

The Impact of Implementing Full E-learning During Covid-19 on the Students' Academic Performance in the Courses of Accounting and English Language

(A Case Study: Students of the Department of Administrative Sciences - Community College in Khamis Mushait- King Khalid University- KSA)

Musa Mohammed Ahmed Abu Tomma¹, Ismail Mohammed Hamid Rushwan² & Auwal Garba³

¹ Department of Administrative Sciences, Accounting Program, Community College in Khamis Mushait, King Khalid University, KSA

² English Department, Community College in Khamis Mushait, King Khalid University, KSA

³ Federal College of Education (Technical), School of Business Education, Gombe State, Nigeria

Correspondence: Musa Mohammed Ahmed Abu Tomma, Department of Administrative Sciences, Accounting Program, Community College, King Khalid University, P.O. Box: 3926, Postal code: 61961, Khamis Mushait, KSA.

Received: January 11, 2021

Accepted: February 10, 2022

Online Published: February 15, 2022

doi:10.5430/ijhe.v11n4p120

URL: <https://doi.org/10.5430/ijhe.v11n4p120>

Abstract

This study aimed at figuring out the effect of full e-learning on the students' academic performance in accounting courses, which include multiple mathematical calculations compared with the English Language courses, which are free of mathematical calculations. A questionnaire was designed and distributed among a random sample of students during the second semester of the academic year 2019-2020, during which full e-learning was implemented due to the Coronavirus Pandemic. The sample included (302) out of (1411) male and female students at the Department of Administrative Sciences, whose major is accounting and business administration. Besides, they study English language as part of the general courses at the Community College in Khamis Mushait. The study found that, there is a statistically significant effect regarding the features of full e-learning on the students' academic performance with respect to the accounting and English Language courses. The problems related to e-learning did not affect the students' academic performance in accounting courses, while it impacted negatively on the students' academic performance in the English language courses. The study recommended that, the educational institutions should continuously develop the e-learning atmosphere in order to become conducive, attractive and creative.

Keywords: e-learning, higher education institutions, academic performance, English Language courses, accounting courses, King Khalid University

1. Introduction

Learning is one of the basic pillars for the development of societies; the progress of nations is achieved through learning, which is one of the fundamental factors of development. Also, learning enhances people's creativity and boosts knowledge and technological advancement. Learning methods have accordingly evolved; learning has shifted from traditional to e-learning. Some studies (Garcia, 2020; Tan, Liew, & Gan, 2020): defined e-learning as the use of computer network technology, mostly done through Internet, in order to provide information and deliver courses to individuals. Information technology has played a major role in our lives in various fields, including the academic side; therefore, it has gained great attention worldwide in recent years. The study of Elfaki, Abdulraheem, & Abdulrahim (2019) showed that: an estimated 5-7 million students now are enrolled in at least one online course every year.

Many high education institutions in Saudi Arabia, including King Khalid University have adopted different types of e-learning depending on the college and specialty, blended education (for example traditional learning 75%, e-learning 25%). Also, full e-learning has been implemented in some theoretical studies, but after Covid-19, full e-learning has been implemented as a precautionary measure of social distancing.

1.1 The Problem of the Study

After the spread of the Covid-19, some measures had been imposed such as the lockdown and social distancing, full e-learning or distance learning had been implemented in almost all universities because of the advantages of this type of education, such as fast communication, interaction between students and faculty members, enhancing self-learning and increasing students' academic achievement. But in spite of all these advantages, there are some obstacles that face e-learning. Many studies showed that e-learning has a negative impact on students' achievement; they argue that students may feel isolated (Elfaki et al., 2019). Also, full e-learning does not suit some practical specialties or theoretical specialties, such as accounting, which is a highly specialized subject and a challenging major that contains an intensive syllabus and difficult calculations. With respect to the previous points, the statement of the problem can be summarized as follows:

- 1) Does full e-learning suit accounting courses which contain numerous calculations in comparison to English Language courses, which are calculations-free?
- 2) To what extent do students accept to study accounting courses through full e-learning compared to English language courses?
- 3) What is the effect of full e-learning on the academic performance of students in accounting courses compared to English Language ones?

1.2 The Objective of the Study

- i. To identify the extent to which the students accept studying accounting courses through full e-learning?
- ii. To find out the effect of full e-learning on the students' academic performance regarding accounting courses.
- iii. To determine the effect of e-learning on the students' academic performance in respect to English Language courses.

1.3 The Hypotheses of the Study

- 1) There is no statistically significant effect of the advantages of full e-learning on the students' academic performance in accounting and English Language courses.
- 2) There is no statistically significant effect of the problems of full e-learning on the students' academic performance in accounting and English Language courses.
- 3) There are no statistical-related differences between student opinions about the impact of the advantages of full e-learning on students' academic performance in the accounting and English Language courses.
- 4) There are no statistical-related differences between student opinions about the impact of the problems of full e-learning on students' academic performance in the accounting and English Language courses.

1.4 The Significance of the Study

This study can contribute in providing important data about the types of e-learning, student stances towards it, its impact on the academic performance and to help in further future studies in this regard. So, practically, the study results would contribute in providing some guiding principles for institutions, planners, policy makers and other concerning bodies.

1.5 Research Motives

The researchers hope that, the outcome of this research can raise students' standards and improve their academic performance. They also hope that, this study would contribute to college success and enhance the learning process. Moreover, student engagement in research would develop their self-confidence and promote their cognitive skills. Additionally, it can help them be updated with their courses, deepen their understanding of their disciplines and enlighten their ideas.

1.6 Previous Studies

Samuel & Marimuthu (2022), their study aimed to investigate students' perceptions regarding the factors that may affect cost accounting students' performance and determine if these factors have a significant association with students' performance. The study found that, student attendance has a positive impact on their performance in the module.

