

The Degree of the User (the Teaching Staff) Acceptance of a Massive Open Online Course on Business for Higher Education in Palestine, Palestine Technical University: Kadoorie as a Case Study

مدى تقبل أعضاء الهيئة التدريسية في كلية الاقتصاد والأعمال
في مؤسسات التعليم العالي الفلسطينية لاستخدام المساقات
المفتوحة المصادر عبر (الانترنت) في عملية التدريس (جامعة
فلسطين التقنية خضوري نموذجاً)

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Abstract:

This study aimed to determine the Faculty of Business and Economics members' at Palestine Technical University (PTUK) attitudes towards using the Massive Open Online Courses (MOOCs) in the educational process. The descriptive-analytical method was used in the study since it describes the relationship between the variables and analyzes the degree to which these variables are connected. The study sample consisted of 40 faculty members from the Faculty out of 43 members. A questionnaire was constructed and used to be the tool of the study. The study examined the following null hypothesis: There are no significant differences in the level of significance that equals $\alpha \leq 0.05$ in the faculty members' attitudes at Palestine Technical University (Kadoorie) towards using MOOCs for students of the Faculty of Business and Economics according to gender, years of experience, specialization, and academic rank variables. From the previous survey that was conducted for the importance of using MOOCs in teaching the students of the Faculty of Business and Economics at PTUK, we can infer that using MOOCs may enhance their understanding and interaction with the materials of their specialization by engaging with students and tutors worldwide. In addition to the ability to attend online lectures without the urgent need to move to their university in light of the Palestinian political situation, which sometimes makes it difficult to access. In addition to the implications of the COVID-19 Crisis that were reflected worldwide.

The researchers came up with some recommendations that the Palestinian Academic Institutions should integrate "MOOCs" in the education process as they serve the special situation of Palestine: academically, politically, and economically; and make use of the other countries' experience in that.

Keywords: Massive Open Online Courses, Palestine higher education institutions, user acceptance.

المخلص:

هدفت الدراسة إلى تحديد اتجاهات أعضاء الهيئة التدريسية في كلية الأعمال والاقتصاد في جامعة فلسطين التقنية نحو استخدام المساقات المفتوحة عبر الإنترنت في العملية التعليمية. تم استخدام المنهج الوصفي التحليلي في هذه الدراسة؛ لأنه يصف العلاقة بين المتغيرات، ويحلل الدرجة التي تربط بين هذه المتغيرات. ولقد تكونت عينة الدراسة من (40) عضو هيئة تدريس بالكلية من أصل (43) عضواً. تم إعداد استبانة كأداة للدراسة، كما اختبرت الدراسة النظريات الصفية التالية: لا يوجد فروق

ذات دلالة احصائية في اتجاهات أعضاء الهيئة التدريسية نحو استخدام المساقات المفتوحة عبر الإنترنت في العملية التعليمية تعزى لمتغيرات: النوع، وسنوات الخبرة، والتخصص، والمستوى الأكاديمي. وقد خلصت الدراسة إلى استنتاج أهمية المواد المفتوحة عبر الإنترنت في تعزيز فهم الطلبة وتفاعلهم مع المواد التي يدرسونها عن طريق الانخراط مع طلبة ومدرسين من شتى أنحاء العالم. يضاف إلى ذلك قدرتهم على حضور محاضرات إلكترونية دون الحاجة للتوجه لجامعاتهم، الأمر الذي تحتاجه المعاهد والمؤسسات التعليمية بشدة نظراً للظروف السياسية والوبائية (أزمة كورونا في العالم). أوصى الباحثون توصيات عدة تتلخص في ضرورة تضمين المساقات المفتوحة المصدر عبر الإنترنت في العملية التعليمية التعليمية في المؤسسات الأكاديمية؛ نظراً لأهميتها في خدمة الوضع الفلسطيني بشكل خاص: أكاديمياً وسياسياً واقتصادياً.

الكلمات المفتاحية: المساقات المفتوحة المصدر عبر الإنترنت، مؤسسات التعليم العالي الفلسطينية، مدى التقبل.

