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King Abdulaziz University's female faculty's perspectives regarding the effectiveness of using Blackboard on teaching and learning

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Abstract.currently, increasing educational facilities, especially higher ones, implement e-learning to support or substitute traditional learning. Simultaneously, there exist multiple barriers and limitations for its successful application that should be assessed to ensure the development of e-learning that facilitates communication, considers learners' differences, provides access to abundant information, and helps educators deliver materials. Thus, this qualitative research examined the university female faculty's perspectives regarding the effectiveness of using Blackboard on teaching and learning. Using the narrative approach, it collected data through semi-structured interviews efficient for small-scale research. The participants were 12 female members of the Faculty of the College of Education at the King Abdulaziz University, Jeddah. For data reliability, sampling, methodology, design, and data analysis corresponded to the research subject and were appropriate for answering the research questions and drawing conclusions. The findings revealed the participants' positive attitude toward using Blackboard. They also highlighted several factors that contribute to the improvement of teaching and learning at the graduate level, such as developing tools to support the research courses and focusing on achieving the students' learning outcomes using Blackboard.
Keywords: e-learning; Blackboard; teaching and learning; female faculty; College of Education, King Abdulaziz Univers

1. Introduction

This study examined the perception of female faculty members of the College of Education at the King Abdulaziz University (KAU), Jeddah, toward e-learning through Blackboard regarding classroom instruction (teaching and learning). Its significance is determined by e-learning being an intrinsic component of education in modern realities. Moreover, it is regarded as one of the best education methods, especially for the higher educational facilities, as it has several substantial benefits (Al-Hafdi & AlNajdi, 2023; Arkorful & Abaidoo, 2015). For e-learning that fully or partially substitutes the traditional education process, its flexibility regarding place and time should be considered (Al-Hafdi & AlNajdi, 2023; Politis & Politis, 2016). Specifically, e-learning tools enable individual and personal selection as to when and where to study (Rubens et al., 2012). Moreover, e-learning ensures that students have access to abundant information through the Internet and facilitates communication between students and educators (Al-Hafdi & AlNajdi, 2023; Arkorful & Abaidoo, 2015).

E-learning is cost-efficient in most situations and is likely a solution for challenges posed during education staff shortages. A digital tool that enables e-learning is Blackboard, a specific Internet-based course management system that allows the faculty and students to use online activities and materials to support face-to-face teaching and participate in online classes (Bodendorf & Franke, 2022).

In recent years, the Internet has become an intrinsic part of people's lives worldwide. Regarding education, it is vital to make resources for learning and research available for both students and teachers

to acquire and share information (Purwantoro, 2021). In fact, modern e-learning is characterized by using technological advancements and the Internet to teach learners, produce or collect learning materials, and regulate courses in education facilities (Al-Hafdi & AlNajdi, 2023; Arkorful & Abaidoo, 2015). It covers diverse learning methods, applications, and processes.

There is no common definition of e-learning, as it is perceived differently by researchers and users. Broadly, it is any learning enabled electronically and empowered by digital communication and information technologies (Rennie & Morrison, 2013). Moreover, in some definitions, it encompasses the offering of fully online courses, while some experts state that it presupposes the use of technology to deliver a course partly or wholly from a permanent place and time independently (Al-Mubireek, 2019). According to the European Commission, e-learning is "the use of new multimedia technologies and the Internet to increase learning quality by easing access to facilities and services as well as distant exchanges and collaboration" (Arkorful & Abaidoo, 2015, p. 30). Additionally, it includes online distance, distributed, and hybrid learning.

The Organization of Economic Co-operation and Development (OECD) initially formulated the most comprehensive definition of e-learning, which will be addressed in this research. According to the Centre of Educational Research and Innovation based on the OECD, e-learning's common vision is not currently achievable in practice (OECD, n.d.). Specifically, the idea that a student will follow prestigious overseas universities' entire courses comfortably from their own home due to e-learning without a high cost of living abroad and other inconveniences has failed to materialize. Students are still attached to classrooms at least partially as the peculiarities of this education type are essential for efficient learning. Thus, the OECD defines e-learning as "the use of information and communication technologies in diverse processes of education to support and enhance learning in institutions of higher education, and includes the usage of information and communication technology as a complement to traditional classrooms, online learning or mixing the two modes" (Arkorful & Abaidoo, 2015, p. 30). In this case, it facilitates the attainment of knowledge through the distribution of information by electronic means.

Initially, e-learning was perceived as the transmission of information to distant locations in the format of video presentations. However, subsequently, it was discovered that e-learning's features are centered on digital devices and the Internet, along with the development of communications technologies, has transformed distance learning into e-learning ((Bodendorf & Franke, 2022; Arkorful & Abaidoo, 2015; Sangrà et al., 2012). Regarded as a revolutionary phenomenon, e-learning is believed to be able to turn education into an interactive, self-paced, repetitious, and customizable process (Afghani, 2021). Thus, to be distinguished from the other types, e-learning should obtain the following characteristics:

- The presence of a multimedia environment (Garrison, 2011; Carliner & Shank, 2016);
- The incorporation of several types of information;
- Support for collaborative communication (Boud & Cohen, 2014; Lou et al., 2017);
- The provision of student-centered education (Wright, 2011);
- Learners' control over education processes;
- Support for networks for accessing information;
- Free implementation of education systems on various digital devices.