Marlina, Tjahjadi, & Ningsih (2021) This study aimed to determine the factors influencing student performance by using e-learning based on the Unified Theory of Acceptance and Use Technology (UTAUT), also the study proposed additional

variables to expand the UTAUT model, which is suitable in higher education. The results show that, UTAUT constructs, namely, social influence, facility conditions, and effort expectancy, have significant influence on student behavior and performance, while the performance expectancy variable shows no significant effect. The additional variables, include lecturer qualities, external motivation, and organizational structure, which directly affect students' performance.

Owusu, Koomson, & Hanson (2020) This study aimed at accessing the impact of Covid-19 on Ghana's teaching and learning. The study revealed some challenges students encounter in the lockdown of schools due to the outbreak of the pandemic. Students are unable to learn by themselves effectively from home. Again, parents are incapable of assisting their children on how to access online learning platforms. The e-learning platforms rolled out also pose a challenge to majority of the students because of the limited access to internet and lack of the technical knowhow of these technological devices by most Ghanaian students.

Elfaki, Abdulraheem, & Abdulrahim (2019) They studied the impact of e-learning on the students' academic performance. It was a facility-based and quasi-experimental research design that was carried out at Najran University- KSA- College of Nursing, during the period of time from January to August, 2019. The key findings of the study showed a significant difference in the learning outcomes, besides the positive attitudes between online and traditional learners which can be a valuable alternative learning method for higher education.

Suleiman (2019), this study focused on finding out the effect of social media on students' academic performance at the Federal College of Education, Kontagora in the state of Niger in Nigeria. The results of the study indicate that, the effect of social media can be both positive and negative. The social media sites such as Twitter, WhatsApp, Facebook and Instagram were mostly used and diverted students' attention from learning.

Papageorgiou, K., & Halabi, A. K. (2014), conducted a study with the purpose of examining the effect of the five performance determinants concerning students, ($N = 677$) they completed three years of financial accounting studies in order to obtain a BA in accounting (BCompt) through distance learning at the University of South Africa. The results revealed that, mathematical background and academic aptitude are both significantly associated with student performance in terms of the financial accounting subjects. Prior accounting knowledge is also important in the first year of their study, but not thereafter.

1.7 Commentary on Previous Studies

It is noticed that, the previous studies focused on the impact of e-learning on the teaching and learning process in general. Although, some of these studies, such as (Elfaki, Abdulraheem, & Abdulrahim 2019; Samuel & Marimuthu 2022) study, are consistent with the current study, but what distinguishes this research from the previous studies is that, it has linked the effect of the different e-learning related factors and deeply examined their effect on the students' performance in the accounting courses compared to the English language ones, though it differed with regard to the population, sample and period of time.

2. Methodology and Field Study Procedures

This study adopted a sample survey design approach which is based on selected numbers of the population. This design was adopted because it is suitable to observe or obtain information about facts, behavior, attitudes, and the responses of the participants in the given population. Therefore, data can be obtained from a reasonably selected few numbers, while inference would be applicable to the whole population.

2.1 Study Tool

The study adopted a questionnaire tool to collect the necessary data. The questionnaire was designed on Google Drive and electronically distributed to the study sample. The questionnaire included 34 questions, distributed on five axes, in order to know the effect of e-learning on students' academic performance in the accounting and English Language courses.

2.2 Likert Scale

The study adopted Likert five-point scale, which is used to determine the degree of approval of the research variables (i.e. the direction of opinion towards approval or disapproval). According to this scale, it can be considered that, the arithmetic averages that take values greater than (3) means agree and less than (3) means disagree, that is not significantly different from (3) means neutral, where the response ranges from (1-5) as follows:

Strongly agree (5), Agree (4), Neutral (3), Disagree (2), Strongly disagree (1).

2.3 Population and Sample of the Study

The study population consists of male and female students at the Department of Administrative Sciences at the Community College in Khamis Mushait - King Khalid University, KSA, during the second semester of the academic year 2019-2020. This semester was intentionally chosen because full e-learning was implemented due to the Covid-19. The department of Administrative Sciences includes two academic programs: accounting program and business administration program, the students in these programs study accounting and business administration courses as their majors. In addition, they study an Intensive English Language Program as part of the general courses.

According to the registrar office in the college, the total number of the students enrolled during the aforementioned semester was **(1411)** male and female students. The number of male is **499**: 140 in the accounting program and 359 students in the business administration program. While the number of female is **912**: 345 are in the accounting program and 567 in the business administration program. A random sample of these students was selected by using Richard's equation, a sample size according to this equation was **302** students, it was taken from the overall number of students, by distributing it according to the ratio of males to females, and the ratio of the program to the other for both males and females, as shown in the following Table 1:

Table 1. Sample of the study according to gender and programs

Gender	Accounting Program Frequency	Business Administration Program Frequency	Total Number	Percent%
Male	30	77	107	35.40
Female	74	121	195	64.60
Total	104	198	302	100.00

Source: Field Survey, 2021.

3. E-Learning Implementation Requirements

Before implementing e-learning programs, education institutions need to assess their readiness to implement e-learning and determine the factors for successful e-learning implementation as follow:

3.1 E-Learning Readiness Assessment

E-learning readiness assessment is a way of helping organizations to design e-learning strategies comprehensively and to implement and manage their ICT goals more effectively. Managers and learners must also be prepared for e-learning (Nwagwu, 2020). It can be said: e-learning readiness assessment helps education institutions in providing important information that would work out appropriate solutions, which can provide specific needs for each learning group. Organizations need to expand their needs assessment process by creating high-level requirements that include:

- i. E-learning objectives (macro organizational objective and micro target learner population objectives).
- ii. An e-learning readiness score.
- iii. A list of advantages and potential obstacles to e-learning adoption.
- iv. A list of possible e-learning configuration (Nwagwu, 2020).

Chapnick (2000) designed a model that can be used by organizations to measure their e-learning readiness by answering the following questions:

- i. Could this be done? ii. How it can be done? iii. What are the outcomes and how do we measure them?

