Perceptions of Faculty Members on Using Moodle as a Learning Management System in Distance Education

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Article Info	Abstract
	In order to understand how faculty members, feel about using Moodle as a learning management system (LMS) tool for teaching and learning in Jordanian universities, a mixed-methods study was conducted. Surveys and interviews were used to gather the data. 270 professors from three Jordanian universities took part in the study. The results show that while the participating faculty members thought using Moodle in instruction was a useful teaching tool, they weren't happy with it. The Internet crisis, interaction, the need for education for electronic platforms, online tests, and self-regulation were among the difficulties mentioned by these participants. The potential use of Moodle in education is encouraged through pedagogical implication. In conclusion, the implementation of the Moodle system for distance learning has been very remarkable in recent years. The effectiveness of its use depends on the active involvement of business managers and the willingness of teachers to adopt e-learning. By addressing the challenges ahead and providing incentives for faculty, universities can ensure success and use of the system. As the use of the Moodle LMS continues to grow, it is important to focus on the development of the tool and provide ongoing support to improve its effectiveness and impact on distance education.

Introduction

Teachers are constantly looking for new methods and resources, which is an essential prerequisite for improving the quality of education. As a result of these searches, advanced learning strategies have been developed, introducing effective learning technologies that make traditional textbooks more accessible to students and thus improve the teaching and learning process. It is undeniable that the emergence of e-learning is one of the most extraordinary achievements of modern man, and it is also a significant technological achievement that has expanded learning opportunities and allowed it to take place at any time and (Benson & Samarawickrema, 2007; Yucel, 2006).

A learning management system (LMS) and digital learning environment were combined to create one of the most well-known educational platforms in the world in 2002 with the help of the open-source intranet Moodle. It enables integration with authentication protocols and student data systems. According to Yucel (2006), Moodle is an Internet-based learning management system that can be accessed through the Internet, an intranet, or a

computer. Khine (2003) added that Moodle is a pedagogical method that gives students the tools to become more self-reliant. This definition refers to the principles of e-learning. Sife et al. (2007) demonstrate that the Moodle platform is an excellent addition to conventional teaching strategies like face-to-face instruction. Vahed & Levine (2019) 3 Moodle users oversee the overall operation and implement teacher training.

The teacher teaches the lesson and fills in the student's data. Students can make use of the various resources at their disposal. More than 60,000,000 people use the intranet at 65,000 schools across 216 nations. Moodle is used in schools, universities, workplaces, and other industries for blended learning, distance learning flipped classrooms, and other e-learning projects. Gros & López (2016) highlighted that Moodle can enhance learning and teaching systems by providing interactive and collaborative benefits. It provides a communication and content exchange platform between students and teachers (Choudhry et al., 2021). Moodle acts as a learning management system (LMS) to display content and allow students to read content and engage in real-time conversations with peers. (Alokluk, 2018).

Moodle can also develop discussion threads that allow teachers and students to participate (Albakri & Abdulkhaleq, 2021). Moodle provides an email service that allows communication between teachers and students, students and peers, and allows them to send messages to all course participants (Cox, 2019). Moodle does, however, allow instructors to upload documents, tasks, and videos for course material (Baig et al., 2020). With the help of this function, teachers can specify when assignments and exams are due. Teachers can also publish various courses for students to access (Ransdell, 2013). Teachers can upload tests and exams in this tab, and students can access them online (Baig et al., 2020). Additionally, Moodle technology enables students to submit assignments online, and teachers can post grades, videos, and other media for students to view, along with their grades (Bradford et al., 2007).

According to the 2023 annual report of the digital portal, the number of people using the Internet in Jordan has reached 9.95 million, which is 58.4% of the total population. 45.4% of users were women and 54.6% were men. Advertising tools on major social media platforms show that 5.59 million people aged 18 and over are using social media, representing 79.4% of the population aged 18 and over. Okla statistics show that the average mobile internet speed in Jordan will decrease by 2.76 megabits per second (-14.3%) at the beginning of 2023. However, the fixed Internet connection speed increased by 21.10 Mb/s (+39.5%) during the same period (Makalima et al., 2023). The Jordanian government has yet to fully implement distance learning in higher education despite rising student enrollment and Internet and computer usage. Distance learning is an alternative education option that helps students continue their education while contributing to the national economy. The accessibility and speed of internet services, the creation of content for distance learning, addressing student differences, and the effectiveness of instruction on platforms for distance learning are some of the difficulties that students encounter (Almaiah et al., 2020).

Jordan is currently utilizing Moodle more and more as a learning management system (LMS), but there is still room for development and expansion. Yarmouk University, Al-Mutta University, and Al-al-Bayt University offer online education courses. University websites make use of the Moodle platform, which supports Question Mark

exams as well as other platforms like e-learning and online exam platforms.

It is necessary to determine the factors affecting the use of the system given the significant growth and difficulty of using the Moodle system as an e-learning platform for Internet-based education systems in various international universities, particularly in Jordan. The purpose of this study is to identify the challenges faced by the teaching staff of Yarmouk University, Al-Mutta University, and Al-albyt University and to highlight the main obstacles that prevent them from achieving their goals. The purpose of e-learning is to use the Moodle system. This study assesses the perceptions of faculty and staff at these universities engaged in e-learning using the Moodle system. Therefore, this study aims to answer the following questions:

1. How satisfied are Jordanian university faculty members with teaching their students through Moodle as a Learning Management System (LMS) platform?
2. What are the faculty members' perceptions of the effectiveness of courses taught using Moodle at Jordanian universities?
3. What are the faculty members' perceptions of the effectiveness of using the at Jordanian universities?
4. What are the challenges facing teaching using the Moodle platform as perceived by faculty members in Jordanian universities?

Literature Review

Since the coronavirus pandemic broke out, educational institutions have come to recognize the Internet as a crucial tool for reaching a range of students through courses and educational programs, which has had an impact on education all over the world. The development of the World Wide Web has led to an expansion in educational and technological tools, which has been very beneficial for online education. When compared to pre-pandemic levels, 97 percent more students enrolled in distance learning in 2020. By the end of 2020, the rise had increased by 186% as compared to 2019. Online courses are replacing conventional face-to-face courses in education, and providing this kind of education is a top priority for the higher education system in the twenty-first century (El Zawaidy, 2014).

In an online learning environment, learning is no longer limited by physical presence, location, or distance, students may attend classes virtually or in classrooms that are invisible to them (Arizona et al., 2020). The ability of learners to communicate clearly with one another is one of the most crucial aspects of online learning (M. Moore, 1990). With the help of this feature, students can learn without being constrained by time or geography (Alzahrani & Aljraiwi, 2017). In the online learning environment, the teaching staff serves as advisors, keeping a close eye on students' efforts and getting involved in solving issues as they come up. Students are evaluated based on their capacity to produce the desired outcomes. Years of study have yielded convincing proof of the efficiency of distance education (Means et al., 2010). To support synchronous or asynchronous communication, Jordanian higher education institutions have used LMS technology. Both synchronous and asynchronous settings are supported for information exchange (Alhadreti, 2020). Asynchronous enable lengthy discussions because participants do not need to interact with each other simultaneously during discussions. In a synchronized

environment where communication necessitates simultaneous exchanges between participants, students, and teachers can interact and converse in "real time.". Communication between teachers, students, and Moodle is key to e-learning's success.

Moodle as a Learning Management System (LMS) is an open communication platform that makes use of various digital channels (Chen et al., 2020). Moodle is distinguished by its ability to improve both teaching methods and student motivation to learn (Motlhaka, 2020). Additionally, it oversees all activities, such as scheduling, recording, making content accessible, monitoring student performance, and generating reports on that. Additionally, it enables interaction between the elements of the educational process (the teacher with the student, with peers, and with the content) as well as the delivery of scientific material, tracking of exams, registration procedures, study schedules, and other functions. Additionally, it offers file sharing, chat, email, evaluation, tests, and questionnaires for the educational process (Awad et al., 2019). The group of programs known as Moodle, which manages the online teaching process, is some of the most crucial elements of distance e-learning programs.

