






University Students' Attitudes towards using the Nearpod Application in Distance Learning

Mofeed Ahmed Abu Musa¹  
Jehad Ali Al Momani² 



(✉ Corresponding Author)

¹ Arab Open University, Jordan.
Email: M_abumusa@aou.edu.jo
² Amman Arab University, Jordan.
Email: jmomani@aau.edu.jo

Abstract


Creating a stimulating learning environment is a challenge in distance learning settings. This study aimed to investigate university students' attitudes towards using Nearpod in distance learning. For purposes of the study, the researchers developed a questionnaire of 20 items for which the validity and reliability were verified. The study sample consisted of 190 students. The students were taught different courses remotely in the second semester of the academic year 2020-2021 via Nearpod and Zoom. The results showed that the students had positive attitudes towards using Nearpod. In addition, the results showed that teacher support was the most important variable ($\bar{x} = 3.69$), while student interaction and participation via Nearpod was predicated by students. Using appropriate applications to increase teacher support and student interaction is the most important variable in distance learning settings. The results also showed that there were no statistically significant differences ($\alpha = 0.05$) attributed to the gender and academic stage variables.

Keywords: Student attitudes, Nearpod application, University teaching, Distance learning, Video conference, Authoring tools.

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Contents

1. Introduction	111
2. Literature Review and the Previous Studies	112
3. Research Methodology	115
4. Research Results	116
5. Conclusion	117
6. Recommendation.....	117
References.....	118

Contribution of this paper to the literature

This study provides empirical evidence on distance learning environments from students' point of view. The study reports many applications that can be used to create supportive learning environments in distance learning. Nearpod integrated with Zoom was used as the authoring and presentation tool in this study.

1. Introduction

The education system has been greatly affected by recent technological developments, and there have been changes in the system corresponding to the era of information technology and the Internet. With the emergence of Web 2.0 and its tools, education has developed in an unprecedented manner and many forms of educational styles have emerged, such as e-learning, blended learning and distance learning. Subsequently, educational institutions began to develop their inputs using the Internet, to attain high quality optimum outputs that meet the needs of the community. As a result, many applications have appeared and they are classified as interactive presentation methods that employ multimedia such as the Nearpod application.

The increase in the use of the Internet and the employment of education technologies, especially in the period of the Corona pandemic have led to a rapid development in the concept of distance learning as well as a noticeable increase in the use of electronic applications in distance learning, such as the Nearpod, Mentimeter and Live worksheet. The Nearpod application is an interactive application that allows synchronization between tablets, and it can be used in face-to-face learning or through synchronization of virtual classrooms. The application includes the ability to create presentations and interactive activities that can be used for evaluation during or after live sessions in an integrated template. Using this application enables teachers to design the actual teaching process easily. It is available on the Internet and can be run through computers or through mobile devices. It allows the subscriber as a teacher to simultaneously host forty students in each session with free storage space of 100MB. This application is characterized by ease of use, flexibility in modification and the ability to share information with other teachers and students, as it makes the learning environment more participatory through various e-learning environments. These participatory environments can be described as a system for communicating with electronic content and interaction between the students and the teacher as well as between the students themselves, in addition to the change in the interaction of students with the content, which has taken many varied forms (Ajmal, Arshad, & Hussain, 2019).

In the past years, many universities have started to use blended learning as a type of learning that combines face-to-face learning with full electronic learning or distance learning. Blended learning can be defined as the combination of the Internet environment and face-to-face education, which is a mixture of web-based courses or computer-mediated communication practices and face-to-face instruction. In contrast to the different interpretations of blended learning, the common points in the definitions include combining the elements of distance learning with its tools and the usual face-to-face learning, and perhaps the most important common tools between them are their use of learning management systems (Anderson, 2019).

In order to gain benefits from blended learning, educational institutions and universities have used learning management systems (LMS) to create a new environmental learning system that needs new rules to be dealt with by all parties in the educational process. The activities of learning management systems include adding patterns to interactive course materials such as group chats, forums, individual and group projects and surveys on specific topics that enable students to collaborate and participate among themselves and their teachers to build and learn content. Learning management systems also help develop multiple skills among students such as cooperative learning skills and self-learning skills. Perhaps the current shift to distance learning highlights the need to pay attention to blended learning in order to create an active learning environment in light of the attention paid to distance learning. The change in the learning environment in light of distance learning has forced teachers to search for interactive tools of high quality such as the Nearpod application (Anderson, 2019).