3.2 Key Factors for Successful E-Learning Implementation

Numerous studies concerning e-learning have determined various factors related to its dimensions, with the aim of making it a success. Among those studies, (Angrainingsih, Uman, & Setiadi, 2018) the key findings of their study constitute that, the most important factors for successful e-learning are: financial policy, regulatory policy, course quality, flexibility in studying the course, relevant content, covering of content, student attitudes and technical support.

A study in Saudi Arabia provides eight categories of e-learning CSFs, such as:

1. Instructor's attitude. 2. Instructor's access to technology. 3. Student's computer competency. 4. Student's interactive collaboration. 5. Course content. 6. Technology access. 7. Technology infrastructure. 8. University support (Lu & Dzikria, 2019; Selim, 2007).

Another study focused more on technology and institutional support of e-learning where browsing speed, ease of use, computer network reliability, computer labs availability, and technical assistance are considered as success factors of e-learning (Lu & Dzikria, 2019; Masrom, 2008).

4. Advantages and Disadvantages of E-Learning

In regard to the researchers' experience in e-learning, it can be mentioned that, there are a lot of advantages of this type of learning. These advantages include the learners, the course providers or instructors and the institutions. Consequently, this study will divide e-learning advantages into the following:

4.1 Advantages gained by institutions and instructors

- 1) E-learning helps institutions to give students access to their courses and spread knowledge more effectively. It can also allow more student intake and make education cost-effective, (Dung, 2020). Likewise, it can help solve shortage of teachers and reduce learning cost, (Masie, 2019).
- 2) E-Learning is cost-effective: it helps educational institutions to reduce cost of staffing as well as cut down traveling budget of staff mobility. Virtual classrooms have no need for lecture halls, which tend to get very costly (Dung, 2020; Tamm, 2021).
- 3) In order to be competent at e-learning, faculty members have to attend a lot of seminars and training sessions, the thing which would enrich their teaching experience and diversify their instruction methods, (Dung, 2020).
- 4) Technology has affected all aspects of our life, and education is one of them. So, faculty members have to exert more efforts in order to cope with this trend, (Dung, 2020).
- 5) E-learning fully utilizes analytics, analytics is the quantity and analysis of data about learners and how to figure out their understanding and assess their learning outcomes. With student data gained through e-learning analytics, institutions can improve their types of training and develop the learning methods in various ways. For example, if data on dropouts is available, the institution can be supportive to those students and help solve their problems, (Tamm, 2021).

4.2 Advantages for Students

- 1) As for the students, e-learning is appreciated for its flexibility, cost effectiveness, and convenient access, (Dung, 2020).
- 2) E-learning is self-paced: it can increase student satisfaction and reduce stress. Students can access their learning material at any time, (Tamm, 2021).
- 3) E-learning enables students who search for online programs offered by other universities and access to different courses according to their choices (Dung, 2020).
- 4) Individual learning styles: In fact, e-learning is a dynamic alternative for self-motivated students who can do their assignments and monitor their learning goals (Dung, 2020; Tamm, 2021).
- 5) E-Learning is student-centered: Student-Centered Learning (SCL), is a modern learning method which is capable of making students independent learners. In fact, most of the 10 types of e-learning are related to the idea of student's active learning, (Tamm, 2021).
- 6) Online learning is time-efficient: it saves time for both students and instructors. Also, e-learning lessons can be delivered and updated quickly and efficiently, (Tamm, 2021). Moreover, with asynchronous courses, the student can enjoy a more flexible schedule according to their convenience, (Dung, 2020).
- 7) Since all the material for e-learning can be accessible online, the need for textbooks diminishes (Tamm, 2021).

4.3 Disadvantages of E-Learning

There are advantages of e-learning which have been mentioned, but there are disadvantages as well, (Mandela 2019) summarized them as follows:

- 1) Online student feedback is limited.
- 2) E-learning can cause social isolation.
- 3) E-learning requires strong self-motivation and time management skills.

- 4) Lack of communication skills.
- 5) Prevention of cheating in online assessments is complicated.
- 6) Online instructors tend to focus on theory rather than practice.
- 7) E-learning lacks face-to-face communication.
- 8) E-learning is confined to certain disciplines.
- 9) Online learning is inaccessible to the computer illiterate population.
- 10) Lack of accreditation and quality assurance in online education.

Apart from these disadvantages, researchers believe that there are other disadvantages of online courses such as, it requires more time than on-campus classes, students will not be serious in terms of attendance, plus Internet connection problems during virtual classes.

5. Types of E-Learning

Educationalists and researchers divided e-learning into several types according to the learning tools, while others focused on different foundations such as synchronization and learning content. In this regard, (CommLab India Bloggers, 2020) said: basically, there are two categories of e-learning, Synchronous and Asynchronous, as follows:

5.1 Synchronous Online Learning

This type is also known as e-learning with virtual presence and with e-communication (Elfaki et al., 2019; Negash & Wilcox, 2008). Synchronous online learning means that, the learners and the instructor interact with each other in a learning activity, where it enables groups of students to participate in the lecture simultaneously, from anywhere through virtual classrooms, audio and video conferencing, chat, webinars, application sharing and instant messaging, etc. (CommLab India Bloggers, 2020 ; Tamm, 2019). It should be noted that synchronous e-learning may be (blended/hybrid), mostly physical presence and little for virtual classes, known by (Elfaki et al., 2019; Negash & Wilcox, 2008): e-learning with presence, along with e-communication (blended/hybrid-synchronous).

