

The Quality of Blended Learning During COVID-19 Pandemics at the University of Jordan

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Abstract

This study aimed at identifying the quality of using blended learning within COVID-19 pandemics in teaching some postgraduate courses at the University of Jordan from the students' perspectives. The study used the descriptive approach and developed a survey as an instrument, which was distributed to a sample of (130) students for the summer semester in 2020. The results showed that students were highly satisfied with using blended teaching in the following areas, aspects of blended learning, the role of students, the role of teachers, and the blended learning materials. However, students showed medium responses to the e-learning system. The researcher recommended that the University Jordan administration needs to move forward to apply blended learning, integrate technology into postgraduate courses, and improve the e-learning system.

Keywords: blended-learning, University of Jordan, Graduate Studies, COVID-19 pandemics, E-Learning system.

I. Introduction

Most universities aspire to present high-quality education by using various teaching methods and techniques to cope with the accelerated use of technology worldwide. The technological revolution created several challenges for higher academic institutions in Jordan, especially after the emergence of COVID-19 at the beginning of 2020. Educational institutions faced the challenge of transforming all their programs to online education after the closures and lockdowns that occurred because of the pandemic. After the ease of restrictions and the issuance of regulations regarding opening schools and universities to a certain limit, universities strived to provide solutions to treat the new norms of mixing face-to-face and online education. Therefore, there was an attempt to implement blended learning solutions to solve several problems that the pandemic created. This attempt did not aim to eliminate the conventional learning methods but to create a balance that enables students to benefit from both. The use of blended learning has been expanding from secondary education to higher

education systems in response to the increased demands to use technological solutions in education (Halverson et al., 2017).

Scholars defined blended learning as the education that combines in-person and online education, which means that teaching technique is used in percentage from 30%-45%. Graham (2006) defines blended learning as “learning systems combine face-to-face instruction with computer-mediated instruction” (p. 5) while Castro (2019) defined blended learning as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences” (p. 96). Blended learning proves to have several benefits to students in graduate and postgraduate levels (Bliuc et al., 2010; Bowyer & Chambers, 2017). It helps students to increase their attendance to face-to-face classes, assist them to improve their professional skills, gain further knowledge, master time management, and enhance their online discussion skills (Mishra et al., 2020). Other reasons for higher academic institutions to implement blended education include the inability of some students to attend classes on campus for job and family

commitments while other students have financial reasons (Bonk, 2009). Furthermore, most universities seek to implement blended learning to fulfill the accreditation requirements and to improve the university level to meet the international recognition measures.

In Jordan, the faculty of Educational Sciences was founded at the University of Jordan in the academic year 1973/1974. The faculty grants students a bachelor's degree in five majors, and master's and Ph.D. degrees in 37 programs. In summer 2020, 634 students enrolled in the master's programs, and 626 students in the Ph.D. program. The strategic plan of the faculty requires getting an international accreditation. The accreditation requires the application of blended learning throughout the college programs. In addition to these requirements, the COVID-19 situation imposed the use of online education, and blended learning was one of the solutions.

1.1. Statement of the problem

Higher education institutions worldwide aim to implement blended learning and online learning both hybrid and fully online education in almost all their programs. However, many educational leaders wonder whether online education is going to be the preferred method by students (Courtney, 2011). Because of the accelerated use of online education, high number of students enroll in online programs (Francis, 2020). In addition, many higher academic institutions are creating and designing new programs that implement technology to offer several online courses (Wong, 2012). Therefore, the researchers found out that there is a need in the University of Jordan to encourage professors to implement blended learning as a tool to help students improve their professional skills and offer them courses that align with their academic goals and expertise. To improve online learning, the University of Jordan offered several workshops to help professors understand the importance of online education and have a holistic idea about successful programs offered worldwide. The University also offered the Moodle program as a platform for online education and adequate training for faculty members to familiarize them with the new system. However, until now, the University did not make a decisive decision regarding implementing blended learning for all courses. Therefore, the researchers found out that there is

scarcity in the studies that address blended learning in the universities in the Middle East in general, and specifically in Jordan.

This study aimed at understanding the quality of blended learning courses in the faculty of Educational Sciences at the University of Jordan from the students' perspectives and the effectiveness of these courses. The study presented an answer to the following question:

- What is the level of quality of blended graduate programs offered by the faculty of Educational Sciences at the University of Jordan from the students' perspectives?