In universities, a new learning environment focused on electronic networks allows students to individualize learning schedules and support. In comparison with the traditional learning environment, e-learning facilitates collaboration and interaction between peers and instructors as it is more inherent by design (Mathew et al., 2019). Additionally, the use of multimedia makes the educational process more interesting, productive, and active. Regarding higher education, e-learning may empower students to maintain their own careers, pursue personal objectives, and acquire education simultaneously (Elfeky et

al., 2020). Generally, e-learning may be divided into computer- and Internet-based according to its engagement in education (Algahtani, 2011). Thus, the former implies using software and hardware for computer-assisted learning and computer-managed instruction. However, it is suitable for self-learning or support outside and inside the classroom, respectively (Moore et al., 2011). Accordingly, computers are applied for information storing and retrieving to aid in education management.

Consecutively, Internet-based e-learning presupposes substantively diverse opportunities for education. Based on an instructor's involvement, computer-based learning is divided as follows: the assistant mode, used in the classroom along with traditional learning; mixed and blended modes that offer individual learning and traditional classes or use e-learning tools to support traditional teaching in the classroom (Zuvic-Butorac et al., 2011; Graham et al., 2013); and online mode, entailing complete individual learning using learning networks exclusively.

Blackboard is a learning management system (LMS) used as a course information repository and a communication medium through announcements, emails, podcasts, or discussion boards (Alokluk, 2018). Furthermore, it facilitates information delivery in the classroom without traditional boards (Lau et al., 2014). It enables educators to provide course materials, virtual chat, academic resource centers, online quizzes, and many other activities (Blackboard, n.d.). Every faculty independently chooses the degree of Blackboard's use within a particular course. For instance, it may be applied as a supplement to classroom teaching by posting handouts and syllabus on the course sites; contrariwise, instructors may conduct classes entirely through Blackboard (Alenezi & Shahi, 2015). It delivers learner-focused and personalized content and activities, thus promoting engaged learning and interactivity.

Generally, Blackboard's use predominantly depends on users' efficiency and educators' competency regarding e-learning technologies. Thus, users need to know how to utilize it to facilitate the educational process (Aljawarneh, 2020). Otherwise, technological progress will deteriorate rather than contribute to efficient learning (Trelease, 2016). In turn, with Blackboard's help, educators may provide quality support for students and teach them how to "select, combine, coordinate their cognitive strategies in connection to the new knowledge, and prompted to reflect on their strategy use, extending their metacognitive knowledge with strategy and capacity beliefs" (Alokluk, 2018, p. 135). Simultaneously, if educators use the tool incompetently, it becomes useless to students (Subramanian et al., 2014; Oye et al., 2011). To be effective, they require technology literacy and the ability to integrate digital tools in student-centered learning.

In faculty settings, educators are vital in providing e-learning and ensuring that the learning-related tools, including Blackboard, promote efficient student-centered learning (Alturise, 2020; Fryer & Bovee, 2016). They are responsible for generating the content that will be both appropriate and interesting, gathering sources relevant to the course's subject, grouping collected data into regular portions or modules, and giving structured material to students (Mohsen & Shafeeq, 2014). Overall, course-management software helps university professors bring "new levels of interaction both among students and between students and professors" and organize courses more professionally (Alokluk, 2018, p. 136). Simultaneously, Blackboard is frequently perceived as inconvenient and inflexible for the faculty and students.

This perception is traditionally determined by the tool's limitations and educators' insufficient technical competency. According to Alokluk (2018), only 23% of teachers confidently use e-learning technologies. The University of Wisconsin System conducted a study that explored how Blackboard is utilized by the faculty (Prescott, 2013) and revealed the following:

- Poor rates of LMS uptake due to the faculty's fear of losing control over the educational process and belief in the LMS procedures' negative impact on pedagogy;

- The majority of faculty use LMS only for the content presentation – interactive parts of the tool, including quizzes, tests, and surveys, are employed less than the static ones;
- Adopting LMS is perceived as a part of class management rather than pedagogy;
- The use of e-learning tools is mostly caused by the persuasion of deans and departmental chairs;
- The majority of faculty members mention the necessity of adequate training related to e-learning software for its efficient implementation and regular use by all participants of the academic process.

In considerable higher education institutions, Blackboard has already been applied for online classes and classroom instructions. However, the e-learning initiatives' development has not reached its advanced stages in the Middle East (Al-Azawei, 2016; Al-Asmari & Khan, 2014; Bhuasiri et al., 2012). Moreover, both educators and students experience difficulties in using these e-learning tools, and multiple barriers for their efficient application have been observed (Alshahrani & Al-Shehri, 2012). Thus, as the e-learning technologies will continue to develop, it is essential to examine its perspectives based on the current situation and educators' perception of their efficiency and accessibility. Hence, a narrative qualitative study was conducted using semi-structured interviews to answer the following research question:

How can e-learning through Blackboard on classroom instruction be improved to provide the most acceptable teaching and learning outcomes at the College of Education, KAU?

