

The benefits and drawbacks of using the blackboard system in Saudi universities, as seen by students and faculty members

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Abstract

Education management systems, such as the blackboard system, aided in providing optimal solutions to the consequences of the Corona pandemic in Saudi Arabia. At this point, the results of Saudi Arabia's financial investment and educational development strategies became visible. Saudi Arabia's educational development strategy based on the use of learning management systems, and the Blackboard system was widely distributed as one of those systems in all universities. The educational process management system based on the Internet or a local network for planning, implementing, and evaluating a specific learning process. The Blackboard system offers a unified environment. Both faculty members and students benefit from the learning management system. The benefits and drawbacks of implementing the program investigated, while relying on it and emphasizing its significance in light of the Corona pandemic. The study compared the perspectives of faculty members and students on the Blackboard system, as well as their perceptions of its components, interactive features, and ease of use. The program's use evaluated from the perspectives of Blackboard's primary users, as well as a study of the benefits and drawbacks of its components, whether technical or human, in order to make the best use of that system. Students and faculty members agreed on three axes of advantages and disadvantages, namely, technical defects related to the system, advantages related to the educational process and its mechanisms, technical problems and operating conditions. Suggestions and solutions for these flaws presented in order to maximize the value of the Blackboard system.

Keywords: Blackboard, Blackboard benefits, learning system flaws, Corona pandemic, education.

I. INTRODUCTION

Saudi Arabia regards the provision of scientific contents of educational materials in a simplified and high-quality manner as one of the components of the scientific renaissance leading to the transformation of the country into a knowledge society. There is no doubt that multimedia and e-learning technologies play a significant role in simplifying information, improving educational process quality, and providing a good environment

those benefits from science simplification, (Hammoud, L., et al., 2008). E learning based on the use and application of the Internet and computer technologies through a variety of systems and solutions to enable learning and improve educational process performance.

E learning is one of the modern mechanisms that contributes to the delivery of science in a language that is compatible with global educational trends. The health requirements and preventive measures in the aftermath of the

Corona pandemic have demonstrated the extent to which educational systems have succeeded in providing a suitable alternative to traditional forms of education. As a result, it is necessary to investigate the impact of using an e-learning system, particularly a blackboard system, on the efficiency of the educational process and the desired quality. The system of using education systems consists of the services that support the educational process as well as the inputs used, which are represented by students, faculty, and curricula, (Köse, U. (2010). The impact of e-learning on students' learning behaviors and performance, as demonstrated in a study where these systems contribute to the formation of students' personalities, bring difficult concepts closer, and increase academic achievement rates, laying the groundwork for development and creativity through the electronic learning environment.

1. 1. Research problem:

In Saudi universities, the blackboard system has become popular as one of the e-learning systems. Despite the significant support for those in charge of and beneficiaries of educational services, such as the provision of electronic learning management systems and the training of faculty members to use it in various administrative and educational affairs; the benefits and drawbacks of using this system must be studied. This is to achieve the universities' development and quality goals, as well as to maximize the potential of the Kingdom's e-learning systems for both students and faculty members with the required efficiency.

The study raises a series of questions about why students and faculty members in Saudi universities are not reaping the full benefits of the blackboard system's capabilities:

- How do students and faculty members rate the Blackboard system as one of the learning systems? Efficiency in the use of its components and tools.
- What are the flaws and problems that students and faculty members encounter when operating and utilizing learning management systems, and how they being addressed?

1. 2. Aims of study:

The study's issues and conclusions contribute to the growth of the educational system by ensuring the effectiveness of technology in all educational matters and optimizing its use by researching the enabling and limiting factors for the use of e-learning systems in Saudi institutions, (King Faisal University used as a model). Standing firm in the face of the problems and challenges that this application faces, and providing solutions to gain the desired advantage from these systems so that students and faculty members can fully benefit from the capabilities of the e-learning systems used in Saudi Arabia.

1. 3. The purpose of the study:

The study's goal is to identify and optimize the potential benefits of Saudi institutions' e-learning systems by determining the strengths and prospects of King Faisal University's e-learning management system (Blackboard), as well as to investigate and suggest solutions to problems encountered by King Faisal University's e-learning management system users (Blackboard). Concisely, the study's goal is to identify the factors that influence faculty members' ability to use the Blackboard e-learning system in their teaching, as well as the roadblocks that prevent them from getting the most out of it.