1.2. Significance of the Study

This study is designed to evaluate the implementation of blended learning at the University of Jordan based on the academic challenges that higher academic institutions face. In addition, the continuous improvement that the faculty of Educational Sciences aspires to accomplish to get the international accreditation. Therefore, the results of this study will be useful to the faculty of Educational Sciences Deanship and colleges of education in Jordan and the Arab world to evaluate their blended learning programs. The results also will inform university professors on the feedback of using blended learning in their classes during the COVID-19 pandemic.

2. Literature Review

Blended learning describes a solution combining several teaching methods including collaborative learning, web-based courses, electronic systems, and knowledge management, which all integrate with in-person teaching and live e-learning. Blended learning is also a blend of traditional teacher-guided training, synchronous online conferences, and asynchronous self-paced study (Lee et al., 2016). Blended learning provides a hybrid system, where traditional teaching methods are used alongside modern e-learning resources and activities in one course (Akyüz & Samsa, 2009).

The literature shows the importance of blended learning and its effectiveness for the student and the teacher. Blended learning has an impact on the achievement of students. Studies have shown that students who receive their education in an

environment integrated with blended learning achieve better than students who learned by traditional (face-to-face) and the full e-learning system. It also affects increasing students' retention of learning over traditional (face-to-face) and full e-learning (Bowyer & Chambers, 2017). Studies also showed that blended learning has reduced almost half of the learning time, as well as half the cost by mixing direct e-learning, self-progression, and face-to-face classroom learning. Students' attitudes to using e-learning technology in the classroom in the educational process may contribute to the interest in blended learning to help them increase their motivation to learn, develop the cognitive and performance aspects, and meet their individual needs so that each of them learns at his own pace, as well as increasing their sense of equal educational opportunities (Bayerlein & Jeske, 2018).

The definitions of blended learning includes a combination of the several elements that serve as an answer to the question, what does blended learning combine? The answer to this question would be that blended learning combines various presentation media (traditional and internet-based), diverse learning events (self-paced, individual & collaborative, and group-based), and electronic performance support and knowledge management (Lee et al., 2016).

Blended learning has several dimensions that its users can utilize to get optimal results. These dimensions exist in the combination of direct online learning with indirect learning, mixing self-paced learning with direct learning, mixing planned and unplanned learning, mixing customized content (prepared based on need) with ready-made content, and finally mixing learning with practice (Güzer & Caner, 2014). Ginns and Ellis (2007) argued that the quality of blended learning is difficult to reach its utmost effectiveness because technology only supports a small portion of the educational process. Moreover, there is a continuous improvement of technological devices and computer programs. To evaluate the efficiency of blended learning, Pombo and Moreira (2012) suggested an outline to evaluate the quality of blended learning that included teacher, learner, and electronic resources. Whereas, Bowyer and Chambers (2017) recommended another outline to evaluate the quality of blended learning based on context; social, legal, economic, and ethics, subject

material: content, lesson plan, and activities, students; computer and technological skills, their roles as learners, lecturers; computer and technological skills, and their roles as facilitators, and finally, the technological system used; flexibility, accessibility, and its ability to provide several moods of knowledge, in addition, to offer safety and interaction.

Blended learning became important in the different educational levels. At universities, it has been introduced into undergraduate and graduate programs. There were several studies conducted that aim to evaluate the quality of blended learning and the level of satisfaction among grad students and professors. Al-Fodeh et al (2021) evaluated the effectiveness of blended learning and its quality as provided for dental education in Jordan. The students' opinions and views on the use of blended learning were also explored. After conducting an online survey for 314 students, the majority were inclined toward face-to-face teaching of dental courses. However, participants showed positive attitudes toward combining traditional teaching with online teaching. In the same area of dental education, Sarialioglu Gungor et al (2021) investigated the attitudes of undergraduate students in dental majors toward the use of online education in some universities in the US. The investigation included 1,605 undergraduate students, who have been selected randomly and who participated after taking their consent. The study used several instruments to collect data, such a questionnaire and interviews. The findings showed that most students expressed their dissatisfaction with distance learning in dental courses.

Jamil et al (2022) explored the options of teaching mathematics for undergraduate students during the Covid-19 pandemic at Universiti Brunei Darussalam. The university used blended learning as a solution during the pandemic. The investigation was done by reviewing this solution by conducting interviews with professors and students to see their feedback. The investigation concluded that using online education, and especially blended learning was effective and useful during the COVID-19 pandemic.