5.2 Asynchronous Online Learning

This type is also called: e-learning without presence or e-communication learning (Elfaki et al., 2019; Negash & Wilcox, 2008). In the case of asynchronous online learning, students study independently at different times and locations, which means that, the learner and the instructor are not online at the same time. Asynchronous e-learning may use technologies such as email, blogs, discussion forums, eBook's CDs, DVDs, etc. Asynchronous e-learning can be from several sources as: self-paced online courses, discussion forums & groups, and message boards (CommLab India Bloggers, 2020; Tamm, 2019). Asynchronous e-learning may be (blended/hybrid) including occasional presence, as mentioned by (Elfaki et al., 2019; Negash & Wilcox, 2008): e-learning with occasional presence and with e-communication (blended/hybrid-asynchronous).

Indeed, the researchers in this study believe that, by experiments, many students prefer asynchronous instead of synchronous learning, because they can attend online courses according to their convenience.

On the other hand, some educationalists classified e-learning types more simply. They identify just two primary types of e-learning: **computer-based e-learning** and **Internet-based e-learning**. This method of classification could be considered more accurate because it differentiates e-learning from online learning, (Tamm, 2019).

5.3 Types of E-learning at King Khalid University

The types of e-learning that are usually implemented at king Khalid University are synchronous and asynchronous online learning, e-learning with presence, with e-communication (Blended/hybrid-synchronous), e-learning with occasional presence and with e-communication (blended/hybrid-asynchronous).

6. Performance Calculation in King Khalid University

The current study focuses on the academic performance of a certain group of students at KKU, the researchers will show the methods of calculating and measuring students' academic performance. The measure of students' achievement is based on the course objectives in terms of assignments, class participation and tests, in addition to project presentations, in which students can show their comprehension and understanding of the course material that can be recorded either manual or within blackboard. By the end of the semester, each student's total grades will be converted to A+, A, B+, B, C+, C, D+, D and F scales (A+= 95-100; A= 90-94; B+= 85-89; B= 80-84; C+=75-79; C=70-74; D+=65-69; D=60-64 and less than 60 is considered F which is a failure.

7. Data analyses and Hypotheses Testing

Data were analyzed by using the Statistical Package for Social Science version 10 (SPSS) to verify the validity and reliability of the study tool, and to get results of the descriptive analysis of the study axes and testing hypotheses.

7.1 The Validity and Reliability of the Study Tool

To verify the validity and reliability of the study tool, Alpha Cronbach scale was used to test the internal consistency of the questionnaire statements. According to (Sekaran & Bougie, 2010): The value is considered weak if it is (less than 60%) and acceptable if it is (61% and less than 79%) and good if it is 80% or more. Table 2 shows the internal consistency coefficient for each of the questionnaire axes separately, and then for all questionnaire statements, by looking at Table 2 it is noticed that the alpha value is good and indicates the stability of the tool and its internal consistency of the study axes. The alpha value ranged between (0.746) at the minimum and (0.958) at the maximum. The alpha value of the study instrument as a whole and for all its statements indicates a degree of consistency good, (0.880).

Table 2. Coefficient of internal consistency (Cronbach Alpha) for the axes and statements of the questionnaire

Items	Number of statements	Internal consistency	Degree of internal consistency
Axis1: Students' readiness to use full e-learning in the educational process.	8	0.884	Good
Axis2: The impact of full e-learning advantages on students' academic performance in the accounting courses.	8	0.885	Good
Axis3: The impact of full e-learning advantages on students' learning achievement in English language courses.	8	0.817	Good
Axis4: The Impact of full e-learning problems on students' academic performance in the accounting courses.	5	0.746	Acceptable
Axis5: The Impact of full e-learning problems on students' academic performance in the English language courses.	5	0.958	Good
Study tool (all statements)	34	0.880	Good

Source: Researchers' analysis based on SPSS results, 2021.

7.2 Descriptive Analysis of the Study Axes

7.2.1 First Axis: Students' Readiness for Using Use Full E-Learning

Table 3. Percentages, arithmetic means and standard deviations of the first axis statements, N (302)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
1	The university provides training courses for using full e-learning.	79.8%	19.9%	0.3%	0%	0%	4.79	0.413
2	I have sufficient knowledge for using e-learning tools.	76.8%	21.9%	0.3%	1%	0%	4.75	0.507
3	My e-learning knowledge increases by time.	75.8%	21.9%	2.3%	0%	0%	4.74	0.492
4	I prefer to use full e-learning in the learning process.	79.1%	18.5%	1.7%	0.3%	0.3%	4.76	0.526
5	I am ready to study accounting courses that include applied mathematical operations through full e-learning.	69.2%	22.2%	8.6%	0%	0%	4.61	0.642
6	I am ready to study English language courses through full e-learning because they do not include mathematical equations.	79.8%	19.2%	1%	0%	0%	4.79	0.433
7	I prefer to use full e-learning in studying accounting courses.	69.9%	21.9%	3%	5.3%	0%	4.56	0.791
8	I prefer to use full e-learning in studying English language courses.	74.5%	23.1%	1.7%	0.7%	0%	4.72	0.527
Total							4.72	0.541

Source: Researchers' analysis based on SPSS results, 2021.

Table 3 includes the results of analyzing the respondent opinions about their readiness to use full e-learning in the educational process, and the following analytical data are noted:

1/ The arithmetic mean of the total axis is (4.72) and the standard deviation is (0.541), it is noticed that the arithmetic mean of the total axis is higher than the hypothetical mean of the scale (3), which is adopted to examine the levels of the studied sample responses.

2/ The arithmetic means of the axis dimensions was higher than the hypothetical mean, and ranged between a maximum of (4.79) and a minimum of (4.56).

3/ The highest responses for most of the statements came within the point (strongly agree), followed by the point (agree) and then (neutral). This indicates the tendency of the respondent opinions towards agreement, and it is noticed that the standard deviations are relatively small, indicating the homogeneity of the respondent opinions.

