Integrating Internet into Traditional Education: A Practical Study of University Students' Usage and Attitudes

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Abstract: *This paper describes a study conducted on the attitudes of students towards the integration of the web as a channel of communication and a study tool in traditional teaching at the Hashemite University of Jordan. In particular, the study aims at studying the effect of certain variables such as gender, major, computer experience, and the percentage of internet usage on the learning process. A survey was carried out with a sample of 502 male and female of the university students. A comprehensive and reliable questionnaire was designed and distributed to the students' sample. Drawing on evidence from lesson observations, teacher/student interviews and project reports, this paper also examines the university perspectives and strategies to incorporate use of internet resources and associated information and communication technology tools into humanities, social, and scientific studies. Amazingly, the results revealed a low percentage of internet usage in university education. Also, the results showed that computer experience mainly affects how internet is used in the learning process. However, there were no significant differences in the results regarding the gender and major or even the bi- or tri-interactions between the variables under consideration. The study also showed that email correspondence and internet search are the most common uses of internet in the university. Furthermore, our findings support the following assumptions: The Web cannot substitute entirely for face-to-face learning, but it can serve as a reasonable alternative when the latter is unavailable. The paper concludes with a list of recommendations.*

Keywords: *Technology-based teaching, internet in education, world wide web, user attitude.*

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1. Introduction

The use of technology in the classroom has increasingly been the subject of many studies in recent years [4]. The internet is considered to be the most prominent invention in modern technology and in the modern revolution of information and communication. Although internet has existed for nearly 30 years, only recently has its surge of mainstream popularity motivated researchers and teachers to acknowledge its educational value. The widespread of internet can be used in many educational and scientific fields. The most recent national surveys based on school inspections have drawn attention to increasing classroom use of internet resources in learning. In fact, the introduction of internet services to classes is considered a significant step toward enhancing the use of these services in the field of learning [2]. Increasingly, students should make use of technology to acquire skills and knowledge [25]. Furthermore, literature on instructional technology shows that the use of internet in teaching has the potential to motivate both students and teachers [18]; increase their participation [27] and interaction in the classroom [28]; provide students with a more active role in their learning [32]; help to facilitate cross-curricular work [29]; among other advantages.

According to [30] and [31], the introduction of internet services at the university level will make revolutionary changes in the way of improving students' intellectual skills compared to traditional learning. In [16], the conclusion was that the use of internet can improve the educational measures significantly, and it will bring up new ways of teaching at a wider scope. Also, [17] indicated that "the successful use of the internet in education is wholly based on the availability and the enthusiasm of the teachers and learners with appropriate training".

The use of internet in education can achieve many advantages like: rapid education, flexibility in time and place, high speed in creating new programs compared to the systems of videos and CD-ROM, changing the style of the teacher from lecturing to guiding and monitoring, creating classes without walls, getting the study materials from any time and any location, and getting the views of scientists and scholars in various fields [18, 8]. The authors in [24, 22, 13, 5] proved that the successful usage of internet in the universities can open new horizon to develop the learning process and

provide the student with new and more flexible way of learning.

The rest of the paper is organized as follows. In the next section, the related work is detailed. The problem statement is then described in section 3. The preliminaries of the study are outlined in section 4. In section 5, we present the methods used in the paper followed by the design of the study. Section 6 describes in details the results and discusses them. The paper concludes with some conclusions and highlight future directions in section 7.

2. Related Work

In this section, we outline the related work and then categorize previous studies toward the end of this section and along several dimensions. [23] Conducted a study in Taiwan about internet learning. The conclusion was that male students prefer to use internet for learning more than females. [21] Studied the degree of internet use of school teachers and school supervisors in Sheffield city, UK. The researchers, the results were that 85% of teachers learned to use internet on their own, while less than half learned from their peers. Moreover, about 33% of teachers have used internet as a teaching tool in their classes. [7] Conducted a study with the objective of evaluating the effect of using internet in the learning and research processes by the faculty members at Qatar University. The results showed a low internet usage with significant differences in the degree of internet usage related to gender and academic degree. [9] Has studied the real situation of internet of teachers and students in Jordan University of Science and Technology. The results of the study showed that 50% of the professors use internet daily and 45% use internet weekly and 66% consider it very important. The study indicated that the use of internet has no relationships with the variables of gender, or specialty. The study recommended that it is important to make internet training courses for the students. [3] Studied the percentage of using internet by secondary stage teachers in AL-Reyad, S.A. The results showed that 40.8% use internet, and there were significant differences in using internet according to major for the benefit of scientific major. [10] conducted a study aimed at recognizing the reality of internet use by the faculty members' at Jordanian universities. The study showed that the ratio of those who use internet was high and internet usage was affected by specialization, academic rank, and computer experience. [12] and [19] studied the importance of internet use in the field of learning from the university teacher point of view. The results revealed significant statistical differences among users attributed to differences in specialties (in favour of scientific specialties) and gender (in favour of males). Many other studies aimed at studying various aspects of internet usage in university education [1, 15, 3, 33, 6, 11, 14, 26, 34]. [34] Gave a theoretical base to understand the change from teacher-centered to student-centered activities, where it emphasized that imparting knowledge is done through lecture and all college faculty can talk.