Introduction

An influx of interest in Massive Open Online Courses (MOOCs) has stimulated the global public curiosity, attracting more people than conventional online education. MOOCs are available to all kinds of students, with no charge for participation (Voss, 2013). Due to the rise of online education providers such as Coursera, edX, and Udacity, MOOCs emerged fast in early 2012. About 79 million individuals registered in over 800 MOOCs provided by over 800 higher education institutions in 2018, illustrating just how vast the rise in MOOCs has been (Shah, By The Numbers, MOOCs in 2017, Class Central, 2018., 2019). Moreover, the number of MOOC students and the universities that provide MOOCs is projected to increase. While most professors are instructed to engage students in learning experiences in a face-to-face class, students in MOOCs are expected to be actively involved in their education (Kizilcec, Pérez-Sanagustín, & Maldonado, 2017).

The Arab experience in establishing MOOCs platform has been illustrated by Edrak platform, which was established in Jordan by Queen Rania Foundation for Development in 2013, and with edx partnership to improve the education level of individuals, which would result in other fields' prosperity.

Rawaq is another Arab Platform founded in Saudi Arabia by the two pioneers, Fuad Alfarhan and Sami Alhaseen, in 2013, to offer free lectures in the Arabic Language in various fields of knowledge, especially for those who cannot join the traditional universities, among others.

On the other hand, managing MOOCs effectively

is a big challenge. Most institutions are concerned with strategies to keep MOOCs alive and viable by reducing direct instructor or facilitator engagement, such as restructuring MOOC assignments to make them self-paced. In this revamp, a combination of multiple-choice questions and automated peer reviews can replace collaborative tasks. Also, there were several roadblocks to the long-term success of MOOCs. The future is paved for MOOCs, and the routes to long-term educational sustainability depend almost entirely on what we do now (Alamri, Almaiah, & Al-Rahmi, 2020).

Universities have recently made significant investments in organizing their production pipelines, launching new multimedia departments, purchasing infrastructure, and retraining academics to teach MOOCs, among other things. Sustainability is preserving the present generation of resources while also preserving the next generation. Ensuring that sustainable development may be achieved on a global scale is linked to education (Calvo, Lyon, Morales, & Wade, 2020). Many sustainability educators have been able to modify their practice due to the increasing number of MOOCs since many of them have produced resources relating to energy, wealth, ethics, environment, and management. Studies conducted before the release of MOOCs indicate that one of the primary topics in sustainability education is ethics. In their research on sustainability and MOOCs, Beltrán et al. (2019) found that MOOCs had a higher impact on sustainability if the subject matter was incorporated into the course material and if students were motivated to utilize it (Beltrán, Romero-Rodríguez, & Ramirez, 2019). Thus, this study examines how a university-based MOOC approach has inspired a rise in sustaining social learning and has led to a broad education in that area.

Statement of the Problem

We can determine the research problem by the need to improve the teaching-learning process in Palestine that is negatively affected by the historical occupation of the country, in the light of the technological advancements and the limited capacities of the Palestinian universities as well (Ramahi, Hanan 2015).

MOOCs can help the universities serve education for a large number of students in the same course simultaneously, which will enhance their learning and integration in the educational process (Andreasen et al., 2018).

In this study, an investigation of MOOCs in business English for Palestinian higher education is

conducted, especially the use of MOOCs to teach some courses of the Faculty of Business and Economics at PTUK. The study sheds light on identifying the lecturers' acceptance of using such online courses in the teaching-learning process and the applicability of that in light of the specialty of the Palestinian issue and the obstacles that face education as well.

The Study Objectives:

1. To identify the attitudes of the Faculty of Business and Economics lecturers at Kadoorie University towards using MOOCs in the teaching and learning process.
2. To identify the impact of the variables years of experience, academic rank, gender, and specialization field on the participants' attitudes towards using MOOCs in the teaching and learning process.
3. To enhance the Palestinian educational developed teaching policies in higher education institutions in general, and in the Faculties of Business and Economics in specific; since they need such development and refinement to keep up with the accelerated use of the technological applications in the labor market.
4. To supply the Ministry of Higher Education decision-makers in Palestine with some data about the acceptance of involving MOOCs in the teaching and learning process in the faculties of business and economics in the Palestinian Universities, especially at Kadoorie University as a case study.

Hypotheses of the Study:

- Are there any significant differences at $\alpha \leq 0.05$ in the participants' attitudes towards using MOOCs in the teaching and learning process due to the gender variable?
- Are there any significant differences at $\alpha \leq 0.05$ in the participants' attitudes towards using MOOCs in the teaching and learning process due to the years of experience variable?
- Are there any significant differences at $\alpha \leq 0.05$ in the participants' attitudes towards using MOOCs in the teaching and learning process due to the specialization variable?
- Are there any significant differences at $\alpha \leq 0.05$ in the participants' attitudes towards using MOOCs in the teaching and learning process due to the academic rank variable?

