IOSR Journal of Engineering (IOSRJEN) **www.iosrjen.org**
ISSN (e): 2250-3021, ISSN (p): 2278-8719
Vol. 05, Issue 01 (January. 2015), ||V2|| PP 01-06

Examination the role of technical information in the development of nursing education for the Iraqi Faculties of Nursing

Eqbal G. Ma´ala, PhD* Ali D. Abbas, PhD**
**Professor, Pediatric Nursing Department, Collage of Nursing, University of Baghdad,*
*** Instructor, Fundamentals of Nursing Department, College of Nursing, University of Baghdad,*

Abstract: Objective(s): The study objectives to examining the role of technical information used in nursing education, such as "the Internet, e-mail services, video, audio conferencing and other "in the Iraqi faculties of nursing.
Methodology: A descriptive and analytical study which was using the examination approach was conducted on a non-probability sample (purposive sample) of (150) members of the Iraqi Faculties of Nursing. A questionnaire was constructed for the purpose of the study. It was consisted of two parts; the first part which included the demographic characteristics of faculty members (such as age, sex, their qualification, scientific title, and the scientific department in college) and the second part includes (22) question about the technical information used in nursing education, Where it was built through the review of the literature related to technical information used in education. Data were collected through a self- administration method, from 4th to 30th September, 2014. Data were analyzed through use of descriptive analysis (frequencies and percentages), and inferential statistical measures which include the (ANOVA).
Results: The results of the study indicated that the majority of faculty members are encouraged to use of various technical information in nursing education.
Conclusion: The study concluded that the high qualification of faculty members led to a high familiarity with technical information and its importance in nursing education.
Recommendations: The study recommend the need to develop a database on the use of technical information in the Nursing college as well as for the other Nursing colleges in Iraqi Universities to facilitate the process of identifying needs, planning services for information systems and the optimal allocation of resources for technical information in nursing education.

Keywords: Technical Information, File Transmission Protocol, Video Conferencing, Grade default

I. INTRODUCTION

Health care delivery increasingly requires timely information for effective decision making, for this reason the technical information must be integrated into nursing education curricula for all future nurse clinicians and educators[(1)].

Over the past ten years technical information has made a substantial impact on the way students learn and how they are taught .This evolution has been driven by factors and events internal and external to nursing education. The nursing profession has long recognized the need for nurses worldwide to possess a basic set of informatics competences if they are to operate effectively in an increasingly technologically driven world. Over the coming years the use of technology will continue to change the landscape of nursing education, health care delivery and nursing practice [(2)].

Improving technical information is a top nursing education priority. Improving care access, quality, and cost effectiveness, technical information skills are vital for professional development and advancement. Nursing programs have embraced distance learning and added informatics content, courses, and specific technologies; however, undergraduates' and educators' skills are still considered inadequate [(3)].

Combining technological applications in support of classroom and clinical education can reduce these barriers and increase efficiency, thus expanding educational capacity while conserving scarce financial resources[(4)].

Distance technology can be used to facilitate statewide teaching and sharing the delivery of nursing learning resources. Advances in simulation and virtual technology now offer excellent adjuncts to "live" clinical education, reducing the barriers associated with limited experiences, limited clinical sites, and limited clinical faculty resources. Technology provides efficient, safe, and effective alternatives to expand clinical teaching opportunities [(5)].

There are two groups of electronic media use in nursing education the first group of electronic media include: On-Line databases, On-line-discussion, Courses-on demand, Teletext and Videotext, Audio-graphics, E-books, and E-library. The second group of electronic media include: Computer-based

instruction, Audio / Tele-Conferencing, Video Conferencing, Virtual Class, and Internet. This mean that there is a big role of technical information in the development of nursing education, and the light of this study, the problem can be formulated in the main question: what's the role of technical information in the development of nursing education?(6)

II. METHODOLOGY

Objective of the study: The study objectives to examining the role of technical information used in nursing education, such as "the Internet, e-mail services, video, audio conferencing and other "in the Iraqi Faculties of Nursing.