Simultaneously, this complex question was supported and logically derived from the following additional question:

How do the female faculty members in the College of Education at the KAU perceive contemporary e-learning and evaluate their competency in their use, including Blackboard, on classroom instruction?

What limitations and barriers regarding Blackboard's successful implementation and usage are experienced by the female faculty members in the College of Education at the KAU?

The College of Education is the only college at the KAU that solely offers graduate degrees. All other colleges provide undergraduate and graduate degrees. Therefore, this college was investigation-worthy as the faculty was using Blackboard with graduate courses only, with classes having below 20 students. The graduate courses differ from the undergraduate ones as they focus on research and involve using more skills. Therefore, it is important to know how the faculty members implement teaching using Blackboard and how students receive learning through this tool from the participants' perspective; this will enable understanding the situation better and seeking improvement for using this method in teaching and learning for graduate students.

2. Study design

2.1. Method

The narrative qualitative method was used; its application's expediency was determined by several factors. Primarily, the data was collected through semi-structured interviews with the faculty; thus for the non-numerical descriptive data, the qualitative approach was utilized. Moreover, it allowed identifying the participants' unique experience and perception of e-learning using Blackboard, its current scope, and future opportunities or hindrances regarding its development. The narrative qualitative method's benefit is in its ability to explore the individuals' narratives by listening to their stories and presenting their voice (Creswell, 2007). Specifically, the participants' answers presented the e-learning application's vision through Blackboard at the KAU comprehensively to draw relevant conclusions. Finally, by setting semantic categories, this method's use allowed a discourse and the related content analysis, guaranteed high validity, and reduced inappropriate interpretations (Fandiño et al., 2019). Based on the data analysis, the study provided specific recommendations that may be considered and applied for the improvement of teaching and learning using Blackboard in the graduate courses.

2.2. Participant recruitment

The research participants were the College of Education's female faculty members at the KAU, Jeddah. The researcher sent them a WhatsApp message that explained the study purpose and asked them if they were interested to partake by attending a one-hour interview. Subsequently, 12 out of 50 faculty members replied to the message positively. The researcher was confident that all of them had employed Blackboard because of the coronavirus disease 2019 (COVID-19) pandemic. Hence, the participants familiar with the research subject provided a professional and reliable opinion.

2.3. Data collection and analysis

Semi-structured interviews are efficient for small-scale research as they provide a highly flexible technique when the study is characterized by an open framework. All interviews were conducted individually within an hour in a secure place. They were recorded in an audio format for subsequent transcription and semantic analysis. The latter was used to extract and categorize meaningful information from the possibly unstructured data. Generally, the interviews were based on a set of questions (Appendix 1); however, the participants could leave their comments concerning any aspect of the subject matter. Furthermore, the researcher added some pop-up questions according to the participants' answers. All participants signed a consent form prior to the interviews that emphasized the confidentiality and the protection of their identity by withholding their real names. They were from the following six different college departments: Educational Administration, Psychology, Curriculum and Instruction, Educational Technologies, Special Education, and Foundation of Education.

2.4. Data validity and reliability

In qualitative research, data validity refers to the appropriateness of information, processes, and tools. Specifically, it defines "whether the research question is valid for the desired outcome, the choice of methodology is appropriate for answering the research question, the design is valid for the methodology, the sampling and data analysis is appropriate, and finally the results and conclusions are valid for the sample and context" (Leung, 2015, p. 325). This study's sampling, methodology, and data analysis corresponded to the research subject and were appropriate for answering the research questions and drawing conclusions. As previously mentioned, semi-structured interviews were suitable for a small-scale study to provide an appropriate data scope.

In turn, this qualitative research's reliability depended on the collected data's reliability. As the information was provided by competent educators with experience in working with e-learning tools, results were regarded as reliable. Simultaneously, the human factor of subjectivity and the possibility of participants forgetting or misinterpreting some information was considered (Noble & Smith, 2015). Accordingly, the interview transcription was verbatim to ensure that the participants' exact words were used. Moreover, the researcher requested an external auditor to assess the whole process and product to ensure its accuracy. Furthermore, the researcher used thick description to allow readers to make decisions about transferability. Nevertheless, the research subject allowed some subjectivity as it examined the perception of individuals according to their knowledge and experience to provide insights regarding e-learning using Blackboard for the improvement of the teaching and learning quality in the future.

3. Results

The data presented was organized by themes under each research question. After analyzing the data, common themes were selected, and the participants' quotations were used to best reflect the meaning. To protect their identities, pseudonyms were utilized.

3.1. Question one: How can e-learning through Blackboard on classroom instruction be improved to provide the most acceptable teaching and learning outcomes at the College of Education, KAU?