2. Terms Used:

- Learning Management Systems (LMS): A software program or internet-based technology used to design, implement, and assess a learning process (Chapman, D. (2005). These programs designed to aid in the administration, follow-up, and delivery of training and continuing education, as well as all other related operations in educational institutions. Alenezi, A. (2012) presented findings demonstrating the extent to which faculty members require training in the use of education management systems, specifically content management, file sharing, forums, and question banks, with an emphasis on the lack of any differences in system use between faculty

members based on gender or type of faculty, such as Humanities, Sciences, or Health Colleges.

- Course Management Systems (CMS): A CMS is a system that enables the distribution of scientific materials, the management of course-related study activities, and the administration of all current courses. It allows for the creation and updating of dynamic websites. One of its primary focuses is the development and expansion of courses (Lopes, V. (2008). This system enables the distribution of scientific materials, the management of course-related study activities, and the administration of all currently offered courses. It allows for the creation and updating of dynamic websites.

- Content and Learning Management System LCMS: Stands for learning content management system. (Gravemeijer, K., & Cobb, P. (2006) defines it as the learning and support activities carried out by different people (learners and teachers) within the context of a learning unit. It enables the "author, instructional designer, and materials specialist" to create, develop, and modify educational content more effectively by creating a repository that contains the learning object of the content and is simple to control, assemble, distribute, and reuse in a way that suits the elements of the training process from the teacher, learner, and designer.

3. Literature review:

In education, multimedia is more than just putting puzzle pieces together. Massive simulations and elements created with multimedia tools can help to improve thinking and problem-solving abilities. Learning management systems are an important component of e learning because they are an integrated system that manages the electronic educational process through the Internet or a local network. Content delivery options include asynchronous learning, testing, and certification. The importance of using electronic education management systems in Saudi universities cannot overstated in light of the health conditions that followed the

emergence of the coronavirus pandemic. In addition, given the need to implement precautionary measures for disease outbreaks such as social distancing. This significance highlighted in a study conducted by Patel, S. R., et al. (2018), which investigated the effect of educational system design on disease prevention as a contributing factor that prevents exclusion.

3.1. Importance of E- learning development:

Many academic organizations and institutions use e learning. Because it is a cost-effective component of the educational process that delivers content quality comparable to traditional education techniques. In terms of preparing teaching materials in the classroom and training teachers, the costs of developing e-learning, including the costs of web services and technical support, are much lower than the costs of a traditional classroom, especially if highly advanced multimedia or interactive methods are used. Shu, F., Zhao, C., & Wan, L. (2012) study found that using a tablet computer increased students' participation and scientific success in co-related courses. He concluded that using e-learning systems raises students' grades at a much higher rate than traditional systems for the same set of courses.

3.2. The benefits of blackboard as E-learning model:

Providing educational systems with the ability to save time and effort. It allows staff, teachers, and students who may have to travel long distances to attend virtual classroom sessions as an alternative to traditional classes (Kinash, S., et al. (2012). E learning can reach a larger segment of the target audience by engaging learners who are unable to attend traditional classroom learning:

Complete flexibility in attending classes, courses, and training without regard to work or family obligations that prevent people from attending courses on specific dates and according to a specific schedule.

The ability to participate in class sessions without restricted by cultural differences or social conventions.

Avoiding movement-restricting hazards that may arise because of health, social, or security concerns.

- Motivating some students to overcome shyness and resolving some issues that arise from communication challenges in real-time.
- Providing effective learning approaches such as connected embedding practices, combining groups of activities with learner self-development, personalizing learning paths based on learner needs, and using simulations and games.

The blackboard system allowed all students to obtain the same skills, information, and educational level. The same lecture can be repeated for a large number of students with the cooperation of a group of faculty members rather than relying on the ability of a single faculty member. Conde, M. Á., et al. (2014) defines formalized. The blackboard system compared to quantitative industrial production because the educational process produces the same product with the same efficiency and quality. To achieve the desired learning outcomes, study programs and implementation plans must be modified. The number of students who will be exposed to the course and its contents should be taken into account when developing the course and its contents.

Several studies on the topic of e-learning, such as (Mudra, O. (2021), revealed the benefits and challenges of e-learning, suggested how to make the most of online training courses, and examined the potential challenges and drawbacks of e-learning. Questions have been raised about the best ways to support students, the importance of implementing e-learning in Saudi universities, and researching the reality and obstacles, which include issues such as a lack of infrastructure, slow communications, network extensions within some educational institutions, insufficient computer equipment, and a scarcity of national software.

Elucidates some of the advantages that digital repositories offer to higher education and academic institutions, as well as their positive effects on universities through the preservation of intellectual production and intellectual

property rights (Pershing, J. A., et al. (2008). It is a tool that collects, documents, and makes dispersed educational resources accessible in a cost-effective and simple manner, as well as providing a space for scientific debate and the exchange of experiences and information in these digital archives.