According to Cavus (2015), Moodle is a fully functional online learning management system. The Moodle system has benefits, including being a communication tool that helps create, organize, and manage electronic exams as well as for managing registration and creating lesson plans (Hardware et al., 2020). Additionally, it permits conventional on-campus education, which is a standard feature (Kasim & Khalid, 2016). Depending on the requirements and specifics of the course, an instructor may choose from three different teaching strategies offered by Moodle. When classes are delivered entirely online, activities are designed and put into place to encourage communication and interaction between teachers and students. The second approach, referred to as the "hybrid" approach, combines in-person activities with online learning, causing a revolution in teaching and learning resources, methods, and plans while undermining the benefits of the flexibility of online learning and regular teacher meetings. A web extension is a third tactic that combines in-person interactions with the capability of including educational activities on websites (Krouska et al., 2017).

Whatever the strategy, there are four stages to course design: Planning, execution, documentation, and summary are the other three phases of course design. During the planning phase, it is encouraged to ask and answer questions as well as to identify the interests and learning styles of the students. Students finish and turn in their assignments during the work phase. The trainer keeps track of how well the students are using blended learning resources and problem-solving skills during the documentation phase. The faculty member assesses the tasks given to the students during the summary stage, looking at how they have expanded their knowledge, developed their problem-solving abilities, taken learning initiatives, and reflected on the outcomes (Malikowski et al., 2007).

Moodle, according to Uziak et al., (2018), is crucial for distributing educational materials to students as well as managing content in terms of memorization, searching, categorization, processing, and editing. Alashwal (2020) confirms that the decline of traditional face-to-face education and the rise of online learning, concomitant with the crisis of electronic content management, represent significant challenges and opportunities for change and the return to normal life. Every crisis offers a chance to rebuild with more skill (Alblaihed, 2023). According to Khlaif & Salha (2020), the difficulties faced by those in charge of the educational process and the involved parties at the

level of the Arab world have a few things in common. The lack of technical resources and infrastructure is arguably one of the biggest obstacles preventing the use of learning management systems in the classroom. especially considering the crises and low incomes experienced by some Arab nations.

To ensure equity among students and provide equal learning opportunities, the learning management system may run into difficulties. as stated in Elsayed & Ghanem's (2023) assertion, potential obstacles include the student's technical proficiency, access to Internet security, and the ability of those around him or her to observe the educational process from a variety of psychological, social, and technical perspectives. It's also important to consider how fragile rural areas are, as well as how people can't build the necessary infrastructure. The accessibility of technical resources and infrastructure, including Internet network accessibility, coverage gaps between urban and rural areas, power outages, and the accessibility of student devices. Arab nations heavily rely on social media because they lack the infrastructure and technical capacity required for online learning.

One of the difficulties faced by learning management systems may be the requirement for faculty and students to contribute more to technical training in Arab universities. Due to their increased involvement in their children's education and their inability to provide them with access to the required technological infrastructure, parents also experience material and psychological stress (S. A. A. M. Kenawy, 2020). As a result, those involved in the educational process face a real challenge as a result of the available electronic platforms. According to Malikowski et al., (2007), using learning management systems for instruction may still be problematic due to the need for technological proficiency.

The teaching staff might be better at imparting knowledge and less adept at facilitating discussions using Moodle. Lack of time or interest in learning online platforms limits faculty members' use of online teaching strategies. According to Hakami et al., (2023), faculty must be convinced of the advantages of a learning management system for it to be effective. Since there are inherent obstacles to innovation. Increased accessibility, quicker responses, improved two-way communication, and improved tracking, organization, time management, and communication skills are potential benefits (Sulaiman, 2023). Through the Internet, users can access Moodle, view and download course materials and other information, as well as submit completed assignments (Thabet et al., 2021). This is affected by several things including a poor learning environment, difficulty interacting and conversing with students and other teachers, the slowness of teacher feedback, and the time commitment needed by students for studying. More importantly, there are more opportunities for knowledge development the more interaction there is with teachers and other students (Darawsheh et al., 2023).

Despite advancements in technology, the strength of the Internet, and accessibility to modern devices, learning management systems at the level of developed nations face several difficulties of a human, technical, and psychological nature that could obstruct the successful transformation of this educational path. However, we discover that Jordan lacks the same human, psychological, and technical skills as developed nations. It is crucial to discuss the difficulties faculty members face to ensure the success of the transition to the use of electronic learning platforms in the classroom.

Learning Management System (LMS) based on Moodle

Moodle, an acronym for Modular Object-Oriented Dynamic Learning Environment, is a free and open-source learning management system. It was first developed in 2002 by Martin Dougiamas, a computer scientist and educator (Cole & Foster, 2007). Since then, Moodle has been continuously developed and updated by a global community of contributors. The platform is designed to help educators create effective online learning environments, and it is used by educators, administrators, and learners for blended learning, distance education, and flipped classroom model (Smalley, 2020).

One of the defining features of Moodle is its open-source nature, which means that the source code is freely available for anyone to use, modify, and distribute. This has led to a vibrant and active community of developers, educators, and learners who continuously contribute to the improvement and customization of the platform (Ali, 2019) .As a result, Moodle has been translated into over 100 languages and is used by millions of users around the world.

Moodle offers a wide range of features that support both traditional and innovative approaches to teaching and learning (Al-Hadrati, 2020). Educators can create and manage courses, deliver content in various formats, facilitate discussions and collaboration, and assess student learning through quizzes and assignments. Additionally, Moodle supports the integration of third-party plugins and tools, allowing for the seamless incorporation of multimedia, interactive resources, and external applications (Hauschka, 2018). Moreover, Moodle is designed to be accessible and inclusive, with features that support diverse learners and compliance with accessibility standards. For example, the platform offers built-in support for screen readers, keyboard navigation, and alternative text for images, ensuring that all users can engage with course materials and activities (El Mhouti & Erradi, 2018).

 The impact of Moodle on education has been considerable. The platform has empowered educators to design and deliver engaging and interactive learning experiences, whether in traditional face-to-face settings, fully online courses, or blended learning environments. Moreover, Moodle has played a crucial role in expanding access to education, particularly in underserved and remote communities (Cole & Foster, 2007).In recent years, Moodle has revolutionized the way education is delivered and has been linked to improved academic performance (Nash & Rice, 2018). As a result, students are more likely to stay engaged with the course material and demonstrate improved academic performance (Al-Zahrani and Al-Jariwi, 2017). Its flexibility and scalability make it ideal for a wide range of educational contexts, from K-12 schools to higher education institutions to corporate training programs.

In conclusion, Moodle is a robust and versatile learning management system that has made a significant impact on education. Its open-source nature, user-centered design, and wide array of features have made it a popular choice for educators and learners worldwide. As technology continues to evolve, Moodle will no doubt continue to adapt and innovate, remaining an essential tool for delivering high-quality learning experiences.

Effective Learning based on Moodle System

Online learning has become a popular option for many students seeking to further their education and improve their academic performance. According to Wickham & Woods (2005) teachers and students can be made to use online learning to influence interaction. Synchronous and asynchronous learning are combined in this interactive model. For example, students arrive to class at a specific time, the teacher immediately reviews materials with them, and teachers are instructed to encourage active participation (Abar & de MORAES, 2019).

Students' ability to think creatively is improved (Algayres & Triantafyllou, 2020). Moodle can help organizations monitor how their guided learning policies are being implemented. The moderator can check whether users have followed the rules or not (Umek et al., 2015).. With the advancement of technology, the opportunity to access educational materials online has become easier and more convenient. There are several reasons why online learning has been linked to improved academic performance, and these reasons can be attributed to the effectiveness of the learning experience. One reason why online learning is effective in improving academic performance is due to the flexibility it offers (Goyal & Tambe, 2015).

With online learning, students have the freedom to access course materials and complete assignments at their own pace and on their own schedule (Woo et al., 2021). This allows for a more individualized approach to learning, enabling students to focus on topics that they may struggle with, while also progressing quickly through material that they find easy to understand. According to a study by the U.S. Department of Education, flexibility in learning has been shown to positively impact students' academic performance (Nwankwo, 2015). This flexibility also has the potential to reduce stress and increase motivation, leading to overall better performance in the classroom.

Another reason why online learning is effective in improving academic performance is because it allows for increased engagement and interactivity. Many online learning platforms utilize multimedia and interactive features to engage students in the learning process. This can include videos, quizzes, and discussion forums that encourage active participation and critical thinking. Research has shown that these interactive tools can lead to a deeper level of understanding and retention of material, ultimately contributing to improved academic performance (Bolyen et al., 2019).