Limitations of the Study:

The study addressed the Faculty of Business and Economics lecturers at Kadoorie University. The study sample consisted of 40 items from the total society with a total of 43 lecturers.

Background of Research

Technologies such as artificial intelligence have altered the old teaching style into the current way of training (Di Vaio et al. 2020). Through websites, learning portals, video conferencing, YouTube, mobile applications, and thousands of free, readily available websites for blended learning tools, e-learning is encompassed by a broader term of technological development. Currently, MOOCs improve the understanding of students, even academics and professionals, and industry over the internet (Chopra et al. 2019). Most colleges in higher education provide online courses for their students on and off campuses. MOOCs are acknowledged as a significant advance in higher education. Millions of individuals and students benefit from the current skills (Gupta and Gupta 2020).

A study by Baggaley (2014) focused on the widespread use of MOOCs among Western educators as it is considered a potential cost-saver based on reliable pedagogical principles that can be useful vehicles for education and training.

On the other hand, the study stated that the available MOOCs now did not consider developing countries' needs. A matter which offered more encouragement for designing MOOCs takes into account the developing countries' situations and obstacles (Baggaley, 2014).

The previous studies have not neglected the challenges that MOOCs meet in the teaching-learning process. Such challenges can be seen as providing tutoring support, answers to student-posed questions, and the control of cheating that are addressed in Haas et al.'s study titled "Automating a Massive Online Course With Cluster Computing" (Haas, 2016).

The study suggested developing an online course delivery system that runs in a cluster computing environment and is designed to support a course with 10k or more students. The delivery system enhances synchronous and asynchronous lectures, provides an online intelligent tutoring system, and detects plagiarism, as literally stated by the study.

The Complete University Guide in the UK has stated the advantages of MOOCs courses as follow:

1. They offer a large number of students the

opportunity to study high-quality courses online with prestigious universities, often at no cost.

2. They are ideal for independent study, and users can select courses from any institution offering them.
3. MOOCs do not always lead to formal qualifications. There are no entry requirements.
4. Video-based offer interaction through peer-review and group collaboration or automated feedback through objectives and online assessments, including quizzes and exams.

Literature Review

As an approximation of the tactics of business faculties, the MOOC approach plays an active role in the online learning industry. Although the MOOCs have not gained the momentum that many expected, there has been a new wave of creative education approaches, and academics are investigating new teaching methods supported by digital technology (Guerrero, Heaton, & Urbano, 2021).

Jung, Kim, Yoon, Park, and Oakley (2019) performed a study on the influence on student control, sense of progress, and perceived efficiency in MOOCs on the perceived quality of education. In this study, writers assessed the quality of teaching through the dimensions of course material, course structure and organization, transactional interaction between the student and the contents, and evaluation. The study demonstrates the essential determinants of the perceived efficacy of transactional engagement and course structure. It is crucial to emphasize that this study focuses only on one aspect of the transaction. Authors believe that formative evaluations and thorough dialogues are necessary through teachers or experts. Askeroth and Richardson (2019) have performed a qualitative study using oral interviews analyzing the teacher's perspective of quality learning in MOOCs. Teachers regard scale issues as a problem while emphasizing that interaction is a crucial element for supporting learning for the varied audience attracted by MOOCs (Julia & Marco, 2021).

MOOCs have several advantages over conventional ways of learning, including more access to educational materials, quicker communication, and academic collaboration (Alam, et al., 2021).

Continuing technological developments have made it hard to design a distinctive MOOCs concept. Earlier research has tried to define MOOCs in different

ways. Several studies (Ullah, Mugahed Al-Rahmi, Alzahrani, Alfarraj, & Alblehai, 2021) have described e-learning as the use of technology in the learning process. In contrast, others have defined e-learning as an information system that can be integrated into various teaching materials through email, debate, tasks, and live chat sessions.

In a study by Andrew Patrick (2011), the researcher stated that among the benefits of open education, supported by MOOCs include the abundance of educational resources and new academic societies. The study added that the learners found it a good chance to be provided with educational resources, especially in far, separated places. In contrast, the old-aged learners said that: "This way, using MOOCs will activate our brains while our bodies' power is weakening." This is a sign of their positive attitude towards using "MOOCs.