The above studies can be classified based on the obtained results as follows:

- Studies revealed low degree of internet uses in university learning [21, 12, 15, 33, 1, 3].
- Studies revealed high degree of internet usage [10].
- Studies revealed differences in internet between to female with male predominance [23, 19, 11].
- Studies revealed significant gender differences in internet use [7, 9].
- Studies revealed no significant relationship between major and internet use with scientific branches predominance [3, 19, 10, 15].
- Studies revealed significant relationship between specialties and internet use [9, 10, 33]. These studies revealed differences in the degree of computer experience.
- Studies revealed the impact of the internet as a learning tool in the learning process [7, 9, 14, 26, 34].
- Studies revealed that the most important aspect of using the internet was e-mail [10, 15, 11].

Although the topic of this paper is not new, the author's objective is to study the collection of variables that affect the integration of web in the traditional learning and report some useful feedback for the Hashemite University in Jordan (HU) in its pursuit to employ new technologies in teaching. Furthermore, the authors' intent is to make a useful comparison between the results of this paper and the results of the above studies, and then draw some useful conclusions. In the next section, the problem will be defined in details and the procedure to collect information is outlined.

3. Problem Statement

As of currently, most universities are introducing a variety of internet services in their facilities in order to cope with new technology trends and to advance knowledge. Indeed, the internet service has become available to all teaching staff and to students in most of the world. The number of students who utilize this service is notably increasing. HU established many internet labs for this purpose. In fact, HU has recently developed a model of learning based on new technologies which combines and integrates on-line technologies with traditional distance education teaching aids. In this regard, a formal committee at HU has recommended that e-learning must be integrated with traditional one in an attempt to advance the learning process. However, this may create a problem among students who have different computer abilities,

different degrees in internet usage, and different motivations for internet use. Moreover, there are no enough studies that address all the above variables altogether.

The authors of this paper have noticed that there are differences in terms of ability, training, and technical skills among the students in their use of internet during their university studies. This is what gave rise to the present study, for it aims to study the nature, degree, and other factors that govern internet use in university education. Furthermore, the study tries to reflect on the student's attitudes towards the use of web in addition to the traditional learning process. In other words, we are trying to answer the following question: what is the real situation of the use of internet by the HU students in their education and how they feel about this issue? This question is divided into the following sub-questions:

- Are there any statistically significant difference at level (α= 0.05) in the percentage of internet usage among the HU students in the university education according to the variables of the study, namely, gender, major, computer experience, double and triple interaction between these variables?
- What is the degree of internet usage by the students in the university education?
- Are there any statistically significant differences at level (α= 0.05) in the degree of internet uses by the students in the university education according to variables and triple interacted between variables?
- What do students feel about the incorporation of new technologies in the teaching process?
- Can a traditional learning system be substituted by another system that is based on e-learning methods?

4. Preliminaries

The objective of this study is to study the effect of internet usage on the university learning process, study the relationship between internet usage in the learning process and the gender, major, and computer experience among university students, and study the attitudes of the student toward such type of learning.

