow the students the freedom in choosing the educational activities, increase the students' responsibility in the educational process, increase the self evaluation opportunities" got high degree of perception with relevant importance (82.4%, 76.8%, 77.2%, 78.2%, 79.2%) and this can be attributed to the student's perception of the challenges of the integration of information and communication technology in the educational process. recently new role have been imposed on the teacher and the student; the student becomes the core of the educational process, a receiver and sender for information at the same time, employ knowledge in solving problems in addition to the change of education's role which is to build a human who can teach himself by himself continuously and therefore, the student is responsible for choosing his activities and evaluating himself. Siemens and Conole (2011) came with the same conclusion that information and communication technology creates new types of methods for interaction between the teacher and the student and it allows the student to be responsible for his learning.

Concerning item "means of information and communication technology encourage the students' cooperation in the process of learning" got a relevant importance (74.6%) and this result may due to the nature of the common educational environment in the Arab education institution which depends on the competition between the students. And item "means of information and communication technology help in filing the shortage in the number of the teachers who are qualified educationally and scientifically" got a relevant importance (69.8%) which indicates the student pay attention to issues as their studies more than issues related, for example to the number of the teachers and their qualification.

Item "means of information and communication technology help in taking into account the students' individual differences" got the least degree of perception with relative importance (66.4%) and this may due to the nature of the academic level which the students belong to because in this level more attention paid to other issues as

requirements of total social development, teaching students ways of using the scientific method in solving the problems and taking decisions, adaptation to changes.

7.2 Discussion Results Concerning the Second Question

The results concerning this question showed lack of statistical significant differences at the level of significance $\alpha \geq 0.05$ attributed to the college variable and this indicates that the students of the scientific and literary colleges realize the role of means of information and communication technology in the academic education process in different colleges. On the other hand, the university's insistence to provide the infrastructure for these means as computer labs, internet and video conferences 'halls in all the universities and with same description helps in enhancing the great role of the mean of information and communication technology in the educational process and this result agrees with the result of Shareif's (2004) study and disagrees with the study's of Al-Moteri (2005).

7.3 Discussion Results Concerning the Third Question

Results showed lack of statistical differences at the level of significance $\alpha \geq 0,05$ attributed to the difference in the academic level variable and this indicates that students from different academic levels realize the importance of means of information and communication technology in the academic learning and teaching in the same degree and it may attribute to the availability of capabilities, labs are available in the university to be used by the whole students regardless their academic year and this results agrees with the results of Sharif's (2004) study and Al-materi's (2005) study.

7.4 Discussion of Results Concerning the Fourth Question

Results concerning the fourth question showed statistical significant differences at the level of significance ($\alpha \geq 0.05$) attributed the gender variable in favor of the female students and this result may due to the female students' high perception of the importance of means of information and communication technology that allow them to have the latest news about the international issues via internet and other means of technology especially in a society imposed social and religious pressures on the women in particular and this result agreed with the result of Al-Freih's study (2005) which stated that learning through means of technology could help in developing and educating the women in the developing countries in particular and this result agrees with the study of Siemens and Conole (2011) but on the other hand it disagrees with the studies of Al-Shareif (2004) and Ababneh (2003).

8. Recommendations

- Holding meetings, discussions and courses discussing the successful experience of Al-Balqa Applied University that may affect positively the Arab and Jordanian universities' performance and their plans in adopting information and communication technology.
- Conducting further studies about the same issue on other samples and in light of other variables.

References

- Ababneh, Z. (2003). *Using of Internet as a Source of Learning among Postgraduate Students and Obstructions of Using It* (Unpublished master thesis, Yarmouk University, Irbid, Jordan).
- Abood, A., & Shaaban, M. (2009). *Future education technology*. Dar Wael for publication, Jordan.
- Al Bori, W. (2002). *The Role of the University in Facing Intellectual Extremism*. Alexandria: Dar of Academic knowledge.
- Al Ghommeid, I. (2003). *Using Of Internet As A Source Of Learning For A Sample Of Students Who Using Internet At Yarmouk University And Jordan University Of Science And Technology* (Unpublished master thesis, Yarmouk University, Irbid, Jordan).
- Al Jarf, R. (2006). The effectiveness of electronic education in teaching of English Language at the undergraduate in the Kingdom of Saudi Arabia. *Thesis of education and psychology*, 26, 28-33.
- Al Mutairi, B. (2005). *The reality of using internet in teaching by Colleges of Technology students at Jeddah city, Kingdom of Saudi Arabia* (Unpublished master thesis, University of Jordan, Jordan).
- Ali, N. (2001). *Arabic culture and information age, the world of knowledge* (p. 276). Kuwait.
- Benne, T., & Lockyer, L. (2004). Becoming On Online Teacher: Adapting To a Changed Environment for Teaching and Learning in Higher Education. *Journal of Educational Media International*, 41(3), 231. <http://dx.doi.org/10.1080/09523980410001680842>
- Burgess, L. (2003). WebCT as an E-Learning Tool: A Study of Technology Students Perceptions. *Journal of*