The concept of e-learning is a development of remote learning in the 1980s. Ongoing worldwide lockdowns due to the outbreak coronavirus illness (COVID-19) pandemic in 2019 has shown that MOOCs are the only alternative for further learning (Mailizar, Burg, & Maulina, 2021). Each institution worldwide has spent much on e-learning, and many traditional classes have transitioned to MOOCs. Advances in digital technology and communications (ICT) have led to significant advances in all sectors concerned (Castiblanco Jimenez, Cepeda García, Violante, Marcolin, & Vezzetti, 2021).

ICTs have adopted developing concepts like Cloud Computing, MOOCs, Internet of Things, Big Data, E-learning, Social Networking, and blockchain to assure their sustainability (Ullah, Mugahed Al-Rahmi, Alzahrani, Alfarraj, & Alblehai, 2021). As a result of these ICT-driven advancements, new platforms, products, systems, and facilities have developed. Education also benefits from this growth in ICT-driven inventions. ICT has introduced several new learning paradigms, including e-learning and mobile learning. MOOCs and mobile learning are all supported in formal, non-formal, and informal learning. Previous research has explored the characteristics that both endanger and encourage the long-term survival of smaller e-learning programs in the tertiary sector of New Zealand (Li, He, & Wong, 2021).

Furthermore, the results indicated a thorough picture of developing e-learning challenges in the sector. A complete overview and assessment on these topics are available in the anthology, MOOCs, and sustainable curriculum, covering values, resources,

and some best practices in the field. Initially, it looks to be viable to introduce and execute e-learning in higher education. Generally, e-learning methodologies and approaches are frequently less intense than those employed in traditional training. It was also shown that online learning helps sustainability by successfully reducing content demand and energy-saving (Amsal, Putri, Rahadi, & Fitri, 2021).

Albo et al. (2020) stated that universities have been making a significant effort to develop MOOCs. Brick-and-Mortar traditional courses were maintained to develop and carry out MOOCs. Several design strategies that combined face-to-face learning with MOOCs were applied. This research aimed to present and explore the affordances offered by an authoring tool devoted to supporting the design of MOOCs' blended uses and its impact on the resulting learning designs. The findings indicated a positive impact of MOOC design on the learning process.

Methodology

Research design

In this study, the descriptive-analytical method is used as an appropriate approach. The descriptive approach examines the relationship between variables, the degree of relationship between variables quantitatively and uses quantitative measures. Therefore, the researcher has found it the most appropriate for this study and the one that achieves its objectives in a manner that ensures accuracy and objectivity.

Population

The study population consisted of all members of the teaching staff at Palestine Technical University (Kadoorie), which are 43 members of the teaching board, according to the Faculty of Business and Economics at Palestine Technical University (Kadoorie).

Study sample

The study sample consisted of 40 members of the teaching staff of the Technical University of Palestine (Kadoorie). The sample consisted of 93% of the study population. The sample is representative of descriptive research in which the study population is in the hundreds when the representation ratio is 20% and above.

Table 1
Frequencies & Percentages Due to Study Variables

Variables	Levels of Variables	Frequency	Percentage (%)
Gender	Male	36	90%
	Female	4	10%
Years of Experience	Less than 5 years	14	35%
	5-10 years	10	25%
	More than 10 years	16	40%
Specialization	Accounting	13	32.5%
	Administrative sciences	18	45%
	Financial & Banking Sciences	2	5%
	Economy	5	12.5%
	Others	2	5%
Academic Rank	Faculty member	5	12.5%
	Lecturer	23	57.5%
	Assistant Dr.	10	25%
	Prof. Assistant & higher	2	5%

Research Instrument

A questionnaire is developed as an instrument to identify the attitudes of PTUK's faculty members towards the use of online courses (MOOCs) for students of the Faculty of Business and Economics. The questionnaire consisted of two parts. The first included demographic data on the subjects represented by gender, years of experience, specialization, academic rank, and the second one consisted of the items that measure the attitudes of faculty members at PTUK towards the use of online courses (MOOCs) for students of the Faculty of Business and Economics. The number of these items is 34, distributed over three main dimensions:

1. The importance of using MOOCs, which consists of 9 items.
2. The advantages and benefits of using MOOCs, which consist of 10 items.
3. Obstacles and challenges of using MOOCs in the educational process and consists of 15 items.