The current study is important in many aspects. First, it enhances the current and future internet usage for educational purposes at the HU. Second, it may provide us with useful recommendations that may contribute to the development and enhancement of internet usage at the HU. Third, it is a significant research tool that may open the way for future studies in the same field. That is, development of studies with a major focuses on internet as a learning tool. Fourth, it complies with the new teaching recommendation which implies that e-learning is one of the cornerstones for effective university education. Finally, it highlights the student attitudes toward such type of learning and how these attitudes can be utilized to enhance the effectiveness of this teaching tool. The current study is built on the following assumptions: (1) the sample of the study represents the students of the HU. (2) The questionnaire that researchers prepared can fulfil the objectives of the study. (3) The students fill the items of the questionnaire frankly and objectively without reservation or biasing. (4) The students are able to select the subjects, which they want to build knowledge in. (5) Reliability and validity of the study instruments are enough to do the study. (6) The internet is an education tool that offers plenty of services to the university education. The study is governed by the following limitations/ delimitations (1) the study is concerned only with the students of the HU who were registered for the second semester of the academic year 2004/2005. (2) The questionnaire's reliability is tested by common procedures and by expert people. (3) In order for the results of the study to be generalized; the population of the study must be representative to the general outside population. (4) The students' ability to use internet varies with respect to the fields included in the measuring instrument used in the study.

5. Methods and Procedures

In this section, we will present the methods and procedures used in conducting this study. First, we define the population of study used in this paper. The population consists of all the students of the HU who were registered for the second semester of the academic year 2004/2005. A total of 8710 students at the B.A. level were registered for that semester. Out of this number, a sample of randomly chosen 2000 students was approached and questionnaires were delivered to them. Only 502 of the questionnaires have been brought back, which represents 5.76% of the study population. Table 1 shows the sample subjects distribution according to the variables. The definition of each of these items will be presented in section 6.

5.1. Methods and Instruments

As the case of many other studies, this study uses the descriptive survey method to study the different variables. The *method* includes functions like the medium, the means, the standard deviation, the percentage, the analysis of variance, and post comparisons. The data was collected using a questionnaire was prepared after looking critically at the literature review related to this field. The study used the method of gathering personal data and questions that are related to the level and percentage of internet use in university education. The questionnaire is composed of four major sections as follows:

- Personal data.
- The percentage of using internet among students.

Table 1. The sample distribution.

Level / Variable	Gender		Major			Computer Experience		
	Male	Female	Humanities	Scientific	Trade	small	Moderate	Advanced
Frequency	253	249	147	290	65	384	78	40
Percent	50.4%	49.6%	29.3%	57.8%	12.9%	76.4%	15.6%	8%

- The degree of using internet (4 items).
- The different uses of internet (3 items).
- The attitude of using internet in education.

In order to ensure *validity and reliability* of the questionnaire, it was presented to 15 specialized people in the fields of educational technology, computer science, information technology and measurement and evaluation in jordanian universities. Some items were changed to clarify the meaning. Some items were changed according to their suggestions in a way that is more appropriate with the aim of this study. Also the instrument coefficient reliability was deduced by calculating coefficients of reliability using the well-known Kronbauch/Alfa equation for internal consistency of each part of the study's instrument. The values of these coefficients are as follows: the coefficient of reliability of degree of usage is 0.71; the coefficient of reliability of the extent of variety is 0.73. As such, the instrument enjoys a reliability degree that permits its usage with a high degree of confidence.

5.2. Procedures

To derive useful results, the authors of the paper followed a scientific procedure that is outlined as follows:

- Prepare the tools of the study with the help of previous disciplinary science studies.
- The total number of students who were registered for the second semester of year 2004/2005 was collected.
- From the registrar office of the HU. A sample of 2000 students was chosen randomly from the population of the students.
- The questionnaire forms were distributed to the students during their classes and were collected after the class time.
- The data in the questionnaire forms were collected and tested for integrity and clarity.
- The questionnaire results were analyzed by SPSS for final results and conclusions.

5.3. Variables

A. Independent variables:

1. Gender: male, female.
2. Major:
   - Scientific majors (Science, Engineering, Nursing, and Natural Sciences).
   - Humanities (Arts, Education, Sport).
   - Trade: (Trade, Economy, Tourism, Management, Money and Banking Science).
3. Computer Experience:
   - Low: less than two Years.
   - Moderate: 2-5 Years.
   - High: more than 5 year.

B. Dependent variables:

1. The percentages of internet usage: which represent the internet usage in numbers those are measured depending on the above interval values. And also can be classified into 3 main intervals (low, moderate, high).
2. The degree of internet uses: represent the students' answer on (questions) over 4 paragraphs each of which is divided into 4 subparagraphs (questions) for more accurate result. The degree of result (x) represents the total means and as follows: $4 \le x \le 7$: low degree of internet use, $7 \le x \le 13$: intermediate degree of internet use. $13 \le x \le 16$: high degree of internet use.