Foung et al (2022) investigated the role of blended learning in improving students' learning process of English language and the

students' engagement during the COVID-19 pandemic in Hong Kong university. The study analyzed 469,286 data logs in the learning management system used in the university to evaluate the students' engagement. The findings revealed that students were most engaged with assessment and examination. The more students were engaged in the course, the better their outcome was. The findings provided a positive impact on the use of blended learning during the pandemic.

Valverde-Macias and Llerena-Izquierdo (2022) explored a strategy based on the use of Google Classroom and blended learning for students at Salesian University. This mixed strategy was used during the COVID-19 pandemic. The solution was implemented with students online and in a face-to-face environment. The findings revealed positive results for such an implementation. The findings also showed the need for using blended learning in situations similar to the COVID-19 pandemic.

Finlay et al (2022) investigated the views and opinions on the use of blended learning for undergraduate students in sports sciences majors during the COVID-19 pandemic. The national student survey was used as an instrument to gather the perceptions of 62 students. The results revealed positive attitudes toward blended learning. The results suggested blended learning as a preferred method to be used by university professors to teach students in sport and other disciplines.

The previous studies showed that most students had positive attitudes regarding online and blended education. Regardless of some negative feedback, students' satisfaction with blended learning was significant. Therefore, this study was designed to evaluate the University of Jordan's attempt to apply blended learning in most of its programs. However, several factors controlled the quality of courses offered and the followed procedures.

3. Methodology

3.1. Research Design

This study belongs to the type of quantitative research methodology. This approach allows researchers to investigate phenomena in an objective manner (Mohajan, 2018). The survey approach was used to collect the data among the selected sample of this study. The study was conducted at the University of Jordan, which is one of the major universities in Jordan. The Faculty of Educational Sciences was selected, where the researcher works and has good knowledge of its staff and students.

3.2. Participants

The sample of the study included all 130 graduate students from several programs in the Faculty of Educational Sciences at the University of Jordan. The participants received their classes in the summer semester of 2020 when the outbreak of COVID-19 forced the closure of all educational institutions.

3.3. Instrument of the study

The survey method was used as an instrument and was designed based on the suggestions of Bowyer and Chambers (2017) and Pombo and Moreira (2012) in the area of blended learning quality. The survey in its final version consisted of 38 questions distributed among five main items: aspects of blended learning (12 questions), blended learning materials (5 questions), student's role (6 questions), and professor's role (9 questions), and blended learning system (6 questions).

Reliability and validity of the instrument have been verified by content reliability and using Cronbach's Alpha, which is a measure of internal consistency to investigate the level of consistency of the survey items by implementing the formula 0.80-0.91 as shown in Table 1.

Table 1. Reliability values according to Cronbach Alpha for the fields of the study instrument.

No.	Item	Internal Consistency
1	Aspects of Blended Learning	0.90
2	Blended learning material	0.82

3	Student's role	0.91
4	Professor's role	0.91
5	Blended learning system	0.80

3.4. Data analysis

The analysis of the results of the survey was carried out descriptively and statistically. The survey was distributed to all grad students at the University of Jordan in summer 2020, and the SPSS program was used to analyze the survey questions and to extract the mean scores and standard deviations for the responses of the participants of the study. To present the results and judge the quality of the responses of the sample members, the scores level was low if the score was (1.00-2.33), medium (2.34-3.67), and high grade (3.68-5.00).

4. Results and Discussion

The main question of the study was related to the quality of implementing blended learning in teaching some graduate courses at the Faculty of Educational Sciences at the University of Jordan from the students' perspectives. The mean scores and standard deviations of the responses of the participants regarding their satisfaction with blended learning were calculated as shown in Table 2.