The questionnaire's items were designed

according to the Likert scale. The scale was designed on the basis of the five-dimensional Likert scale. The items were built in positive and negative directions, and the weights were given as follows: strongly agree: five degrees, agree: four degrees, neutral: three degrees, disagree: two degrees, strongly disagree: one degree.

Authenticity of the tool: The semantics of the reliability of the tool have been extracted by presenting them to a group of arbitrators specialized in the field of management and scientific research methods (three arbitrators). In order to verify the suitability of the tool, the soundness of the formulation of items, in the light of the observations made by the arbitrators, the appropriate amendments were made. The researchers adopted the final formulation of the tool in its current version.

Stability of the Instrument:

In order to indicate the stability of the tool, the researchers used the equation of Cronbach Alpha, Geithman equation, and the equation of the half-interval.

Table 2
Stability of the Scale

Stability measurement tool	No. of Items	Stability	Order
Cronbach Alpha Equation	34	0.91	1
Half-Split Equation	34	0.71	3
Geithman Equation	34	0.89	2

It is clear from Table 2 that the stability coefficients of the tool were appropriate, with the coefficient of stability 0.91 according to the equation of Cronbach's Alpha, 0.71 according to the Split-Half equation, and 0.89 according to the Geithman equation. This indicated that the instrument has an acceptable degree of stability that can be relied upon in the final application of the study, which is higher than the acceptable minimum of (60%) and is statistically sufficient to continue the research procedures after indicating the validity and reliability of the research's questionnaire.

Statistical Analysis of the Study:

To test the hypotheses of the study, the data were stored in the computer; then, the results were analyzed and processed. The researchers used a set of appropriate statistical methods using the Statistical Package for Social Sciences (SPSS) as follows:

1. The means, percentages, and one sample T-Test

to examine study hypotheses.

2. Analysis of multiple variances to examine hypotheses related to gender, years of experience, specialization, and the academic rank variables.
3. Cronbach Alpha equation, Geithman equation, and the half-split equation of stability.
4. Colom Grove-Smirnov Test to see if the data follows or not a normal distribution (1-Sample K-S).

Results and Discussion of the Study:

In order to determine the statistical methods that will be used to test the hypotheses of the study, the normal distribution test (Kulmgrove-Smirnov test 1) was used (1-Sample KS).

Table 3 shows the results of the Kolmajarov-Smirnov test to determine whether the data follow a normal distribution or not, in order to determine the appropriate statistical tests for each case (teacher tests, laboratory tests) because most of the scientific tests require the distribution of data to be normal. The mean of each field of study is higher than 0.05. This indicates that the data follows the normal distribution and must use the scientific tests:

Table 3
Normal Distribution Test

Normal distribution test	Z - (Test's Value)	Significance Level
The tool's items total degree	0.51	0.95

Statistical Results Related to the Study Questions:

- First main question: What are the attitudes of faculty members at Palestine Technical University - Kadoorie towards using MOOCs for students of

the Faculty of Business and Economics?

A number of sub-questions have emerged from the main question according to the study's axes, as follows:

- Question 1: To what extent are the faculty members aware of the importance of MOOCs?
- Question 2: What are the advantages and benefits of using MOOCs in the educational process?
- Question 3: What are the obstacles of using MOOCs in the educational process?

To answer the main question and the sub-questions, a one-sample t-test was used to analyze the questionnaire's areas. The researchers estimated the percentage of substitutes for each item, the mean, the standard deviation, the calculated value of the sample, and the calculated level of significance for each item, as well as the order of the items according to the value of their arithmetical mean and percentage. The item was positive when the respondents agreed with its content. This meant that the absolute value of t was higher than the tabular value of t 1.98 at the level of freedom 109 and the level 0.05 or the level was less than 0.05, and the relative percentage was higher than 60%. The item was negative when respondents did not agree with its content which means that the absolute value of the calculated value was less than the absolute value of the tabular value t. The level was higher than 0.05, and the relative percentage was less than 60%. The significance was higher than 0.05, and the relative weight was 60%.

- The first sub-question result:

How satisfied are the faculty members with the importance of using MOOCs?

