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The Effect of Online Learning on The Academic Achievement Among Students of Jordanian Private Universities in Light of The Covid-19 Pandemic, Based on The Variables of Comprehension and Analysis from The Perspective of Faculty Members

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Abstract. The current study aimed to identify the impact of online learning on the academic achievement among students of private Jordanian universities in light of the COVID-19 pandemic. The study sample, which was a stratified random sample, consisted of (378) faculty members. Descriptive survey method was used in the current study. In order to achieve the objectives of the study, a questionnaire was developed, and its validity and reliability were verified. The results showed that the effect of online learning on the academic achievement among students of private Jordanian universities in light of the COVID-19 pandemic was average; results of the study also showed statistically significant differences at the significance level ($\alpha \leq 0.05$) according to the gender variable in favor of females, and no statistically significant differences according to either the type of college variable, or years of experience' variables. In light of these results, the study recommended that private Jordanian universities pay great attention to online education, providing it with the appropriate infrastructure, because this may contribute to enriching the cognitive skills received, upgrading students' behavioral level, and actively contributing to improving students' academic achievement.

Keywords. Online-Learning, Academic Achievement, COVID-19 Pandemic, Jordanian Private Universities

1- Introduction

The world was recently exposed to the Corona virus pandemic (Covid-19), with its rapid and geometric sequence spread, which constituted a real danger that affected various vital areas in all fields of societies. This pandemic revealed the weaknesses of all society's sectors, especially the economic, health and educational ones. This reveal caused an additional burden on all countries of the world in general, and on the developing countries in particular. The pandemic reshaped the patterns of life in most societies, forcing people to try achieving normal life' activities from home and staying away from others in fear of the rapid spread of the virus. People started panicking from fear of infections, especially with the increasing death rates, the absence of the vaccine and the confusion of immediate medical solutions.

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This epidemic has resulted in a state of confusion in the professional plans of the educational process. The absence of academic activities and practices which present an important part in shaping both students' scientific and realistic personalities may very much weaken the educational performance of students and undermine the educational efforts undertaken by the existing educational systems. This absence would also produce a weak and fragile generation that are unable to keep up with global developments, in addition to causing loss of school's value and scientific importance (Baloran, 2020).

The outbreak of the Corona virus has caused the closure of schools and universities, and as a result of this, countries of the world have turned to the development and manifestation of educational technologies, educational networks, and modernize technological education platforms to ensure the continuity of the education system on one end, and to keep the education system in a state of permanent readiness for any new dilemma that countries of the world may face on the other end. Therefore, international interest in technology has increased, considering that technology is an integral part of communication between students and teachers, and between various community groups, especially in moments of isolation, quarantine and emergency situations. In addition, technology facilitates online learning and establishes virtual learning, integrated learning, mobile learning, automated learning, inclusive learning, deep learning, and cooperative learning. (El-Jabali, 2020).

Based on the above, online learning comes as an imperative need in light of the current conditions that the whole world is experiencing. These grave conditions might cast a shadow on the academic achievement of students, which may be either positive or negative according to the psychological conditions and variables of the learner, and due also to the economy of the educational institution, especially with regard to the technological aspect of the state (UNESCO, 2020).

The academic achievement of higher education students is considered a basis for creativity and excellence and a cornerstone of the promotion ladder from one academic year to another. So, it is necessary to focus on the academic achievement that is based on comprehension, analysis and application, which in turn reflects the actual picture of the process of preparing university students to enter successfully into labor market (umaira, 2019).

Looking at a number of researches and studies that dealt with e-learning in general and online education in particular, we find that these studies discussed academic achievement from different angles, such as Miqdadi's (2020), the UNESCO's (2020), Umaira's (2019), (Bonyan's, 2020), (Baloran's, 2020) and other studies. These studies tried to keep pace with the circumstances of the Covid-19 pandemic, and address the weaknesses that the higher education system suffers from, trying to create a combination that can improve the pillars of the educational process represented by the curriculum, the learner, faculty members, as well as a set of technical tools and methodological methods.