Table 2. The mean scores and standard deviations of using blended learning from the students' perspectives in a descending order

No.	Category	Mean score	Standard Deviation	Rank	Degree
3	Students' Role	4.11	0.67	1	High
4	Professors' Role	3.97	0.67	2	High
1	Aspects of Blended Learning	3.96	0.57	3	High
2	Blended Learning Material	3.72	0.64	4	High
5	Blended Learning System	3.11	0.56	5	medium
Total		3.83	0.46	-	High

Table 2 shows the total results of the quality of blended learning in some subjects at the Faculty of Educational Sciences at the University of Jordan. The student's role had the highest rank with a mean score of 4.11. The professors' role came in the second rank with a mean score of 3.97, and the blended learning systems came in the last rank with a mean score of 3.11. The students' role had the highest score due to the

important part the students play in engaging with the blended learning materials. The blended learning systems received the last rank because students did not get the adequate motivation to search for additional resources. Moreover, the internet services were not available in all classes which impeded getting information online.

In the second area, the professors' role got a high score of 3.97, where item number 26 received the highest mean score that addressed the variety of using teaching techniques such as video, sound, text, etc. In addition, item number 32 got a mean score of 4.15 that addressed the role of the professor in helping and supporting students to learn.

The aspects of blended learning got a mean score of 3.96. Students mentioned that blended learning encouraged them to search for additional resources to get more information and enhance their understanding of the subject topics. In addition, the online discussion forums helped students present their ideas freely and without restrictions. Furthermore, blended learning helped students interact in class discussions that encouraged them to cope with the latest news regarding their subject topics.

Regarding the material of blended learning, the mean score was 3.72. Item 15 scored the highest mean score because students mentioned that the assignments that were required to do harmonize with the subject outcomes. However, item 14 received a low mean score because professors in some subjects faced some difficulties in presenting the material online which is different from in-person classes.

According to the fifth area, the online learning system, item 38 received a mean score of 3.11 that addressed the possibility of using the online system to present word documents, PowerPoint slides, Pdf, videos, pictures, etc. Whereas, item 37 received a mean score of 4.06 that addressed the technical support that students received when having any technical issue in the online system. However, due to the old online system used in the University of Jordan, students complained about facing several technical problems. Moreover, the old online system is not updated to cope with students' needs. The internet disconnection in classes and the absence of Wi-Fi service in some other classes created hindrances for blended learning classes.

It is obvious from these findings that the general evaluation of using blended learning in some graduate courses at the Faculty of Educational Sciences at the University of Jordan from the students' perspectives was generally high in the first four categories: aspects of blended learning, students' role, professors' role, and blended learning material. However, in the fifth category

which is related to the online system, the evaluation was medium. This explains that there is a general awareness among students regarding the importance of blended learning in advancing their learning abilities and enriching their knowledge through searching for new information and resources. In addition, students who are enrolled in blended learning classes are motivated to adopt this type of learning as part of their education side by side with their awareness of their roles as students.

The results of this study agree with a similar study done by Al-Fodeh et al (2021), which proved that blended learning help students have a level of satisfaction with the education material, the online system, and the well-designed courses which help in increasing the level of motivation among students. Similarly, the results of this study showed that graduate and undergraduate students prefer this type of education (Sarialioglu Gungor et al., 2021). Graduate students also mentioned that online education increased their motivation to learn new things through searching for further information online. Moreover, blended learning helped students have better communication with their instructors on the online platform (Jamil et al., 2022). Moreover, blended learning help student becomes more independent improves their skills, and enhance their academic progress (Varthis, 2016). Likewise, blended learning helps students improve their time management skills, evaluate their academic progress and adapt to new forms of education (Finlay et al., 2022).

Conclusion

This study addressed the importance of implementing blended learning in teaching courses at the Faculty of Educational Sciences at the University of Jordan. The findings revealed that both distance and online learning have been widely recognized nationally and internationally among several universities. In addition, online education attracts students, who have social and work commitments that prevent them from attending in-person classes. The use of blended learning at the University of Jordan during the COVID-19 pandemic proved to be effective. The University, however, can improve the experience of using blended learning systematically. Students benefited from the use

of such a solution, as well as professors. Therefore, blended and online education allows these students to pursue their education and get university degrees in easier and more accessible ways.

Recommendations

In the light of the results of this study, the researcher recommends that the University of Jordan use blended learning not only for graduate students at the Faculty of Educational Sciences but also for all students in higher academic institutions. There is a strong need to adopt blended and online learning as a new model of education for all students in all colleges, especially at the time of COVID-19. In addition, there is a need to adopt a new and updated online system to help students access their courses conveniently. The researcher also suggests that more studies are needed to measure the effectiveness of online and blended learning on students' academic progress and the accomplishment of their master theses and Ph.D. dissertations.

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