To answer the question, the t-test of the sample was used, and the results in Table 4 showed the trends of the study sample in the first field:

Table 4

T-Test Results, Means, Standard Deviation, and Percentage of the Faculty Members' Awareness towards Using "MOOCs" in the Teaching-Learning Process

No.	Item	Mean	St.d	Approximate percentage	T value	Level of significance	Order
1	It gives a chance for a large number of students to join the course.	4.22	0.70	84.50	15.64	00.0*	2
2	This method supplies enough pace for learning.	4.07	0.47	81.50	21.00	00.0*	5
3	It helps in solving the teaching-learning process's financial problem.	4.15	0.62	83.00	16.77	00.0*	4
4	It decreases the expenses and increases the profit.	4.02	0.66	80.50	14.62	00.0*	6
5	It gives the opportunity for cross cultures interchange.	4.00	0.72	80.00	13.25	00.0*	7

No.	Item	Mean	St.d	Approximate percentage	T value	Level of significance	Order
6	It creates an effective learning.	3.82	1.01	76.50	8.29	00.0*	9
7	It supplies students with the essential feedback.	3.85	0.83	77.00	10.24	00.0*	8
8	It goes side by side with the technological revolution.	4.40	0.63	88.00	19.00	00.0*	1
9	It helps in the acceleration of developing the teaching-learning process.	4.17	0.81	83.50	13.03	00.0*	3
	Total degree	4.08	0.43	81.61	23.01	00.0*	

Table 4 showed that the value of the significance level of the sample was statistically significant at the level of significance $\alpha \leq 0.05$ on items 1-9 and the total degree of the importance of faculty members' awareness of MOOCs'. The level of significance of the sample was 0.00. This means that the respondents agreed on these items. Item 8 was very high in the first order as the percentage of the responses was 88%. This meant that respondents showed high support using MOOCs and kept pace with technology development. Item 6 was ranked last, with an estimated percentage of responses 76.50% higher than 60%, which meant that the educational process had achieved quality and effectiveness by using MOOCs.

In general, it was clear that the overall degree

of faculty members' awareness of the importance of MOOCs courses was very high according to the respondents' attitudes. Moreover, the total mean was 4.08, a standard deviation was 0.43, a level of significance was 0.00, and the estimated percentage was 81.61%. These findings proved that PTUK is a technical university that copes with up-to-date technological developments.

• Results of the Second Sub-Question:

What are the advantages and benefits of using MOOCs?

To answer the question, the sample t-test and results in Table 5 were used to show the attitudes of the sample items in the second field:

Table 5
T-Test Findings and Means, Standard Deviation, Percentages of the Advantages and Benefits of Using MOOCs in their Educational Process.

No.	Item	Mean	St.d	Approximate percentage	T value	Level of significance	Order
10	It enables the faculty members to teach massively and effectively at the same time.	3.95	0.78	79.00	11.71	00.0*	10
11	It offers the chance to join reputable universities.	4.05	0.84	81.00	11.59	00.0*	7
12	It enables the learners to obtain the optimal use of others' experiences globally	4.37	0.58	87.50	20.25	00.0*	1
13	It helps in creating an independent learner.	4.20	0.65	84.00	16.58	00.0*	2
14	It enables the learner to access global universities.	4.15	0.62	83.00	16.77	00.0*	4
15	It helps to overcome the registration process routine.	4.10	0.59	82.00	17.13	00.0*	5
16	It offers an adequate chance for learners' interaction through the live broadcasting.	4.17	0.71	83.50	14.87	00.0*	3
17	It allows the learner to watch the lectures at any time.	4.10	0.67	82.00	15.06	00.0*	6
18	It decreases the learner's tuition fees.	3.95	0.64	79.00	14.36	00.0*	9
19	It decreases the teaching process's expenses.	3.97	0.53	79.50	17.58	00.0*	8
	Total degree	4.10	0.45	82.05	22.56	00.0*	

* Statistically significant at level $\alpha \leq 0.05$.

Table 5 showed that the value of the sample's significance level was statistically significant at the level of significance $\alpha \leq 0.05$ in items 10-19. Furthermore, the total degree of advantages and benefits of using MOOCs, as the level of significance value of the sample, was respectively 0.00. This meant that the respondents agreed on these items. Item 12 was very high and in the first order, as the estimated percentage of respondents' responses was 87.50%, which meant the respondents supported the item. It stated that the use of MOOCs enabled students to gain benefit from international specialized people and experts. Item 10 came in the last order with an estimated percentage of respondents' responses of 79%, which was higher than the relative percentage of 60%. This meant that the use of MOOCs enabled us to teach a large number

of students with high quality.