Furthermore, online learning can provide access to a wider range of resources and expertise. Through online platforms, students have the opportunity to connect with experts and professionals in their field of study, as well as access a plethora of resources such as e-books, articles, and online libraries. This access to diverse resources can enhance the learning experience and provide students with a greater depth of knowledge. A study by the New Media Consortium has found that access to a wide range of resources can lead to improved academic achievement (Goyal & Tambe, 2015). In conclusion, online learning has been linked to improved academic performance for several reasons. The flexibility it offers allows for a more personalized approach to learning, while the interactive and engaging nature of online platforms can enhance understanding and retention of material. Additionally, access to a wide range of resources can provide students with a greater depth of knowledge. As the popularity of online learning continues to grow, it is important to recognize the potential benefits it can have on academic performance.

By taking advantage of the opportunities that online learning provides, students can better equip themselves for success in their academic endeavors.

Implementing Learning Using Moodle Technology

One of the most crucial aspects of the online learning environment is the capacity for communication regarding educational components (M. G. Moore, 1993). This feature makes it possible to study at any time and from any location while utilizing the same learning support resources as in a classroom (Babalola et al., 2023). For instance, students may participate in virtual learning or attend class in a location that is hidden from view. Instructors function as advisors in the virtual learning environment. They monitor pupils' development and assist in resolving issues as they come up. Grades are assigned based on how well students meet expectations (Wang & Yamamoto, 2020).

Moodle offers three distinct teaching strategies that the instructor can select from, depending on the specifics and requirements of the course. Activities are planned and carried out to promote interaction and communication between teachers and students in fully online classes. The second strategy, known as the "hybrid" strategy, undermines the advantages of regular teacher meetings and the flexibility of online learning while fusing in-person activities with virtual learning. It revolutionizes teaching and learning resources, methods, and plans. A third strategy that combines one-on-one communication with the capacity to incorporate learning activities into websites is web extension (Coulianos et al., 2022). Studies have demonstrated the effectiveness of distance learning as a teaching strategy (Means et al., 2010).

One method of integrating technology with students' learning needs is through Moodle-based learning (Makruf et al., 2022). Performance expectations, effort expectations, social factors, and facilities must all be considered when planning learning with Moodle (Ramallah and Northings, 2020). Making an e-learning account and defining the learning objectives, learning activities, and teaching strategies is one way to organize instruction using a Moodle-based learning system (Toubat et al., 2019). There are several methods to create learning plans using the Moodle system: 1) Putting the semester's learning plan into Moodle 2) Outlining the course curriculum at the start of the semester 3) Formulating an agreement on learning with the instructor 4) Putting the students' learning contracts online 5) Adding it to the Moodle system (DEMİRAL, 2017).

Challenges of Implementing the Moodle System in Distance Learning

Distance learning has become increasingly popular in recent years, offering flexibility and accessibility to students who may not have the opportunity to attend traditional classes (Samudi et al., 2020), As a result, many educational institutions have implemented Moodle, an open source learning management system, to facilitate distance learning (Er & Er, 2016). While Moodle has many benefits, such as providing a platform for course delivery, communication, and assessment, there are also many challenges that must be addressed in order to effectively implement this system in a distance-learning environment.

There is the challenge of providing appropriate support and training to teachers and students on using Moodle. Teachers may not be familiar with the capabilities of Moodle, making it difficult to use. Likewise, students may need guidance and support in navigating Moodle. There is another challenge facing the application of the Moodle system resulting from the weakness of teachers and students in possessing the technical skills necessary to use the Moodle system. This can lead to frustration and confusion, which ultimately affects the quality of the distance learning experience. In addition, technical issues such as server downtime or connectivity issues can hinder the smooth operation of the Moodle system, creating obstacles for both teachers and students. Another challenge is the potential for poor interaction in a distance learning environment.

Traditional classrooms provide direct interaction between students and teachers, fostering a sense of community and collaboration. While in a distance learning environment, Moodle should provide a platform for virtual communication, collaboration, and interaction. This can be difficult, because it requires teachers to effectively use Moodle features to create engaging and interactive learning experiences for students. Furthermore, there is the challenge of ensuring the security and integrity of the Moodle system. With the increasing reliance on digital platforms for education, there is a growing concern about protecting sensitive student information and preventing academic dishonesty. Therefore, teachers must be vigilant in monitoring the use of the Moodle system to detect and address any potential security violations or instances of cheating.

One of the challenges faced by learning management systems is requiring faculty members and students to contribute more to technical training in Arab universities. Therefore, we find that parents are exposed to financial and psychological pressures (I. Kenawy & Elkadi, 2021). According to Malikowski et al., (2007), the use of learning management systems in teaching remains problematic due to the need for technological competence. Lack of interest in learning via electronic platforms limits faculty members' use of the Noodle system. According to Hakami et al., (2023),, faculty members must be convinced of the benefits of the learning management system in order for its use to be effective. Despite these challenges, applying the Moodle system in distance learning is not impossible. With the right support, resources, and strategies, teachers can overcome these obstacles and effectively leverage the benefits of the Moodle online learning system (Sulaiman, 2023). Providing comprehensive training and professional development, providing technical support, and prioritizing inclusive design and digital equity are essential steps in Successful implementation of Moodle in distance learning (Thabet et al., 2021).

Through the Internet, users can access Moodle, view and download course materials and other information, as well as submit completed assignments. This is affected by, among other things, a poor learning environment, difficulty interacting and talking with other students and teachers, teachers' slow reactions, and the time commitment required. Students to study. Most importantly, there are greater opportunities to develop knowledge the more interaction with teachers and other students.

As distance learning continues to grow in popularity, it is crucial that these challenges are recognized and addressed. Your learning management system may struggle. As Elsayed & Ghanem's (2023) assert, potential obstacles include the student's technical proficiency and access to internet security. It is also important to take

into account the vulnerability of rural areas, access to technical resources and infrastructure, including the Internet, coverage gaps between urban and rural areas, power outages, and access to student devices. Even with all of Moodle's benefits, there are certain obstacles that prevent it from being widely used in the classroom. The creation of online courses and tracking student progress are the most crucial.

Additionally, self-discipline, infrastructure, and the ability to use the Moodle system and its applications are areas where both faculty and students are lacking (Ahmed & Mohammed, 2020; Davis & Daniels, 2016; Tawalbeh, 2018). Faculty members faced numerous challenges, the most significant of which was their lack of prior computer training and the lack of infrastructure in their homes and schools, but they were aware of how important it was to use Moodle in teaching and learning. Moreover, Bedolla & de León (2018). carried out research to determine the barriers preventing academic staff at private Jordanian universities from using the Moodle platform. There were moderately significant factors limiting use.

To ascertain whether utilizing (Moodle) is actually feasible, Al Amri & Marey-Perez (2020) showed that the use and difficulties were moderate at Murtha University. Many studies were carried out in the local and global environments due to the recent adoption of e-learning management systems by universities and their widespread use in university teaching. In order to better understand how Moodle is used by teaching staff at Yarmouk University and to determine the challenges they face when using the e-learning management system. El-Sabagh & Yamani, (2020) conducted a study in Jordan. their findings indicated that the system was used to a moderate extent and that there were moderately many barriers to its use.

A qualitative investigation into the An-Najah National University's e-learning management system (Moodle) implementation process was carried out by Hasan (2019).The study found that although faculty members' participation varied, it was generally good. Another study was carried out by Asiri & Aly (2018) to assess the College of Education at Najran University's experience with learning management systems (Moodle). The findings indicated that both faculty and students used the system to a high degree. As can be seen from the presentation of earlier research, the current study's objectives align with those of earlier studies that evaluated the universities' experiences with e-learning management systems (Moodle) and investigated the difficulties faculty members encountered when using Moodle for instruction. This is one of the first descriptive and qualitative studies aimed at assessing Yarmouk University in Jordan's Moodle e-learning management system.

In conclusion, the challenges of implementing Moodle in distance learning are multifaceted and require careful study and planning (Darawsheh et al., 2023). By addressing poor internet connectivity and technical support, designing effective online courses, ensuring digital equity, and prioritizing student data security, institutions can overcome these challenges and harness the potential of Moodle to enhance the quality of distance learning.

Method

Study Area

The study was conducted from March to May 2023 at Yarmouk University, Hashemite University, and Muta

University. These universities are Jordan's leading teaching universities and are geographically dispersed in urban and large rural areas.