6. Results and Discussion

In this section, we present the results of the study and also discuss their implications. To answer the questions raised in the study earlier, the numbers and percentages, ANalysis Of VAriance (ANOVA), and post comparisons were used. To streamline our results presentation, we will divide our results into subsections pertaining to the set of questions raised at the beginning of section 3.

- *What are percentages of the internet usage among the HU students in the university education?*

The answers to this question are shown in Table 2 below where the distribution of the internet usage among the university students is shown. It is found that there are 15.3% users with high internet usage, 44.3% are moderate users, and 40.4% of students are low or infrequent users.

Table 2. The percentage of internet usage.

Internet Usage	High	Moderate	Low	Total
Number	77	222	203	502
Percentage	15.3%	44.3%	40.4%	100%

These findings show that internet is used in low-to-moderate scale in university education. This might due to the recent introduction of internet service to the students of the university. Moreover, it can be due to the fact that teachers are not urging their students to refer to the internet to enrich their knowledge in the courses they study. Also, student's lack of awareness of the importance of the internet in university education might lead to this result. The results obtained comply with the previous studies done in the same fields [21, 12, 15, 33, 7] which also showed low level of internet usages among universities' student and teachers. Surprisingly, the results contradict with the ones obtained by [10] where these studies showed a high degree of internet usage.

- *Are there any statistically significant differences at the level (α=0.05) in the percentage of internet usage among HU students in the university education related to the variables of the study; and with respect to double and triple interaction between these variables?*

To answer this question, an extensive analysis on the collected data in which the number of students, their means, the standard deviations, were used to explore the differences with respect to statistical denotations were performed. Table 3 shows a summary of these results. According to the listing in Table 3, the students, whether male or female, with long experiences from the commercial specialties have the highest means (2.71) followed by male students with high experiences from different majors. The lowest means were for female with humanities major and female from all major who have low expertise's (1.41), (1.5), followed by students from all majors who have low computer experience. In order to evaluate if there are significant differences between means according to variables and their interactions at (*α= 0.05*) levels, the one-way analysis of variance was conducted and the results are presented in Table 4.

Table 4 shows that there are significant differences over computer usage experience variable. However, there are no significant differences with respect to gender, major, double and triple interaction on internet usage percentages in university education. As for the computer experience, the researchers made post comparisons using Schaffer way as shown in Table 5. The results in Table 5 shows that there are significant differences in the percentage of the usage of the group with low computer experience and the other tow groups, moderate and high computer experience for the benefit of the last second groups of low computer experience.

The ratio of internet uses for those with high and moderate computer experience was high because of their experience and knowledge of networks and the variety of its usage which drove them to employ and use it in university education. In contrast, those with low experience know little about the fields of using the internet in university education which is reflected on the low ratio of their internet use. It seems that the percentage of computer usages are low to moderate among gender, major, and its interaction, and the

Table 3. Means and Std. deviation of responses of the samples.

Major	Sex	Computer Experience	N	Means	Std. Devn.
Humanities	Female	Low	130	1.41	0.58
		Moderate	14	2.29	.61
		High	3	2.67	.57
	Total	**Total**	**147**	**1.50**	**.63**
Scientific	Male	Low	146	1.68	.68
		Moderate	39	2.26	.59
		High	24	2.50	.59
		Total	**209**	**1.88**	**.72**
	Female	Low	63	1.63	.60
		Moderate	12	2.00	.42
		High	6	2.00	.63
		Total	**81**	**1.72**	**.59**
	Total	Low	209	1.67	.66
		Moderate	51	2.20	.56
		High	30	2.40	.62
		Total	**290**	**1.83**	**.69**
Commercial	Male	Low	26	1.81	.74
		Moderate	12	2.08	.66
		High	6	2.67	.51
		Total	**44**	**2.00**	**.74**
	Female	Low	19	1.7	.73
		Moderate	1	2.00	.00
		High	1	3.00	.00
		Total	**21**	**1.81**	**.57**
	Total	Low	45	1.78	.73
		Moderate	13	2.08	.64
		High	7	2.71	.48
		Total	**65**	**1.94**	**.74**
Total	Male	Low	172	1.70	.69
		Moderate	51	2.22	.61
		High	30	2.53	.57
		Total	**253**	**1.90**	**.73**
	Female	Low	212	1.50	.61
		Moderate	27	2.15	.53
		High	10	2.00	.66
		Total	**249**	**1.59**	**.64**
	Total	Low	384	1.59	.65
		Moderate	78	2.19	.58
		High	40	2.40	.63
		Total	**502**	**1.57**	**.70**

Table 4. The result of analysis using ANOVA.