E-learning achieves a variety of goals. According to Hertiavi, M. A. (2020), e-learning systems include the participation of trainers, students, and mentors who use technology, and this occurs because of how they work. This increases the effectiveness of the educational process while also improving students' attitudes toward e-learning. E-learning assists teachers in developing educational materials for students, as well as increasing teacher efficacy and increasing the number of students. Some teachers' lack of expertise can be compensated for by providing the educational package in electronic form to both the teacher and the student. The Curriculum Development Department can centrally update it, and virtual classrooms can compensate for a scarcity of academic and training cadres in various educational areas.

3.3. E-learning and learning systems in Saudi Arabia (as modeled by Blackboard):

The Saudi Electronic University, established in 2012, is the country's first electronic university, and it employs the Blackboard system for e-learning. The most important aspects of selecting the learning management system are its distinguishing features, such as flexibility, ease of use, accessibility, and ease of use (Srichanyachon, N. (2014). Rossing, J. Pet al. (2012) investigated whether Blackboard Mobile Learn made a significant difference in student learning, and the findings revealed that students used their mobile devices in class just as much for Blackboard Mobile Learn as they did for web research, access to university web pages, email, and Facebook post creation. According to nearly unanimous responses from the study sample, the use of iPads increased their motivation to learn as well as the positivity of the e-learning system significantly (Pituch, K. A., & Lee, Y. K. (2006).

One of the current developments in language is an interest in the practical form of multimedia technology. It employed in specifying complicated aspects, clarifying their ambiguous challenges, and easing their knowledge and understanding by utilizing the vocabulary of the design process and applying its scientific basis. Teachers must adapt to various learning strategies while maintaining communication between professors and students by utilizing powerful technology resources such as e-learning management systems (LMS) and their formative vocabulary (Nkomo, L. M., & Nat, M. (2021), as well as student participation in the system.. One of the benefits of utilizing e-learning and multimedia technologies is the success attained in the delivery of education (educational content), which includes the benefits of increasing ease of access to information as well as ensuring the use of best practices in content design (Srichanyachon, N. (2014).

Furthermore, the benefits of e-learning and the various e-learning systems that approach the method of simplifying science are that it unifies the content of educational courses and brings consistency to how they are communicated to the recipient, as opposed to what is done in a single lecture given to several different groups. The automatic tracking and reporting of student activities reduces the effort required by those in charge of follow-up responsibilities.

According to (Silber, K. H. (2009), Instructional Systems Design (ISD) is one of the most widely used methods for developing new educational and training resources. This entails a methodology for combining human and machine aspects with behavioral psychology, systems engineering, and computer programming, resulting in a new template known as educational development. According to the report, the evolution of ISDs will most likely continue to adapt in response to shifting social and economic circumstances.

Most research on e-learning focuses on its utility in primary, secondary, and higher education, these systems can also developed for adult learners. According to (MacKeracher, D., Suart, T., & Potter, J., 2006), the most difficult

challenge for older students is an internal psychological one, followed by time, financial considerations, and family commitment. As a result, they concluded that additional steps must take to improve the e-learning environment for adult learners in order to achieve quality educational outcomes. Adult students share some characteristics with full-time students, but their studies differ in other ways, influencing the shape and design of learning programs (Ndlovu, P., & Moyo, W. (2013).

Post-graduates recognize the value of learning and have a stronger desire for problem-solving experiential learning. This frequently results in better outcomes because they can see results and apply content immediately through their work because e learning allows them to choose the best time, place, and speed to complete the study.

4. Methods:

This study employs a descriptive-analytical approach. Following a review of the relevant literature, a list of learning management systems under consideration compiled. The Blackboard system adopted as the Ministry of Education-approved system in Saudi universities. Then, a questionnaire developed to identify and quantify the difficulties and issues that students and faculty members had with King Faisal University's learning management system. For the first semester of the academic year 2019/2020, the sample included 134 students and 54 faculty members.

The participants' perspectives on the e-learning system, its ease of use, the perceived benefit of using the e-learning system, and the identification of technical challenges faced by teachers and students were all polled. A questionnaire used as the research tool to determine the elements that promote and limit the implementation of electronic education management systems from the perspectives of each student and faculty member. The corresponding responses for each question in the questionnaire were set on a scale of 1 to 5, and the values' averages were calculated and

translated into relative values using the Likert scale. The survey asks students and faculty members why they do not use all of the features of the Blackboard learning management system. There were two questions on the questionnaire:

How do students and faculty members rate the Blackboard system as one of the learning systems? Efficiency in the use of its components and tools.