3.1.1. Developing useful tools and features for the research courses using Blackboard

The College of Education is the only college at the KAU that offers graduate degrees only. Hence, using Blackboard in this college is different than the other colleges at the KAU. All students are at graduate levels that involve research courses such as seminars, statistics and research courses, and thesis or graduation project. The faculty reported that Blackboard lacks tools that support research which they need in the graduate courses to enhance teaching and learning. For enhanced teaching and learning outcomes, Blackboard should incorporate some features that facilitate research. Dr. Amani reported, "The only thing I know in Blackboard that may help the students in research courses is safe assign. However, it is inaccurate. Thus, we use iThenticate or Turnitin to detect plagiarism." Dr. Lubna added, "I wish Blackboard had a search engine in it instead of exiting it and opening the browser to search." Further, Dr. Farah also reported the inadequacy of these tools and the importance of adding them to the Blackboard for an improved functionality in the research courses. While Dr. Sara believed that the research courses should be fully delivered through Blackboard, she declared not knowing any tools that support research. However, she thought that it would be more flexible for students to attend the graduation project classes and research courses online; further, the office hours could be scheduled online to support students considering their different circumstances, such as living in a different city, illness, and more. However, most faculty in the study believed that Blackboard should be considered as an assistive tool to direct learning, especially in research. Dr. Karima said, "In the course's theoretical part, we can use Blackboard; however, in its practical part, it is impossible for me to use Blackboard as I consider it as a helpful tool that supports face-to-face classes."

3.1.2. Creating content support and increasing storage space

Preparing materials for Blackboard could be an additional load for the faculty when it comes to effort and time that may hinder its use in teaching and learning. Moreover, preparing this material requires expertise in creating videos and digital content using technology, a skill that all faculty may not have. Dr. Rabab said, "If there is a technical and administrative team that is responsible for preparing the videos and assisting in uploading the content in Blackboard, it will encourage me to use it more. Creating digital content needs expertise in this area." Moreover, increasing the space would help the faculty as each course has a limited space that cannot be exceeded. However, for the graduate course materials in some cases, this limited space is insufficient. Dr. Ohood mentioned, "If the space storage that we have in Blackboard is increased, it will be likely that the faculty uses it more."

3.1.3. Implementing Blackboard to achieve the students' learning outcomes (SLO)

It is important to consider how the faculty implements different tools in Blackboard and how they really choose the best tool to be employed in each learning context to better achieve the learning outcomes. Dr. Ahlam stated, "A negative point is our perspective in using e-learning, specifically Blackboard, as some use technology for the sake of doing so or for a technical goal; however, we must utilize it to achieve the learning outcomes. Thus, we must choose a suitable tool to be used in the learning context."

3.1.4. Turning on the camera for visual contact

Occasional visual contact is necessary. Dr. Maram mentioned, "I feel tired when I conduct online classes because I keep talking to the screen. I do not see the students and vice versa because the camera is not used; I find this very exhausting. I realized that this makes me use my voice greatly and repeat the information many times, thus making me weary because of the absence of immediate visual interactions. I always have to wait until they interact using the chat." Dr. Faten added, "The insufficient eye contact leads the students to join the virtual classroom in Blackboard even if they are not sitting in front of the screen. I could easily tell that they are not there behind the screen, or they are busy doing something else. Occasionally, I call a student and there is no response despite joining the class. I am thinking that I should wear my hijab and request them to do so to be able to turn on the camera."

3.2. Question two: How do the female faculty members in the College of Education at the KAU perceive contemporary e-learning and evaluate their competency in their use, including Blackboard, on classroom instruction?

3.2.1. Faculty perception of e-learning including Blackboard

All participants agreed that the COVID-19 pandemic changed their perception toward e-learning. Their experience proved that currently, it is important for everyone to be skilled in using technology for educational purposes including Blackboard. After the experience of online learning during the pandemic, they realized that e-learning specifically through Blackboard could help overcome several challenges. Dr. Ohood mentioned, "I have a student who was living in Jeddah. When she started her thesis, she got married and moved to Dhahran. As her thesis supervisor, I had to meet her weekly, which was impossible because of the distance and also, she got pregnant. Accordingly, Blackboard helped us to overcome the distance issue. We met in the virtual classrooms regularly and she visited the university occasionally." Dr. Aram added, "E-learning assisted us to access many websites that support the learning process. Presently, it is easier to share recourses in Blackboard under content."

3.2.2. Competency of using Blackboard on classroom instruction

Most faculty interviewed reported using Blackboard in their teaching. They all mentioned that during the COVID-19 pandemic, they used it fully; however, after the pandemic and the return of physical classes, its usage decreased. The features they employed were mainly posting advertisements, sharing resources, and virtual classrooms. During the virtual classrooms, the faculty usually shared content and used the white board and pointer. They also activated the chat and microphone. Table 1 presents their percentage of using Blackboard after the return to physical classes.