Design of the study: A descriptive approach is carried out to achieve the purpose of the study.

Setting of the study: The study is conducted at the College of Nursing at the University of Baghdad.

Sample of the study: A purposive "non–probability" sample of (150) members of the Iraqi Faculties of Nursing college.

Data collection: The data were collected through a self- administration method by using a questionnaire which was constructed by the researcher for the purpose of the study, includes:

1. Demographic characteristics of faculty members include: age, sex, qualification, scientific title, and the scientific department in college.
2. (Twenty-two) question about the technical information used in nursing education.

The data collection from 4th to 30th of September, 2014. A panel of 4 experts has reviewed a questionnaire for its content validity. The reliability coefficient for the questionnaire was 0.82.

Statistical data analysis: Appropriate statistical approach is used that includes frequencies and percentages to describe the distribution of demographic characteristics of sample and inferential statistical measures which include the (ANOVA).

RESULTS .III

Table 1: Distribution of the Sample by their Demographic Characteristics

List	Variables		
1.	**Age (years)**	**F.**	**%**
1.1.	**Less than 30**	**35**	**23.3**
1.2.	**30 – 39**	**39**	**26**
1.3.	**40 - 49**	**32**	**21.3**
1.4.	**50 and more**	**44**	**29.3**
	Total	**150**	**100**
2.	**Gender**	**F.**	**%**
2.1.	**Male**	**71**	**47.3**
2.2.	**Female**	**79**	**52.6**
	Total	**150**	**100**
3.	**Qualification**	**F.**	**%**
3.1.	**Bachelor Degree**	**39**	**26**
3.2.	**Master Degree**	**56**	**37.3**
3.3.	**Doctoral Degree**	**55**	**36.6**
	Total	**150**	**100**
4.	**Scientific title**	**F.**	**%**
4.1.	**Assistant Instructor**	**50**	**33.3**
4.2.	**Instructor**	**33**	**22**
4.3.	**Assistant Professor**	**37**	**24.6**
4.4.	**Professor**	**30**	**20**
	Total	**150**	**100**
5.	**Scientific Department in nursing college**	**F.**	**%**
5.1.	**Fundamentals of nursing department**	**25**	**16.6**
5.2.	**Adults nursing department**	**31**	**20.6**
5.3.	**Pediatric nursing department**	**21**	**14**
5.4.	**Maternal and child health nursing department**	**29**	**19.3**
5.5.	**Psychomental health nursing department**	**23**	**15.3**
5.6.	**Community health nursing department**	**21**	**14**
	Total	**150**	**100**

F. =Frequency, %=Percent

This table shows that the distribution of age indicated that the majority of sample's ages were 50 years old and more who were accounted for (29.3 %), more than half (52.6 %) were female. The qualification represents that nearly two quarter (37.3%) have master degree; one third (33.3%) have the scientific title

(Assistant Instructor). (20.6 % , 19.3%) of the sample were from adults nursing department & maternal & child health nursing department respectively .

Table 2: Distribution of the Sample by use of Computers and the Internet

List	Items	Yes		No	
		F.	%	F.	%
1.	Do you have a computer in your office?	86	57.3	64	42.6
2.	Do you use computers in the teaching of nursing?	93	62	57	38
3.	Have you ever used the Internet?	92	61.3	58	38.6
4.	Did you use the Internet to download the curriculum for the teaching of nursing students?	88	58.6	62	41.3
5.	Have you ever participated in the sessions of the use of computers and the Internet?	85	56.6	65	43.3

F. =Frequency, %=Percent

This table indicates that (57.3%) of the sample have computers in their office,(62%) use computers in the teaching of nursing , most of them (61.3%) use the Internet and (58.6%) use the Internet to download the curriculum for the teaching of nursing students ,also (56.6%) participate in the sessions of the use of computers and the Internet.