What are the flaws and problems that students and faculty members encounter when operating and utilizing learning management systems, and how they being addressed?

When responding to the questionnaire, respondents asked to consider the following issues: the degree of clarity of instructions and instructions for use; the ability to complete and follow up on academic and teaching tasks efficiently and quickly; and the extent to which an interactive e-learning environment is more enjoyable, particularly in unstable conditions. An open interview conducted with the respondents to obtain their perspectives on the second question, the actual challenges they face, and their ideas and perspectives on how to solve these issues.

It should note that the instrument's validity determined by the respondents' honesty, which is based on their observations, the actual obstacles they face, and their ideas and perspectives on how to solve these issues.

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5. Results:

The study's goal is to identify the factors that influence faculty members' ability to use the "Blackboard" e-learning system in their teaching and the roadblocks that prevent them from getting the most out of it.

The survey contains a series of questions about why students and faculty members do not fully utilize the features of the Blackboard learning

management system. There were two questions on the questionnaire, which were as follows:

5.1. Responses for the first question: The following aspects studied in the questionnaire paragraphs for this aspect: the degree of clarity of instructions and instructions for use, the ability to complete and follow up academic and teaching tasks efficiently and quickly, and the extent to which an interactive-learning environment is more enjoyable, particularly in unstable conditions.

5.1.1. Student Survey Responses, Question One

Figure (1.a&b) depicts the students' overall assessment of the Blackboard software, which is one of the e-learning systems. Only 6.7% of students believe the system is excellent, 15.7 % believe it is adequate, and 51.5% believe it is adequate. Only 20.9% of students believe it is a moderately beneficial program, while 5.2% believe it is a poor program.

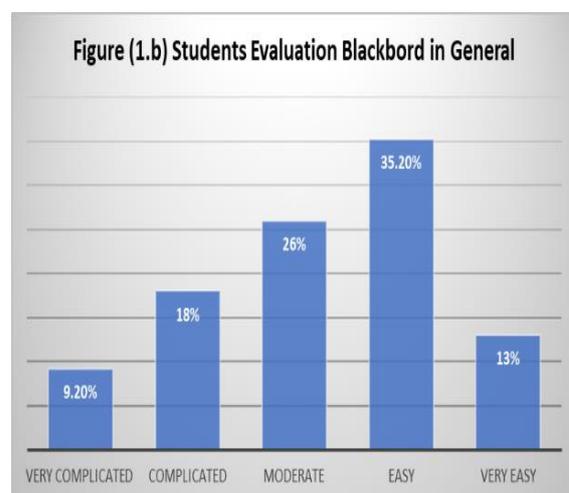
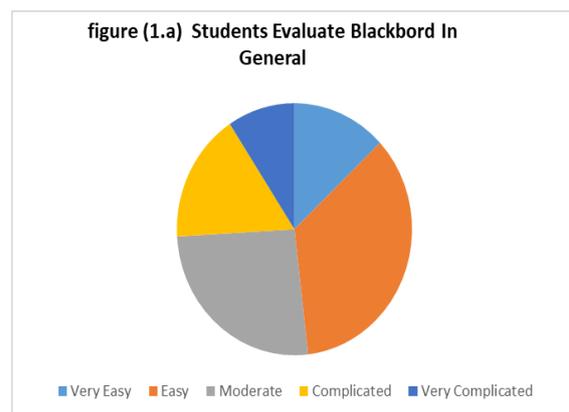
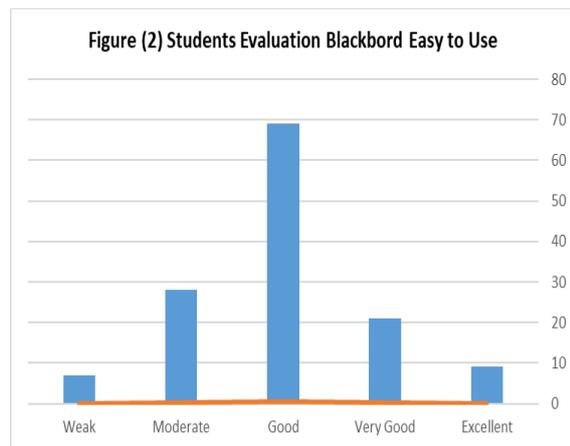


Figure (2) depicts students' perspectives on the clarity of the instructions and usage

instructions, with 9% believing that the software is very complex, 24.6% believing it is complex, and 41.7% believing it is of average clarity. Furthermore, 17.9% of students believe the program is simple in its current form, while 6.7% believe the program is extremely simple and does not require further simplification. The majority of students (59%) believe that the system allows them to upload assignment files directly to the system platform, eliminating the need to print them and the associated hassles.