Participants	Department	The percentage of using Blackboard
Dr. Karima	Foundation of Education	30%
Dr. Ohood	Foundation of Education	40%
Dr. Lubna	Educational Technologies	70%
Dr. Faten	Educational Technologies	50%
Dr. Ahlam	Educational Technologies	70%
Dr. Farah	Curriculum and Instruction	30%
Dr. Aram	Curriculum and Instruction	30%
Dr. Rabab	Curriculum and Instruction	40%
Dr. Maram	Special Education	30%
Dr. Lama	Special Education	50%
Dr. Sarah	Educational Administration	30%
Dr. Amani	Psychology	30%

[Table 1]

3.3. Question three: What limitations and barriers regarding Blackboard's successful implementation and usage are experienced by the female faculty members in the College of Education at the KAU?

3.3.1. The infrastructure

The KAU tried greatly to work on developing the university area's infrastructure during the COVID-19 pandemic. However, students lived in different areas and there were usually some troubles in the infrastructure across the country. The faculty indicated that the infrastructure could be a barrier that hinders the successful implementation of Blackboard. Dr. Ahlam said, "A con of e-learning is generally the infrastructure and specifically the Internet establishment and network outage. We witness several problems regarding the Internet speed and connection that need to be addressed".

3.3.2. The absence of physical and visual interactions

Blackboard was designed such that the faculty members and students could see each other through the camera. However, this was not the case in the virtual classes for the participants because this feature was not used due to a cultural issue; the faculty and students were afraid that someone could record the session and spread recordings, or someone from home may pass by in front of the camera that was against privacy. Consequently, the participants declared how it is hard to not see the students during the classes and how this may affect the teaching and learning process negatively. Dr. Amani said, "I see Blackboard as a supporting tool for teaching and learning, however, we cannot depend on it completely. I miss the physical, visual communication. Although I can hear the students, I cannot see their eyes or physical movements. I cannot tell if they are able to understand. Occasionally, I am even unsure if they are sitting in front of the screen or not."

3.3.3. Insufficient time

The faculty reported that being busy with planning, teaching, and assessing leads to difficulties regarding finding the time to train themselves to use Blackboard or implement it even if they know how to. Dr. Lama said, "The administrative workload gives me insufficient time to search for the Blackboard updates or to develop myself. I wish to win the award for excellence and creativity in e-learning; however, I have insufficient time to fully activate Blackboard."

3.3.4. Inadequate incentive and need

Some participants did not describe themselves as confident users of Blackboard and used it very limitedly; although they employed it during the COVID-19 pandemic, they did so mostly to deliver virtual classes through Blackboard ultra. When asked about the reason for not trying to learn about it, they mentioned insufficient need. Dr. Aram mentioned, "I did not feel the need of learning more about Blackboard. I think what I know is sufficient. Since there is no need, I will not have the motivation to learn more about how to use it." Dr. Lama added, "The lack of need to activate or use all the tools and features in the Blackboard may be the reason of not using it. Further, there is an insufficient incentive to learn more as previously when I had to do so because I had to conduct my exams online because of the pandemic. Currently, everything is back to normal; thus, I do not feel obligated to use it."

3.3.5. Limited storage space for each course in Blackboard

A barrier reported by the faculty in using the Blackboard is the limited storage space in each course. Dr. Ohood said, "I encountered some difficulties because of Blackboard's storage space. I received an email notification stating that my course is lacking space. Consequently, I had to send several materials to the students through emails; this was somewhat difficult as it took more time and it was hard to get back to the materials by students later because it gets lost between other emails they receive. Thus, I do not prefer using Blackboard."

3.3.6. Technical issues

A barrier reported by the faculty in using Blackboard is the technical issue they encounter during virtual classes, such as the Internet lagging, losing the connection, or difficulties in using the microphone. Moreover, some faculty members reported issues regarding certain Blackboard procedures. Dr. Faten mentioned, "Although I am a confident user of Blackboard, personally, I do not consider it a user-friendly platform; for example, I have a question set in Blackboard and Dr. Lubna as well. When we try to exchange our question sets, Blackboard gives us several problems despite both of us having expertise in programming and coding. It is challenging to use; even if we follow the stepwise guide, we are unable to achieve what we want." Dr Lubna agreed, "I do not think Blackboard is a user-friendly platform."

4. Discussion

4.1. Using Blackboard in teaching and learning

This research's findings indicated that the faculty's perception toward using Blackboard was positive; however, their use of it was insufficiently deep as only some features were used. They tend to use Blackboard whenever there is a need and time. During the COVID-19 pandemic, it was employed fully because there was no other way of communication between the faculty and students as even the classes were online through Blackboard (Asanov et al.2021, Chen et al.2020). Once the physical classes resumed, necessity for and demand of Blackboard decreased. What we accomplished specifically in using educational technologies in higher education during COVID-19 pandemic in Saudi Arabia must be maintained (Al-Hafdi, 2023). Accordingly, several points must be considered.