The learning management systems in the blended learning environments have helped to increase the responsibility of students in learning. Students have to work and learn independently using the different tools and forms of educational content provided by these systems, and these systems help students to choose what they learn, as well as choose from the range of educational resources and multimedia available to them and those that are provided for them by the teachers through communication tools such as interactive multimedia applications, learning management systems and other distance learning tools. Self-learning skills include students' ability to manage their learning tasks without any guidance from teachers. Self-learning skill is one of the most important skills that must be acquired by students of the current era, supported by blended learning or distance learning (Todri, Papajorgji, Moskowitz, & Scalera, 2020).

The highly effective e-learning tools and applications provided by distance learning environments, such as the Nearpod application, have helped teachers to provide integrative and interactive reinforcements that allow students to study at all times and work at their own pace, allow teachers to offer a flexible schedule available anywhere, and help them in promoting the virtual learning environment in light of distance learning. The idea of learning has become dependent on internet connectivity and students can attend classes using their devices such as computers and tablets (Rahmadi, 2021; Tiba & Condy, 2021).

The change in the learning environment in light of the Corona pandemic has led to a change in the role of both the teacher and the learner and the need to adopt highly effective technological tools and means to motivate students and increase the interaction space during the face-to-face meetings. The blended learning environment based on the presence of a face-to-face meeting and the use of a mixture of technological tools in asynchronous meetings has radically changed the distance learning environment and this is what many universities follow, such as the Arab Open University. This shift has brought about a clear change in the learning environment. This change may need scrutiny, exploration and evaluation. In light of this situation, this study aimed to investigate the attitudes of the students in the Arab Open University towards employing the Nearpod application in distance learning. A further aim is to gauge the university students' satisfaction with this experience in light of the distance learning system which has increased in demand as a result of the spread of the Corona pandemic, when face-to-face

learning was stopped in all countries of the world to safeguard people's lives. The aim of the present study can be realized by answering the following two questions:

Question 1: What are the university students' attitudes towards using the Nearpod application in remote learning?

Question 2: Are there statistically significant differences at the level ($\alpha = 0.05$) between the arithmetic means of the university students' attitudes towards using the Nearpod application in distance learning between the gender and education level variables?

1.1. Research Significance

The importance of the current study is to shed light on distance learning environments and the electronic tools and applications that increase students' interaction and motivate them during direct sessions, which may have a positive impact on achieving educational outcomes and increasing students' motivation towards learning. It also focuses on employing electronic application in distance learning and the extent of university students' satisfaction with it, by revealing their attitudes towards this experience and identifying their views on employing this type of electronic application and the extent of its needs in light of the distance learning system which is seen to be a starting point and evaluation system for judging the quality of employing such applications in university teaching and the possibility of generalizing them in institutions of higher education.

1.2. Study Terms and Definitions

- Nearpod application: An interactive application that has been adopted in distance learning and teaching in universities by creating interactive displays that combine a number of interactive multimedia during simultaneous sessions working to integrate students into the learning process during live sessions.
- Distance teaching in universities: the educational process through which knowledge and skill outcomes are achieved by students of different levels (Bachelor and Master Levels) at the Arab Open University, and the entire program is implemented remotely through virtual classes and educational platforms such as the Zoom application, during the second semester of the academic year 2020-2021.
- Students' attitudes: a state of mental readiness organized through experience and which exerts a direct or dynamic influence. In this study, this is measured by the degree obtained by the students in the scale of attitudes towards employing the Nearpod application in the distance learning process, which was prepared by the researchers.

1.3. Limitations of the Study

- Spatial limits: This study was carried out at the Arab Open University, Jordan.
- Human limits: This study was applied to students of the Faculty of Educational Sciences at the Arab Open University, Jordan.
- Time limits: This study was applied in the second semester of the academic year 2020/2021.

The ability to generalize the results of the study was determined by the tools that were used in the study, in light of the validity and reliability of the tools. It is therefore not possible to guarantee obtaining the same results when using other tools.

