The Advantages and Disadvantages of E-Learning from the Viewpoints of Educational Faculty Students

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◻ ABSTRACT ◻

This study aims to investigate the advantages and disadvantages of e-learning from the viewpoints of Jordanian students attending the Educational Sciences Faculty of Al al-Bayt University (AABU). The researcher used mixed approaches, therefore 11 participants were interviewed, and a questionnaire was designed consisting of (31) items distributed into two fields: the advantages (13 items) and disadvantages of e-learning (18 items), and then delivered to the study's sample which was chosen randomly with a size of (300) students. The results showed that 55% of AABU students are not satisfied with electronic learning. The results additionally revealed that the students' attitudes towards e-learning's disadvantages were high, but were medium for e-learning's advantages. There are statistically significant differences in the participants' perceptions of e-learning disadvantages in favor of females. No statistically significant differences were detected in terms of the participants' views towards the e-learning advantages according to the variables of gender and academic level

Keywords: Jordan, e-learning, higher education, Al al-Bayt University (AABU).

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مزايا وعيوب التعلم الالكتروني من وجهة نظر طلبة كلية العلوم التربوية

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🔲 ملخّص 🔲

هدفت هذه الدراسة إلى تعرف مزايا وعيوب التعلم الإلكتروني من وجهة نظر طلبة كلية العلوم التربوية في جامعة آل البيت. استخدم الباحث تصميما كميا ونوعيا، لذلك تمت مقابلة 11 طالبا، وتم تصميم استبيان يتكون من (31) فقرة موزعًة حسب مجالين: المزايا (13 فقرة) والعيوب (18 فقرة). وزعت الاستبانات على عينة الدراسة التي تم اختيارها عشوائيا وبلغ حجمها (300) طالب وطالبة. أظهرت النتائج أن 55٪ من طلاب طلبة جامعة آل البيت غير راضين عن التعلم الإلكتروني. وكشفت النتائج أيضًا أن وجهات نظر الطلبة تجاه عيوب التعلم الإلكتروني كانت عالية، لكنها كانت متوسطة تجاه مزاياه. كما اشارت النتائج الى وجود فروق دالة إحصائية في وجهات نظر الطلبة تجاه عيوب التعلم الإلكتروني ولصالح الإناث. ولم تظهر فروقا دالة إحصائية في وجهات نظر الطلبة تجاه مزايا التعلم الإلكتروني حسب متغيرات الجنس والمستوى الأكاديمي.

الكلمات المفتاحية: الأردن ، التعليم الإلكتروني، التعليم العالي، جامعة آل البيت (AABU)

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Introduction

Several academic institutions have recently started to encourage the creation of e-learning environments in light of the widespread of the Internet, especially in the field of education. The knowledge explosion that the world is witnessing requires us to think clearly about more flexible educational methods and mechanisms since the education process is a constantly a renewed one, which must keep pace with its paths of knowledge change especially due to the advent digital technologies and the Internet, which represents a key component of electronic learning.

Class Central site recently released a report that shows by numbers the growth statistics of e-learning platforms for the year (2019). According to statistics from year-end 2019, a total of (13.5k) MOOCs were in the pipeline or had been implemented by more than (900) higher education institutions across the world. Around (2.5K) courses were launched by (450) universities. The platforms that facilitate e-learning gain a great interest recently, especially in light of the amendments made to them, which made them more digitally secured.

Al- Sharhani (2003) defines e-learning as the process of having lectures offered on the Internet to a location other than the classroom where the academic teaches. Al-Bati' and Abdul-Mawla (2008) define e-learning as the learning that part or all of it reaches the student via the Internet. Zaitoun (2005) defines it as providing educational electronic content based digital technology and online networks to learners in a manner that facilitates active interaction with the information, their teacher, and their peers. This form of learning takes into account the circumstances, capabilities of the learners, the time and place available to them. As for Badr (2005), he sees e-learning as a modern trend in education and a new way to provide an interactive environment centered on learners. It is well designed in advance, and accessible to any individual, anywhere, and at any time. Al-Mousa and Al-Mubarak (2005) believe that e-learning is a contemporary form of education that is based on the utilization of modern technologies as a means of communicating content to learners efficiently, with minimal effort and with maximized benefits. Both Al-Fentoukh (2001) and Mank (2005) believe that e-learning is close to the concept of internet-based learning, as it is an individual process of teaching and learning that is provided to learners via public or private computer networks and is dealt with using the web browser. Given the previous definitions, it is noted that all focus on students as the primary target, and the utilization of the Internet as a medium to obtain knowledge, through the interaction between human elements (the students) and non-human components. The success and effectiveness of e-learning systems in all educational institutions is not limited to Physical and spatial preparation of the educational environment, or the presence or absence of a Learning Management System (LMS) but goes beyond that to include principles of communication and various psychological theories, to ensure its compatibility with the characteristics of learners, so their needs and psychological aspirations are fulfilled (Abdul Ghafour, 2012)