7.2.2 Second Axis: The Impact of Full E-Learning Advantages on Students' Academic Performance in Accounting Courses

Table 4. Percentages, arithmetic means and standard deviations of the second axis statements

N (302)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
1	Fast communication and interaction in the full e-learning system enhanced discussion methods and helped improve my academic performance in the accounting courses.	62.9%	24.5%	7%	5.6%	0%	4.45	0.852
2	The full e-learning system provides enough flexibility which helped me in team work.	58.9%	23.2%	13.9%	0%	4%	4.33	0.990
3	Easy access to e-learning tools enabled me to improve my achievement in the accounting courses.	56%	27.1%	11.9%	4%	1%	4.33	0.906
4	Easy access to the course and downloading of lectures and files enhanced self-learning and boosted my academic performance.	54%	25.8%	14.2%	4%	2%	4.26	0.978
5	Designing the course and its plan in an easy way helped me in developing knowledge.	59.9%	23.2%	9.9%	3%	4%	4.32	1.037
6	Clear instructions and proper assessment methods helped me develop skills and increased my academic benefit.	57%	23.1%	9.9%	6%	4%	4.23	1.102
7	The diversity of evaluation methods, such as short and lengthy tests, assignments and forums enriched my learning.	56.6%	21.8%	11.6%	6%	4%	4.21	1.112
8	The full e-learning atmosphere encouraged me to achieve the course goals.	57.6%	16.9%	17.6%	0%	7.9%	4.16	1.202
Total							4.29	1.022

Source: Researchers' analysis based on SPSS results, 2021.

Table 4 shows the results of analyzing the opinions of the responding students about the impact of full e-learning advantages on their academic performance in accounting courses, the following analytical data are noted:

1/ The arithmetic mean of the total axis is (4.29) and the standard deviation is (1.022), it is noticed that the arithmetic mean of the total axis is higher than the hypothetical mean of the scale (3), which is adopted to examine the levels of the studied sample responses.

2/ The arithmetic means of the axis dimensions was higher than the hypothetical mean, and ranged between a maximum of (4.45) and a minimum of (4.16).

3/ The highest responses for most of the statements came within the point (strongly agree), followed by the point (agree) and then (neutral). This indicates the tendency of the respondent opinions towards agreement, and it is noticed that the standard deviations are relatively small, indicating the homogeneity of the respondents' opinions.

7.2.3 Third Axis: The Impact of Full E-Learning Advantages on Students' Academic Performance in the English Language Courses

Table 5. Percentages, arithmetic means and standard deviations of the third axis statements

N (302)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
1	Fast communication and interaction in the full e-learning system enhanced discussion and helped improve my performance in the English language courses.	68.9%	17.9%	9.3%	1%	3%	4.49	0.925
2	The full e-learning system provides enough flexibility which helped me in the team work.	65.9%	19.2%	10.9%	0%	4%	4.43	0.971
3	Easy access to e-learning tools enabled me to improve my academic achievement.	66.9%	15.9%	13.2%	1%	3%	4.43	0.964
4	Easy access to the course and downloading of lectures enhanced self-learning and improved my academic attainment.	55.6%	23.9%	17.5%	3%	0%	4.32	0.866
5	Designing the course and its plan in an easy way helped me in acquiring more knowledge.	53.6%	26.8%	15.6%	3%	1%	4.29	0.905
6	Clear instructions and proper assessment methods helped me in mastering the skills.	58.6%	17.5%	11.6%	9.3%	3%	4.20	1.143
7	The diversity of evaluation methods, such as short and lengthy tests, developed my thinking and enriched my vocabulary.	59.9%	20.2%	7%	3%	9.9%	4.17	1.288
8	The full e-learning atmosphere encouraged me to achieve the course goals and upgrade my level.	58.7%	22.5%	10.9%	0%	7.9%	4.24	1.165
Total							4.32	1.028

Source: Researchers' analysis based on SPSS results, 2021.

Table 5 shows the results of analyzing the opinions of the responding students about the impact of full e-learning advantages on their academic performance in the English language courses, and the following analytical data are noted:

1/ The arithmetic mean of the total axis is (4.32) and the standard deviation is (1.028), it is noticed that the arithmetic mean of the total axis is higher than the hypothetical mean of the scale (3), which is adopted to examine the levels of the studied sample responses.

2/ The arithmetic means of the axis dimensions was higher than the hypothetical mean, and ranged between a maximum of (4.49) and a minimum of (4.17).

3/ The highest responses for most of the statements came within the point (strongly agree), followed by the point (agree) and then (neutral). This indicates the tendency of the respondents' opinions towards agreement, and it is noticed that the standard deviations are relatively small, which indicates the homogeneous sampling.

7.2.4 Fourth Axis: The Impact of Full E-Learning Problems on Students' Academic Performance in the Accounting Courses

Table 6 indicates the results of analyzing the opinions of the responding students about the impact of full e-learning problems on their academic performance in accounting courses, the following analytical data are noted:

1/ The arithmetic mean of the total axis is (3.65) and the standard deviation is (1.219), it is noticed that the arithmetic mean of the total axis is higher than the hypothetical mean of the scale (3), which is adopted to examine the levels of the studied sample responses.

2/ The arithmetic means of the axis dimensions is higher than the hypothetical mean, and ranges between a maximum of (3.97) and a minimum of (3.16).

3/ The highest responses for most of the statements came within the point (strongly agree), followed by the point (agree) and then (neutral). This indicates the tendency of the respondent opinions towards agreement, and it is noticed that the standard deviations are relatively small, indicating the homogeneity of the respondent opinions.

Table 6. Percentages, arithmetic means and standard deviations of the fourth axis statements

N (302)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
1	Lack of face-to-face communication in full e-learning impacted negatively on my academic performance regarding the accounting courses.	40%	30.1%	19.9%	7%	3%	3.97	1.072
2	Full e-learning, which focuses on the theoretical side, has a negative impact on my academic performance.	35.1%	30.1%	19.9%	5%	9.9%	3.76	1.260
3	Unaffordability to acquire e-learning devices, such as laptops and smartphones, impacted negatively on my learning.	25.2%	14.9%	40%	19.9%	0%	3.45	1.073
4	Internet disconnection during virtual classes had a negative impact on my academic achievement.	45%	25.2%	14.9%	5%	9.9%	3.90	1.299
5	Feeling socially isolated in full e-learning impacted negatively on my learning achievement.	25.2%	14.9%	25.2%	19.9%	14.95	3.16	1.390
Total							3.65	1.219

Source: Researchers' analysis based on SPSS results, 2021.