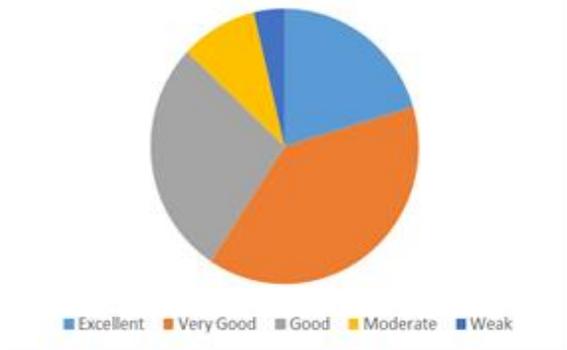


Students' perspectives on the system's success in providing a more enjoyable e-learning environment differed, with nearly equal percentages believing that it provides an enjoyable education (51%) and those believing that the attendance system is the most enjoyable (43%). According to the interview, 109 students agreed on the quality and efficiency of education systems in emergencies such as the Coronavirus pandemic. The system is highly regarded, according to the interview, for its ability to create a secure interactive environment that protects students, instructors, and educational institution personnel from negative consequences.

5.1.2. Faculty Survey Responses, Question One:

Figure (3.a&b) shows that the percentage of faculty members who rate the effectiveness of Blackboard software is higher than the percentage of students.

Figure (3 a) Faculty Members Evaluate Blackbord in General



The lowest score recorded for the weak level was 3.7%, whereas 9.3 % believe the program is of average benefit, 27.8 % believe it is good, 38.9 % believe it is very good, and 20.3 % believe it is excellent, all of which are higher than the percentages reported for students.

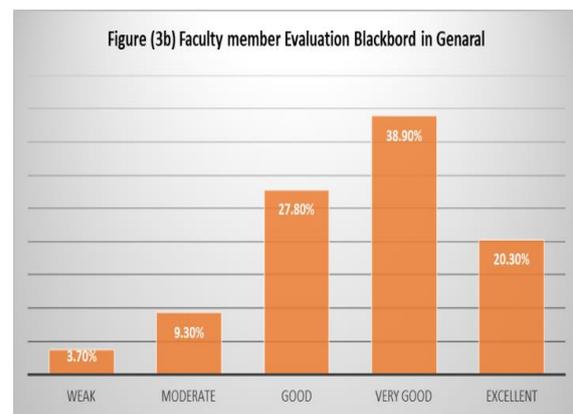
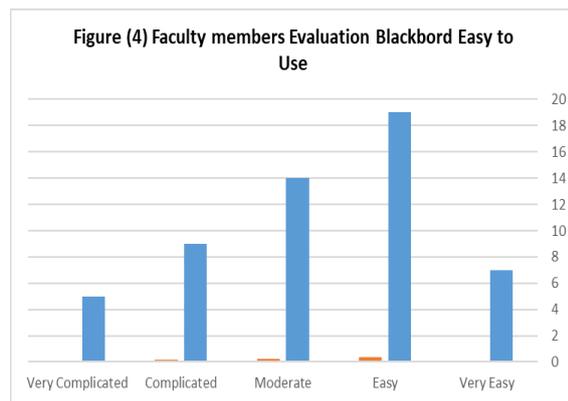


Figure (4) depicts faculty members' perspectives on the instructions' convenience and clarity. According to the results, 9.2% believe the system's operating tools are very complicated, 18% believe some commands are complicated and clear, 26% believe the program in its current form is of average ease, 35.2% believe the program is easy to deal with, and 13% believe teaching is very simple and does not require simplification.



The majority of faculty members (61%) believe that the system allows students to follow up on their responsibilities and work directly on the system platform, allowing them to complete teaching assignments efficiently and quickly. Faculty members' perceptions of the system's effectiveness in creating a more enjoyable learning environment were nearly identical to those who believed the attendance system was the most useful and responsive. During the coronavirus pandemic, 109 students and 49 faculty members agreed that having e-learning education platforms in place was the best way to provide a positive and safe educational environment.

5.2. Responses for the second question, what are the flaws and problems that students and faculty members encounter when operating and utilizing learning management systems, and how they being addressed?

5.2.1. Student Survey Responses, Question Two:

Students' observations classified into three categories: technological difficulties and obstacles related to the program's development as one of the education systems; other educational issues related to the method of explanation and the efficiency of the teaching process; and a third technical issue related to the system's operating conditions, as follows:

Technical difficulties and roadblocks related to the system:

Concerns expressed in the student survey about technical challenges include:

- The lack of an official operating manual on the program's website, as previously mentioned.
- Several commands never used because they conflict with the nature of the courses or studies.
- Some students find it difficult to use all of the program's features.
- The program's user interface (UI) is not interactive, which leads to boredom.