Allocating incentives for using Blackboard could be a useful motivation. It could be a monthly payment added to the payroll or points added to the promotion of the faculty in the category of teaching for using Blackboard effectively. The faculty promotion depends on the number of points the faculty member gains in three categories: teaching, research, and community service or volunteer work at the university. Moreover, raising awareness regarding the advantages of using Blackboard by illustrating its advantages should be done (Bodendorf & Franke, 2022). This includes archiving all the correspondence between the faculty and students in the course itself and not the emails so they can return to check any message easily as it could be lost in the e-mails because of the number of the courses and students that each faculty has. Moreover, it is very easy to duplicate all the materials between courses as well as adding, deleting, or modifying any material that helps in saving time and effort when the course is repeated. Furthermore, it helps to overcome the distance issue when there are certain circumstances preventing physical presence.

4.2. Improving teaching and learning through Blackboard

This study's findings indicated that several points need to be considered to improve teaching and learning through Blackboard for graduate students. The infrastructure was developed during the COVID-19 pandemic in Saudi Arabia (Al-Hafdi, 2023). However, it needs to be enhanced to better serve the faculty and students, such as the Internet lag or the connectivity loss; this may negatively affect the teaching and learning as it could cause several issues, such as loss of class time or canceled lectures, affecting the communication between the faculty and students etc. The weak infrastructure's impact on the classes should be addressed.

Furthermore, to best implement graduate courses, Blackboard should include more features and tools that support research. Their lack may prevent achieving the SLO. This also affects the faculty regarding expanding or eliminating Blackboard's usage in teaching. The more the faculty feel that using Blackboard is facilitating the learning process for the students as well as achieving the course's SLO, the more likely they will increase using it. Blackboard has several features and varieties (Bodendorf & Franke, 2022). However, it still needs to be developed to address the research courses.

To address the issue of visual contact, the college should consider using cameras in virtual classes as a policy that should be implemented by both faculty and students. It could be done by wearing hijab for the female faculty and students and preventing students from sharing the recorded sessions with others. This could somewhat solve the challenge of the absence of physical and visual contact, especially when students have a presentation. The faculty can also ensure if the students are sitting in front of the screen or not. Visual contact is an important element in teaching and learning; there are different predominant learning styles and visual learning is one of them. Consequently, educators should consider all the different learning styles (Heng et al., 2022) and if the Blackboard camera is not used, this indicates that the visual learners are excluded, which will affect achieving the SLO for some students negatively.

An advantage of using Blackboard is adapting the teaching for different students' needs (Ulla et al.2021). This did not appear in the use of the faculty as mostly they were all doing the same thing for the whole class except for the office hours. Occasionally, it was scheduled individually through Blackboard to meet students' needs.

The study participants tended to use Blackboard in a way of lecturing. They spoke most of the time despite not doing this in their face-to-face classes as they divide the students into groups to work on or discuss something because they are not get used to student-centered classes online. Online classes do not hinder student-centered learning (Alturise, 2020; Fryer & Bovee, 2016). The faculty could move from the virtual classes to the discussion boards during the class to start a discussion. Moreover, they can utilize the features of breakout rooms in the virtual classes and the faculty can move between them to examine each group. Moreover, polling is an extremely useful tool when it comes to multiple choice and yes/no questions. There are several features that could replace physical teaching if implemented effectively (Wangdi et al., 2021).

To increase Blackboard's use in teaching and learning, it is important to provide the faculty with different types of support like providing content creation and technical assistance and increasing Blackboard storage space for each course. The KAU offers workshops in using Blackboard presented by the Deanship of E-Learning and Distance Education. These workshops are conducted by non-faculty experts in using the platform. Consequently, their focus is more on the technical side. Giving the opportunity of experts' faculty to give these workshops with the assistance of technical experts in Blackboard should be considered as this faculty deals with deep knowledge regarding how to link the course objectives with the content, teaching methodologies, learning activities, teaching aids, and evaluation. This involves considering all components of teaching, learning, and assessing through Blackboard (Aljawarneh, 2020).

5. Recommendations

To improve teaching and learning using Blackboard, this study recommends the following:

(1) Encouraging the faculty to use all Blackboard features by giving incentives.

(2) Spreading awareness regarding the advantages of using Blackboard by engaging the faculty and students in workshops.

(3) Initiating a policy that obliges the faculty and students to use the Blackboard camera during virtual classes, especially if there is a student presentation, after signing a consent form that prevents them from sharing the session recordings.

(4) Adding more features that support research graduate courses for better SLO.

(5) Providing the faculty with all the support they need technically, in creating digital content, and in allocating time for sharing their experiences regarding using Blackboard and learning from each other.

6. Further research questions and issues

The different challenges encountered by the faculty using Blackboard posed the following questions:

- What other platforms may better serve teaching and learning in the graduate research courses?
- How could the faculty members be motivated to best use Blackboard?
- How could we maintain the gains that the faculty acquired in using Blackboard during the COVID-19 pandemic?

7. Limitations

Due to the small number and variety of the participants, the results are not generalizable. All participants were females, who had worked in the College of Education at the KAU. Nevertheless, the study provokes new learning and questions that can be investigated and developed in other contexts.