Independent Variable	Sum of Squares	Df	Means Square	F	Sig
Gender	.144	1	1.44	.359	.549
Special	.811	2	.405	1.01	.36
Computer expert.	13.52	2	6.76	16.90	.000*
Specialty x gender	.35	1	.357	.89	.34
Specialty x Com. Expert.	1.80	4	.45	1.12	.343
X Gender x com. exper.	.04	2	.02	.05	.95
Special x Gender x com. Exper.	.51	2	.25	.64	.52
Error	194.79	487	.40		
Total	248.37	501			

Table 5. The results of Scheffe test of significant differences ascribed to computer experience.

	Experience	Low	Moderate	High
Low	1.59			
Moderate	2.19	*		
High	2.4	*		

courses might be attributed to the old classical way of teaching or the lack of enough internet labs at the HU, and both male and female faces same cricustumanc, this study agreed with [7, 9, 1] studies which show significant differences regarding to gender, and differ with [23, 11] studies, which show no significant differences regarding to gender. However, the results agree with [9, 1], which show significant differences according to major, and differ with [3, 19, 10, 15], which show no significant differences according to major.

- *What is the degree of the internet usage by the students in their university education?*

We now calculate the percentage of the importance of using the internet in university education. For this purpose, the means of the total sample responses for measuring the degree of using the internet has been found. These means have been classified according to what is demonstrated in the variables of the study into the levels: high, moderate and low. Our results show that the gross total for the degree of usage is 5.14, which indicates a low degree of usage. To elaborate on this result, the percentages of the sample subject's responses on each item of the degree of usage have been found. The results are as follows. Table 6 shows the results related to the importance of using the internet in university education. As expected, the results show a high importance for internet usage in education.

To be specific, Table 6 shows that 76.7% see that internet use is important in university education, while 14.1% see a moderate effect, and only 5.6% vote for low importance. The results indicated that a large ratio of students is aware that the internet is important in university education. This might due to the fact that their personal usage of the internet may have promoted a positive vision of the advantages and benefits of the internet in serving university education. We now turn into studying the degree on internet usage among students. Table 7 shows our findings in this regard.

Table 6. The percentage of the importance of using the internet in university education.

	Important	Moderate	Low	Very Low
Number	385	71	28	18
Percentage	76.7%	14.1%	5.6%	3.6%

Table 7. The percentage of the degree of internet's usage in university education.

	High	Moderate	Low	Very Low
Number	50	152	122	176
Percentage	10%	30.7%	24.2%	35.1%

Table 7 shows that 35.1% have a very low usage of the internet in the university education, while only 10% use it in a high scale in their university education. This indicates the low degree of internet use in university education. This is a surprising result if we know that other universities currently are competing to use new technologies like the internet in advancing the level of education at their graduates. This low degree of internet usage might be due to the fact that students may be heavily loaded with many duties that do not allow time to use the internet. This study is in agreement with [11] which showed that a great ratio of students use the internet a little. A third parameter to study in this regard is the frequency of internet usage in the university education. Table 8 shows the results.

Table 8. The percentages of the number of times of using the internet in education.

Number of Times	Yearly	Monthly	Weekly	Daily
Number	211	115	116	60
Percentage	42%	22.9%	23.1%	12%

It is shown that 42% of student` use the internet several times a year, 22.9% of them use it several times a month, 23.1% use it several times a week, and 12% use it daily. This indicates a low number of times of internet usage in university education. One of the reasons for this may be the lack of awareness of students as to the importance of the internet or lack of training on the need to use the internet in university education. This study is in agreement with [1] study but it is differs with [10]. It shows an average ratio of usage that it is affected by specialization and computer experience. To refine this last result, we next present a find-grained results related to the number of hours of using the internet in university education on weekly basis. Table 9 shows the results.

Table 9. The percentages of the number of hours of weekly internet use in university education.

	< 5 Hours	(6-10) Hours Weekly	(11-15) Hours Weekly	≥ 15 Hours Weekly
Number	427	56	10	9
Percent	85 %	11.2%	2%	1.8%

Table 9 shows that 85% of the students use the internet 5 hours or less in the week, 11.2% use it 6-10 hours weekly, 2% use it 11-15 hours weekly, and only 1.8% uses it for more than 15 hours weekly. This indicates the student spend low number of hours of internet use in education. To sum up our findings related to the above question, we calculate the degree of internet usage by using the four sub questions discussed in this subsection. Table 10 shows the results.