7.2.5 Fifth Axis: The Impact of Full E-Learning Problems on Students' Academic Performance in English Language Courses

Table 7. Percentages, arithmetic means and standard deviations of the fifth axis statements

N (302)

N	Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	SD
1	Lack of face-to-face communication in full e-learning impacted negatively on my academic performance respecting the English language courses.	20.1%	19.9%	14.9%	19.9%	25.2%	2.90	1.486
2	Full e-learning, which focuses on the theoretical side, has a negative impact on my learning achievement.	14.9%	25.2%	14.9%	19.8%	25.2%	2.85	1.427
3	Unaffordability to acquire e-learning devices, such as laptops and smartphones, impacted negatively on my performance.	20.2%	19.9%	30.1%	19.9%	9.9%	3.21	1.251
4	Internet disconnection during virtual classes had a negative impact on my academic achievement.	30.1%	25.2%	19.9%	14.9%	9.9%	3.51	1.324
5	Feeling socially isolated in full e-learning impacted negatively on my learning achievement.	14.9%	20.1%	25.2%	19.9%	19.9%	2.90	1.337
Total							3.07	1.365

Source: Researchers' analysis based on SPSS results, 2021.

Table 7 shows the results of analyzing the opinions of the responding students concerning the impact of full e-learning problems on their academic performance in the English language courses, and the following analytical data are noted:

1/ The arithmetic mean of the fifth axis as a whole is (3.07) and the standard deviation is (1.365), it is noticed that the arithmetic mean of the total axis is slightly higher than the hypothetical mean of the scale (3), which is adopted to examine the levels of the studied sample responses.

2/ Most arithmetic means of the fifth axis dimensions are less than the hypothetical mean, and ranges between a maximum of (3.51) and a minimum of (2.85).

3/ It is noted, that the opinions of the respondents differed concerning the effect of full e-learning problems on the academic performance of students in the English language courses, this means that, the respondents are not unanimous respecting the impact or non-impact of these problems on the academic performance.

7.3 Hypotheses Testing

7.3.1 First Hypothesis Test

To verify the validity of this hypothesis, the results of the descriptive statistical analysis of the phrases of the second axis in Table 4 and the phrases of the third axis in Table 5 were used. The arithmetic averages and standard deviations of those axes were extracted in order to be compared with the hypothetical mean (3), so as to decide whether to accept or reject the hypothesis. The decision rule states to accept the null hypothesis and reject the alternative hypothesis if the arithmetic mean of the total axis is less than the hypothetical mean (3), which are shown in Table 8.

Table 8. sample t-test analysis of the first hypothesis

Variable	N	Mean	Std. Deviation	Hypothetical mean (Acceptance rejection criteria)	Decision or
The advantages of full e-learning and the academic performance in accounting courses.	302	4.29	1.022	3	Reject null hypothesis
The advantages of full e-learning and the academic performance in English Language courses.	302	4.32	1.028	3	Reject null hypothesis

Source: Researchers' analysis based on SPSS results, 2021.

It is evident from Table 8 that the total arithmetic mean of both axes is greater than the hypothetical mean (3). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. Accordingly, "there is a statistically significant effect of the advantages of full e-learning on the students' academic performance in accounting and English Language courses".

7.3.2 Second Hypothesis Test

To verify the validity of this hypothesis, the results of the descriptive statistical analysis for the statements of the fourth axis in Table 6, and the statements of the fifth axis in Table 7 were used. The arithmetic averages and standard deviations of those axes were extracted to be compared with the hypothetical mean (3), in order to figure out whether to accept or reject the hypothesis. The decision rule states to accept the null hypothesis and reject the alternative hypothesis if the arithmetic mean of the total axis is less than the hypothetical mean (3), which is shown in Table 9.

Table 9. The results of one sample t-test analysis of the second hypothesis

Variable	N	Mean	Std. Deviation	Hypothetical mean (Acceptance or rejection criteria)	Decision
The problems of full e-learning and the academic performance in the accounting courses.	302	3.65	1.219	3	Reject null hypothesis
The problems of full e-learning and the academic performance in the English Language courses.	302	3.07	1.365	3	Reject null hypothesis

Source: Researchers' analysis based on SPSS results, 2021.

It is clear from Table 9, that the total arithmetic mean of both axes is greater than the hypothetical mean (3). Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. Consequently, "there is a statistically significant effect of the problems of full e-learning on the students' academic performance in accounting and English Language courses".

7.3.3 Third Hypothesis Test

To test this hypothesis, a T-test for the difference between two paired samples is used, where the decision rule states to accept the null hypothesis and reject the alternative hypothesis if the (P-value) is greater than (0.05). Table 10 shows the results of the analysis.

Table 10. The results of T-test analysis of the third hypothesis

Variable	N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
Advantages of full e-learning	302	- 0.03353	0.94798	- 1.738	2415	0.082

Source: Researchers' analysis based on SPSS results, 2021.

It is obvious from Table 10, that the value of the (P-value) was (0.082) greater than (0.05). Therefore, the null hypothesis is accepted and the alternative hypothesis is rejected. Thus, "there are no statistical-related differences between student opinions about the impact of the advantages of full e-learning on students' academic performance in the accounting and English Language courses".

7.3.4 Fourth Hypothesis Test

To test this hypothesis, a T-test for the difference between two paired samples was used, so, the null hypothesis is accepted and the alternative hypothesis is rejected. The (P-value) is greater than (0.05). Table 11 shows the results of the analysis.