E-learning is based on several theories, the most famous of which is Skinner's procedural theory and its applications in programmed education. Skinner believes that teachers often lack educational competence and awareness, in addition to the rigidity of the school system that may alienate the learner and make him less motivated towards learning. The programmed education addresses the previous defects, through two principles: The first is the principle of the conjugation of reinforcement in learning as the desired responses are rewarded immediately; the second is the principle of arranging reinforcement so that there

is an appropriate reinforcement for each desired response. This learning is distinguished by the fact that the learner does respond except with a pure motivation from him, which could enhance the concept of self-learning among the learners themselves (Gilbert, and Dabbagh, 2005; Kweran, 2010).

The cognitive school, headed by (Jean Piaget), believes in the need to concentrate on the cognitive aspect of e-learning; therefore, learning, according to cognitive theory, is based on several mental processes such as remembering, thinking, reflection, abstraction, and motivation. What distinguishes this theory is its recognition for the importance of the individual differences between learners, the ability of the student to assess himself and understand the strengths and weaknesses that help him enhance his ability to develop self-confidence while learning. This theory is far from indoctrination and depends on acquiring new experiences and skills to benefit the individuals and their society (Anderson and Elloumi, 2004)

The constructive school, led by Carl Rogers (1969), believes that everyone is present in a constantly changing world of experience in which he is the center. They recommend constructive learning for the individual who is the feature of e-learning. This theory indicates that the learners are those who build Knowledge rather than delivering knowledge to them, therefore the learner in this theory is active because he is the one who builds the knowledge. There are many programs and different locations that allow the user to self-learn by adopting a basic principle of this theory, which is considering learning process as a cumulative process, rather, than a complex and multifaceted process, which includes personal thinking, searching for new information, social communication with others to solve problems, searching for relationships between what is known and what is new, identifying similarities and differences, and testing assumptions to resolve inconsistencies in learning (Applefield et al., 2001; Paletz et al., 2015).

E-learning's advantages and disadvantages

E-learning comes to embody an innovative manner to offer an interactive environment targeted round learners which is well- designed in advance and on hand to any individual, anywhere and every time by using the characteristics and assets of the Internet and virtual technologies in line with the concepts of educational design suitable for the open, bendy and distributed learning environment. It is possible to summarize the most important advantages of e-learning as follows:

• Ease of movement: as it is possible to move with laptops anywhere, on which educational materials are saved, and the student can retrieve them at any time he requests

• Convenience and ease of use: E-lessons have become easier to use than attending lectures in real lessons.

• Strategic Employment: there is a diversity of educational materials available electronically to students, making it easier for them to choose the most suitable one for them and employ them in our working life strategically, which is provided by the traditional methods of education.

• Flexibility: e-lessons can be used during the real semester where teachers or trainers follow up on the practical application of scientific theories in the classroom and correct students 'mistakes immediately and follow-up directly to them.

• Simplicity: simplifying educational materials through e-lessons allows students and learners to focus on learning more.

- Low cost: e-lessons are less expensive than traditional educational methods (Oshiba, 2009; Barghouti and Masoudi, 2016). Conversely, the disadvantages of e-learning can be summarized as follows:

- E-learning can make learners socially isolated.

- E-learning necessitates leaners to be self-motivated with the ability to manage their time appropriately.

- Insufficient communication abilities among online learners

- Online educators seem to focus on theoretical rather than practical aspects

- E-learning lacks face to face interaction

- E-learning is conducive to cheating by students in online tests (Arkorful and Abaidoo, 2014; Gilbert, 2015).

Related Literature

Extensive research has been performed to address the reality of e-learning in the context of tertiary education (the challenges and the obstacles) such as Hussamu and Abdullah's study (2011). According to the study findings, most important obstacles related to e-learning were the absence of appropriate infrastructure for it and the increased burden on the faculty member for designing the appropriate material for e-learning which requires him to sit for long periods in front of the computer. Al-Awaqleh (2012) study' results showed that the arrangement of electronic learning difficulties was as follows: challenges pertaining to academic administration, challenges pertaining to students, challenges pertaining to the infrastructure, technical assistance provided in classrooms, challenges pertaining to the curriculum, and challenges pertaining to experience in the field of e-learning. On the other hand, from the perspective of students: challenges pertaining to the university curriculum, challenges pertaining to infrastructure and technical support, challenges that the students themselves experience, and challenges associated with the academic administration.