Table 10 shows that the mean of the importance of using the internet is 2.64, the degree of using internet in teaching is 1.16, the number of time of using internet is 1.06, and the number of hours of using internet weekly is 0.21. Also, the overall mean degree of internet usage is 5.04, and it seems that the overall internet usage in the university education is low. This indicates that students do not have enough time to use internet? Both these two factors comply with the

previous results mentioned [7, 12] but the study results contradicts with [10].

Table 10. Means and standard deviations of various aspects of internet usage.

No.	Item	*n*	Means	Standard Deviation
1-	The importance of using the internet in education.	502	2.64	.74
2-	The degree of internet usage in education	502	1.16	1.01
3-	Number of times of using the internet in education	502	1.05	1.06
4-	The number of hours of using the internet in education weakly	502	.21	.55
	Total	502	5.04	2.27

- *Are there any statistically significant differences at level α=0.05 in the degree of internet uses by the students in the university education and according to variables and triple interaction between variables?*

To answer this question, the means and std. deviations of the total of the sample subjects' responses related to the degree of using the internet and according to the variables mentioned above have been found. Table 11 shows the results. Table 11 shows that the highest mean for female from commercial specialty with good computer skills 9.0, followed by males from scientific specialties with high computer skills 7.54 followed by males with high computer skills from all specialties 7.16, the lowest mean was for female from humanities specialties 4.25 followed by females with low computer skills 4.46 followed by males from scientific specialties with low computer skills 4.61. To know if there are significant differences between these means according to study variables and interactions between them, further analysis using ANOVA was performed. Table 12 shows the results.

Table 12 illustrates that there are significant differences related to the computer experience variable. However, there are no significant differences regarding the gender, major, double, and triple reaction on internet usage. To further explain the differences between means related to the computer experience variable, the comparison was further carried out using Scheffe test method, and the results are shown in Table 13.

It is shown that there are significant differences between the students with little computer experience and those with moderate and high computer experience with explicit advantage of the last two groups. Experience and familiarization with the virtues of using the computer and internet and the simple access to information may explain the student's eagerness toward using the internet. It was found that the students with little computer experience did not explore the virtues of internet and the services it provides in university. Furthermore, it is noted that there are no significant differences of the degree of usage in relation with the two variables of gender and major and the interactions between these variables. This indicates a similarity in the degree of using internet among students, their view of using internet in university education, and the conditions of their usage of internet are the same despite their gender and major. These results agree with results of [9, 1], while they differ from the results of [10, 15]. Another perspective which the study focuses on is what are the topics that students wish to develop their knowledge in as classified in Table 14.

Table 11. Means and standard deviation according to interaction between these variables.

Major	Sex	Computer Experience	N	Means	Std. Devn.
Humanities	Female	Low	130	4.25	1.83
		Moderate	14	5.71	2.30
		High	3	6.00	2.64
	Total	**Total**	**147**	**4.42**	**1.94**
Scientific	Male	Low	146	4.61	2.25
		Moderate	39	6.51	2.44
		High	24	7.54	2.18
		Total	**209**	**5.30**	**2.5**
	Female	Low	.63	4.80	2.07
		Moderate	12	6.75	1.76
		High	6	5.00	2.28
		Total	**81**	**5.11**	**2.13**
	Total	Low	209	4.67	2.19
		Moderate	51	6.56	2.26
		High	30	7.03	2.39
		Total	**290**	**5.25**	**.2.41**
Commercial	Male	Low	26	5.50	1.52
		Moderate	12	6.41	1.97
		High	6	5.66	1.75
		Total	**44**	**5.77**	**1.69**
	Female	Low	19	4.78	2.61
		Moderate	1	7.00	0
		High	1	9.00	0
		Total	21	5.09	**.2.68**
	Total	Low	45	5.20	2.06
		Moderate	13	6.46	1.89
		High	7	6.14	2.03
		Total	**65**	**5.55**	**2.06**
Total	Male	Low	172	4.75	2.18
		Moderate	51	6.49	2.32
		High	30	7.16	2.21
		Total	**253**	**5.38**	**2.40**
	Female	Low	212	4.46	1.99
		Moderate	27	6.22	2.06
		High	10	5.70	2.45
		Total	**249**	**4.70**	**2.09**
	Total	Low	384	4.59	2.08
		Moderate	78	6.39	2.22
		High	40	6.80	2.33
		Total	**502**	**5.04**	**2.27**