Obstacles to and mechanisms of the educational process:

Concerns about educational barriers expressed by students in a survey include:

- Some students are embarrassed to ask faculty members questions during explanations or to scribble notes that the lecturer disregards in large groups.
 - Students are unable to upload large assignments.
 - Disinterested students can benefit from their classmates' efforts by cutting and pasting assignments from the responses that their classmates have uploaded to the site. Because of the system, all assignments are visible to all students and can copied without restriction. On-renewal because the teacher has already raised the course.
 - When it comes to homework preparation, students rely on libraries and outside assistance. A percentage of students prefer face-to-face education, particularly in practical courses, because they believe it allows for engagement that is more positive and communication with the course lecturer.
- Technical Concerns and Working Conditions:
- Concerns around operating conditions as expressed in the student survey include:
 - Some students are unable to join the lecture using their university account, but they can participate as a guest using a URL separate from their Blackboard account.

- Some students are unable to join the lecture using their university account, but they can participate as a guest using a URL separate from their Blackboard account. The ability to load assignments from an iPhone is limited, and they do not appear on the page.

- The assessment did not appear, despite the fact that the course completed by the end of the semester.

5.2.2. Responses to Question 2 of the Faculty Survey:

Responses from faculty members divided into three categories: technological difficulties and obstacles related to the program's development as one of the educational systems; issues related to explanation methods and the effectiveness of the teaching process; and other technical issues related to the system's operating conditions.

Technical difficulties with the system:

- Concerns about technological issues expressed by faculty members in a survey include:

- The safeguards in place to protect the e-learning system from incorrect data are adequate, but they have unintended consequences (e.g. access denied to the system after several attempts).

- The user interface is uninteresting, and it should be improved and simplified, particularly for orders that not used frequently.

- Having to repeat the same subject each semester.

- Finding information is difficult.

- Forming and disbanding workgroups is difficult.

- There is no user manual on the program's website.

- The Kodak operating system is subpar.

- There isn't enough room for images;

- The type in the layout is difficult to change; and font-formatting instructions are slow and difficult to use.

- The command menus on the side respond slowly.

- The difficulty of associating the website's address `http://` should be copied and pasted.

- You not permitted to attach more than one file when creating content.

- Files must save in PDF format because the format changes while viewing files in another format.

- The requirement to repeat the same course each semester and discard previous semester's data.

- Useful steps should take gradually, especially when adding information to live lectures.

Barriers to the educational process and its methods include:

- Concerns about educational barriers raised by faculty members in a survey include:

- There is no mechanism in place to protect the intellectual property rights of the program's content because any student, not just survey participants, can view and download the content, files, and recordings.

- Some students were embarrassed about approaching faculty members and not being able to answer their questions, especially in large groups, because it is difficult to follow up on students' comments due to other active elements.

- Students are using external libraries to prepare assignments and are not paying as close attention as they should to in-person lectures.

- The ability to copy and paste assignments from answers submitted to the system by colleagues, where the assignments are visible to everyone.

- Some students' inability to concentrate during lectures, as well as their preoccupation with checking e-mail or social networking sites.

Working Conditions and Technical Difficulties:

- Concerns about operating conditions expressed by faculty members in a survey include:
- Because voice communication is only possible through the desktop computer, there are times when technical issues arise, prompting students to transfer their notes through groups or send a guest link to other students.
- The majority of students connect via social networking apps, which are not available in the Blackboard system, and it is not possible to add another e-mail address.
- While university email is safe and secure, it is not suitable for sending files larger than 10 gigabytes. As a result, students, particularly in practical courses with large assignments, are unable to upload certain files.
- Difficulty understanding commands at first use, as well as those used only once a year, causing the method of dealing with them to be forgotten (such as creating tests and copying them to more than one division).

6. Discussion:

6.1. Examine the answers to the first question:

How popular is the Blackboard system among students and faculty? This section's questionnaire included the following questions:

6.1.1. Question One in the Student Response Discussion:

The majority of the findings support students' confidence in the Blackboard system's overall effectiveness as an e-learning system. This could be because, in recent years, due to the effects of the coronavirus pandemic, online education has been limited to the use of learning tools, specifically Blackboard. According to the researchers, the reason for the improvement in students' evaluation of the

system is that students gained more experience interacting with the system in the absence of other options for the educational process, which increased their efficiency and acceptability of e-learning systems. Students, on the other hand, are unfamiliar with all of the software's tools and usage instructions, and some of them believe that the program should be clarified and simplified, as well as interactive and entertaining elements added to the system.