Study Design

This study used the quantitative data collection method and the qualitative data collection method. This kind of research, which collects data using both quantitative and qualitative methods, can offer insightful perspectives on the subject being studied (Molina-Azorin, 2016). In the quantitative method, a large amount of data was collected to help us understand faculty members' attitudes toward the use of Moodle in online teaching and learning. Participants completed a 5-point and 17-point Likert questionnaire that the researcher developed based on a review of the literature and the objective of the study. The survey response scale ranged from strongly disagree (1) to strongly agree (5). The survey consisted of three sections: faculty members' attitudes towards using Moodle when designing e-content (9 points) and faculty members' perceptions of the impact of using Moodle on their learning (8 points). Additionally, at one point, participants were asked if they were satisfied with the use of Moodle in teaching and learning. The qualitative method used in-depth interviews as we wanted to understand the process that faculty members went through in terms of using Moodle in teaching and learning, as well as their behaviors and perceptions.

Data Collection

The survey tools used to gather data for this study were questionnaires and interviews. There were two sections to the questionnaires. The second section of the survey includes 21 items (18 closed and 3 open), with the first section focusing on participants' personal information (gender, age, and number of years of college teaching experience). These items are about faculty members' perceptions of the use of Moodle in teaching and learning. All 21 questions in the second section were divided into three groups: satisfaction with Moodle for teaching and learning (1 item), faculty members' attitudes toward using Moodle in e-content design (9 items), faculty members' perceptions of the impact of using Moodle on their learning (8 items). Additionally, the three open-ended questions sought faculty members' opinions on the use of Moodle in the classroom as well as their ideas for resolving issues that may arise. The reliability of the questionnaire was verified using Cronbach's alpha at 0.89 on 21 faculty members from the Faculty of Education at the University of Jordan.

To ensure that the participants can understand the questions and express their opinions freely and naturally, the interview questions are first written in English and then translated into Arabic. To gather qualitative information, a thorough qualitative interview was carried out. After a preliminary analysis of the quantitative research, a comprehensive question guide was created. Twenty key informants were interviewed to elicit more in-depth opinions and produce data to support the quantitative findings. Teachers, professors, and assistant professors who are on the faculty participated in interviews. According to the preference of the respondents, the principal investigator conducted interviews in either Arabic or English. Digital recordings of every interview were made. A research associate transcribed it, translated it into English, and then had one of the lead researchers translate it once more.

Participants

The study sample consisted of 270 faculty members drawn from Yarmouk University (123), Hashemite University (79), and Murtha University (68) in Jordan. There were 230 men and 40 women altogether. From 27 to 64 years old, they range in age. The experience period covered the time when faculty members worked at the university, which ranged from two to twenty-eight years. Respondents were chosen at random using numbers generated from a mailing list (Shmueli et al., 2011). A link to a web survey created by Survey Monkey (Eugene, 2012). was sent to each participant in the study via email. Of the 270 faculty members who received the email invitations, 20 (7.4%) accepted the invitation to take part in the interview. Faculty members who preferred a paper interview but were unable to complete the online survey were given a printed copy of the questionnaire, which was available for 35 days. The questionnaires were given out by a data collection assistant, who also eventually collected them.

Data Analysis

The data for this study were analyzed using two different techniques. The first was the quantitative analysis, where the frequencies, arithmetic means, and standard deviations (SD) of the faculty members' responses to the questionnaire items were extracted. The objective evaluation of the information gathered through open-ended questions served as the second technique (Arora & Srinivasan, 2020).

To make sure that the research was carried out precisely, consistently, and thoroughly, the analytical methods and research findings were recorded, organized, and disclosed in detail (Nowell et al., 2017). The qualitative data were analyzed utilizing the Brown and Clark method. Six steps were taken in this procedure. To generate, gather, modify, and organize common insights and deduce categories from them, the analyst in the first step carefully read the responses to ensure that they were fully understood.

The second step involves encoding and categorizing the topics connected to the research question into lists and tables based on predetermined traits. In the third stage, it was determined whether the coded subjects were interacting with the data and that those involved understood the fundamental characteristics of the coded data that were pertinent to the research question. Once that is done, make sure the subject had been carefully considered and was coherent, with distinct boundaries and defined key concepts. The topics were determined in this step, and when necessary, some topics were divided into smaller components or integrated directly into other topics, enabling each subject to take on an individual identity and successfully address the learning objectives in a meaningful manner.

The fourth step involved ongoing analysis to guarantee that each topic was recognized and given a name. This was done to determine the main points of each topic's content as well as the relevant data component. Each theme's narrative was assessed using all available data to make sure that an overarching story had been developed, to see if it matched the overarching narrative, and to determine whether the theme had any subthemes. In the fifth stage, topics were given names that briefly summarized the topic's content. The final report was created in the sixth phase after taking the final theme into account. The report's preparation process focused on choosing subjects that

would best address the research question Braun & Clarke (2019) claim that the app's goal is to tell stories by organizing an analysis of a subject and presenting information in a way that persuades the reader of the analysis's importance and relevance. The data subjects are relevant to the chosen dataset, as demonstrated by the report's ample evidence. Additionally, to clarify and document the significance of the analysis' key points, excerpts and citations are included in the descriptions.

Results

The main objective of this study is to examine the challenges Jordanian university professors face when using the Moodle system for instruction and to identify system flaws so that necessary corrections can be made.

Results for the first question, "How satisfied are Jordanian university faculty members with instructing their students through the Moodle platform?".

Frequencies and percentages for the responses of the faculty members who took part in this study were used to respond to this. Table 1 reveals that 64.9% of respondents have low satisfaction with teaching using the Moodle platform, 11.4% of respondents have high satisfaction, 23.6% have medium satisfaction, and 11.4% have low satisfaction. To investigate the reasons for this low level of satisfaction, more research is warranted, according to this. The results show that academic staff at Jordanian universities must exert more effort to improve the standard of instruction provided through the Moodle platform.

Table 1. Percentages and Frequency of Academics' Satisfaction with Moodle Use in Jordan

Level of satisfaction	Frequencies	Percentage
High satisfaction	40	11.14 %
Moderate satisfaction	86	23.96 %
Low satisfaction	233	64.90 %

Results related to answering the second question, which is: "What are the faculty members' perceptions of the effectiveness of courses taught using the Moodle platform at Jordanian universities?".

In the second section of the survey, faculty members are asked what they thought of the Moodle platform courses they had taken in terms of their academic rigor, thoroughness, linguistic clarity, usability, and ease of navigation. Results are displayed in Table 2.

Table 2 shows the instructors' perceptions of courses offered through Moodle to achieve e-course content goals in terms of academic accuracy, completeness, linguistic clarity, practical efficiency, and ease of navigation. The overall mean value of (2.02) and a standard deviation of (0.31). This indicates that faculty members find that using Moodle does not facilitate the achievement of online course content goals. The table shows the item, "Effective and easy-to-navigate online course content." received first importance, with a mean value of "3.05" and a standard deviation of "1.03". This indicates that the use of Moodle is fair and transparent in e-course content. The arithmetic

mean of all remaining items ranges from (125–1.99). This result suggests that faculty feel that courses taught using models offered by the academy do not meet their goals.

Table 2. Faculty's Perceptions of Courses Offered Through Moodle

Items	Mean	SD	Level	Rank
E-courses had useful and simple-to-navigate content.	3.05	1.03	Moderate	1
E-courses had clear writing and insightful dialectics.	2.78	1.07	Moderate	2
Students can achieve the learning objectives thanks to the course's electronic materials structure.	1.99	0.58	Low	3
The electronic course materials covered practical knowledge associated with the subject matter.	1.95	0.50	Low	4
Electronic content was introduced at the student's level.	1.91	0.54	Low	5
Logical accuracy was a feature of the course's electronic content.	1.81	0.61	Low	6
Through online courses, faculty can instruct students on how to complete practical tasks related to their learning.	1.78	0.53	Low	7
Students can present their hands-on activities to the course instructor through an online course.	1.62	0.68	Low	8
The e-course content contains all of the course description's components.	1.25	0.12	Low	9
Overall	2.02	0.31		

Results for the third question, "What are the faculty members' perceptions of Moodle effectiveness at Jordanian universities?".

Means and standard deviations for this query were computed, and the results are displayed in Table 3.

Table 3. Means, Standard Deviations of Faculty members' Perceptions of the Effectiveness of Moodle.