In general, it was clear that the overall degree of the advantages and benefits of using MOOCs was very high according to the respondents' attitudes with a total mean of 4.10, a standard deviation of 0.44, a level of significance of 0.00, and an estimated percentage of 82.05%.

- Results of Sub-Question III:

What are the obstacles of using the Massive Open Online Courses (MOOCs) in the educational process?

To answer the question, t-test was used for the single sample, and the results are shown in Table 6.

Table 6
T-Test Findings and the Means, the Standard Deviation, the Percentage of Obstacles of using MOOCs in the Educational Process.

No.	Item	Mean	St.d	Approximate percentage	T value	Level of significance	Order
20	The budget allocated for purchasing equipment such as computers and laptops required for applying MOOCs is insufficient.	3.60	.74	72.00	9.35	0.00*	14
21	The faculty members are not well qualified for using MOOCs in teaching.	3.75	.74	75.00	10.65	00.0*	8
22	The university's administrative team does not support using MOOCs in teaching the faculty's courses.	3.60	.90	72.00	7.73	00.0*	13
23	The faculty members lack of experience in using MOOCs.	3.72	.85	74.50	9.15	00.0*	10
24	The widespread society culture of learning restricts using internet in the educational process.	3.75	.95	75.00	8.29	00.0*	9
25	The regulations of the Palestinian Educational System restricts using MOOCs in learning.	3.65	.83	73.00	8.72	00.0*	11
26	Strong rejection towards using MOOCs by the faculty members.	3.60	.87	72.00	7.99	00.0*	12
27	Students' lack of awareness of the advantages on using MOOCs in their learning.	4.12	.61	82.50	16.93	00.0*	1
28	Poor infrastructure of using MOOCs applications.	4.05	.68	81.00	14.47	00.0*	3
29	Absence of rules and regulations of using MOOCs applications	4.02	.73	80.50	13.15	00.0*	4
30	High costs of infrastructure such as purchasing hardware and software applications as well as the establishment of sites and networking, and information security.	3.92	.73	78.50	12.35	00.0*	5
31	Lack of qualified teachers using MOOCs in their teaching.	3.87	.94	77.50	9.26	00.0*	7
32	Lack of support of using MOOCs in teaching by the University's administration.	3.57	1.01	71.50	6.73	00.0*	15
33	Not accrediting these courses on the global and official levels of education.	3.87	.757	77.50	11.48	00.0*	6
34	Activities and tests are run online; which makes it difficult to prove the students' identities.	4.10	.84	82.00	12.03	00.0*	2
	Total degree of the obstacles of using MOOCs in the educational process.	3.81	0.51	76.30	16.38	00.0*	

Table 6 showed that the value of the significance level of the sample was statistically significant at the level of significance $\alpha \leq 0.05$ in items 20-34 and the total degree of obstacles of using MOOCs in the educational process as the significance value was respectively 0.00. This means that the respondents agreed on these items. Item 27 was very high and in the first order. The percentage of respondents' responses was 82.50%, which meant that the respondents agreed that there was a lack of awareness among students on the advantages and benefits of MOOCs in the educational process. This justified the university's insistence on developing e-learning. Item 32 obtained the last arrangement, where the percentage of the estimated responses by the respondents was 71.50%, which was higher than the relative percentage of 60%. This meant that the faculty board members did not support using open online courses.

The researchers attribute these results to the unacceptance of new technologies in the Arab World in general and resistance to teaching and learning new techniques. Moreover, students fear using new technology they are not familiar with. A study by Haas (2016) has shown other challenges that should be taken into consideration while conducting MOOCs.

To conclude, it is clear that the overall degree of obstacles of using open online courses in the educational process is high according to the respondents' attitudes with a total mean of 3.81, a standard deviation of 0.50, a level of significance of 0.00, and an estimated percentage of 76.30%.

- Second main question:

Are there any significant differences in the level of significance $\alpha \leq 0.05$ of faculty members' attitudes at PTUK towards using MOOCs by the Faculty of Business and Economics students according to gender, years of experience, specialization, and academic rank variables?