Students prefer to use the Blackboard system as one of the electronic education systems because it allows them to complete and follow up on academic and teaching assignments more efficiently and quickly. The researchers attribute this to students' perceptions of the system being more comfortable than traditional methods, when compared to face-to-face education, e-learning saves time and effort while also mitigating mobility issues. Aside from the safety aspect, some of them want the educational process to continue in the same way after the health measures are removed. The survey results emphasized the students' ability to complete instructional activities more easily and quickly due to their use of the Internet for research, assignment preparation, and general course requirements. Students, on the other hand, believe that the program should create a more enjoyable interactive e-learning environment and that the browser interface should be updated. Some students enrolled in practical courses have expressed dissatisfaction with e-learning, claiming that it is ineffective. According to the researchers, this is due to the nature of those courses, which sometimes require direct transmission of experiences from the professor to the students. This finding can be explained by the system's inability to provide a more efficient environment for courses requiring skill development, despite the fact that the system contains numerous mechanisms to do this.

6.1.2. Question One in the Faculty Response Discussion:

The survey results demonstrate the impact of faculty members' training and regular use on the system's efficiency. Because of the recent reliance on electronic education systems,

faculty members rate the Blackboard system as extremely efficient. The majority of faculty members regard e-learning systems as very good or exceptional for practical reasons and a sense of responsibility.

Some faculty members believe that the instructions and usage instructions are unclear, and that some of the instructions are complex, possibly for non-permanent orders. According to the majority of faculty members, the system allows students to follow their assignments and work directly on the system platform, allowing them to complete instructional chores more quickly. Furthermore, the ability to evaluate and track their grades directly on the program platform, as well as the ability to easily re-weight the responsibilities. When compared to traditional methods, the technique expedites the completion of educational duties.

According to the researchers, if certain parts of the system, such as testing, not used on a regular basis, the system forgets how to do them. The fact that faculty members have an equal opinion about the system's effectiveness in providing a more effective learning environment, and those who believe the attendance system is the most useful, could attributed to the nature of their teaching programs and their decisions based on their specializations.

6.2. Analysis of the results of the second question:

The responses to this question offer appropriate solutions to the actual barriers that all students and faculty members face, as well as the system's ability to fulfill users' desires. The following are the results of the difficulties and impediments that limit the optimal use of educational system programs, particularly the blackboard:

6.2.1. Question Two in the Student Response Discussion:

The responses to this question offer appropriate solutions to the actual barriers that all students and faculty members face, as well as the system's ability to fulfill users' desires. The following section discusses the challenges and

impediments that limit the optimal use of educational system programs, particularly the Blackboard system.

According to researchers, in order to get the most out of today's education systems, it is critical to take a holistic approach to the challenges and hurdles, whether technological, educational, or technical, as follows:

Technical issues with the system:

According to the researchers, many of the students' complaints about the system related to the lack of an official operating manual on the program's website. This missing component makes it difficult for students and faculty members to recognize and utilize the system's capabilities. Some commands should be moved to the secret commands list if they are only used seasonally, such as during exams, or if they are never used because they are incompatible with the nature of the courses or the nature of the study. They should also be included in the operating manual. The researchers believe that changing the system's interface and incorporating interactive activities into some of its components will increase student participation and reduce boredom, especially in theoretical lectures that need to be developed and simplified.

Some of the obstacles to the educational process and its methods are as follows:

The researchers believe that the main reason for some students' reluctance to approach faculty members during explanations or take notes is the large number of students who attend a single lecture, which may cause embarrassment for the student in front of his peers. Furthermore, it is difficult for the faculty member to consistently all of the students' observations, comments, and remarks, making it impossible for them to respond to all of them. Furthermore, the researchers believe that increasing storage capacity for assignment and project components is critical in order for students to upload large-sized assignments. If some students copy and paste assignments from their peers' responses to the system, the system designers can hide all of the assignments from all students and only reveal them to the course

professor. Allowing students enough time to complete their homework ensures that they understand the material and do not need to seek assistance from the library. Researchers agree that elements of courses with skill components must be presented in person.

Working Conditions and Technical Difficulties:

Internet networks, their strength, and their proximity to transmission towers may be the primary causes of problems in operating conditions, and the only way to solve this problem is to recommend the use of Fiber-based networks to achieve appropriate communication efficiency, particularly during lectures. Furthermore, while keeping the necessary security requirements in mind, providing system designers with unrestricted access to lectures from both within and outside the university network would be beneficial.