1-1The Study Problem and Study Questions

All educational institutions seek to achieve the advancement of their learning and education system due to their societal responsibility to build a person who is able to serve and advance his country in light of the modern developments witnessed by the whole world. Educational institutions aspire to build the modern person who possesses knowledge, skill and integrated personality that represent the ability to rearrange the individual needs to achieve greatly in the real world. From this perspective universities focused on maintaining the continuity of the learning and education system in all circumstances, especially during the Covid-19 pandemic that broadened chaos all over the world and caused a state of confusion in various sectors especially the educational ones. Looking at private Jordanian universities, the

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researchers noted a state of societal discomfort from online learning - especially among students - as a result of many reasons such as, defective technological infrastructure, poor methods of delivering educational content, assigning specific teachers for academic courses that some students do not like and accept, and assigning specific types of tests that do not take individual differences into account; not to mention the large numbers of students attending a single subject, which constitute a burden on the Internet servers and causes frequent interruptions and consequently the loss of part of the knowledge provided to students; in addition to lack of class communication and interaction between students and teachers due to lack of time and the use of that time in giving the knowledge material.

All of these reasons negatively affected the academic achievement of students, creating a state of discontent and dissatisfaction among students, and subjecting them to accept what is provided as is, and bear any result obtained under the pretext that the prevailing situation is an exceptional case; the results of the studies of (Bonyan, 2020), (Baloran, 2020), & (Harlianty, 2020) confirm all of this.

This study seeks to identify the impact of online learning on the academic achievement among students of private Jordanian universities in light of the COVID-19 pandemic, by answering the following questions:

The first question: What is the impact of online learning on the academic achievement among students of Jordanian private universities in light of the COVID-19 pandemic from the perspective of faculty members?

The second question: Are there statistically significant differences at the significance level ($\alpha \leq 0.05$) between the arithmetic means of the responses of the study sample individuals towards the effect of online learning on the academic achievement among students of Jordanian private universities in light of the COVID-19 pandemic from the perspective of the faculty members due to variables (gender, academic rank, and college type)?

1-2- The Importance of The Study

It is hoped that this study results will:

Theoretically, this study will add new knowledge and new ways in the field of online learning to activate it better, and ensure its success and effectiveness, especially in the contingency conditions university education system is facing.

Practically, this study will assist the educational field, and decision and policy-makers in higher education by ensuring the stability and continuity of the educational system within the educational institution. The study also will generate a state of confidence among students in the ability of higher education institutions to continue providing them with education in various ways within the possibilities that create a state of psychological safety for them to receive education to the fullest without negatively affecting their academic achievement.

1-3- Terminology of Study

This study included the following terms:

- **Online learning**: is the process of separating the learner from the teacher and content in the educational environment, and transferring the traditional education environment into a multi-geographically separate environment. It is a modern phenomenon of education that has developed with the rapid technological development in the world, and it aims is to provide education to students who cannot obtain it under traditional conditions (Miqdadi, 2020).

- **Academic achievement:** is a set of cognitive experiences and skills that students can comprehend, memorize and recall when necessary, using multiple factors such as understanding, attention and repetition distributed over certain periods of time, so that the ability to understand lessons is linked with the results obtained (Umaira, 2019).

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- **COVID-19 pandemic:** is a current ongoing global pandemic of Coronavirus disease caused by the association of Corona virus with severe acute respiratory syndrome, which was first spread in Wuhan, China, in early December 2019. The World Health Organization officially declared on January 30 that the outbreak of the virus is a public health emergency of international concern (WHO, 2020).

1-4- Related Previous Studies:

This part will include an overview of the previous studies that have been viewed, both Arab and foreign, arranged historically from oldest to most recent, as follows:

- Miqdadi (2020) conducted a study aiming to reveal the perceptions of high school students in Jordanian public schools for the use of online education in light of the Corona crisis and its developments; the study also aimed to identify the function of differences in the perceptions of high school students about the use of online education in Jordan according to the gender variable. The study was applied in the second semester of 2020; the study used the descriptive survey approach. The study population consisted of high school students in public schools in the Irbid Province, and the study sample consisted of (167) male and female students, (89, 78 respectively) who were chosen by a simple random method. The study concluded that there were no significant differences in the estimates of the sample members due to the gender variable. Study results showed positive effect of using online education in light of the Corona pandemic

- Baloran (2020) conducted a study in which he addressed the development of online education in Icelandic universities. The study aimed to provide a detailed analysis of the practice of online education at the University of Akureyri (UNAK) in Iceland, as well as to analyze academic achievement. the study sample consisted of (330 (Male and female students from different academic years; the study used a questionnaire as a study tool. The results of the study showed that online education significantly affected students' academic achievement, as the results showed that females take longer in academic achievement compared to males. The study results also revealed that students receiving online education tend to receive lower grades in business and administration degrees.