2. Literature Review and Previous Studies

There are many types and tools of communication in distance learning but the two types of communication generally referred to are synchronous communication and asynchronous communication. Synchronous communication indicates that learners meet at the same time through electronic tools in one electronic environment. Among the most important synchronous communication tools are virtual classrooms, video conferencing, Saba Sentra, Adobe Connect and Webex. As for asynchronous communication, the learners are free from time constraints. They converse and interact but they do not meet at the same time. The tools used are e-mail, blogs, collaborative writing editors and billboards. The advantage of synchronous communication in distance learning is that it provides the opportunity for interaction between learners and enables them to exchange and share experiences among themselves, in addition to sharing and exchanging files and working to increase students' motivation towards more learning, as well as working on the development of the social aspect among students. As for the asynchronous communication in distance learning, this is characterized by working to free the students from time constraints and giving them the opportunity to answer questions and participate at any time; it also allows the students to return to the educational content at any time and allows the process of self and independent learning for the learners and encourages them to interact in a virtual and asynchronous way, which in turn increases the students' confidence in themselves.

2.1. The Teacher's Role in a Distance Learning Environment

After forced transformation in the mechanism of the education process from face-to-face education to distance learning due to the Corona pandemic, the attempts at limiting the spread of this virus have resulted in the balance of the education process being overturned, and this has become a reality all teachers, learners and parents are forced to face. With these changes taking place, the roles and responsibilities of the teacher were forced to change too.

The teacher, under normal circumstances, is the centre of the teaching and learning process and the main point of reference. One of his duties is to create an appropriate and organized learning environment and one of his primary roles is to transfer knowledge from the textbook and the teacher's guide to the learners in the classroom in the usual rhetorical way of lecturing, explaining, describing and telling stories, and the success of all these methods depend on the teacher's efforts in the classroom. Although there are many advantages to the recitation method, such as ease of application on the ground and the possibility of explaining and clarifying incomprehensible ideas, there are some negatives to the method of recitation in its forms that cause fatigue to the teacher because he

is the main figure responsible for the transfer of knowledge to learners; thus, causing him stress. The method of delivery also neglects the students' tendencies and desires and the individual differences between learners, and it is one of the ways that helps to spread the spirit of boredom and dispersion, and that is due to the role of the learner as the listener most of the time (Sifer, 2020).

As for the teacher in e-learning, he is required to prepare for the educational situation in advance and to be able to design and plan the entire learning atmosphere and have a vision for this educational situation before moving on to apply it in practice (analyzing the characteristics of learners, defining educational goals and choosing the appropriate educational means and media to achieve the educational goal). It also requires the teacher to upload the learning material onto the educational platform before the start of the lecture and to make sure that it is taken from the approved course for the chapter, meaning that it is the latest version that has been modified. The teacher has to make sure that the hyperlinks are effective and he has to try them out before starting the lecture, to ensure that they work properly. One of the characteristics of a successful teacher in e-learning is that he always has an alternative plan if a certain method does not work during the presentation of the lecture, for example, a video clip that was prepared before the lecture. Here, there must be another way to display the video content or presentation slides (Debeş, 2021; Ferraro, Ferdinando, Aruta, & Iavarone, 2020).

The teacher engaged in e-teaching should have the ability to spread positive energy through his positive tone of voice, so that he presents and shares information that learners are interested in, and he understands how to communicate with them if he needs to clarify certain points. Also, the teacher should display the extent of his passion and involvement in the knowledge content that he plans to present. He should start by welcoming the learners and giving them an overview of what he will present during the educational or scheduled situation in general, and what materials and instructions are required to start the lesson. He should ensure that all students are present from the beginning of the virtual classroom lesson and try to help the students who face problems with entering the virtual classroom or encounter problems with the sound or images presented during the lesson. He is also required to motivate students to communicate with each other through the available discussion forums for the course, to exchange ideas, provide assistance and feedback or through creating a WhatsApp group to achieve the aims and purposes of the lesson (Rahmadi, 2021).

The teacher must also provide feedback that helps develop and enhance students' performance, helps them correct their mistakes and empowers them with the skills entrusted to them, builds their confidence in their learning outcomes and plays a major role in raising the level of competition among learners. This also contributes to strengthening the learning process and forming positive attitudes towards learning. The teacher should guide learners to access search engines on the Internet or make references to periodicals and scientific publications to obtain information and knowledge and continue their studies without wasting time on electronic devices. In order to achieve the above, the teacher has to be firm at the right time and in the right position, because this increases the students' motivation to learn; he needs to be patient and wise because he deals with a large number of students from different backgrounds and cultures (Sifer, 2020; Viktoria & Aida, 2020).