Table 11. The results of T-test analysis of the fourth hypothesis

Variable	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
Problems of full e-learning	302	0.57550	1.86362	12	1509	0.000

Source: Researchers' analysis based on SPSS results, 2021.

It is noted from Table 11 that, the value of (P-value) was (0.000) less than (0.05). Hence, the null hypothesis is accepted and the alternative hypothesis is rejected. Accordingly, "there are statistically significant differences between students' opinions about the impact of e-learning problems on students' academic performance in accounting and English language courses".

8. Discussion

This study aimed at finding out the students' opinions with respect to the study of accounting courses, which include multiple mathematical calculations through full e-learning, and to compare them with the English Language courses, which are calculations-free, then to determine the effect of full e-learning on the students' academic performance. Many studies (Al-adwan, & Smedly, 2012; Alhabeeb & Rowley, 2017; Arkorful & Abaidoo, 2014; Berstorff & Lowe, 2007) conducted in this area, found that, students in higher education institutions are more receptive to e-learning, and their academic performance is generally better than the performance of students who study face-to-face by traditional methods. These results are consistent with the findings of the current study, which reaches

out that, the students are quite ready to use full e-learning in their educational process; whether in the accounting courses, or in the English language courses. In addition, this study found that, e-learning has positive effects that help in achieving the targeted learning outcomes in the accounting and English language courses, thereupon, improving the students' academic performance. These results match those of the previous studies by (Abdel Jawad & Shalash, 2020; Azis, 2019; Ja'ashan, 2020; Keshavarz, Rahimi, & Esmaeili, 2013; Klein & Ware, 2003; konwar, 2017; Suresh, Priya, & Gaythri R, 2018).

On the other hand, the results of the study of (Ja'ashan, 2020; Mandela, 2019) showed that e-learning has some problems which negatively affect the educational process, but this study concluded that, these problems have no effect on students' academic performance in accounting courses, but they have a negative impact on student performance in relation to the English language courses. The study findings indicated that, there is a difference in students' opinions about the impact of full e-learning problems on students' academic performance in accounting and English language courses.

9. Conclusions and Recommendations

According to the previous analysis, the study reached certain conclusions and recommendations, which can be summarized as follows;

- 1) The students are aware of the e-learning and its tools, and they prefer to use it their e-learning process.
- 2) There are multiple features for e-learning, which help in achieving the learning outputs in compliance with quality standards, the thing which will raise the student learning achievement in the accounting and English Language courses. Such features include the easy access of teacher-student interaction, flexibility in dealing with e-learning tools, and accessibility to the recorded learning material on blackboard. Also, there is a diversity of assessment methods such as quizzes, assignments and tests, forums and discussions. It's also worth mentioning, that the low cost of learning and non-counting of the class attendance, which results in deprivation-free exams, are also part of these features.
- 3) Moreover, the study reached that, e-learning related problems such as lack of face-to-face contact, the feeling of social isolation, Internet connection problems and unaffordability of e-learning devices do not have a negative impact on the academic performance of students in accounting courses, but impacted negatively on students in English Language courses.
- 4) There are no statistical-related differences between student opinions about the impact of the advantages of full e-learning on students' academic attainment in the accounting and English Language courses.
- 5) There are statistically significant differences between students' opinions about the impact of e-learning problems on students' overall performance in the accounting and English Language courses.

In the light of the above-mentioned results, the study would make some recommendations with the purpose of developing the e-learning and the educational process in accordance with the future educational trends, and taking into account the circumstances imposed by the Covid-19, these recommendations are as follows:

- 1) The educational institutions have to develop the educational e-learning environment, with the aim of making it conducive, attractive and creative. That can be achieved through technical and financial support, plus the continuous training for the teachers and learners.
- 2) The design of e-learning courses should be easy in order to cope with the changes and technological updates by restructuring the e-course with all its content such as the user interface, accessing options and easy access to the required information, the thing which would impact positively on the learning outcomes.
- 3) The necessity of developing and diversifying the communication tools between teachers and learners so as to increase efficiency and boost active learning.
- 4) The educational institutions have to tackle the repeated technical problems that would negatively affect the student academic performance.
- 5) It is a must to maintain the quality of e-learning standards by following the required accreditation rules, with the intention to guarantee and ensure the e-learning credibility.

References

- Abdel Jawad, Y. A., & Shalash, B. (2020). The Impact of E-Learning Strategy on Students' Academic Achievement, Case Study: Al- Quds Open University, *International Journal of Higher Education*, 9(6), 44-53. <https://doi.org/10.5430/ijhe.v9n6p44>