- (Caliskan, 2020) conducted a study aimed at examining the level of achievement among medical students in the Turkish final year and their perceptions of the Corona pandemic. The study was conducted on senior medical students from (6) medical colleges in (6) geographical regions in Turkey. The number of volunteers was (860 students), and data were collected using an online questionnaire. Results showed that the level of academic achievement was (69.00%).

- Umaira (2019) also conducted a study aimed at identifying the impact of online learning on students' achievement for the educational qualification diploma at the Syrian Virtual University. The sample of the study consisted of (26) male and female students undergoing online education. The results of the study showed an active effect of online learning on students ’achievement, with a statistically significant difference between the achievement of the experimental group and the control group for the benefit of the experimental group. The results of the study also showed no statistically significant differences due to the gender variable.

- Al-Bawi (2019) conducted a study aimed at identifying the effect of using the google classroom educational platform on the achievement of students of the Computer Department for Processing Image class, and students’ attitudes towards e-learning. The study was applied over an entire academic year of one day per week using the educational platform and a control group of 47 students. The experimental group which consisted of 60 students was taught in the traditional way. After preparing the requirements for the experiment and ensuring its internal and external validity, two tools were used, namely the achievement test and the attitude scale

towards e-learning, and psychometric properties were confirmed. After the completion of the teaching of the scientific material and the application of the test. The results showed positive effect of using the educational platform on the experimental group's achievement and on their attitudes towards e-learning compared to teaching in the traditional method.

- Al-Muqrin (2019) also conducted a study aimed at identifying the effect of e-learning by using a learning management system on the achievement in the computer course at cognitive levels (remembering, comprehension) among tenth-grade female students in Riyadh and around it. The study sample consisted of (32) female students in the experimental group who were taught through the EDMODO Learning Management System, and (30) students in the control group, who were taught by the traditional method. A scale was used to measure the attitude towards the e-learning management system. Results of the study showed statistically significant differences between experimental and control groups in the achievement of the level of memory in favor of the control group; the study showed no statistically significant differences between the means of the experimental and control groups regarding the level of understanding; there was also statistically significant differences between the means of the pre and post attitude measurements among the experimental group.

- Al-Bitar (2016) conducted a study aimed at identifying the effectiveness of the use of online education in developing academic achievement and the attitude towards online education in the educational technology course for students of the general diploma for Industrial Education Division/ a one year system /. The study sample consisted of (32) students as an experimental group chosen from the general diploma students at the Faculty of Education in Assiut University. The study tools consisted of the learning teacher's guide online for the educational technology course, an achievement test, and the attitude scale towards online education. The results of the study assured the effectiveness of using online education in developing academic achievement and developing good attitude towards online education in the educational technology course among students of the general diploma for Industrial Education Division / one year system.

1-5 A summary of previous studies and the position of the current study among them:

The previous studies, especially Miqdadi's (2020) and Umaira's (2019), added to our knowledge of the appropriate methodology and statistical processes, in identifying the theoretical framework of the subjects and variables of the study, and thus in building the study tool.

Al-Bawi (2019) and Chilishkan (2020)' studies helped us in identifying the impact of online learning on students' academic achievement. The current study coincides with previous studies in reviewing the concepts of both online education and academic achievement, and in exploring the dimensions of online education and the extent of the success of online education in positively affecting the academic achievement of university students. The current study is similar to the study of Al-Muqrin (2019), Miqdadi (2020) and Barlon (2020), in terms of the study community, but was distinctive from them on studying students of private Jordanian universities from the perspective of their teachers in light of the Covid 19 pandemic.

Article I. 2- Method and Procedures

The descriptive survey approach was used to achieve the objectives of the study.

2-1 Study Population

The study population consisted of 3166 faculty members from private Jordanian universities. Table (1) shows the distribution of the study population according to the variables of the study.