Abu Aqeel and Ibrahim study (2014) showed that the percentage of electronic courses represents (26%) of the total number of courses available on the university's web page. The results also showed that the obstacles are represented in: the limited number of technicians who can provide technical assistance to students during e-learning, the scarcity of workshops explaining how e-learning should be used, and the difficulty of using the English language for some students, and the results also showed that the obstacles to using it when students of Sharia and administration are more than Other colleges, and that the barriers to its use among freshmen and sophomores are more than others. Al-Qadri study (2017) investigated the reality of e-learning via the Internet in the scientific colleges at Al al-Bayt University. The results showed that the differences between students were statistically significant between faculty participants who participated in e-courses training, which was due to limited experience. Bashir and Ammar's Study (2018) also examined the reality of e-learning, its advantages, disadvantages, and constraints from the viewpoint of faculty participants at Baskara University. The study revealed that e-learning meets students' interests and it reduces the burden on teachers and increases the burden on students. One of the e-learning's disadvantages is caused by sitting for long hours in front of the computer which may lead to many diseases. The high cost of maintenance of computers, accessories, and network equipment used in the application of e-learning is considered an obstacle in addition to the university's lack of educational human cadres who can deal with e-learning programs.

Other studies have been conducted on the effectiveness of e-learning on university students such as Nguyen's study (2015). Its results showed that (92%) of the studies that dealt with distance education and education via the Internet confirmed the effectiveness of this form of education, to the extent that it is superior to conventional education. While approximately (3%) of the researches collected by the researcher showed the opposite, meaning that conventional learning in the classroom has greater effectiveness. As for Sun & Chen study (2016), they concluded that effective e-learning depends on the content of a suitably organized course, the stimulating interaction between the teacher and students, and the highly competent supervisors to provide the required technical support.

Salamat et al. study (2018) also highlighted the effect of e-learning on undergraduate students. The study concluded that e-learning is a program which offers time mobility for students to learn and urges them to do their job without the help of others. It is also concluded that students felt self-confident browsing and surfing the Internet. Pham et al.. (2019) research addressed e-learning services, student satisfaction in e-learning and overall satisfaction of students in Vietnam, a developing country. The findings showed that the quality of the e-learning system was a second-order construction consisting of three variables, including the standards of the e-learning program, the competence of the e-learning instructor, the standard of the teaching materials, and the effectiveness of the administrative e-learning and support services. The most important factor that impacted the general quality of the e-learning service was determined to be the quality of the e-learning program, then the e-learning instructor and co-learning service. Another study was conducted by Alfaki et al. (2019) whose findings indicated a substantial difference in learning outcomes as well as positive attitudes between online and conventional learners, which can be a viable alternative learning tool for higher education. The study made a valuable contribution to the current literature in the field of online teaching and e-learning.

By reviewing the previous research, the researcher noted that most of the studies pointed to the reality, the obstacles, and challenges related to e-learning in the institutions of higher education such as the study of Hussamu and Abdullah's study (2011), Al-Awaqleh (2012), Abu Aqeel and Ibrahim (2014), Al-Qadri (2017), Bashir and Ammar's Study (2018). The obstacles revealed in those studies are either logistical or materialistic. Some previous studies dealt with the topic of e-learning in terms of its impact on students' learning such as Nguyen (2015), Sun & Chen (2016), Salamat et al. study (2018), and Alfaki et al. (2019) their findings highlighted the positive impact of e-learning on students compared to physical learning in the classroom. Most studies used the descriptive approach in addressing e-learning as the optimal approach, except for Alfaki et al. study (2019), Sun & Chen study (2016), and Nguyen's study (2015) and the current study.

Research goal

For more than a decade, many Jordanian educational conferences have recommended the need to focus on e-learning at universities and the necessity complete the required infrastructure for it to be implemented effectively, such as the National Conference for the Development of Study Plans, Teaching Methods and Scientific Research (2010), the International Education Conference at Tafila Technical University (2012), the Educational Development Conference (2015), and the University of Jordan's conference: "Education in the Arab World: Towards a Distinguished Educational System" (2018). In light of these recommendations, the current study comes to investigate the benefits and shortcomings of e-learning in AABU from the viewpoint of students attending the faculty of educational sciences, as AABU began to offer four e-courses and then five since 2016, which are the

Arabic language (1), Islam and contemporary issues, an introduction to astronomy, computer and national education, and it is currently moving towards offering more e-courses for some university requirements. To achieve the previous goal the researcher put forth the following questions for investigation:

    1. What are the benefits of e-learning at Al al-Bayt University from the perspective of students attending the faculty of educational sciences?

    2. What are the drawbacks of e-learning at Al al-Bayt University from the perspective of students attending the faculty of educational sciences?

    3. Do the sample participants estimate the disadvantages of e-learning differently according to the variables of gender and academic level?

    4. Do the sample participants estimate the advantages of e-learning differently according to the variables of gender and academic level?