- Technology Education*, 15(1), 6-15.
- Dabbasi, S. (2003). The effect of using Distance Education on collecting of female students. *Journal of Educational Science (King Saud University)*, 15(2), 773-794.
- Fleck, R., & Mcqueen, S. (2002). *Internet Access, Usage and Policies in College and Universities*.
- Freeh, S. (2005). *Distance Learning and its role in Arab Women Development*. A research paper offered to the Forum of Arab Women, Science and Technology, Cairo, 8-10.
- Gharaibeh, F., & Gharaibeh, L. (2001). Educational policies and the role of university education in the initializing human to face the era developments, The Second Jordanian Conference for Giftedness and Creativity, 2-4 April, Amman. *Journal of Educational and Psychological Science*, 2(1), 50-87.
- Hamdan, M. (2003). Modern Technology of Computer and Internet and its role in functional developing for professors of Higher Education. *Education Journal*, 146, 242-249.
- Hamdi, N. (1999). *Education technology and universal teaching (education technology-Arabic studies)*. Editing: Mustafa Abdel Samie, Cairo: El Ketab Centre for publishing.
- Hazzani, N. (2013). The effectiveness of electronic social networks in developing process of education and learning to female students at the College of Education at King Saud University. *International Journal of Educational Researches*, 33, 129-164.
- Hijab, M. (2000). *Media and overall development*. Cairo: Dar Al Fajr for Publication and Distribution. Retrieved from <http://Www.Firstmanday.Dk/Issues 4-11/Fleck>
- Jabr, M. (2011). Difficulties faced by students of Open Al-Quds University with using the electronic learning. *Journal of Association of Arab Universities*, 58, 277-308.
- Jarrah, A. (2011). Attitudes of students of University of Jordan towards using of Blackboard software in their learning. *Journal of studies, Educational Science*, 38(1), 1293-1304.
- Mbsult, M. (2005). The reality of using information technology and communication in teaching by secondary schools in Amman (Unpublished master thesis, University of Jordan, Jordan).
- Sa'adah, J., & Adel, S. (2003). *The using of computer and internet in fields of education*. Amman: Dar El Shorouk.
- Salameh, A. (2001). *Communication and education technology*. Amman: Yazouri.
- Salem, A. (2004). *Technology of education and electronic education*. Riyadh: El Roshd Lirary, Publishers.
- Shareef, A. (2004). The extent of using internet by postgraduate students at King Abdel Aziz University and the difficulties that they face (Unpublished master thesis, Yarmouk University, Irbid, Jordan).
- Shomali, Q. (2007). *Modern styles in Higher Education: Multimodal Electronic Education*. Sixth conference of the deans of the faculties of Arts at the members universities in the Association of Arab Universities, Seminar of Education Quality Assurance and Academic Accreditation, Jinan University.
- Shunnaq, Q. (2011). The Reality of Using Electronic Multimedia in Teaching the Science at United Arab Emirates from the Viewpoint of Teachers. *International Journal of Educational Researches*, 29, 185-207.
- Siemens, G., & Conole, G. (2011). Special Issue Connectivism: Design and Delivery of Social Networked Learning. *International Review of Research in Open and Distance Learning*, 12(3), 1-4.
- Sife, A., Lwoga, E., & Sanga, C. (2007). *New technologies for teaching and learning: Challenges for higher learning institutions in developing countries*. Sokoine University of Agriculture, Tanzania.
- Zahrani, M. (2005). *The Reality of Using of Faculty Members at King Fahd University of Petroleum in Teaching* (Unpublished master thesis, University of Jordan, Jordan).

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).