2.2. The Role of Students in a Distance Learning Environment

Under the distance learning system, classroom interactions between students and teachers are being improved through applications and software and relying on multimedia and digital files, which also help to engage learners in the self-learning process and involve them in online virtual classes and various educational activities. The distance learning environments provide university students with online training courses, and allow them to submit to electronic tests, control the content and presentation of lessons, obtain instant feedback from teachers, acquire backup copies of course content and upload course materials through learning management systems or educational platforms (Belay, 2020).

Educational interaction is defined as the events that occur to allow communication between the learner and the learner's environment. Interaction is an active process that requires learners to do more than just passively absorb information. During the Corona pandemic, different types and levels of interaction appeared in distance education courses, as modern technologies available today allow a high degree of communication between the teacher and the learners and between the learners themselves (Tosun, 2021).

There are three types of interaction in distance learning mentioned in Moore's theory, as follows (Ibdah, 2020):

1. Student-content interaction: Students can obtain information from the course contents in several ways and forms. The contents may be in the form of text, audio, video, Internet communication or computer-supported programs.
2. Student-student interaction: This is through the exchange of ideas and information; it arises between students, both in the absence and presence of the teacher. This interaction appears in the form of group projects or group discussions that enhance learning through cooperation and knowledge exchange.
3. Student-teacher interaction: This is through the teacher's communication with the learner in the form of a trainer who transmits information, inspires students and provides them with feedback.

The above 3 types of interactions in distance education require learners to do more than one task in order to access information and scientific content in a meaningful way, in addition to having technical skills that enable them to practice learning through modern electronic technologies and applications that guarantee them continued learning and communication with teachers.

2.3. Implications of the Distance Learning Environment in the Educational Process

The role of the teacher and student has changed with the emergence of distance learning, which has led to the use of new communication channels and increased the complexity of communication between them. This has affected the way students perceive information as educational content is no longer presented face-to-face in the classroom; rather, it is presented synchronously and asynchronously using technological tools. Tools that allow the delivery of messages have changed too, such as face-to-face meeting techniques. On the other hand, methods such as e-mail have been used in cases of asynchronous communication. The contextual factors that play an important role in how the educational content is delivered have been affected. Body language, facial expressions and gestures

have been eliminated. This in turn affected the quality of the content and led to misunderstandings. In addition, the presence of confusion and noise led to a distortion of the process of students' communication and interaction during the educational process. One of the most prominent manifestations of confusion during this period is the continuous interruption of the Internet during the lessons, and the change in the form of feedback to become online feedback. It may be synchronous directly between the teacher and the learner across educational platforms, or it may be asynchronous in which feedback is provided between a peer discussion group, all of which are represented by interactive worksheets and videos sent through social media and messages sent by e-mail and files in various forms via Google Drive. The general aim is to achieve asynchronous participatory learning exchange, the exchange of ideas and different viewpoints and providing non-immediate feedback because these asynchronous tools do not require the presence of group members at the same time (Tosun, 2021).

In relation to the main focus of this study, a number of recent studies have been identified as having employed the Nearpod application in the educational process:

Hakami (2020) conducted a study to explore the Nearpod program used as a tool to promote active learning in higher education, where the Nearpod application was adopted to enhance the teaching and learning outcomes of lectures given by teachers. The sample of the study consisted of (74) female students of Sharurah College of Sciences and Arts at Najran University who were studying in separate university campuses. To achieve the goal of the study, an electronic educational questionnaire was designed and the Nearpod application was integrated with the video learning system to be used in distance learning to present lectures and the students' own devices were used to carry out learning activities during the lessons. The results of the study related to the study tool showed that the Nearpod program and the BYOD model enhanced active learning in the classroom and raised students' satisfaction in the integrated learning environment and in the use of the Nearpod program in all courses, especially those taught through the video learning system.

Shehata, Mitry, Shawki, and El-Helaly (2020) conducted a procedural study aimed at revealing the effectiveness of including Nearpod application in university financial accounting classes in Egypt for tests on answering multiple-choice type questions in the category of introductory financial accounting for the first university stage. It also aimed to study the effects of using the Nearpod application on teaching and learning experiences in one of the best private universities in Egypt. In addition to this, it was an attempt to reveal the impact of the teacher's use of the Nearpod in the classroom on students' interest in the subject and course materials when compared with traditional paper and pen tests. To achieve this, a survey questionnaire was prepared on the use of the Nearpod application as an online platform that facilitates the use of interactive educational materials via using mobile devices. The results of the student and focus group surveys showed that using the Nearpod application increased students' interest in the classroom and showed positive effects on their learning.