Study significance and limitations:

The significance of the current study lies in highlighting a modern form of learning, namely, e-learning at AABU by investigating its advantages and disadvantages, since no study was conducted in this topic- according to the researcher's knowledge - from the viewpoint of AABU students. This study may contribute to reduce the gap respectively of the current literature on the benefits and downsides of Jordanian universities' e-learning from the perspective of their students. It is also hoped that the present research could provide groundwork for future studies on this subject. Nevertheless, the ability to generalize the research findings could be constrained since this study focuses almost exclusively on Jordanian undergraduate students' perceptions of e-learning advantages and disadvantages at AABU.

Methodology:

Research design

The current study used a mixed design, whereby the quantitative data is firstly collected and analyzed, and then the same process is applied for the qualitative data. Then the research results are combined within the analysis section of the study. This design offers greater insights into the fundamental research problem than would be possible by applying either of them individually (Dhanapati, 2016).

The quantitative sample and data Collection:

The study population comprised all class teachers (888) studying at Al al-Bayt University for the academic year 2019-2020. Using random sampling, the first sample consisted of 300 (49 Male and 251 Female), where 149 were freshmen, 13 sophomores, 38 juniors, and 55 seniors. According to a comprehensive literature review, the research instrument and processes used in this study were designed by the researcher on the basis of those employed in the studies of Abu Aqeel and Ibrahim (2014) and Bashir and Ammar (2018). The finalized version of the questionnaire comprised two questions pertaining to demographics, while 31 questions were intended to evaluate the students' viewpoints regarding e-learning disadvantages (18 items) and advantages (13 items) (see Appendix 1). The questionnaire's validity was assessed by a group comprised of five professors in the field of education as well as two learning supervisors, whose feedback was utilized in the process of revising the questionnaire. The questionnaire's reliability was determined via the application of the test-retest approach on 22 (class-teacher) students who were excluded from the sample, where the questionnaire was administered to these students twice with a 22-day interval. Calculation of the Cronbach's Alpha Coefficient returned a value of 88%. Subsequent to determining that the questionnaire was reliable and valid,

questionnaire, it was distributed personally to the participants who were ensured that their responses would remain confidential and anonymous. From the total of 326 questionnaires given to the students, 300 were completed and returned to the researcher, generating a 92% response rate.

The qualitative sample and data collection:

The second study sample consisted of 11 interviewees who were randomly selected from the faculty of educational sciences for the year 2019-2020. Six of those completed e-courses and 5 were undertaking them at the time the study was conducted. The current researcher designed the initial form of a structured interview, which consisted of 7 questions, and then reviewed by a group of experts in teaching approaches and e-learning from the Department of Curriculum and Instruction at AABU. Based on the feedback of the group, the interview form has been revised to include final design of three questions. (see Appendix 2). The reliability of the interview form was tested using a 15-day interval test-retest of 9 subjects who were removed from the main sample of the study. When data analyses were conducted they revealed high reliability, which was further confirmed by a colleague's analysis. After obtaining the interviewees' consent to enroll in the study, the interviews' appointments were arranged and respondents were informed about the purpose of the interview and assured the confidentiality and anonymity of their responses they provide in the interviews which were videotaped and immediately transcribed. After the excerpts were examined for reliability, the researcher handed them back to the respondents to verify if they were coherent with their answers. After all participants reported that the excerpts matched their responses; the excerpts of the interview were analyzed, classified, in terms of frequency and percentages. It is worth mentioning that, during the qualitative analysis of data, several responses have been cited and used in the presentation of the results.

Results and Discussion

The Questionnaire's Results and Discussion:

Table 1 shows the means as well as standard deviations of the (18) questionnaire items pertaining to the first research question, which aimed to evaluate students' perceptions of e-learning disadvantages at AABU.

Table 1. Means and standard deviations of the e-learning disadvantages' items

Rank	Item No.	Item	Means	SD	Level
1.	8	E-learning lacks the human interaction between students and the teacher.	4.04	1.095	High
2.	14	There is a difficulty in contacting e-learning coordinators after the end of the official working hours.	3.97	1.092	High
3.	11	A lack of space for discussing questions in e-learning is a major reason for failing to answer them.	3.84	1.017	High
4.	15	The absence of appropriate training for students, before taking the e-courses.	3.83	1.131	High
5.	1	E-learning lacks consideration for individual differences among students.	3.77	1.186	High
6.	9	Students' low motivation towards e-learning is due to spending a lot of time on smartphones and laptops	3.76	1.157	High
7.	2	The student's lack of computer skills affects his e-learning.	3.75	1.066	High
8.	6	Unsafe websites make the e-learning process unsafe too.	3.75	1.168	High