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Table (1): the study population distribution according to the study variables

Variables	Variable	number	Total
Gender	Male	2242	3166
	Female	924	
Academic rank	Professor	399	3166
	Co-professor	676	
	Assistant Professor	1552	
	Teacher	539	
College type	Humane	1891	3166
	Scientific	1275	

Source: Ministry of Higher Education, 2020.

2-2 The Study Samples

According to Stephen Thompson's equation, the minimum size of the random stratified sample representing the community was calculated at the significance level ($\alpha \leq 0.05$), and that was (343) faculty members. In anticipation of the waste in the sample and the indifference in the response, the actual sample size was determined as (400) faculty members. The study sample was located in three private Jordanian universities distributed over three regions, namely: Al-Ahlia University of Irbid in the northern region, University of Petra in the Central Region and Al-Isra Private University in the South. The researchers distributed (400) questionnaire to the study sample, (378) questionnaires were retrieving. Table (2) shows the distribution of the study sample, which was extracted according to the Thompson Equation according to the study variables.

Table (2): The distribution of the study sample according to the variables of the study

Variables	Variable	number	Total
Gender	Male	283	400
	Female	117	
Academic rank	Professor	50	400
	Co-professor	86	
	Assistant Professor	202	
	Teacher	62	
College type	Humane	239	400
	Scientific	161	

2-3 Study Tool

To achieve the study objectives and answer its questions, the study tool was developed after reviewing the theoretical literature and some previous studies such as Al-Bitar's (2016) and al-heela's (2006) studies. The study tool consisted in its initial form of (30) paragraphs, and in its final form of (25) paragraphs distributed into two fields: the field of comprehension, consisting of (19) paragraphs, and the field of analysis, consisting of (6) paragraphs.

For the validity of the tool, the study tool in its initial form was presented to (9) arbitrators specialized in educational administration to give their opinion on the paragraphs of the study tool in terms of phrasing the paragraphs, and the suitability of the paragraphs for the fields they were assigned to. The attributers' observations were taken into account with regard to the amendment, deletion, addition and merging of paragraphs, and the number of the study tool's paragraphs reached (25) paragraphs in its final form. To verify the stability of the tool,

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the internal consistency coefficient was used according to the Cronbach Alpha equation to extract the stability of the study tool according to the fields. Table (3) shows the stability coefficients of the tool fields:

Table (3): Cronbach Alpha stability coefficients for the study tool fields

Number	Field	Cronbach Alpha
1	Comprehension	0.95
2	Analysis	0.92

Table (3) shows that the stability coefficients were acceptable. To judge the impact of online learning on the academic achievement among students of private Jordanian universities, the following scale was adopted: a low impact score (2.33 or less), a medium impact score (2.34-3.67), and a high of impact score (3.68 or more).

3- Results and Discussion

3-1 Results related to the answer to the first question of the study

What is the impact of online learning on the academic achievement among students of Jordanian private universities in light of the COVID-19 pandemic from the perspective of faculty members?. To answer this question, arithmetic means and standard deviations were calculated for the responses of the study sample individuals in general and for each field of the study in particular. Table (4) shows these means.

Table (4): Arithmetic means, standard deviations, and the effect of online learning on academic achievement among students in private Jordanian universities from the perspective of faculty members

Number	Field	Arithmetic Means	Standard Deviation	Rank	Effect
4	Comprehension	3.65	0.91	3	Average
5	Analysis	3.55	0.88	3	Average
Total score		3.59	0.89	Average	

As Table (5) shows, the effect of online learning on the academic achievement among students of private Jordanian universities was average, as the arithmetic mean was (3.59) and the standard deviation was (0.89). Both fields' scores were average, but for the paragraphs of each field the results were as follows:

1. Comprehension: arithmetic means and standard deviations were calculated for the paragraphs of this field, and Table (5) explains that:

Table (5): The arithmetic means, standard deviations, ranks and the degree of effect for the field of comprehension

#	Paragraph	Arithmetic Means	Standard Deviations	Rank	Effect
3	"online education contributes to the provision of various scientific materials	3.59	0.92	1	Average
5	Online education helps the student to understand the subject matter	3.59	1.03	2	Average