6.2.2. Discussion of Faculty Responses, Question Two:

Researchers believe that the world events surrounding the Corona epidemic, as well as the forced health issues, such as distance, have increased the need for e-learning systems to use. It was a convenient and ready-made alternative to traditional education. By studying the content of the open interview, the faculty members' findings of the difficulties they see can be understood as follows:

- Technical issues and roadblocks related to the system:

Many security measures, according to the researchers, cause programs and systems to run slowly. Some issues may arise because of these measures, such as denial of access to the system after numerous attempts. Researchers believe that faculty members can enter the system in sufficient time before the lecture begins and upload the contents to ensure that the lectures begin on time and immediately, bypassing the slow steps of use, particularly when uploading content to live lectures.

Some students' disengagement can be traced back to the user interface, where interactive elements could be incorporated to pique students' attention and generate interaction. A regular review of

interface designs (as mentioned in the technical concerns section) should include hiding unnecessary commands to simplify the system interface.

If the same course is taught for two semesters in a row, the researchers argue that there is no reason to upload the same course each semester independently unless there is a need to update the course to keep the content up to date. Some issues, such as the complexity of research techniques, the formation and dissolution of work teams, necessitate training for faculty members. The lack of a user manual on the program's website, according to the researchers, is to be blamed, and providing one would be the best solution.

Some technical issues, such as the Kodak operating system not working properly with the system and a lack of image storage space. The reason for this is that the system will require a massive amount of data to deal with it, which could result in work being delayed. File compression, on the other hand, can be used to reduce the size of the photographs. To address the challenges of adjusting the typing in the layout and the slow formatting font's commands, training is required to improve the efficiency of interacting with the system and to address the issues of sluggish response side menus. Furthermore, there is the issue of copying and pasting the site's address (<http://>).

There are some similarities between the results of the study and the findings of Almaiah, et al. (2020) "Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic."

It is not possible to connect more than one file when creating content and it is necessary to upload files in PDF format due to format differences when viewing files in another format. According to the researchers, this is not a big deal because it speeds up content browsing. According to the researchers, rather than removing data from expired classes, this data may be kept because students' names, data, and grades will be replaced every semester.

Some of the obstacles to the educational process and its methods are as follows:

To combat plagiarism, system administrators can be asked to make the files available for browsing only to protect the intellectual property rights of the information contributed to the program. Copy assignments from their fellow participants on the system to prevent students from using external libraries to prepare assignments. A faculty member to take quick and decisive action can use the withholding tool and fraud detection tools.

If certain students are nervous about approaching faculty members and they are unable to answer their questions, especially in large groups, it is possible to communicate via university mail at times other than during the lecture. Because there are other active elements, it will inevitably be difficult to follow up on the students' comments with a large number of students.

Concerning students being distracted by their devices in class: Teachers, according to (Sherwood, G., & Horton-Deutsch, S., 2015), should not be overly concerned when students use their mobile devices in class for purposes other than learning, such as reading Facebook and surfing the Internet. This behavior should be viewed as analogous to what might have occurred in a traditional lecture, such as scribbling or letter writing.

Working Conditions and Technical Difficulties:

According to the researchers, following up with network operators, particularly internal ones at educational institutions can solve the majority of technical problems and overcome barriers. Because of technical difficulties that prevent audio communication with students, the guest link can be prepared and sent prior to the start of the lectures. In the event that you are unable to log in using your university account, this would be a suitable alternative. To address the issue of students being unable to upload certain files, particularly in practical courses with large assignments, the files can be compressed or their resolution and size reduced.

An operating manual should be readily available to assist users with any difficulty understanding commands during initial use, as well as those that are only used once a year (where the intermittent usage leads to the users forgetting the relevant commands and protocols).

7. Conclusion:

The study looked at the elements of blackboard systems and determined how to best use them, as well as studying their advantages, disadvantages, strengths, and weaknesses in building them in order to maximize the benefit of these systems through the development of proposals and solutions to those obstacles. The findings indicate that there is an electronic gap between the generation of modern technologies represented by students and the actual generation represented by professors. The majority of professors' observations are about technical issues and the system, whereas students' observations are:

- There are technical issues.
- Individual differences and personal issues
- Problems with teaching that related to the faculty member.

8. Recommendations:

The researchers make the following recommendations in light of the study's findings:

- We emphasize the importance of regularly and intensively training faculty members, as well as developing an operating model for the program, particularly in terms of arranging and duplicating exams and creating models for different people.
- We advocate for reducing the functionality of interface tools to a bare minimum, while also simplifying access to remaining instructions as needed and adding

appealing aesthetic elements to the program interface.

- A user's handbook that users can easily access should be included on the e-learning program's home page.

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