Govindarajan (2020) conducted a qualitative study aimed at revealing the effectiveness of using web-based games and interactive activities in achieving better student participation in English language classes. To achieve this, content was taught using electronic applications such as Nearpod, Kahoot and H5P in regular face-to-face classrooms and in online classrooms, since the global scenario had changed due to the existing epidemiological situation. The results of this study showed the positive effects of using web-based games and interactive activities in achieving better student participation in English language classes. It was also found that most students may not be able to create the appropriate classroom atmosphere at home for online learning and accordingly the learners' motivation levels may not be at the same level when they attend online lessons. Also, some effective techniques such as pair work or group work cannot be conducted effectively by teachers in online classes and teachers need to pay special attention to asynchronous classes and focus on motivating students and supporting their participation in the virtual learning environment. The best option to achieve this may be through the use of interactive games and activities because the classroom is connected to the Internet.

Al-Zahrani (2019) conducted an empirical study aimed at revealing the effects of using an e-learning environment based on mobile learning through the application of Nearpod on the academic achievements of female students at the College of Education at Princess Nourahbint Abdulrahman University in the educational technology course. The study sample consisted of (60) female students from the College of Education at Princess Nourahbint Abdulrahman University. They were divided equally into two groups; one was the experimental group who studied the Google Educational Applications unit through an e-learning environment based on mobile learning using mobile phones managed using the Nearpod application. The other was the control group who studied the same unit taught using the lecture method. To achieve the goal of the study, an achievement test was prepared and administered to the two study groups after verifying its validity and reliability. The results showed that there were statistically significant differences in the achievement of the students and in favor of the experimental group students who recorded better scores in the achievement test compared with the control group, which indicates the effectiveness of the e-learning environment based on mobile learning using the Nearpod application.

Kurt et al. (2019) conducted a qualitative study that aimed to determine teachers' opinions on the use of Web 2.0 tools in education. The study sample consisted of 148 teachers from 21 different cities in the TÜBİTAK project, who were asked to express their expectations before they underwent the training and their perceptions of the training after it was completed, in addition to asking them which Web 2.0 tools they most liked within the scope of the project entitled "Education Portfolio: Using Web 2.0 Tools in Education". To this end, a structured online form prepared for the purpose of the research was shared with the participating teachers. This form included three questions on (1) teachers' expectations in the training, (2) training efficiency and (3) Which Web 2.0 tools they liked/disliked during the training process. After applying the study tools, the data were analyzed with the content analysis, and the data obtained from the content analysis were discussed under two sub-headings, expectations related to education and post-education perspectives. The expectations of the participating teachers were collected on topics related to the teacher, education and the student. The opinions of the participating teachers were collected after the training under four axes: training, content, teacher and teachers. The results showed that the most preferred Web 2.0 tools for online participating teachers were the Quizzes test preparation tool and the Metaverse tool that can develop augmented reality applications; the Edmodo, Google Forms, Edpuzzle and Nearpod tools were among their other favorites.

Al-Asiri (2018) conducted a quasi-experimental study that aimed to measure the effectiveness of the Nearpod application in tablets on verbal and non-verbal classroom interaction among female students in their second-year of high school in the computer subject in Riyadh. The study sample consisted of 25 female students, and to achieve the aim of the study, the classroom interaction measurement tool was used, which was the modified "Menf" model. The interview tool was also used; this was designed to know the views of the teacher and students on classroom interaction after the experiment. They were taught a full unit using the conventional method before intervention. Next, the Nearpod application as an active learning method was used as a strategy in designing the activities that were used in the application. The results showed that the use of activities through the Nearpod application encouraged better class interaction because it gave the learners the opportunity to participate, talk and interact with the teacher in the classroom, and encouraged non-verbal interaction between the teacher and the students. It was also found that the Nearpod application encouraged productive silence in which the student worked alone or with other students. The results of the interview analysis of the teacher and the students showed that there were positive trends towards using the Nearpod application, and that it had a positive effect in motivating them to interact and participate, compared with the conventional methods.