9.	17	Offering electronic courses for students, some of whom do not enjoy any computer experience.	3.74	1.230	High
10.	7	The presence of technical errors in the e-learning' site prevents the students from entering the electronic course.	3.72	1.136	High
11	16	The presence of lots of pressure on computer laboratories at the university prevents students from undertaking e-courses in their free time.	3.64	1.215	Medium
12	10	E-courses reduce students' creativity and innovation.	3.62	1.197	Medium
13	18	The complexity of the procedures which students go through to obtain a new password prevents them from entering the electronic course on time.	3.61	1.181	Medium
14	4	The internet connection speed for taking e-courses inside the university is weak.	3.58	1.315	Medium
15	13	There is a frequent difficulty facing the student when trying to enter the course website electronically from outside the university.	3.53	1.217	Medium
16	12	Some of the computers available at the university need maintenance.	3.48	1.327	Medium
17	5	Students refuse e-learning with a preference for (face-to-face) learning.	3.48	1.312	Medium
18	3	The method of learning through e-courses is one of the reasons for students' weak academic achievement	3.42	1.223	Medium
The first field: The disadvantages of e-learning			3.70	0.532	high

Table (1) shows that the total mean of students' responses on 18 questionnaire items of e-learning disadvantages' field, amounted to 3.70 with a standard deviation of 0.53. The table also shows that there are 10 items obtained a "high" degree. Item 8, e-learning lacks the human interaction between students and the teacher, got the highest mean of 4.04, with a standard deviation of 1.095, followed by item 14, there is a difficulty in contacting e-learning coordinators after the end of the official working hours, and item 11, lack of space for discussing questions in e-learning is a major reason for failing to answer them, with means of 3.97 and 3.84 and standard deviations of 1.092 and 1.017, respectively. However, eight items obtained a "medium" degree, the lowest mean recorded in the field of disadvantages, was for item 3, the method of learning through e-courses is one of the reasons for students' weak academic achievement, followed by item 5, students refuse e-learning with a preference for (face-to-face) learning, with means of 3.42 and 3.48 and standard deviations of 1.223 and 1.312, respectively. The results of the first question show that AABU students' perception of e-learning disadvantages was high, which can be summarized as follows:

• E-learning lacks the human interaction between students and the teacher, for purposes of clarification or discussion, which affects negatively observing the goals of the cognitive and emotional side of the academic e-courses. E-learning also lacks the consideration for individual differences among students. The previous results can be attributed to the lack of training of academic professors in the use of e-learning patterns, which may create difficulty in dealing with such electronic patterns

• There is a difficulty in contacting e-learning coordinators after the end of the official working hours, in case the student is outside the university and cannot access the site for technical issues, or because he forgot his password and need to get another one which is often hard because of the complicated procedures that he has to go through.

This can be attributed to the lack of necessary technical services in the university's laboratories which contributes to impeding the process of e-learning

• The absence of appropriate training for students, before taking the e-courses. This result is attributed to the fact that AABU headed towards e-learning recently, in addition to its limited resources, whether logistical or physical

• Students' low motivation towards e-learning due to spending a lot of time on smartphones and laptops.

Those findings are consistent with the study of Hussamu and Abdullah (2011) which also showed students' lack of interest in e-learning because of its disadvantages. The results were consistent with Al-Awaqleh (2012), Abu Aqil and Ibrahim (2014), Arkorful and Abaidoo, (2014); Gilbert, (2015); and Sun & Chen (2016), which all highlighted e-learning defects and recommended the need to increase in the number of technical supervisors to append any obstacles that students may encounter in e-learning courses. However those results were inconsistent with Oshiba, 2009; Barghouti and Masoudi, 2016, which highlighted the benefits of e-learning, and also inconsistent with Nguyen (2015), Sun & Chen (2016), Salamat et al. study (2018), and Alfaki et al. (2019) which highlighted the student's satisfaction with e-learning.

Table 2 presents the means and the standard deviations for (13) items in the questionnaire pertaining to the second research question, which aimed to address students' perception of e-learning advantages at AABU.

Table 2. Means and standard deviations of the e-learning advantages' items

Rank	Item No.	Item	Means	SD	Level
1.	20	Great pressure relief on the university computer labs enhances access flexibility to e-courses site from anywhere where the internet is available, especially in students' spare time	3.74	1.148	High
2.	24	The use of technology in e-learning develops students' learning skills.	3.69	1.060	High
3.	27	E-courses contribute to saving students' time, effort, and expenses.	3.68	1.176	High
4.	30	E-courses help students to balance work and study.	3.65	1.219	Medium
5.	29	There is no need for teachers' presence with students in one place	3.58	1.141	Medium
6.	28	E-learning addressed many of the disadvantages of traditional learning methods.	3.55	1.125	Medium
7.	22	The presentation of the scientific material in e-courses provides students with abundant information that exceeds what they get in traditional learning.	3.54	1.369	Medium
8.	23	There are no obstacles in e-learning when sending or receiving scientific material between teachers and students	3.41	1.116	Medium
9.	31	E-learning takes into account the individual differences between students	3.40	1.227	Medium
10.	25	E-learning help students obtain equal educational opportunities with their peers	3.40	1.112	Medium
11.	28	Students feel satisfied while learning via e-learning sites.	3.32	1.338	Medium
12.	21	Students can easily access the e-learning site from inside or outside the university.	3.25	1.178	Medium