Table 3: Distribution of the Sample by the use of Technical Information in the Development of Nursing Education

List	Items	Yes		No		To some extent	
		F.	%	F.	%	F.	%
1.	Using international expertise to use technical information in the development and improvement of nursing education.	50	33.3	52	34.6	48	32
2.	Using national expertise to use technical information in the development and improvement of nursing education.	54	36	45	30	51	34
3.	Availability of laboratories for Computer.	57	38	49	32.6	44	29.3
4.	Availability of connection to the Internet service.	74	49.3	38	25.3	38	25.3
5.	Availability of computer network that covers all scientific departments.	62	41.3	46	30.6	42	28

F. =Frequency, %=Percent

The findings of this table show that (34.6%) of the sample say that the Iraqi Faculties of Nursing don't use international expertise to use technical information in the development and improvement of nursing education, and (36%) of the sample say the college use national expertise to use technical information in the development and improvement of nursing education,(38%) there is laboratories for Computer available at the Iraqi Faculties of Nursing, connect to the Internet service available at the Iraqi Faculties of Nursing (49.3%), (41.3%) computer network covers all scientific departments in the college.

Table 4: Distribution of the Sample according to Satisfaction with the Services provided by the Website of the Iraqi Faculties of Nursing

Item / List	Are you satisfied with the services provided by the website of the Faculty of Nursing at the University of Baghdad?	F.	%
1.	Yes	52	34.6
2.	No	42	28
3.	To some extent	56	37.3
	Total	150	100

F. =Frequency, %=Percent

This table shows that (37.3%, 34.6%) of the sample to some extent & say yes respectively satisfied with the services provided by the website for the Iraqi Faculties of Nursing.

Table 5: Distribution of the Sample by the use of Electronic libraries

List	Items	Yes		No	
		F.	%	F.	%
1.	Do you have a special participation in the national electronic libraries?	74	49.3	76	50.6
2.	Do you have private subscription libraries in the electronic world of nursing?	67	44.6	83	55.3
3.	Do you support the idea of establishing a national electronic library, private with nursing?	94	62.6	56	37.3

F. =Frequency, %=Percent

This table indicates that (50.6%) of the sample don't have a special participation in the national electronic libraries, also (55.3%) don't have private subscription libraries in the electronic world of nursing, and (62.6%) support the idea of establishing a national electronic library, a private nursing.

Table 6: Order of importance of Technical Information to different Trends of Members of the Study Sample

List	technical Information	I agree		I do not know		disagree		Total		Mean	SD	V	O
		F.	%	F.	%	F.	%	F.	%				
1.	Internet	75	50	36	24	39	26	150	100	2.14	0.52	0.27	2
2.	Electronic Mail	76	50.6	36	24	38	25.3	150	100	2.09	0.43	0.18	1
3.	CD ROM	73	48.6	41	27.3	36	24	150	100	2.11	0.32	0.10	3
4.	Computer Based Instruction	76	50.6	37	24.6	37	24.6	150	100	2.07	0.34	0.11	1
5.	Video Conference	75	50	37	24.6	38	25.3	150	100	2.11	0.62	0.39	2
6.	Virtual Class	66	44	45	30	39	26	150	100	2.35	0.61	0.38	7
7.	Internet Relay Chat (IRC)	71	47.3	39	26	40	26.6	150	100	2.26	0.62	0.39	4
8.	Discussion Group	70	46.6	42	28	38	25.3	150	100	2.23	0.53	0.28	5
9.	File Transfer Protocol (FTP)	69	46	45	30	36	24	150	100	2.21	0.41	0.17	6
10.	News Group	66	44	47	31.3	37	24.6	150	100	2.30	0.51	0.26	7
11.	Smart Board	71	47.3	42	28	37	24.6	150	100	2.19	0.45	0.20	4

SD= Standard Deviation , V=Variance , O=Order, F. =Frequency, %=Percent

This table shows that Electronic Mail and Computer Based Instruction (50.6%), Internet and Video Conference (50%), and CD ROM (48%) more use by members of the Iraqi Faculties of Nursing.