Table 14 shows that the most important topics in ascending order were: searching data by index 84.8%, attending a course in using the internet in education 78.2%, and the internet's applications in education 77.8%. The rest of percentages ranged from 75.9% identifying sites locations to 63% downloading electronic games. These results indicate that although students wish to familiarize themselves with all aspects of the internet, effective searching for data was

the most required part. Overall, these results indicate a strong desire among students to possess internet technology and use its applications in university education and in their public life. These results are in agreement with the studies of [11] which emphasized the importance of organized training in acquiring the skills of using internet applications in education.

Table 12. The impact of study variables on degree of using internet using ANOVA.

Dependant Variable	Sum of Squares	Df	Means Square	F	Sig
Gender	0.447	1	0.447	0.101	0.751
Major	7.64	2	3.82	0.86	0.423
Computer experience	112.73	2	56.36	12.69	0.00
Major X gender	10.54	1	10.54	2.37	0.124
Major X Computer experience	5.72	4	1.42	0.32	0.863
Gender X Computer experience	.2.33	2	1.16	0.26	0.769
Major X gender X Computer experience	31.27	2	15.63	3.52	0.03
Error	2161.57	487	.4.43		
Total	***15403.00***	***502***			

Table 13. The results of Scheffe's test to significance of differences in the means that can be attributed to computer experience.

Experience	Experience Means	Low	Moderate	High
Low	1.14			
Moderate	1.59	*		
High	1.7	*		

Table 14. Topics in which students like to develop their knowledge classified downward.

Number	Item	Percentage
1	Search data by index	84.8%
2	Taking an Internet course	78.2%
3	Internet application in learning	77.8%
4	Search data by addresses	75.9%
5	Using the E-mail	74.9%
6	Chatting	74.2%
7	Download Education-related software	73.9%
8	Web-based courses design	73.2%
9	Web browsing	67.6%
10	Games download from the internet	63%

- *What do students feel about the incorporation of new technologies in the teaching process? can a traditional learning system be substituted by another system that is based on e-learning methods?*

To answer this question, a dedicated questionnaire has been distributed to the sample of students. The questionnaire aims at measuring the attitude of the students toward the use of e-leaning as a substitute or partial substitute of the traditional learning. Table 15 shows the results for this case. After careful review of the overall results in Table 15, we notice that the results show that e-learning tools are important in two aspects. First, as general informative resources in most basic and advanced courses with a percentage of 80.3% of the questions and mean value of 4.1 and about 60.1% of the students believe that e-learning can act as stand-alone teaching resources that would complement the traditional teaching methods.

Table 15. Attitude of students toward the integration of e-learning into traditional learning.

Number	Item	Percentage Agree	Mean Value
1	Importance of e-learning as a complementary tool for teaching	80.3%	4.1
2	Importance of e-learning as a dedicated tool for teaching	60.1%	3.34
3	Support positive effect of e-learning on the teaching environment	62.4%	3.43
4	e-learning increase the productivity and enhance student grades	71.4%	3.86
5	e-learning can totally substitute traditional learning	41%	2.41

The results also show with a percentage of more than 70% believe that well-designed e-learning material can assist in the understanding of many topics and it can also help in organizing the study times. Finally, most of the students believe that incorporating e-learning methods into the traditional system have a very positive effect on enhancing the outcome of the learning process on both technical depth and grades. This indicates that student support the use of e-learning in the teaching process and their attitude towards such type of teaching is overall positive with a mean value of 3.43. However, the study results also shows that there is a negative impact of e-learning related to the social life among students and teachers and among students themselves and the lack of live interactivity found in the real classrooms. Moreover, the students believe that questions that need face expressions and dialogue cannot be served by such kind of teaching method.