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#	Paragraph	Arithmetic Means	Standard Deviations	Rank	Effect
2	Online education provides the student with an opportunity for creativity and innovation	3.57	0.91	3	Average
4	Online education gives the student the ability to catch up with what he missed	3.55	1.03	4	Average
1	Online education provides the student with the ability to interact and participate effectively	3.55	0.94	5	Average
6	Online education helps the student's mental structures to grow	3.54	0.95	6	Average
8	Online education provides freedom to choose the subjects desired by the student	3.51	0.97	7	Average
9	Online education helps the student to deal with the presented scientific material accurately and quickly.	3.50	1.00	8	Average
7	Online education contributes to providing the student with the opportunity to exchange knowledge with others	3.47	1.18	9	Average
12	Online education deepens the student's ability to link theory and practice	3.47	0.91	10	Average
10	Online education enables the student to simulate reality with high accuracy	3.45	1.03	11	Average
15	Online education helps develop the student's scientific thinking	3.44	0.94	12	Average
11	Online education develops the student's ability to harmonize and relate his educational materials	3.44	0.97	13	Average
19	Online education develops the student's ability to refute, refute and prove scientific facts	3.41	0.94	14	Average
18	Online education contributes to reducing the difficulties of language communication between students and the faculty member	3.40	1.00	15	Average
16	Online education takes into account the individual differences between students when introducing the scientific material	3.39	1.03	16	Average
14	Online education focuses on the final behavior of the student in	3.37	1.18	17	Average

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#	Paragraph	Arithmetic Means	Standard Deviations	Rank	Effect
	understanding the lessons learned from the presented scientific material				
17	**Online education provides immediate feedback to determine the academic performance of the student**	**3.37**	**1.03**	**18**	**Average**
13	**online education helps achieving the perfect learning**	**3.36**	**0.94**	**19**	**Average**
Total score		**3.47**	**0.79**	**Average**	

Table (6) shows that the effect of online education on the academic achievement among students of private Jordanian universities in the field of comprehension was average, with an arithmetic mean of (3.47) and a standard deviation of (0.79). Paragraph (3) ranked first, which states: "online education contributes to the provision of various scientific materials"; while Paragraph (13) ranked last, it states: "online education helps achieving the perfect learning". These results may be due to the absence of shared brainstorming which is responsible for generating ideas, and actively contributes to demonstrating the presented knowledge. As comprehension is not based only on the way a faculty member presents information, but it also depends on the ideas and opinions presented by students to be able to receive this information in a mature manner. This result may be also due to the weak ongoing communication between student and teacher during the lecture, as an inevitable consequence of the absence of the mental presence component resulting from the volume of radiation emitted from the computer screen. Not to mention that another reason for these results could be the state of boredom and inattentiveness that may befall the recipient while sitting in front of the computer screen, and how such a matter may weaken students' understanding process and thus negatively affect their academic achievement.

2. Analysis: arithmetic means and standard deviations were calculated for the paragraphs of this field, and Table (6) explains that.

Table (6). The arithmetic means, standard deviations, ranks and the degree of effect for the field of analysis in descending order

#	Paragraph	Arithmetic Means	Standard Deviations	Rank	Effect
2	**online education provides the student with the ability to disentangle the presented scientific material**	**3.57**	**1.01**	**1**	**Average**
1	**online education contributes to the student's knowledge of the desired goals of the proposed scientific material**	**3.55**	**0.84**	**2**	**Average**
4	**online education helps to establish the student's added values in dealing with the presented scientific material**	**3.52**	**1.02**	**3**	**Average**

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#	Paragraph	Arithmetic Means	Standard Deviations	Rank	Effect
5	online education develops among the student an internal feeling of the importance of the presented scientific material	3.49	0.98	4	Average
3	online education helps in learning how to apply the scientific material and benefit from it in practice	3.47	1.01	5	Average
6	online education contributes to presenting the scientific material in the form of procedural evidence	3.44	1.00	6	average
Total score		3.50	0.81	Average	

Table (6) shows that the effect of online education on the academic achievement among students of private Jordanian universities in the field of analysis came was average, with an arithmetic means of (3.50) and a standard deviation of (0.81). Paragraph (2) ranked first; it states: "online education provides the student with the ability to disentangle the presented scientific material." Paragraph (6) ranked last; it states that "online education contributes to presenting the scientific material in the form of procedural evidence". These results may be due to the absence of direct communication and interaction between students and teachers, and the difficulties students face in completing the remaining cycle of the scientific material by themselves; such a matter ensures a state of loss of motivation and competition among students to reach a reading of scientific ideas and opinions beyond what that information presents. The minimum time of communication and discussions between students and teachers greatly effects the process of logical analysis of the existing phenomenon as well, especially among scientific studies where all learning is based on laboratories and experiments. It would seem also that this minimum time of communication and discussions affect students of humanitarian studies where the prolonged thinking, ideas' sharing and statistics' calculations within a single classroom is most required.