Al-Asiri (2018) also conducted a study aimed at identifying the effects of using the Nearpod software on achievement in chemistry and the development of social communication skills among tenth grade students in the State of Kuwait. The sample of the study, which was chosen intentionally, consisted of 41 students from the tenth grade at Al-Sabah Secondary School for Boys in Al-Farwaniyah Governorate in the State of Kuwait during the second semester of the academic year 2106/2107. This study relied on the quasi-experimental approach by selecting two groups of tenth graders, in which one group was chosen as the control group that studied the scientific material related to the unit on chemical reactions and quantitative chemistry in the conventional way, and the other was the experimental group that studied the scientific material using the Nearpod software defined on the iPad devices of the teacher and students. An achievement test and a measure of social communication skills were prepared after adapting it to the Kuwaiti environment, and after verifying the validity and reliability of the study tools, they were applied to the two study groups. The results showed that there were statistically significant differences at the level ($\alpha = 0.05$) between the arithmetic averages in the achievement test in the unit of chemical reactions and quantitative chemistry, and in the total scores in the social communication skills scale for tenth grade students in the State of Kuwait and in favor of the experimental group that was taught using Nearpod software.

McKay and Ravenna (2016) conducted a quasi-experimental study aimed at determining the effectiveness of the Nearpod application in interactive technology, and its ability to monitor students' progress and check understanding during teaching. The study sample consisted of two teachers nominated in the last semester of hands-on clinical experience. Both teachers taught at a school in Tustin, California to a group of students of whom 49% were socioeconomically disadvantaged students and 26.4% were English language learners. They were divided into two groups, an experimental group consisting of 31 students who studied using the Nearpod application to verify understanding and to monitor their progress in their own classroom, and a control group consisting of 32 students who studied in the usual way without monitoring progress or using the Nearpod application. The results of the data analysis showed that the use of the Nearpod application for the responding students improved the participation of these students and the evaluation of the whole group in one lesson.

Delacruz (2014) conducted a study aimed at revealing the effectiveness of using the Nearpod application while teaching directed reading to primary stage students. The study sample consisted of groups of fourth grade students who had small iPads. A teacher was chosen to implement the English language teaching process for these groups and to use the Nearpod application during the instruction of guided reading. After completing the teaching process, the students and the teacher were interviewed to determine the benefits and challenges of this type of education. The results of data analysis showed that all students found this type of guided reading useful and motivating in learning the content provided through the application. The students also showed the importance of using the Nearpod application in transferring acquired knowledge to their independent work. The teacher also showed ability in improving organization of guided reading groups and the importance of thinking and planning carefully to ensure that the technology worked correctly during the guided reading lesson. Based on these findings, the study recommended that Nearpod be used in guided reading lessons due to its ease of use and its ability to engage students and monitor their progress.

Based on previous studies, it is clear that there is agreement among previous studies on the importance of using the Nearpod application and its positive role in achieving effectiveness in the educational process at the university level, as seen in the studies by Shehata et al. (2020); Hakami (2020) and Al-Zahrani (2019) and at the school level as seen in studies by Al-Shehri (2018); Al-Asiri (2018) and Delacruz (2014). As for the methodology, most of the previous studies adopted the quasi-experimental method to reveal the effectiveness of using the Nearpod application, except the study by Kurt et al. (2019) that used the qualitative method and aimed to reveal teachers' views on the use of Web 2.0 tools in education. The current study aims to reveal the attitudes of undergraduate students towards employing the Nearpod application in distance learning in light of the Corona pandemic. This is an attempt by the researchers to shed light on such electronic applications and their role in light of the global transition to the distance education system.

3. Research Methodology

Based on the objective of the study and its questions, the descriptive-analytical approach was used. To achieve the aim of the study, an intentional sample of 190 male and female students from the education majors were selected out of 900 male and female students enrolled in the second semester of the academic year 2020-2021, which is equivalent to about 21 % of the study population. Based on previous studies related to the educational environment and the use of tools in distance learning, a measure of attitudes towards employing the Nearpod application in distance education was prepared. The scale included two fields; the first field was teacher support during the direct session, and the second field was student interaction and participation. The validity of the tool was confirmed by presenting it to nine referees specialized in curricula, teaching methods, psychology,

measurement and evaluation, and some items were modified based on their suggestions. To verify the internal consistency of the scale, Cronbach's alpha coefficient was calculated for the scale and its value was 93%, which is an acceptable percentage for the internal consistency of the study tool.

4. Research Results

4.1. Results of the First Question: What are the University Students' Attitudes towards using the Nearpod Application in Remote Learning?