Table 7: Analysis of Variance for the Difference between Demographic Characteristics and order of importance of Technical Information to Different trends of Members of the Study Sample

Demographic characteristics	Source of variance	Sum of Squares	Df	Mean Square	F	Sig.
Age	Between Groups	3.968	3	1.323	.164	.920
	Within Groups	306.436	38	8.064		
	Total	310.405	41			
Gender	Between Groups	21.460	1	21.460	2.971	.092
	Within Groups	288.944	40	7.224		
	Total	310.405	41			
Qualification	Between Groups	19.921	2	9.960	1.337	.274
	Within Groups	290.484	39	7.448		
	Total	310.405	41			
Scientific title	Between Groups	26.117	3	8.706	1.164	.336
	Within Groups	284.287	38	7.481		
	Total	310.405	41			

df =Degree of freedom, F= F-statistics, Sig.=level of Significance

Table 7: Analysis of Variance for the Difference between Demographic Characteristics and order of importance of Technical Information to Different trends of Members of the Study Sample

Demographic characteristics	Source of variance	Sum of Squares	Df	Mean Square	F	Sig.
Age	Between Groups	3.968	3	1.323	.164	.920
	Within Groups	306.436	38	8.064		
	Total	310.405	41			
Gender	Between Groups	21.460	1	21.460	2.971	.092
	Within Groups	288.944	40	7.224		
	Total	310.405	41			
Qualification	Between Groups	19.921	2	9.960	1.337	.274
	Within Groups	290.484	39	7.448		
	Total	310.405	41			
Scientific title	Between Groups	26.117	3	8.706	1.164	.336
	Within Groups	284.287	38	7.481		
	Total	310.405	41			

df =Degree of freedom, F= F-statistics, Sig.=level of Significance

The findings in this table indicate that there are no significant difference between (age, gender, qualification, and scientific title) and order of importance of technical information to different trends of members of the study sample at ($P \leq 0.05$).

IV. DISCUSSION:

Related to the age of sample distribution, most of members of the Iraqi Faculties of Nursing are at age 50 years old and more (Table1). These results indicate that the majority of members of the faculty of the college of nursing are middle age. This result is similar to the results obtained from study done by Arishi, 2007 which indicates that the majority of sample ages are middle adulthood [(7)].

Concerning the gender, large number of sample is female. Results out of this data analysis are supported by Al-Shehri, 1995 who states that large number of sample are female in study done in technical colleges in the Kingdom of Saudi Arabia [(8)].

With regard to the qualification, this character is represent (37.3%) of sample possess a master's degree. The scientific title, this character is accounted for more than half of the samples possess an assistant Instructor. Such result supported by study done by Al Manee, 2000 which reports that most of the members of the faculty of the college of nursing have assistant Instructor title [(9)].

With regard to the Scientific Department of sample, it is demonstrated that most of the sample from adults nursing department in college of nursing.

The study findings demonstrate that more than half of sample have computers in office, most of the members of the faculty of the college of nursing use computers in the teaching of nursing, also most of them use the Internet to download the subject for the teaching of nursing students, and participate in the sessions of the use of computers and the Internet (Table2). This result is consistent with the study done by Al-Shehri, 1995 which indicates that the majority the members of the faculty of the college of nursing fluent use of the Internet in the teaching curricula of nursing [(8)].

Table (3) indicates that the college of nursing don't use international expertise to use technical information in the development and improvement of nursing education, but use national expertise to use technical information in the development and improvement of nursing education, laboratories for computer available at the college of nursing at the university of Baghdad and connect to the Internet service, also computer network covers all of scientific departments in colleges.

This indicates that the staff of nursing college moving in the right direction for the use of technical information in the development of nursing education especially.

The study findings demonstrate that majority of the sample to some extent satisfied with the services provided by the website of the college of nursing (Table4). This calls for the development of website services of the college to meet with needs of users.

While table (5) shows that more than half of sample don't have a special participation in the national electronic libraries and don't have subscription libraries in the electronic world of nursing. Most of them support the idea of establishing national electronic library, & private nursing study.

This result is disagreeing with the study done by (Blinko_, 1996) which indicates that the most of the members of the faculty of the college of nursing in Jordan have private subscription libraries in the electronic world of nursing [(10)].