3-2 Results related to the answer to the second question

Are there statistically significant differences at the significance level ($\alpha \leq 0.05$) between the arithmetic means of the responses of the study sample individuals towards the effect of online learning on the academic achievement among students of Jordanian private universities in light of the COVID-19 pandemic from the perspective of the faculty members due to variables (gender, academic rank, and college type)?

This question was answered as follows: a. **Gender variable**: arithmetic means, standard deviations, and the (t-test) according to the gender variable, and Table (7) shows that.

Table (7): arithmetic means, standard deviations, and the (t-test) according to the gender variable

Field	Gender	Number	Arithmetic Means	Standard Deviations	T value	Significant level
Comprehension	female	266	3.54	0.75	1.141	0.011**
	male	112	3.47	0.81		
	total	378	3.55	0.78		
Analysis	female	266	3.63	0.92	0.884	0.173

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	male	112	3.57	0.91		
	total	378	3.53	0.91		
Total score	female	266	3.63	0.82	1.583	**0.047
	Male	112	3.43	0.83		
	Total	378	3.53	1.65		

**** The difference is statistically significant at the significance level (α≤ 0.05).**

To determine whether the differences between the means are statistically significant at the level of significance (α≤ 0.05), the t-test was applied. Results in Table (7) indicate the existence of statistically significant differences at the level of significance (α≤ 0.05) due to the gender variable In favor of females based on the calculated value of (t) as it reached (1.583) with a significance level of (0.047). This may be attributed to the lack of female faculty members' belief in the effectiveness of online education, which differs inversely with the level of social interaction, which appears significantly among females rather than males.

B. **College type variable**: The arithmetic means, standard deviations, and a t-test were calculated according to the college type's variable, and Table (8) shows that.

Table (8): The arithmetic means, standard deviations, and a t-test were calculated according to the college type's variable.

Field	gender	number	arithmetic means	standard deviations	T value	Significant level
comprehension	humanitarian	221	3.42	0.57	-0.834	0.405
	scientific	157	3.47	0.56		
	Total	378	3.44	0.56		
analysis	humanitarian	221	3.73	0.77	-1.777	0.076
	scientific	157	3.88	0.86		
	Total	378	3.80	0.81		
Total score	humanitarian	221	3.53	1.64	-1.284	0.200
	Scientific	157	3.63	1.67		
	Total	378	3.58	1.65		

**** The difference is statistically significant at the level of significance (α≤ 0.05).**

To determine whether the differences between the means are statistically significant at the level of significance (α≤ 0.05), the t-test was applied; the results in Table (8) indicate that there are no statistically significant differences at the level of significance (α≤ 0.05) due to the variable "type of college" based on the calculated value of (t) as it reached (-1.284) and the level of significance was (0.200). This may be attributed to the availability of online education techniques in universities which allow faculty members to deliver the scientific material easily and thus influence the academic achievement of students according to the comprehension and analysis variables.

3. Academic rank variable: The arithmetic means and standard deviations were calculated according to the academic rank variable, and Table (9) shows that.

Table (9): The arithmetic means and standard deviations according to the variable of academic rank

Field	Academic Rank	Number	Arithmetic Means	Standard Deviations
comprehension	Professor	41	3.54	0.63
	Co- Professor	83	3.60	0.61

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	Assistant Professor	**192**	**3.33**	**0.50**
	Teacher	**62**	**3.35**	**0.56**
	Total	**378**	**3.46**	**0.57**
Analysis	**Professor**	**41**	**3.79**	**0.58**
	Co-professor	**83**	**3.88**	**0.87**
	Assistant Professor	**192**	**3.75**	**0.81**
	Teacher	**62**	**3.64**	**0.78**
	Total	**378**	**3.76**	**0.74**
Total score	**Professor**	**41**	**3.61**	**1.58**
	Co-professor	**83**	**3.67**	**1.72**
	Assistant Professor	**192**	**3.51**	**1.61**
	Teacher	**62**	**3.43**	**0.83**
	Total	**378**	**3.55**	**1.42**