7. Conclusions

This paper addressed an important topic that is related to the effect of integrating internet into the traditional

teaching process along several aspects. The results of this study showed that there is a necessity for using internet in all university facilities and students should be directed to employ internet in university education in order to enrich their learning outcomes and experience. Moreover, the study results showed there is a lack on the use of internet in university education and hence there is a need to familiarize students with the uses of internet through courses and workshops. This can also be supported by providing technicians and assistants to assist students in the labs and lecture halls to access databases and to facilitate communication and connection. The result also shows that students should be encouraged to use internet in university education and this should be done by the teachers and adopted as a university policy. Although the results were obtained on a sample of single university, the results can be easily generalized since educational environments and type of sample is almost same in all universities in jordan and surrounding countries. The authors believe that there is a great necessity to conduct more studies related to internet that deal with other variables such as student's academic and educational level and his/her culture in the field of internet, the relationship between students' attitudes toward using internet and their ability to use and employ it.

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Appendix: A Summary of Study Questionnaire

General Information:

- College: ❒ scientific ❒ humanistic ❒ commercial
- Specialization:
- Sex ❒ male ❒ female
- Computer experience: ❒ less than two years. ❒ from 2-5 years ❒ more then 5 years of internet.

1- First: The ratio of using internet in university education and its variety.
The ratio of using internet in general. ❒ Low ❒ Moderate ❒ High.

2- Second: The degree of using internet in university education.

a. The importance of using internet in university education from your point of view:
❒ Important ❒ Moderate ❒ Low ❒ Very low.

b.The degree of your usage of internet in university education:
❒ High ❒ Moderate ❒ Low ❒ Very low

c.The number of times of your usage of internet in university education.
❒ Yearly ❒ Monthly ❒ Weekly ❒ Daily

d.The number of hours of using internet for university education purposes weekly:
❒ 5 hours and less ❒ 6-10 hours ❒ 11-15 hours ❒ more than 15 hours.

3- Third: The Internet Topics in which you desire to develop your knowledge (Mention Them All)

No.	Sub Topic	Great desire	Medium desire	Little desire	No desire
1.	Search data by index.				
2.	Internet applications in learning.				
3.	Sear data by addresses.				
4.	Chatting.				
5.	E-mail.				
6.	Games Down Load.				
7.	Web Browsing.				
8.	Software Down Load.				
9.	Designing web-based courses.				
10.	Attending a course in using internet and its applications in education.				

4-Fourth: how do you feel about using internet in the learning process (Answer to all questions below would be one the following five choices: Strongly Agree–Agree – I don't know, Disagree, Strongly Disagree).

1. I consider the site of courses on internet a source of learning information.
2. I hate e-learning because I can not be kept in communication with professors across these sites.
3. I think that these sites support and reinforce the education process.
4. I feel that these sites help me to organize my time and understand the content of the courses better.
5. I believe that the use of these sites make the learning process easier.
6. I do not feel that I have gained extensive knowledge of learning with these sites.
7. I believe that the use of these sites a positive impact on my achievement.
8. I think that the use of these sites keeps me in communication with courses at a time that suits me.
9. I do not face any difficulties in accessing to these sites from my home.
10. I can review the previous lectures to enter the lecture content located on the website of the course on internet.
11. I do not favour the use of these sites for lack of the spirit of participation in the classroom.
12. I prefer to inquire about the issues that require explanation through these sites.
13. I prefer to performance tests using these sites.
14. I prefer to take the results of my examination via websites.
15. I use e-learning sites for the purposes of interaction with students.
16. I believe that interaction between students across these sites facilitate the learning process and learn from my colleagues
17. I feel that these sites encourage me to exchange information and discuss ideas and concepts related to the

courses.

18. I feel that these sites are encouraged me to discuss my professors the ideas and concepts that I learn.
19. I feel that these sites encourage me to learn new positive experiences.
20. I wish to register more courses offering assistance Internet sites.
21. I feel that these sites encourage me to spend longer enjoying in my studies.
22. I feel that I am aware of the importance of computers and internet in education.
23. I get enough support from the university to deal with these sites.
24. I think that computer technology considered an essential element of education in the classroom.
25. I think that learning with these sites help with my readiness to my tests
26. I think that learning with helping these sites more cooperation between students
27. I used internet regularly to find information related to my lessons.
28. I prefer use of technology in education such as (power point) as an aid in understanding the content of the course.
29. I feel that assisted learning via these sites improves my ability to understand and evaluate the views of others.
30. I believe that the use of these sites does not require the possession of special skills in the English language.
31. I believe that the use of these sites do not require more effort and focus.
32. I believe that the use of these sites does not require the possession of special computer skills.
33. I think that assisted learning Internet sites suitable for all university courses.
34. I recommended colleagues registration in courses that give online.
35. I encourage all universities to present its courses via internet.