13.	19	The speed of the internet connection inside the university is strong.	3.09	1.380	Medium
		The second field: The advantages of e-learning	3.48	0.654	Medium

Table (2) shows that the total mean of the sample participants' responses for the field e-learning' advantages was 3.48 with a standard deviation of 0.65. Three items have obtained a "high" degree, as in item 20, great pressure relief on the university computer labs enhances access flexibility to e-courses site from anywhere where the internet is available especially in students' spare time, with a mean of 3.74 and a standard deviation of 1.148, followed by item 24, The use of technology in e-learning develops students' learning skills, and item 27, e-courses contribute to saving students' time, effort and expenses, with means of 3.69 and 3.68 and with standard deviations of 1.060 and 1.176 respectively. As for the items that got a medium degree, were 10 items, the highest mean score was for item 30, e-courses help students to balance work and study, followed by item 29, there is no need for teachers' presence with students in one place, with means of 3.65 and 3.58 and standard deviations of 1.219 and 1.141, respectively. However, item 19, the speed of internet connection inside the university is strong, scored the lowest mean of 3.09 with a standard deviation of 1.380. The findings related to the second question showed that the means of students' perception of e-learning advantages as a whole was medium and represented as follows:

•   E-learning contributes to relieve the great pressure on university computers' labs from any place where the Internet is available, especially in students' spare time.

•   E-learning develops students 'skills in using technology.

•   E-learning contributes to saving students' time, effort, and expenses.

•   It helps students to balance their work and study.

This means that all participants perceive the advantages of e-learning, at Al-Bayt University with a moderate degree, regardless of the variables tested in this study. This result is consistent with the result of Qadri study (2017), which showed the satisfaction of faculty participants of e-learning at AABU with a moderate degree too, this result was attributed to the weak infrastructure of the university's computer labs. The second question's result was consistent with Oshiba, 2009; Barghouti and Masoudi, 2016, whose results emphasize the advantages of e-learning. However, this result was inconsistent with Hussamu and Abdullah (2011), Al-Awaqleh (2012), Abu Aqil and Ibrahim (2014) Arkorful and Abaidoo, (2014); and Gilbert, (2015).

In order to address the third research question, which aimed to determine whether any significant differences existed in the students' perceptions of e-learning advantages according to the gender and academic level variables, Two-way Analysis of Variance (ANOVA) was employed. Tables 3 and 4 shown below present the results of this analysis.

Table 3: Means and standard deviations of the students' perceptions of e-learning disadvantages

Variables	Level	Number	Means	SD
Gender	Male	49	3.45	.561
	Female	251	3.74	.513
	Total	300	3.69	.531
Academic Level	Freshmen	149	3.72	.525
	Sophomores	13	3.80	.538
	Juniors	38	3.56	.551
	Seniors	55	3.56	.530
	Total	300	3.69	.531

Table 4: Anova statistics for the e-learning disadvantages' differences due to gender and academic level variables

Source of Variance	Sum of Squares (SS)	Degrees of freedom (DF)	Means of Squares (MS)	F Value	Statistical Significance
Sex	3.275	1	3.27	12.078	.001
Academic level	1.117	3	.372	1.373	.251
Error	79.9	295	.271		
Total	4189.3	300			

The findings show that the value of F for the academic level variable was (1.373), which is statistically insignificant at the level of α= (0.05), thus indicating that there are no statistically significant differences in students' perceptions of e-learning disadvantages at Al al-Bayt University according to the academic level variable. This result is consistent with the study of Abu Aqeel and Ibrahim (2014) whose result showed that there were no statistically significant differences between the means of the sample participants' estimates of the e-learning disadvantage fields according to the academic level variable. This means that students who have learned via e-courses regardless of their academic level suffer from the disadvantages in this type of learning. This result differs from the findings of Abu Aqeel and Ibrahim's study (2014) who found a statistically significant difference according to the academic level variable in favor of freshmen students. On the other hand, the value of F for the gender variable is (12.078) which is statistically significant at the level of α= (0.05), thus indicating that there is a statistically significant difference in students' perceptions of e-learning disadvantages at Al al-Bayt University, according to the variable of gender in favor of females. This result may be attributed to either female students did not receive adequate training on how to use computers and communication networks in education before, or because they do not enjoy freedom in using the internet websites and computers especially in some conservative societies.