- Al-adwan, A. S., & Smedly, J. (2012). Implementing E-learning in the Jordanian Higher Education System: Factors Affecting Impact', *International Journal of Education and Development using Information and communication technology (IJEDICT)* 8(1), 121-135. Retrieved from <https://www.researchgate.net/publication/272942607>
- Alhabeeb, A., & Rowley, J. (2017). Critical success factors for eLearning in Saudi Arabian universities, *International Journal of Educational Management*, 31(2), 131-147. <https://doi.org/10.1108/IJEM-01-2016-0006>
- Anggrainingsih, R., Uman, M. Z., & Setiadi, H. (2018). Determining e-learning success factor in higher education based on user perspective using Fuzzy AHP', in *MATEC Web of Conferences*, 154, 3011. <https://doi.org/10.1051/mateconf/201815403011>
- Arkorful, V., & Abaidoo, N. (2014). The role of E-learning, the advantages and disadvantages of its adoption in higher education, *International Journal of Education and Research*, 2(12), 397-410. <https://doi.org/10.1080/07294360.2014.956693>
- Azis, Y. M. et al. (2019). Student's Experience of E-Learning, Learning Process And Perceived Learning Outcomes In Economic Math Course, *Journal of Humanities And Social Studies*, 3(2), 67-71. <https://doi.org/10.33751/jhss.v3i2.1458>
- Berstorff, P. C., & Lowe, K. S. (2007). Student Perceptions and Opinions towards E-learning in the college environment, *Academy of Educational Leadership Journal*, 11(2), 13-30. Retrieved from <https://www.researchgate.net/publication/285481730>
- Chapnick, S. (2000). Are You Ready for E-learning?, Retrieved December 25, 2021 from https://nurhadiw.files.wordpress.com/2010/08/are_you_ready_for_elearning.pdf
- CommLab India Bloggers (2020). Types of E-Learning, Retrieved December 22, 2021 from <https://blog.commlabindia.com/elearning-design/types-of-elearning>
- Dung, D. T. H. (2020). The Advantages and Disadvantages of Virtual Learning, IOSR, *Journal of Research & Method in Education (IOSR-JRME)*, 10(3), 45-48. DOI: 10.9790/7388-1003054548
- Elfaki, N. K., Abdulraheem, I., & Abdulrahim, R. (2019). Impact of e-learning vs traditional learning on students' performance and attitude, *International medical journal (1994)*, 24(3), 225-233. Retrieved from <https://www.researchgate.net/publication/338528127>
- Garcia, A. (2020). Gaming Literacies: Spatiality, Materiality, and Analog Learning in a Digital Age, *Reading Research Quarterly*, 55(1), 9-27. <https://doi.org/10.1002/rrq.260>
- Ja'ashan, M. M. N. H. (2020). The Challenges and Prospects of Using E-learning among EFL Students in Bisha University, *Arab World English Journal*, 11(1), 124-137. <https://doi.org/10.24093/awej/vol11no1.11>
- Keshavarz, M., Rahimi, M., & Esmaeili, Z. (2013). The effect of e-learning on educational progress of students of Isfahan University of Medical Science, *Journal of Torbat-e-Heydarieh University of Medical Science*, 1(2), 13-22. Retrieved from <https://jms.thums.ac.ir/article-1-39-en.html>
- Klein, D., & Ware, M. (2003). E-learning: New opportunities in Continuing Professional development, *Learned Publishing*, 16(1), 34-46. <https://doi.org/10.1087/095315103320995078>
- konwar, I. H. (2017). A Study on Attitude of College Students towards E-learning with Special Reference to North Lakhimpur of Lakhimpur District, Assam, *International Journal of Information Science and Education*, 4(1), 1-9. Retrieved from https://www.ripublication.com/ijise_info/ijisev4n1_01.pdf
- Lu, H., & Dzikria, I. (2019). Critical Success Factors (CSFs) of Distance Learning Systems: A Literature Assessment, Conference: 2019 International Joint Conference on Information, Media and Engineering, At: Osaka, Japan. <https://doi.org/10.1109/IJCIME49369.2019.00044>
- Mandela, N. (2019). Disadvantages of e-learning, Retrieved July 19, 2021 from <https://e-student.org/disadvantages-of-e-learning/>
- Marlina, E., Tjahjadi, B., & Ningsih, S. (2021). Factors Affecting Student Performance in E-Learning: A Case Study of Higher Educational Institutions in Indonesia, *Journal of Asian Finance, Economics and Business*, 8(4), 993-1001. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0993>
- Masie, E. (2019). We need to bring learning to people instead of people to learning, Retrieved July 19, 2021 from <https://medium.com/lumastic/>

- Masrom, M. (2008). Critical Success in E-learning: An Examination of Technological and Institutional Support Factors, *International Journal of Cyber Society and Education*, 1(2), 131-142. Retrieved from ATISR, <https://www.learntechlib.org/p/209165/>
- Negash, S., & Wilcox, M. V. (2008). E-learning Classifications: Differences and Similarities, *Handbook of Distance Learning for Real-Time and Asynchronous Information Technology education*, IGI Global, pp: 1-23. <https://doi.org/10.4018/978-1-59904-964-9.ch001>
- Nwagwu, W. E. (2020). E-learning readiness of universities in Nigeria- what Are the opinions of the academic staff of Nigeria's premier university?, *Education and Information Technologies*, 25, 1343-1370. <https://doi.org/10.1007/s10639-019-10026-0>
- Owusu, F. C., Koomson, C. K., & Hanson, D. (2020). The Impact of Covid-19 on Learning -The Perspective of the Ghanaian Student, *European Journal of Education Studies*, 7(3), 88-101. <http://dx.doi.org/10.5281/zenodo.3753586>
- Papageorgiou, K., & Halabi, A. K. (2014). Factors contributing toward student performance in a distance education accounting degree. *Meditari Accounting Research*, 22(2), 211-223. <https://doi.org/10.1108/MEDAR-08-2013-0032>
- Samuel, S. C., & Marimuthu, F. (2022). An Investigation on Students' Perception of Possible Factors That Affect Their Academic Performance at A University of Technology, *International Journal of Higher Education*, 11(3), 26-39. <https://doi.org/10.5430/ijhe.v11n3p26>
- Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach*, 5th ed., Wiley, New Jersey, United States.
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models, *Computers and Education*, 49(2), 396-413, <https://doi.org/10.1016/j.compedu.2005.09.004>
- Suleiman, A. A. (2019). Social Media and Students' Academic Performance in Nigeria, *Asian Journal of Education and e-Learning*, 7(1), 29-36. <https://doi.org/10.24203/ajeel.v7i1.5616>
- Tamm, S. (2019). Types of e-learning, Retrieved August 4, 2020 from <https://e-student.org/types-of-e-learning/>
- Tamm, S. (2021). 10 Major Advantages of E-Learning, Retrieved January 17, 2022 from <https://e-student.org/advantages-of-e-learning/>
- Tan, S. M., Liew, T. W., & Gan, C. L. (2020). Motivational virtual agent in e-learning: the roles of regulatory focus and message framing, *Information and Learning Science*, 121(1-2), 37-51. <https://doi.org/10.1108/ILS-09-2019-0088>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).