Regarding university students' attitudes towards using the Nearpod application in distance learning, the arithmetic means and standard deviations were calculated for each field of the scale as shown in Table 1.

The degree (3.5) and above has been adopted as a high degree indicating that students have positive attitudes. The degree (2.5-3.0) is a medium degree indicating moderate degree of attitudes while (2.5) is a low degree indicating that students have negative attitudes.

Table 1. Arithmetic means and standard deviations of students' responses on the attitudes scale, classified by fields (first field: teacher support during the live session; second field: students' interaction and participation)

Students Attitudes	Std. Deviation	Mean	Dimensions
High	0.99	3.69	The first dimension: teacher support during the live session
Moderate	0.88	3.37	The second dimension: student interaction and participation
High	0.84	3.50	Total Score

Table 1 shows that the students' attitudes towards using the Nearpod application indicate a high positive degree in general, indicating that the students had positive attitudes. The first dimension (teacher support during the direct session) ranked first with a high mean indicating positive attitudes of students that reached 3.69. The second dimension (student interaction and participation) came in the second rank with a moderate degree and a mean of 3.37, which indicates the importance of the teacher increasing attention on interaction and participation of students during distance teaching.

In order to reveal the strengths and weaknesses in each field of the scale, the arithmetic means and standard deviations of the students' responses were calculated for each of the scale's items as shown in Tables 2 and 3:

Table 2. Arithmetic means and standard deviations of students' responses to the items of the Attitude Scale classified according to the first dimension (teacher support during the direct session).

Students Attitudes	Std. Deviation	Mean	Items
High	1.12	4.02	Changes the way the teacher speaks to me
High	1.24	3.85	Breaks the face-to-face communication gap with the teacher and colleagues
High	1.22	3.83	Develops the presentation of content
High	1.20	3.71	Enables the teacher to give students the opportunity to participate in class discussion
High	1.13	3.66	The teacher provides sufficient time to respond to my inquiries
High	1.29	3.63	Increases positive interaction with the teacher
High	1.29	3.53	Diversity of interaction methods between the student and the teacher
Moderate	1.31	3.34	Provides an opportunity for the teacher to provide valuable feedback on the tasks and activities that I present

Table 3. Arithmetic means and standard deviations of students' responses on the Attitude Scale, classified according to the second dimension (students' interaction and participation).

Students Attitudes	Std. Deviation	Mean	Items
High	1.16	3.77	Able to explore my own learning styles
High	1.22	3.59	Able to control my learning process related to managing learning time, completing assignments and reviewing lectures
High	1.32	3.55	Motivates me to focus and pay more attention
High	1.19	3.54	Solves my problems
Moderate	1.34	3.45	Able to accomplish my academic tasks in cooperation and sharing with my colleagues
Moderate	1.19	3.42	Increases my motivation to learn.
Moderate	1.37	3.42	Able to make a comparison between my work and the work of my colleagues
Moderate	1.26	3.41	Able to work within a team as part of my regular activities
Moderate	1.30	3.38	Able to find answers to my questions
Moderate	1.38	3.06	Able to share the information I know with my colleagues
Moderate	1.33	3.02	Allows me to review activities after the live session
Moderate	1.39	2.87	Allows me to discuss my thoughts with my colleagues

In Table 2, the high arithmetic mean values for all items of the first field indicate that the students have positive attitudes towards the application of Nearpod. The item "Changes the way the teacher speaks to me" got the highest evaluation from the students with a mean of 4.02, while the item "Provides an opportunity for the teacher to provide valuable feedback on the tasks and activities that I present" came in the last rank with a mean of 3.34. The researchers attribute this to the fact that the Nearpod application worked to reduce the face-to-face communication gap with teachers and the rest of the colleagues during the live sessions, and had a clear impact on changing the classroom environment in distance learning. The students also witnessed a clear change in the way the content is presented so that it has become interactive and gives a clear role to the students during the face-to-face meetings. The use of the application enabled the teacher to take into account individual differences by diversifying the methods of classroom interaction. As for the item "Provides an opportunity for the teacher to provide valuable feedback on the tasks and activities that I present," which ranked last, the researchers attributed

this result to the nature of remote feedback, which was immediate and short in order to save time, and this contradicts the students' expectations of obtaining more detailed feedback.