In order to address the fourth research question, which aimed to determine whether any significant differences existed in terms of the students' perception of e-learning advantages attributed to gender and academic level variables, Two-way Analysis of Variance (ANOVA) was employed. Table 5 and Table 6 below show the results of this analysis.

Table 5: Means and standard deviations of the students' perceptions of e-learning advantages

Variables	Level	Number	Means	SD
Sex	Male	49	3.40	.491
	Female	251	3.49	.681
	Total	300	3.48	.654
Academic Level	Freshmen	149	3.50	.678
	Sophomores	13	3.56	.566
	Juniors	38	3.57	.642
	Seniors	55	3.32	,579
	Total	300	3.48	.654

Table 6: Anova statistics for the e-learning advantages
differences due to gender and academic level variables

F Value	Sum of squares	Degrees of freedom	Means of squares	F Value	Statistical significance
Sex	.164	1	.164	.384	.536
Academic level	1.587	3	.529	1.238	.296
Error	126.009	295	.427		
Total	3766.007	300			

The findings show that the value of (F) for the gender variable is (.384), and the value of (F) for the academic level variable is (1.238) which are statistically insignificant values at the level of α= (0.05), thus indicating that there are statistically significant differences in terms of the students' perceptions of e-learning's advantages at the University of Al-Bayt, attributed to the variables of gender and academic level.

The Interviews' Results and Discussion:

The interview findings are shown below in three sections according to the interview questions. Part one relates to e-learning advantages, part two relates to e-learning disadvantages, while part three relates to students' satisfaction with AABU's e-learning.

Part One: E-learning's advantages

This section examines the respondents' perceptions of e-learning advantages. The findings suggest that only three students (27%) reported that e-learning improves student's self-learning skills, as shown in the following responses:

{…..} *I think e-learning develops students' skills for self-learning.*

{…..} *I did not expect my self-learning capabilities to improve after I registered for e-learning courses*

{…..) *The e-learning courses helped me to develop my self-learning skills.*

Only four students (36%) reported that e-learning facilitates communicating with the instructor, as shown in the following responses:

{…..} *E-learning makes communication with the professor easier.*

{…..} *In e-learning, I can communicate with my instructor any time I wish.*

Only Two students (18%) reported that e-learning is more interesting than face-to-face instruction, as shown in the following response:

{…..} *I enjoy learning via e-courses; because they are more interesting and enjoyable.*

{…..} *I understand everything better through e-courses.*

Only three students (27%) reported that balance-learning was beneficial for maintaining a balance between their study and work, as demonstrated by the following responses:

{…..} *E-learning is better for me because it allows me to study in the morning and work in the evening.*

{…..} *As a student, I work to pay my university fees, so the flexibility of e-learning helps me work and study at the same time.*

The above responses seem to provide evidence to low positive perceptions of some of the e-learning's advantages at AABU, which are e-learning's flexibility, ease of communication with instructors, the material is presented in a more comprehendible way, and improving students' self-learning skills. These findings are in line with previous findings asserting the advantages of learning via e-courses (for example, Oshiba, 2009; Barghouti and Masoudi, 2016), and also in line with the current study's findings which highlighted the advantages of e-learning in helping students balance their work and study with a medium degree, and acquiring self-learning skills with a high degree.

Part Two: E-learning's disadvantages

This section examines the respondents' perceptions of the e-learning's disadvantages. The findings revealed that 8 students (72%) reported the lack of professional instructors to deliver e-courses at AABU, as shown in the following responses

{…..} *I think e-learning courses at AABU need more professional instructors.*

{…..} *I believe that most of the e-learning issues at AABU can be solved if there are more professional professors to teach e-courses.*

Nine students (81%) reported that most students lack appropriate training on how to receive instruction via e-courses, as shown in the following responses:

{….} *I think if I have adequate training before registering in e-courses, I will have fewer defects.*

{….} *I have a computer literacy that is why I had difficulty learning via e-courses.*

The above responses seem to provide evidence to students' high perceptions of some of e-learning's shortcomings at AABU, which are the absence of professional e-learning instructors as well as the limited availability of suitable training for students before enrolling in e-courses. One of these findings is in line with a current study's results which highly pointed to students' lack of training before registering in e-courses as a disadvantage of e-learning.

Part Three: AABU Students' satisfaction with e-learning

This section examines the degree to which the respondents were satisfied with e-learning. The findings revealed that six students (55%) are not satisfied with the e-learning process at AABU, which is a strong indication that e-learning at AABU requires more enhancements to fulfill students' needs. This result is attributed to students' high perceptions of e-learning disadvantages; the poor infrastructure of computer labs, lack of training for both students and academics, and the poor internet services inside and outside the university. However, five students (45%) felt satisfied with e-learning. This result was consistent with one of the current study's result which revealed that students were satisfied with e-learning at AABU but with a moderate degree. It was also in line with previous findings of (Salamat et al., 2018, Pham et al., 2019; and Alfaki et al., 2019) which all revealed students' satisfaction with e-learning's process.