8. Conclusion

The KAU is encouraging the faculty to use Blackboard in teaching and learning in different ways, such as allocating a yearly prize that awarded to 10 faculty members who create e-learning courses through Blackboard and providing the faculty with different training workshops; however, Blackboard is used insufficiently by them. Several factors contributing to this were revealed through the narratives of the College of Education's 12 female faculty members at the KAU. This study provides some recommendations that may support the faculty in maintaining the gains they acquired in using Blackboard during the COVID-19 pandemic and in increasing its use. The participants expressed their positive feelings toward using Blackboard. Simultaneously, they presented their needs that should be fulfilled for improving Blackboard's usage for teaching and learning.

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References

Afghani, A. A. (2021). Evaluating the user experience of e-learning in the distance education program at Taibah University – Opportunities for learner interaction, strategies for improvement, and student attitudes about electronically-based instruction. *International Journal of Higher Education*, *10*(4), 151-160.

Al-Azawei, A., Parslow, P., & Lundqvist, K. (2016). Barriers and opportunities of e-learning implementation in Iraq: A case of public universities. *The International Review of Research in Open and Distributed Learning, 17*(5). https://doi.org/10.19173/irrodl.v17i5.2501

Al-Asmari, A. M., & Khan, M. S. R. (2014). E-learning in Saudi Arabia: Past, present and future. *Near and Middle Eastern Journal of Research in Education, 2014*(1), 2. https://doi.org/10.5339/nmejre.2014.2

Alenezi, A. M., & Shahi, K. K. (2015). Interactive e-learning through second life with blackboard technology. *Procedia-Social and Behavioral Sciences*, *176*, 891-897. https://doi.org/10.1016/j.sbspro.2015.01.555

Algahtani, A.F. (2011). *Evaluating the effectiveness of the e-learning experience in some universities in Saudi Arabia from male students' perceptions*. Durham E-Theses, Durham University.

Al-Hafdi, F. S. (2023). Distance learning gains via digital platforms during the Covid-19 pandemic: a qualitative study of the experience of faculty members. *Journal of Umm Al-Qura University for Educational & Psycological Sciences, Vol.15(1). 83-97.*

Al-Hafdi, F. S., & AlNajdi, S. M. (2023). Faculty members' perceptions toward the learning Opportunities during the Coronavirus (COVID-19) via Learning Management System (LMS). *Journal for Educators, Teachers and Trainers, Vol. 14(5).* 218-237.

Asanov, I., Flores, F., McKenzie, D., Mensmann, M., & Schulte, M. (2021). Remote-learning, time-use, and mental health of Ecuadorian high-school students during the COVID-19 quarantine. *World Development*, 138,105225. doi: https://doi.org/10.1016/j.worlddev.2020.105225

Aljawarneh, S. A. (2020). Reviewing and exploring innovative ubiquitous learningtools in higher education. *Journal of Computing in Higher Education, 32*(1), 57-73.

Al-Mubireek, S. (2019). E-learning in the English classroom: Comparing two e-learning platforms impacting preparatory year students' language learning. *CALL-EJ*, *20*(2), 19-37.
Alokluk, J. A. (2018). The effectiveness of Blackboard system, uses and limitations in information management. *Intelligent Information Management*, *10*, 133-149. https://doi.org/10.4236/iim.2018.106012
Alshahrani, K., & Al-Shehri, S. (2012). Conceptions and responses to e-learning: The case of EFL teachers and students in a Saudi Arabian university. *Monash University Linguistics Papers*, *8*(1), 21-31.
Alturise, F. (2020). Evaluation of Blackboard learning management system for full online courses in western branch colleges of Qassim University. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(15), 33-51.
Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29-42.
Bhuasiri, W., Xaymoungkhoun, O., Zo, H., Rho, J. J., & Ciganek, A. P. (2012). Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty. *Computers & Education*, *58*(2), 843-855.
Blackboard. (n.d.). Blackboard Learn is for educators. Blackboard. https://www.blackboard.com/teaching-learning/learning-management/blackboard-learn
Bodendorf, F., & Franke, J. (2022, January). Application of the Technology Acceptance Model to an Intelligent Cost Estimation System: An Empirical Study in the Automotive Industry. In Proceedings of the 55th Hawaii International Conference on System Sciences. http://hdl.handle.net/10125/79476.
Boud, D., & Cohen, R. (2014). *Peer learning in higher education: Learning from and with each other*. Routledge.
Carliner, S., & Shank, P. (Eds.). (2016). *The e-learning handbook: Past promises, present challenges*. John Wiley & Sons.
Chen, T., Peng, L., Jing, B., Wu, C., Yang, J., & Cong, G. (2020). The impact of the COVID-19 pandemic on user experience with online education platforms in China. *Sustainability*, 12(18), 7329. https://doi.org/10.3390/su12187329.
Creswell, J. W. (2007). Qualitative inquiry and research design (2nd ed.). Sage.
Elfeky, A. I. M., Masadeh, T. S. Y., & Elbyaly, M. Y. H. (2020). Advance organizers in flipped classroom via e-learning management system and the promotion of integrated science process skills. *Thinking Skills and Creativity*, *35*, 100622. https://doi.org/10.1016/j.tsc.2019.100622
Fandiño, F. G. E., Muñoz, L. D., & Velandia, A. J. S. (2019). Motivation and e-learning English as a foreign language: A qualitative study. *Heliyon*, *5*(9), 1-7. https://doi.org/10.1016/j.heliyon.2019.e02394
Fryer, L. K., & Bovee, H. N. (2016). Supporting students' motivation for e-learning: Teachers matter on and offline. *The Internet and Higher Education*, *30*, 21-29.
Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice*. Routledge.
Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *The Internet and Higher Education*, *18*, 4-14.
Heng, L. E., Yuen, P. K., Fui, Y. T., Muniandy, M., Sangodiah, A., & Ping, Y. Y. (2022). Adaptive Learning Content Based on Learning Styles in Learning Management System. *In Advances on Smart and Soft Computing*, 1399, 3-11, Springer, Singapore.
Lau, R. W., Yen, N. Y., Li, F., & Wah, B. (2014). Recent development in multimedia e-learning technologies. *World Wide Web*, *17*(2), 189-198.