Items	Mean	SD	Level	Rank
Moodle as a Learning Management System (LMS) makes a difference in e-learning	2.61	0.56	Moderate	1
I'm trying to learn all the features of Moodle.	2.58	0.24	Moderate	2
I prefer to use another e-learning tool	2.58	0.24	Moderate	3
I would recommend Moodle as a Learning Management System (LMS) to others	2.53	0.81	Moderate	4
Moodle is the best online learning system I've ever used	2.30	0.38	Low	5
With Moodle, there is no teamwork and no hands-on lab work.	2.26	0.38	Low	6
Moodle is an effective system for interaction.	2.17	0.37	Low	7
Moodle is easy to use.	2.17	0.20	low	8
Overall	2.48	0.39	Low	

Table 3. displays the overall mean responses from teachers regarding their opinions of the modules' ability to facilitate learning. where the overall mean is (48 g) and the standard deviation is (039 g). This means that faculty and staff are not comfortable using Moodle. The table also reveals that the arithmetic mean, which was derived from the first four sections, is from (3.61-2.53) and has a moderate rating. In terms of the effectiveness and simplicity of using Moodle to communicate with students, this result showed fair agreement with four of the eight items, but it did not support group projects or laboratory practical. The mean range for the last four items is (1.58–2.17). with low rating. These results indicate that teachers are aware of the challenges they face when using Moodle. Because they believe that Moodle is the best and most reliable learning tool.

Results related to the fourth question, which asks, "What are the challenges faculty members in Jordanian universities perceive with teaching using Moodle as a Learning Management System (LMS) platform?".

 The following sections describe the qualitative findings of the study for each challenge category:

Internet Crisis

One of the most significant challenges that have been brought to light by some Jordanian university faculty members is the "internet crisis". According to 57% of interviews conducted with Jordanian university faculty members, "the internet crisis seems to be a prevalent issue that is hindering the success of virtual learning". The main concerns expressed by participants revolve around the cost, speed, and reliability of the internet. The participants highlighted that "the high prices of internet services are a major barrier for students, with concerns that the increasing costs of network fees and equipment will deter students from actively participating in virtual classes". This issue is further exacerbated by one participant, he noted that "the fact that internet outages are a common occurrence, particularly in low-income areas, leaving many students without access to the internet."

Furthermore, the participants emphasized the impact of the internet crisis on the quality of education. They noted that "the internet interruptions and slow speeds have made it challenging for students to understand the content of e-lessons and virtual class meetings. This has led to frustration and disappointment among both students and faculty, as the inability to access the necessary resources hinders the learning process".

In addition to the challenges faced by faculty members, the internet crisis has also affected the students, albeit to a lesser extent. One participant said "while some faculty members have access to high-speed internet in affluent areas, others living in cities and provinces have experienced cyber emergencies that have disrupted their ability to effectively teach using electronic platforms".

It is evident that the internet crisis poses a significant obstacle to the successful implementation of virtual learning in Jordanian universities. One participant said: "When students try to turn their assignments into pictures… they need to find a place with a good network that can cost a lot of money, online learning requires a high level of network, and students Many had questions about live broadcast, so this question lost logical respect for the address and the given topic." On the other hand, we found that cyber emergencies among staff were not as severe as among

students, with one participant commenting: "Most staff live in affluent areas and neighborhoods with high internet speeds, while you occasionally find staff living in cities and provinces., and in fact, most of them live close to the university, which means that the benefits of the network can be quickly reaped.".

In conclusion, the internet crisis is undeniably a major challenge that must be addressed in order to facilitate effective virtual learning in Jordanian universities. By acknowledging the concerns raised by faculty members and working towards tangible solutions, it is possible to create a more inclusive and equitable learning environment that leverages the benefits of electronic platforms while mitigating the obstacles posed by the internet crisis.

Interaction

Interaction is a fundamental aspect of any successful learning environment, and this holds true especially with the use of Moodle as a Learning Management System (LMS). The lack of interaction in e-learning can greatly affect its effectiveness, which has been demonstrated in various studies (Bernard et al., 2009). 82 % of the participants have expressed the sentiment that "the Moodle platform is not designed for effective student interaction with the learning environment, and this has significant implications for the success of e-learning".

The importance of interaction in the e-learning environment cannot be overstated. One participant stated "Interaction allows for active engagement with the course materials, fosters a sense of community and collaboration, and provides opportunities for feedback and support. In the absence of adequate interaction, students experienced disconnection from the learning process and felt struggled to fully comprehend and retain the information being presented to them". Furthermore, another participant noted "the absence of interaction can lead to disengagement, boredom, and a lack of motivation, all of which can impede the effectiveness of e-learning".

One of the recurring criticisms of Moodle as a LMS is the lack of student-teacher interaction. Many participants in this study have "expressed dissatisfaction with the level of engagement and interaction within the e-learning environment. Participants have reported feeling that the classroom lacks interaction, and that teachers are not well-prepared to engage in e-learning courses". This has led to a situation where many participants feel that "their learning experience lacks the necessary engagement and interaction with their instructors. This sentiment was echoed by a participant who stated that " the biggest challenge was making the classroom interactive, which requires using instructional strategies that engage students in an active learning process".

Moreover, the lack of interaction has led to disengagement and disinterest among students. Some participants have reported" resorting to multitasking during e-learning sessions, such as opening multiple screens and not paying full attention to the class". One participant even admitted to falling asleep in class because he did not find the content interesting.

However, it is essential to recognize that the gaps in Moodle's interactive capabilities can be addressed and filled

with opportunities to improve teaching and learning experiences. University policymakers and educators should reflect on how to enhance the design of educational activities and leverage the potential of interactive virtual learning environments like Moodle. "This entails encouraging and facilitating active participation in discussions, submission of assignments, and demonstrating knowledge of the material".

In conclusion, the success of Moodle as a Learning Management System is contingent on the level of interaction it facilitates within the e-learning environment. The lack of interaction can significantly impact the effectiveness of e-learning, leading to disengagement and a lack of motivation among students. Therefore, it is imperative for educators and policymakers to address the shortcomings in interactive capabilities and leverage the potential of virtual learning environments to enhance the overall learning experience. By prioritizing and enhancing interaction, Moodle can truly fulfill its potential as a powerful tool for e-learning in higher education.

Educational Needs for Electronic Platforms

The reliance on educational technology has become increasingly evident in recent years. However, the COVID-19 pandemic has accelerated the transition to digital platforms, making the need for effective and efficient educational technology even more critical. Among the various educational technology platforms available, the Moodle platform has emerged as one of the most essential tools for educators. The findings of this study demonstrate the significant role of the Moodle platform in addressing the challenges faced by faculty members in Jordanian universities.

One of the participants in the study expressed the urgency of digital platforms for learning, particularly in light of the COVID-19 crisis. They stated, "With the devastating COVID-19 crisis, learning through digital platforms is no longer a theoretical thing or an arbitrary boom. We are primarily meeting educational needs through digital platforms." This sentiment underscores the newfound reliance on digital platforms for education, as traditional in-person learning has been disrupted by the pandemic.

Furthermore, the emergence of electronic and virtual universities worldwide has solidified the importance of digital platforms in education. Another participant highlighted this trend, stating, "The proof is the emergence of electronic and virtual universities that are being incorporated into university and school curricula around the world." The integration of electronic and virtual universities into academic curricula signifies a shift towards a more technology-driven approach to education.

Several participants in the study emphasized that education through digital systems has become an integral part of the curriculum and scientific work. They stressed that "classrooms have transitioned from chalkboards to electronic boards and face-to-face instruction to distance learning". Additionally, educators are increasingly utilizing computers to teach, showcasing the necessity of electronic platforms in education. One participant emphasized that "education through digital platforms must become an essential part of our curriculum, our scientific lifestyle, and our work."

In light of the growing importance of educational technology, one participant raised the question of "whether Jordanian universities have the necessary policies to address this challenge". 61% of participants highlighted the need for educational institutions to identify educational needs through electronic platforms and positively impact education through digital means". This underscores the importance of having clear policies and guidelines in place to effectively utilize educational technology in a rapidly evolving educational landscape.

In conclusion, the findings of the study demonstrate the critical need for the Moodle platform in addressing the challenges faced by educators working with educational technology. The COVID-19 pandemic has accelerated the transition to digital platforms for learning, making the need for effective educational technology even more pressing. As educational institutions continue to adapt to a more technology-driven approach to education, it is essential for policymakers and educators to prioritize the integration of digital platforms such as Moodle to ensure a seamless and effective transition to digital learning.