The finding of table (6) reveals that the electronic email, computer based instruction, internet, video conference, and CD ROM more use of technical information by the Iraqi Faculties of Nursing. This result is consistent with the study done by Al-Shehri, 1995 which indicates that internet, electronic email, and CD ROM more use of technical information in in technical colleges in the Kingdom of Saudi Arabia [(8)].

The finding of this study indicates that there are no significant difference between (age, gender, qualification, and scientific title) and order of importance of technical information to different trends of members of the study sample at ($P \leq 0.05$).

This result is inconsistent with the studies done by (Al-Shehri, 1995; Malik,2000 & Al-Rashoud,2001) , which indicate that there are significant difference between (age, qualification, and scientific title) and order of importance of technical information to different trends of members of the study sample at ($P \leq 0.05$), while there are no significant difference between gender and order of importance of technical information to different trends of members of the study sample at ($P \leq 0.05$) [(8, 11, and 12)].

V. CONCLUSION

The study concluded that the high qualification of faculty members led to a high familiarity with technical information and its importance in nursing education.

VI. RECOMMENDATIONS

1.The need to prepare a database on the use of technical information in colleges of nursing to facilitate the process of identifying needs, planning services for information systems and the optimal distribution of the potential and resources for technology to develop nursing education.

2. Increase awareness and understanding of the importance of technical information and take advantage of them in various stages of nursing education.

3. Encourage the participation of private ownership of each member of the faculty of nursing college in the electronic world of nursing.

REFERENCES

[1] McNeil, B., et al.: Nursing information technology knowledge, skills, and preparation of student nurses, nursing faculty, and clinicians: a U.S. survey, J Nurs Educ. 2003 Aug; 42(8):P.P.341-9.

[2] Elizabeth, R.; Linda, M., and Carolyn, W.: Using Information Technology in Nursing Education, IGI Global, 2009, P.P. 8-10.

[3] Marilyn, F.: Curriculum Strategies to Improve Baccalaureate Nursing Information Technology Outcomes, Journal of Nursing Education, Feb., 2009, V. 48 · Issue 2: P.P.78-85.

[4] American Association of Colleges of Nursing, White Paper: Distance Technology in Nursing Education, available from: www. aacn .nche .edu/Publications/positions/whitepaper.htm. Accessed 9/2003. Last update on 13 Oct.1999.

[5] Wong, T., and Chung, J.: Diagnostic reasoning processes using patient simulation in different learning environments, Journal of Clinical Nursing, 2002, 11(1). P.P. 65-72.

[6] Al-Rawas, A, and Millmore, S.: Connectivity in Higher Education: The Potential and challenges, in: Computer and Education, the 16th National Conference for Computers, 4-7 February 2001, (Riyadh: Saudi Computer Society 2001), P.P. 118-129.

[7] Arishi, G.: The role of information technologies in the development of education ininstitutions of higher education, the Faculty of Arts, King Saud University, Riyadh, 2007,(4), P.P. 26-27.

[8] Al-Shehri, A.: administrative practice and education in technical colleges in the Kingdom of Saudi Arabia (Mecca: Umm Al-Qura University, 1995), (3), P.P. 83-105.

[9] Al Manee, M.: The development of institutions of higher education and community in the Kingdom of Saudi Arabia using a system of open learning and distance education - the Arab Open University model, (Riyadh: King Saud University),2000,(7), P.P. 161-204.

[10] Blinko, B. : Academic staff, students and the Internet: the experience at the University of Westminster, Electronic Library, April 1996,(5), P.P. 52-64.

[11] Al-Rashoud, A., and Al-Abdul-Kareem, M.: Interactive Distance Learning Over The Internet and Intranet, in: Computer and Education, The 16th National Conference for Computers, 4-7 February 2001, (Riyadh: Saudi Computer Society 2001), P.P. 289-296.

[12] Malik, K.: open learning technology, 1st ed., the world of books, Cairo, 2000, p. 247.