Conclusion and Recommendations

Lots of researches have been conducted on e-learning in different aspects. However, the current findings of both approaches revealed that AABU students' perceptions of e-learning' disadvantages were high. They also revealed that e-learning at Al-Bayt University does not highly meet the needs of learners as 55% of them are not satisfied with this method of learning. Female students suffered more of e-learning disadvantages because of their community constraints and lack of training. In light of the findings, several recommendations were put forth such as providing the necessary training for students before registering for e-courses, increasing the number of professional professors of e-learning, and the number of technical supervisors to provide technical assistance to large numbers of students enrolled in e-courses and conducting a periodic evaluation of learning in e-courses at AABU to satisfy the requirements of students and faculty members. The current researcher recommends scholars to conduct more researches on this crucial issue in terms of the impact of e-learning on females in the context of Jordan and the Arab world contexts to reduce the deficiency in the extant literature.

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Appendix
 Study's questionnaire
 Part (A)
Dear respondent:

The researcher is conducting this research to investigate the advantages and disadvantages of e-Learning from the viewpoints of undergraduate students. Obtaining feedback from you is vital for this research. Please assist by completing this questionnaire; we would appreciate your taking the time to complete it. Do NOT write your name on this questionnaire. If there are items you do not feel comfortable answering, please skip them. Your responses are voluntary and will be confidential; they will not be identified by other individuals. Thank you for your cooperation, your assist is highly appreciated.

Demographic Information:
Q1: Sex: a) Female ☐   b) Male ☐

Q2: Academic level:

a) First-year ☐   b) Second-year ☐

c) Third-year ☐   d) Fourth-year ☐

Part (B):
Questionnaire's items:

Field I: E-learning Disadvantages		The Level				
Item No.	**Items**	**Very low**	**Low**	**Medium**	**High**	**Very high**
1	E-learning lacks consideration for individual differences among students					
2	The student's lack of computer skills affects his e-learning.					
3	The method of learning through e-courses is one of the reasons for students' weak academic achievement					
4	The internet connection speed for taking e-courses inside the university is weak					
5	Students refuse e-learning and prefer (face to face) learning					
6	Unsafe websites make the e-learning process unsafe too.					
7	The presence of technical errors in the e-learning' site prevents the students from entering the electronic course..					
8	E-learning lacks the human interaction between students and the teacher.					
9	Students' low motivation towards e-learning is due to spending a lot of time on smartphones and laptops					
10	E-courses reduce students' creativity and innovation					
11	A lack of space for discussing questions in e-learning is a major reason for failing to answer them.					
12	Some of the computers available at the university need maintenance.					
13	There is a frequent difficulty facing the student when trying to enter the course website electronically from outside the university.					
14	There is a difficulty in contacting e-learning coordinators after the end of the official working hours.					
15	The absence of appropriate training for students, before taking the e-courses.					
16	The presence of lots of pressure on computer laboratories at the university prevents students from undertaking e-courses in their free time.					
17	Offering electronic courses for students, some of whom do not have any computer experience.					
18	The complexity of the procedures which students go through to obtain a new password prevents them from entering the electronic course on time					
Field 2: E-learning Advantages		Level				
Item No.	Items	Very low	low	Medium	High	Very high
19	The speed of the internet connection inside the university is high.					
20	Great pressure relief on the university computer labs enhances access flexibility to e- courses site from anywhere where the internet is available, especially in students' spare time					

21	Students can easily access the e-learning site from inside or outside the university.					
22	The presentation of the scientific material in e-courses provides students with abundant information that exceeds what they get in traditional learning.					
23	There are no obstacles in e-learning when sending or receiving scientific material between teachers and students					
24	The use of technology in e-learning develops students' learning skills.					
25	E-courses help students obtain equal educational opportunities with their peers					
26	Students feel satisfied while studying via e-learning sites.					
27	E-courses contribute to saving students' time, effort, and expenses.					
28	E-learning addressed many of the disadvantages of traditional learning methods.					
29	There is no need of teachers' presence with students in one place					
30	E-courses help students to balance their work and study.					
31	E- learning takes into account the individual differences between students					

THANK YOU FOR RESPONDING

Appendix 2
Interview guide

1.   Based on your experience, what do you think are the advantages of AABU e-learning?
2.   Based on your experience, what are the e-learning's defects?
3.   How would you rate the overall quality of AABU e-learning: satisfying not satisfying?