Online Assessments

The transition to electronic exams and assessments has been a significant change in the education system, especially in the wake of the COVID-19 pandemic (smith, 2021). However, with this shift, concerns regarding the validity and reliability of electronic exams have been raised. One of the major concerns is the issue of cheating, which was expressed by many participants in this study. The study found that "the cheating rate during electronic exams administered through electronic platforms was as high as 61%". Additionally, 47% of the participants reported "problems with preparing for essay tests electronically". Many of the participants expressed their "lack of confidence in the results of electronic exams, stating that it is difficult to monitor students' behavior during the exam". This sentiment was captured in one participant's comment, "We cannot rely on the results of electronic exams because it is difficult to watch students' behavior during the exam."Another commonly cited issue was the potential for impersonation during online exams. Participants expressed concerns that a friend or relative of the candidate may take the test on their behalf, and that students often share answers after the results are out. One participant even mentioned, "During the exam session, a friend or relative of the candidate may take the test on their behalf. Their peers usually tell each other about them after the results are out."

The lack of control over student behavior during online exams was also a recurring theme in the study. Participants compared the traditional method of paper-based exams, where the teacher supervises the students as they answer the test questions in the classroom, to the online format where it is much more difficult to monitor student behavior. One participant remarked, "it is impossible to control the behavior of students during the test. Traditionally, the teacher puts the test questions on paper, and the students begin to answer the test in the classroom under the supervision of the teacher."

It is clear that these concerns have significant implications for the reliability and validity of online assessments. Researcher concluded that online assessments do not provide much certainty, as indicated by the lack of feedback from faculty members and the potential for data to be destroyed after the exam. As one participant stated, "Sometimes teachers do not give students feedback on online assessments. After the exam, the stored data will be

destroyed."

In conclusion, the concerns raised by the participants in the study highlight the challenges and limitations of electronic exams and assessments. The high rate of cheating, problems with preparation for essay tests, and the lack of control over student behavior during online exams all contribute to the uncertainty surrounding the validity and reliability of online assessments. It is evident that there is a need for further research and development in this area to address these issues and ensure the integrity of electronic exams.

Self-Regulation

Faculty members in Jordanian universities who use Moodle for teaching have expressed concerns about the challenges students face in adjusting to remote learning. In interviews, it was reported that "self-regulation is a big problem for them because it's hard for students to adjust to learning using Moodle". Furthermore, participants who work with technology and distance learning are also worried about this issue. This is likely due to the sudden transition from face-to-face to remote teaching, which left teachers inadequately prepared with insufficient training and time.

According to this study conducted on Jordanian universities, 61% of participants believe that "hastily switching to online learning without proper training can cause problems". Many Participants also "expressed the need for adequate preparation and training in order to adapt to the new way of learning, emphasizing that being unprepared for emergencies can result in a subpar learning experience". Additionally, 51% of participants surveyed expressed concerns about "how students will adjust to learning online, particularly for difficult subjects". The abrupt shift from traditional classroom teaching to online teaching, prompted by the Coronavirus situation, has raised apprehensions about students' ability to adapt to using online tools for learning.

Furthermore, the challenges of online learning extend beyond the technical aspects. Participants noted that "learning online is different from traditional learning because students do not evaluate their performance in the same way". 42% of the respondents indicated a "lack of mechanisms to help students motivate themselves, attributing this to insufficient guidance". Some participants also raised concerns about "the potential exacerbation of mental health problems due to online learning".

In a cultural context, participants emphasized that students are not taught how to control themselves and that emotional growth is left to be nurtured by family and friends. Al-Adwan, A. S., & Al-Adwan, A. S. (2013) . Moreover, the use of Moodle was cited as a contributing factor to the frustration and emotional distress experienced by students Bonk, C. J., & Graham, C. R. (Eds.). (2006).. This is likely because the lack of face-to-face interaction in online courses can lead to feelings of loneliness and isolation.

67% of participants have indicated that "universities do not provide adequate psychological support to students using Moodle technology, possibly due to the cost and coordination required to offer such support". One participant has also indicated that "learning from Moodle over the internet increased the risk of mental health

problems and disorders. This is primarily attributed to the absence of face-to-face social activities in online courses, leading to feelings of isolation and distress among students".

In conclusion, the challenges faced by faculty members and students in Jordanian universities using Moodle for teaching underscore the need for enhanced preparation, training, and support for online learning. It is imperative for institutions to address the psychological and emotional well-being of students to ensure a positive and effective learning experience. Additionally, further research and initiatives focused on improving the adaptation and self-regulation of students in online learning environments are crucial for the successful integration of technology in education.

Self-Discipline

Faculty members at the universities in Jordan under investigation, who have employed Moodle in their teaching practices, have expressed concerns about the challenges that students face in adjusting to the online learning platform. According to the participants' feedback, students struggled with self-control, and it takes them a while to acclimate to using Moodle for their educational needs. This sentiment was echoed by other participants interviewed, who highlighted "the lack of preparedness and training among teachers due to the abrupt transition from in-person to virtual instruction".

It is evident that the sudden shift to online learning has raised apprehensions among educators and administrators. 61% of the interviewers in this study "emphasized the problems that arises from rushing into online learning without adequate training. They stressed the importance of adapting this new mode of learning and being well-prepared for emergencies in order to avert negative experiences for both educators and students alike". This sentiment is further corroborated by 51% of the respondents who "expressed concerns about how students would adapt to the complexities of online learning, particularly in contrast to traditional classroom education".

Moreover, the participants highlighted the challenges that students face in adapting to online learning, especially in using platforms like Moodle, "they indicated that students may lose interest in learning when they encounter difficulties, and that the lack of self-assessment in online learning differs from traditional classroom education". These findings are consistent with the concerns raised by 42% of the participants, who "contended that students do not receive enough guidance to motivate themselves, and that online learning exacerbates mental health issues, contributing to increased stress and anxiety.

The impact of online learning through platforms like Moodle on students' mental health cannot be overlooked. One participant emphasized that the cultural context in Jordan places a greater emphasis on relying on family and friends for self-control, rather than developing individual self-regulation skills". This observation underscores the significance of considering the sociocultural factors that influence students' experiences with online learning. Additionally, the perception that Moodle and similar platforms can lead to feelings of isolation and hinder emotional growth is another critical aspect that requires attention, as it can potentially contribute to students feeling depressed and disconnected from their peers.

In conclusion, the experiences of faculty members at the universities in Jordan and their observations regarding the challenges students face in adapting to online learning through platforms like Moodle underscore the need for a comprehensive approach to addressing the concerns raised. These include the provision of adequate training and support for educators, as well as the implementation of strategies to help students navigate the complexities of online learning while safeguarding their mental and emotional well-beingAlali, F., Shaheen, A., & Al Dweik, H. (2020). It is crucial to acknowledge and address these challenges in order to ensure that the transition to online learning is as smooth and beneficial as possible for all stakeholders involved.

Discussion

The move to online learning due to the COVID-19 pandemic has forced educational institutions to rely on learning management systems (LMS) like Moodle to deliver course content and facilitate communication between students and teachers. Although these platforms have provided a way to continue teaching in the past, this study conducted at the University of Jordan found that teachers are very reluctant to teach using the Moodle LMS. These results are similar to study conducted at the University of Jordan, which also showed that teachers were not aware of the negative effects of using Moodle in teaching (Karanam et al., 2020). This study found that a very low percentage of teachers were trained to use the Moodle LMS. This is due to the rapid shift to online learning and the inability of universities to meet faculty requirements. Lack of preparation and training inevitably led to frustration and dissatisfaction as teachers struggled to properly use the platform to deliver course content and interact with students.

 Another reason why LMS Moodle is not suitable is that it is difficult to achieve learning objectives through online training (Karanam et al., 2020). The study also found that teachers find it difficult to teach course materials through Moodle and engage students in academic activities. This may be because the content of online courses created in LMS Moodle is different from the content of non-LMS Moodle courses. The frustration expressed by teachers shows the need for more research to understand why. With the right training and support, teachers can effectively use online learning platforms. It is important that universities and policy makers recognize the importance of supporting teachers to adapt to new teaching environments, and equipping them with the skills and resources needed to use platforms such as LMS Moodle effectively. Research shows that professors at Jordanian universities face the following challenges:

Internet Crisis

One of the most important parts of successful distance and blended learning is a reliable Internet connection for students and teachers. The ability to access online resources, attend virtual lectures and participate in discussions through e-learning management systems is highly dependent on a stable internet connection (Gallaway et al., 2020). However, our research has shown that Jordan universities face significant challenges in providing its students and faculty with a stable and reliable Internet connection. Interviews with faculty members revealed that lecturers often experience internet outages, which negatively affects their ability to deliver online lectures and communicate with students. This problem is exacerbated by the current weak network infrastructure, which cannot

meet the growing demand for online learning resources from students and faculty. In addition, many students at those universities come from poor backgrounds and live in areas where access to regular Internet access is limited, if not non-existent. Jordanian universities must address the challenges of using the Internet to ensure equal access to quality education for all students and faculty.