Through Table 3 it can be seen that the second field (students' interaction and participation) needed more attention, as the students' responses showed that the application should enable them more opportunities to discuss their ideas with their colleagues during the live sessions. This is shown by the fact that most of the items in this field obtained a moderate mean value and this may be due to the lack of sufficient time for such activities, or the design of the application did not allow this type of communication. Assuming that it is a means of interactive presentation by the teacher, the students' interaction was not taken into consideration. Also, the process of reviewing the activities after the lecture through the application was not possible in the same way as in live sessions. The students expect to practice the same activities and in the same way through the application in their own time, but these are not possible as the students outside the live meeting do not have the opportunity to participate and interact with each other and this confirms the pivotal role of the teacher in managing the sessions. However, the students indicated that the application gave them the opportunity to explore their own learning methods and contributed to the students' control over their learning process and helped them manage their learning time positively. Finally, the students' positive attitudes towards the role of the application in motivating them and increasing their attention and focus during the direct sessions are apparent. These results agree with the results of previous studies that indicate the effectiveness of the Nearpod application in increasing students' motivation and interaction with the scientific content they learn, such as the studies by Shehata et al. (2020) and Al-Shehri (2018), as well as its effectiveness in increasing academic achievement as shown in studies by Al-Zahrani (2019) and Al-Asiri (2018).

4.2. Results of the Second Question: Are There Statistically Significant Differences at the Level ($\alpha = 0.05$) between the Arithmetic Means of the University Students' Attitudes towards using the Nearpod Application in Distance learning between the Gender and Education Level Variables?

To answer this question the arithmetic means and (t) test were calculated to compare these means; Table 4 shows the results:

Table 4. Results of the t-test to compare the means of student responses in the field of the Attitude Scale

Dimensions and Groups	Gender	N	Mean	Std. Deviation	t	Df	Sig. (2-tailed)
Total	Male	52	3.59	0.91	0.843	188	0.400
	Female	138	3.47	0.81			
First Dimension	Male	52	3.86	1.05	1.379	188	0.169
	Female	138	3.63	0.96			
Second dimension	Male	52	3.41	0.99	0.310	188	0.757
	Female	138	3.36	0.84			
Total	Stage	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
	BSc	160	3.48	0.85	-0.685	188	0.494
First dimension	Master	30	3.59	0.78	-1.011	188	0.313
	BSc	160	3.66	0.99			
Second dimension	Master	30	3.86	0.99	-0.332	188	0.740
	BSc	160	3.36	0.89			
Second dimension	Master	30	3.42	0.82			
	BSc	160	3.36	0.89			

The t-value shown in Table 4 indicates that there are no statistically significant differences between the means of the students' responses on the scale of students' attitudes towards employing the Nearpod application in distance learning at the level of significance ($\alpha = 0.05$) between the gender and school stage variables. The researchers attribute this result to the fact that all the students were exposed to the same conditions under the distance learning system, as all students learned through a distance learning platform and through the Nearpod application; , individual differences between students have been taken into account by diversifying methods and activities and giving them time to complete assignments according to their needs. This has increased the students' motivation and degree of satisfaction towards employing the Nearpod application, and this result agrees with the results of previous studies such as those by Shehata et al. (2020); Hakami (2020) and Al-Zahrani (2019).

5. Conclusion

The use of interactive electronic applications in teaching has become part of the teachers' tasks, and one of these electronic applications is the Nearpod application which may contribute positively to the achievement and effective interactive learning for students, especially in the current era in which the world has shifted towards distance learning due to the Corona pandemic Covid-19, to ensure a healthy and safe educational environment for everyone.

The Nearpod application encourages students to participate and have dialogue sessions with their teachers and colleagues and exchange experiences among themselves to achieve an understanding of the educational content provided to them, through the distance learning system which provides different educational platforms approved by their educational institutions.

The results of the current study show that there are positive attitudes among university students towards using Nearpod application in their distance learning activities. This necessitates an increase in the interest shown by educational institutions in such electronic applications and the training of students and teachers in using them to ensure the continuity of achieving effective learning and access to quality educational outcomes.

6. Recommendation

In light of the results of the study, the researchers recommend the following:

- Raise the awareness of faculty members on electronic technologies and applications and their role in integrated university education.
- Train faculty members in using electronic applications interactively while teaching students, both in remote and face-to-face teaching, and enable them to possess skills and practices related to the implementation of the Nearpod application, to increase students' motivation towards learning in a more interactive and meaningful way.
- Conduct more studies on the effectiveness of using and employing modern technologies in university teaching.

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