To answer this question, the researchers used the analysis of variables method. Table 7 showed the results of the analysis of the multiple variances of the degree of attitudes of faculty members at the PTUK towards the use of MOOCs by students of the Faculty of Business and Economics in terms of gender, years of experience, specialization, and academic rank.

Table 7

Variation Analysis Findings for Faculty Members' Attitudes at PTUK Towards using MOOCs in Teaching Students According to Gender, Years of Experience, Specialization, and Academic Rank Variables.

Variation Source	Deviation Squares Sum	Degrees of Freedom	Mean of Deviation squares sum	F Value	Sig. level
Gender	0.003	1	0.003	0.021	0.88
Years of Experience	0.08	2	0.04	0.31	0.73
Specialization	1.90	4	0.48	3.83	0.01
Academic Rank	0.11	3	0.04	0.29	0.82
The Error - Remains	3.66	29	0.13		
Total	645.57	40			

It was clear from Table 7 that the value of the significance level of the sample on the gender, the years of experience, the scientific rank variables, were 0.88, 0.73, 0.82, respectively, and these values were greater than the value of the specified level of the study 0.05a. We accepted the zero hypothesis on these variables. This meant no statistically significant differences in the level of significance $\alpha \leq 0.05$ in the attitudes of faculty members at PTUK towards the use of MOOCs by students of the Faculty of Business and Economics according to gender, years of experience, specialization, scientific rank variables. As for the variable of specialization, the value of the significance level of the sample is 0.01, and these values were less than the value of the specified level of significance of the study $\alpha \leq 0.05$, i.e., we rejected the zero hypothesis on these variables. There were no statistically significant differences in the level of significance $\alpha \leq 0.05$ in the attitudes of faculty members at PTUK towards the use of the online courses (MOOCs) according to the specialization variable.

To determine for whom differences were based on the specialization variable, we followed the analysis of the mono-variance by the LSD test of the telematics comparisons and the analysis results.

Table 8

LSD Test Findings of the Telematics' Comparisons on the Significance of the Differences in the Faculty Members' Attitudes Towards using MOOCs in teaching the Faculty of Economy and Business at Kadoorie According the Specialization Variable.

Variables	Comparisons	Means	Accounting	Administrative Sciences	Financial and Banking Sciences	Economy	Others
Variables Specialization	Accounting	4.18		0.41*			
	Administrative Sciences	3.77					
	Financial and Banking Sciences	3.99					
	Economy	4.13					
	Others	4.49		0.72*			

Table 8 showed the differences in faculty members' attitudes at PTUK towards using MOOCs courses by the Faculty of Economy and Business students according to the specialization variable between disciplines accounting, etc., in favor of specializations.

According to Table 8 analysis, the differences between the Accounting and the Administration sciences majors in favor of Accounting were clear.

In addition, the table showed the differences between the Administration Sciences and Others in favor of others.

Main Findings:

1. The overall degree of faculty members' awareness of the importance of using MOOCs courses was very high according to the respondents' attitudes, with a total mean of 4.08, a standard deviation of 0.43, a level of significance 0.00, and an estimated percentage of 81.61%.
2. The overall degree of the advantages and benefits of using MOOCs was very high according to the respondents' attitudes with a total mean of 4.10, a standard deviation of 0.44, a level of significance of 0.00, and an estimated percentage of 82.05%.
3. The respondents agreed that there was a lack of awareness among students on the advantages and benefits of MOOCs in the educational process, which justified the university's insistence on developing e-learning.

Recommendations:

The researchers recommend the following:

A. A. For the Ministry of Education:

- To supply the universities with up-dated technological tools and software that contribute in the development of the educational process.
- To conduct training workshops for universities' faculty members on using MOOCs and designing adequate online courses for our future educational environment.

B. B. For the Universities' Faculty Members:

- To enhance the teaching process by using adequate MOOCs to deliver the content to their students since all participants have agreed on MOOCs' importance in teaching. This was indicated in the findings in Table 4.
- To take advantage of other countries' successful experiences in using MOOCs in their teaching plan, as indicated in the findings in Table 5.
- To raise the student's awareness of the advantages of MOOCs and try to overcome the obstacles to apply for such courses in the learning process according to the findings in Table 6.
- To help students who lack experience in choosing effective MOOCs in science data. The findings indicated a preference for using MOOCs in learning among students of Social Sciences specializations over the Applied Sciences as in Table 8.

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