By investing in improving infrastructure, providing financial support, implementing innovative teaching strategies and promoting universal internet access, universities can create an inclusive learning environment that meets the needs of all students and teachers. The results of this study are consistent with the study of (Abuthawabeh & Mahmoud, 2019), who found frequent dropouts at Al-Hussein University in Jordan. Its results were also consistent with Cresini, M., & Ottenhoff (2018) study conducted in private universities in Jordan. And the results of the research project carried out by the Jordan's Internet Infrastructure and Broadband Connectivity (2019) in Jordan, which concluded that teaching in Jordan suffers from weak Internet infrastructure (Al-rawahna et al., 2019).

Interaction

The use of online learning platforms such as Moodle has become increasingly popular in today's educational environment (Al-Nami et al., 2019; Yousef Al-Kasasbeh, n.d.). Despite the many advantages of using Moodle as a learning management system, this study showed a lack of communication, teamwork and cooperation between students in solving problems related to learning tasks. With distance learning, it has become important to keep students engaged and motivated to successfully complete the course. Providing collaborative opportunities can also contribute to the success of distance learners. Group projects, peer assessments and interactive tasks can help students engage with the material and peers, creating a sense of camaraderie and teamwork (Al-Zahrani & Al-Bargi, 2017). This not only promotes a deeper understanding of the subject, but also encourages students to stay focused and motivated throughout the course. This may be due to students and #039; difficult financial conditions and poor internet connection, which can prevent the use of course content and full engagement with the material.

In addition, the study revealed that teachers may not consider individual differences in the Moodle learning environment and may not have the interest or time to fully communicate with students online. Lack of attention to students and#039; needs and preferences can lead to disengagement and lack of motivation among distance learners, which ultimately hinders their success in completing the course. In recognition of the students and#039; By providing effort and incentives for participation and achievement, teachers can help create a positive and supportive learning environment that encourages active engagement and motivation. These results are consistent with the study by Aguilera & Rodríguez-González (2019).

Although Moodle and other e-learning platforms offer various tools to facilitate communication and interaction between elements of the educational system, attention must be paid to effective communication strategies. Teachers can create a supportive and engaging online learning environment that increases student motivation and success. This was suggested by Yeap et al., (2019).The needs for electronic platforms. The widespread adoption of Moodle for online learning has created an unexpected challenge for teachers and students to use Moodle effectively in online courses. Students find it difficult to navigate the platform and interact with the course content.

These results show the importance of addressing the need to use Moodle in online courses and the potential impact of Moodle on the quality of online education. One of the biggest challenges faced by teachers using Moodle for online learning is designing and delivering online courses. Similarly, students may have difficulty using Moodle to access course materials, participate in discussions, or submit assignments. Knowing how to navigate the platform and engage in course content can be difficult for some students, especially those new to online learning (Ally, 2008). As a result, using Moodle in online courses hinders effective learning and negatively affects student engagement and success.

Moodle offers many features and tools to help teachers create engaging and interactive online learning environments. However, many teachers may not receive the necessary training and support to use these strengths and integrate them into their teaching practice (Nash & Rice, 2018). Course design and delivery can suffer, affecting the student learning experience. To meet the challenges of using Moodle in online courses, teachers and institutions must focus on training and support for teachers and students. Providing a comprehensive training program for teachers will help them develop the skills and knowledge needed to use Moodle effectively in curriculum design and delivery (Conole & Conole, 2013).

Students will also benefit from training and resources that will help them navigate the platform and engage with course content in meaningful ways. In addition, support and professional development for teachers and students will play an important role in overcoming the challenges of using Moodle in online courses. Teachers receive training and guidance to continuously improve their use of the platform, and students benefit from resources and support services to help them get the most out of their online learning experience (Akyol et al., 2011).

 In conclusion, using Moodle for online learning is a big challenge for both teachers and students. Addressing the need for appropriate use of Moodle in online courses is essential to ensure the quality and success of online education. Institutions can overcome these challenges and work to create a positive online learning experience for all stakeholders by providing training, support, and professional development opportunities for instructors and students. The results of this study are similar to those of Qiu & Jia, (2023) investigated the use of Moodle in online courses and found that this technology poses a significant challenge for both teachers and students.

Online Assessments

The rise of online education has many benefits, including increased accessibility and flexibility for students. However, this is a new challenge for university teachers, especially when it comes to test security. A study conducted at the University of Jordan found that implementing security measures for online exams is one of the biggest and most pressing challenges facing Jordanian university professors. Research has shown that Jordanian university teachers have difficulties in creating and assigning assignments, essays, presentations and tests through the Moodle system.

According to the research, the reason for these difficulties is the lack of knowledge about how to install Moodle settings to monitor or monitor to be safe and maintain traditional control over students. This highlights the need

to train and support teachers to implement effective security measures for online testing (Dixit et al., 2021). In addition to the difficulties faced by university teachers, students were also found to have difficulty using the Moodle system's user options, which allow them to display personal photos and download tests on their face. Lack of familiarity with the platform and its features means that students need training and many resources to navigate and use Moodle properly (Heilporn et al., 2021).

To solve these problems, research suggests using automated authentication methods such as eye tracking and biometrics (Jat Baloch et al., 2022). These tools improve exam security, prevent fraud, and ensure the integrity of online reviews (Duraisamy et al., 2022). However, it is important that teachers actively encourage the use of these tools and support their integration into online learning environments. In addition, this study shows the importance of providing adequate training and support to teachers and students to navigate the Moodle system correctly and ensure a high level of security for online exams. It is important that Jordanian universities invest in resources and programs to help faculty and students become proficient in using Moodle and implement security measures for online assessments (Salem Yousef Al-Kasasbeh, 2019).

In conclusion, the results of this study show an urgent need for training and support for teachers and students in Jordanian universities in the areas of online test security and the use of online learning platforms, such as Moodle. By addressing these issues and providing the necessary resources and support, universities can ensure the reliability and safety of online testing and create an effective and engaging online learning environment. It is important for universities to consider these findings and invest in the resources and programs needed to address these issues, this study in line with the study conducted (Yousef et al., 2014).

Self-Regulation

Research has shown that the transition to online learning platforms such as Moodle in Jordanian universities poses a challenge for faculty members, especially in terms of self-management. Studies indicate that self-regulation, that is, the ability to plan, monitor and organize learning activities, is important for academic success (Rosenthal et al., 2021). Our research has shown that many professors in Jordanian universities find it difficult to help students adapt to their learning needs through the Moodle system, which affects their self-management skills. In a recent study by (Layali & Al-Shlowiy, 2020). Johnston et al. (2023) identified self-regulation as a key challenge for participants in the transition (Mayfield-Johnson et al., 2020) to online learning through Moodle.

Participants expressed concern about not being prepared for online learning. The study also found that cultural influences influenced students to manage the Moodle environment. Cultural differences affect access to online learning platforms and the motivation and ability to organize courses (Awan, 2020). As a result, students may lose interest in learning when they find it difficult to use Moodle, which may have a negative effect on their self-regulation (Ala'a Al Yaseen & Alshati, 2022). These results have important implications for teachers and educational institutions.

 It is evident that the difficulties associated with adapting to learning in the Moodle system have a significant

impact on students' Self-control influences academic success (Momani & Khazali, 2016). Therefore, it is important to provide comprehensive training and support for teachers and students to navigate and succeed in an online learning environment. Teachers must have the necessary skills and resources to support students' Self-regulation in online learning environments. This may include providing guidance on study strategies, time management and planning, and fostering a supportive and inclusive online learning community.