Table (9) shows that there are apparent differences between the arithmetic means according to the academic rank variable, where the (Co-professor) category obtained the highest arithmetic mean of (3.67), followed by the (Professor) category which ranked second, with an arithmetic mean of (3.61), and in last rank came the category of (teacher), with an arithmetic mean of (3.43). To determine whether the differences between the means were statistically significant at the level of significance ($\alpha \leq 0.05$), the One-Way ANOVA analysis was applied, and the results of the analysis of variance came as shown in Table (10).

Table (10): The One-Way ANOVA analysis to find the significance of differences according to the academic rank variable:

Field	**Source of variance**	**sum of squares**	**degrees of freedom**	**mean of squares**	**P-value**	**Significance level**
comprehension	**Between groups**	**4.344**	**3**	**1.446**	**4.562**	****0.006**
	Within groups	**379.819**	**349**	**1.085**		
	Total	**384.163**	**352**			
Analysis	**Between groups**	**1.982**	**3**	**0.660**	**1.005**	**0.093**
	Within groups	**305.594**	**349**	**0.571**		
	Total	**307.576**	**352**			
Total score	**Between groups**	**3.076**	**3**	**0.314**	**0.633**	****0.049**
	Within groups	**295.151**	**349**	**0.309**		
	Total		**352**			

*** The difference is statistically significant at the level significance level (0.05 $\alpha \leq$)**

The results in table (10) indicate the existence of statistically significant differences at the level ($\alpha \leq 0.05$), due to the academic rank's variable, based on the calculated P value of 0.633 and the significance level (0.53). This may be due to the nature of the scientific material

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presented, where some material requires specific academic ranks to guarantee their correct delivery to students, especially courses in which a limited number of faculty members are singled out to teach in each department. Such a matter may affect the student's level of sound understanding, and the student's abilities regarding the logical analysis of what is presented through electronic platforms. The differences came in favor of co-professor's category when compared to that of an assistant professor in the field of comprehension, and in favor of the associate professor's category when compared to the teacher's category in the field of analysis.

To determine the total differences in all fields a Schiff test was used, table (11) shows this.

Table (11): Schiff test for total differences due to academic rank variable

academic rank	Arithmetic means	Teacher	Co-Professor	Assistant Professor	Teacher
		3.61	3.69	3.54	3.45
Professor	3.61	-	0.955	0.954	0.710
Co-professor	3.69	0.955	-	0.497	0.256*
Assistant Professor	3.54	0.954	0.497	-	0.835
Teacher	3.45	0.710	0.256	0.835	-

The difference is statistically significant at the level (α≤ 0.05)

Table (11) shows that the difference came in favor of Co-Professor's category when compared with the category of (Teacher); this may be due to the high level of experience the Associate Professor has and thus his ability to enable students to understand and analyze the offered materials remotely.

4- Conclusion and Suggestions

Online learning is an important method that Jordanian educational institutions have resorted to, especially universities during the current period of time, which is witnessing a societal spread of the Corona epidemic in the Jordanian state - like the rest of the world - which constituted an obstacle to students' access to their places of learning.

Therefore, we find that online education played a role not at the required level in the ability of students to understand and comprehend the scientific material presented remotely and the ability to analyze it. For this reason, this research paper aimed to reflect the reality of distance education in private Jordanian universities as educational institutions concerned with developing students' abilities, educational and behavioral skills, and refining their scientific and work personality.

The study limitations included the following: Human boundaries: members of the faculty in private Jordanian universities; Time boundaries: the academic year (2020/2021); Spatial boundaries: Jordanian private universities.

Based on the previous results, the researchers recommended that the university administrations should give online education the utmost importance in terms of creating the appropriate technological infrastructure in a way that contributes to enriching the received cognitive skills, upgrading the students' behavioral level, and actively improving students' academic achievement. Also, the Universities should conduct courses specialized in online education and the relevant periodic meetings that ensure the effectiveness of the educational process and that is reflected in students 'academic achievement in terms of understanding educational materials and analyzing their merits.

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