By recognizing and addressing the barriers to self-management presented by platforms such as Moodle, teachers and educational institutions can better support students' learning journeys and ultimately help them achieve their personal goals and objectives (Abdullah et al., 2020). Efforts should be made to address issues related to adapting to online learning environments and provide students with support and resources to develop self-management skills (Samer Hadi, 2018). In conclusion, our findings on the lack of adaptation to new learning environments, such as the transition to online platforms such as Moodle, show the real difficulties students face in terms of self-regulation. These activities include School success and well-being. This finding is consistent with the findings of Smith and colleagues.

Teachers and educational institutions must address these challenges by providing comprehensive support and training, as well as considering cultural factors in the design and implementation of online learning experiences (Hickey, 2018). By doing so, we can better support students to develop self-management skills and succeed in digital learning environments.

Self-Discipline

In recent years, the adoption of online learning platforms such as Moodle has increased in Jordanian universities. These platforms have become important tools for promoting distance and blended learning, especially during the Covid-19 pandemic. However, the shift to online learning poses many challenges for teachers, including self-learning problems when using Moodle correctly. This is a very important question because teachers play an important role in creating a motivating and engaging learning environment for students. Therefore, understanding the challenges facing the Moodle system is essential for the success of online education in Jordanian universities.

The study by (Aljawarneh et al., 2023) aimed to study the challenges faced by Jordanian university teachers in using the Moodle program in teaching and learning. One of the main findings of the study is that teachers find it difficult to self-regulate when using Moodle correctly. Research has shown that teachers find it difficult to manage their time and stay on track with subjects and assignments on the Moodle platform (Ag-Ahmad, 2020). Lack of self-regulation can deteriorate the quality of education provided through online platforms and negatively impact student learning outcomes (Jurado-Tarifa et al., 2018).

Self-regulation problems are of particular concern because they affect student motivation and engagement. struggle with self-regulation on Moodle, they may inadvertently create a less motivating learning environment for students. This, in turn, can lead to decreased student engagement and a lack of interest in learning. Additionally, self-regulation issues among teachers may also result in inconsistencies in the delivery of educational content.

When teachers are unable to effectively manage their time and resources on Moodle, students may experience confusion and frustration. This can lead to a decrease in the quality of instruction and an overall negative impact on the learning experience.

Furthermore, the lack of self-regulation among teachers may also lead to a lack of personalization and individualized support for students. Online learning platforms such as Moodle have the potential to provide personalized learning experiences, but this can only be achieved if teachers are able to effectively utilize the platform. When teachers struggle with self-regulation, they may be unable to provide the necessary support and guidance to meet the diverse needs of their students.

To address these challenges, it is essential for Jordanian universities to provide adequate support and training for teachers in using Moodle effectively. Professional development programs can be designed to help teachers enhance their self-regulation skills and maximize the potential of Moodle for delivering high-quality education. Additionally, universities can facilitate the sharing of best practices and success stories among teachers to foster a supportive and collaborative learning environment. In conclusion, the shift to online learning in Jordanian universities has brought about many challenges, particularly in the realm of self-regulation among teachers when using platforms such as Moodle. This issue is critical as it directly impacts student motivation, engagement, and learning outcomes. Addressing these challenges through professional development and support for teachers is crucial for ensuring the success and effectiveness of online education in Jordanian universities. By empowering teachers to effectively utilize Moodle and self-regulate their use of the platform, universities can create a more engaging and personalized learning experience for students.

These results are consistent with With previous studies such as the study of Al-Shalawi, (2023), the study of Squier, (2016) the study of Al-Ruwaili, (2019), the study of Lestari, (2019) the study of Higaze, (2023), and the study of Shuaib, (2020)and the study of Al-Harithi, (2019).

Conclusion

The implementation of the Moodle system in Jordanian universities is gaining increasing attention, especially in distance education. Good use of Moodle not only makes school work easier for teachers, but also improves the quality of distance learning. It also promotes cooperation between delegations in different regions. However, the successful use of Moodle depends on the involvement of administrative staff and the willingness of teachers to adopt e-learning. To ensure the successful use of Moodle, management plays an important role in promoting awareness and training on learning policies (Al-Ajlouni, 2018). A better understanding of learning management systems (LMS) will help teachers integrate them into their teaching practice. It is important for administrators to encourage e-learning activities, such as the development of e-learning content, and motivate teachers to participate in the system (Das & Al Akour, 2020).

In addition, universities should encourage collaboration between faculties to promote resource sharing and collaborative content development. The concept of reusable learning materials is important to the successful use

of an LMS. By sharing learning materials for courses of similar scope or objectives, universities can ensure that their LMS is suitable for diverse and comprehensive learning materials (Al-Ajlouni, 2018; Salloum & Al-Emran, 2018). Understanding the challenges teachers face, including technical, educational, economic and social barriers, is important for institutions to improve their use of the Moodle LMS (Das & Al Akour, 2020). Addressing these issues will help ensure widespread adoption and efficient use of the system. It is clear that the successful implementation of Moodle LMS depends on the cooperation of management and instructors (Al-Nuaimi & Al-Emran, 2021).

As teachers become more familiar with using the system and the amount of learning resources it offers, students will be motivated to access the platform and, as a result, use it more in the LMS. In the future, it is important to develop tools to manage the creation of educational resources for Moodle LMS, increasing its effectiveness and expanding its impact on distance education Jordanian University (Al-Nuaimi & Al-Emran, 2021). By investing in the continuous improvement of Moodle and providing ongoing support and training for faculty, the University of Jordan will be able to better meet the growing needs of distance learners and provide high-quality education through the e-learning platform.

In conclusion, the implementation of the Moodle system at the University of Jordan for distance learning has been very remarkable in recent years. The effectiveness of its use depends on the active involvement of business managers and the willingness of teachers to adopt e-learning. By addressing the challenges ahead and providing incentives for faculty, universities can ensure success and use of the system. As the use of the Moodle LMS continues to grow, it is important for the University of Jordan to focus on the development of the tool and provide ongoing support to improve its effectiveness and impact on distance education.

Recommendation

The use of Learning Management Systems (LMS) such as Moodle has become a common practice in educational institutions, providing a platform for teachers to deliver course materials, students to access resources, and for communication and interaction between all parties involved. First and foremost, the study recommends improving communication and interaction between teachers, students, peers, and the LMS system itself. Teachers need to be able to effectively deliver course materials, provide feedback, and engage with students in a meaningful way.

Additionally, the study highlights the importance of improving internet connectivity at the university and country-wide levels, as slow internet speeds and inadequate infrastructure hinder the effectiveness of online education. Furthermore, the study suggests improving communication between university faculties and students' parents to ensure that internet and connectivity issues are resolved. It is essential for educational institutions to continuously evaluate and refine their technology systems to ensure a smooth and efficient learning process.

Finally, the study brings to light the need for teachers to adjust to the pace of online education, innovate, and create engaging lessons that increase student engagement. In conclusion, the findings from this study provide valuable insights into the areas that require improvement in utilizing Learning Management Systems in the

educational setting in Jordan. It is crucial for educational institutions to address these recommendations and work towards creating an environment that fosters effective communication, connectivity, and innovation in online education. As technology continues to evolve, it is essential for educational institutions to adapt and embrace these advancements to provide the best possible learning experience for students.

Study Limitations

In a study conducted among faculty members of the Faculty of Education at Yarmouk University, Al al-Baita University, and Al-Mutta University, the analysis of their perspectives on e-learning infrastructure revealed several important factors to consider. The study was conducted by interviewing 20 teaching staff members, which may not be representative of the average e-learning infrastructure in the region. This raises concerns about the generalizability of the findings, as the experiences and perspectives of a small group of instructors may not accurately reflect the broader population. There is also a potential risk of social desirability bias in the interviews, as teachers may not be fully open in discussing their experiences and perceptions of e-learning infrastructure for fear of being harassed by their universities. Furthermore, the decision to use a paper version of the questionnaire alongside the online survey raises questions about the representativeness of the data. It's important to consider the potential impact of this bias on the study's findings and conclusions. The rapid adoption of online learning in all subject areas in 2020 due to the COVID-19 pandemic has significantly altered instructors' perceptions of e-learning platforms such as Moodle LMS. Overall, while the study provides valuable insights into faculty members' perspectives on e-learning infrastructure, it's important to critically evaluate the limitations and potential biases in the research methodology and sample. Moving forward, it will be important to consider these factors in future studies to ensure that the findings accurately reflect the experiences and perspectives of a diverse range of instructors in the field of education.

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Declaration of Potential Conflicts of Interest

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