Leung, L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*, *4*(3), 324-327.
Luo, N., Zhang, M., & Qi, D. (2017). Effects of different interactions on students' sense of community in e-learning environment. *Computers & Education, 115*, 153-160.
Mathew, N. G., Sreehari, P., & Al-Rubaat, A. M. (2019). Challenges and implications of virtual e-learning platform in EFL context: Perceptions of teachers. *International Journal of English Language Teaching*, *7*(2), 100-116.
Mohsen, M. A., & Shafeeq, C. P. (2014). EFL Teachers' perceptions on Blackboard applications. *English Language Teaching*, *7*(11), 108-118.
Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same?. *The Internet and Higher Education, 14*(2), 129-135.
Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing, 18*(2), 34-35. https://doi.org/10.1136/eb-2015-102054
OECD. (n.d.). *Centre for Educational Research and Innovation (CERI) – E-learning in post-secondary education and training.* OECD. https://www.oecd.org/education/research/centreforeducationalresearchandinnovationceri-e-learninginpost-secondaryeducationandtraining.htm
Oye, N. D., Salleh, M., & Iahad, N. A. (2011). Challenges of e-learning in Nigerian university education based on the experience of developed countries. *International Journal of Managing Information Technology*, *3*(2), 39-48.
Politis, D., & Politis, J. D. (2016). The relationship between an online synchronous learning environment and knowledge acquisition skills and traits: The Blackboard collaborate experience. *The Electronic Journal of e-Learning, 14*(3), 196-222.
Prescott, D. (2013). Faculty use of the course management system iLearn at the American University of Sharjah. *Learning and Teaching in Higher Education: Gulf Perspectives, 10*(1), 1-12. https://pdfs.semanticscholar.org/a2cf/86c2e7c2d8cbf03e6a24c7608b3709c7419f.pdf
Purwantoro, A., Asari, S., & Maruf, N. (2021). The effectiveness of e-learning madrasah in English teaching and learning. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, *4*(3), 5234-5244.
Rennie, F., & Morrison, T. (2013). *E-learning and social networking handbook: Resources for higher education*. Routledge.
Rubens, N., Kaplan, D., & Okamoto, T. (2012). E-learning 3.0: Anyone, anywhere, anytime, and AI. In *International Conference on Web-Based Learning* (pp. 171-180). Springer, Berlin, Heidelberg.
Sangrà, A., Vlachopoulos, D., & Cabrera, N. (2012). Building an inclusive definition of e-learning: An approach to the conceptual framework. *International Review of Research in Open and Distributed Learning*, *13*(2), 145-159.
Subramanian, P., Zainuddin, N., Alatawi, S., Javabdeh, T., & Hussin, A. (2014). A study of comparison between Moodle and Blackboard based on case studies for better LMS. *Journal of Information Systems Research and Innovation*, *6*, 26-33.
Trelease, R. B. (2016). From chalkboard, slides, and paper to e-learning: How computing technologies have transformed anatomical sciences education. *Anatomical Sciences Education*, *9*(6), 583-602.
Ulla, M. B., & Perales, W. F. (2021). Emergency Remote Teaching during COVID19: The Role of Teachers' Online Community of Practice (CoP) in Times of Crisis. *Journal of Interactive Media in Education,*)1(, 9, http://doi.org/10.5334/jime.617.

Wangdi, N., Dema, Y., & Chogyel, N. (2021). Online learning amid COVID-19 pandemic: Perspectives of Bhutanese students. *International Journal of Didactical Studies*, 2(1), 101456, https://doi.org/10.33902/IJODS.2021167818

Wright, G. B. (2011). Student-centered learning in higher education. *International Journal of Teaching and Learning in Higher Education*, *23*(1), 92-97.

Zuvic-Butorac, M., Roncevic, N., Nemcanin, D., & Nebic, Z. (2011). Blended e-learning in higher education: Research on students' perspective. *Issues in Informing Science and Information Technology*, *8*, 409-429.

Appendices

Appendix 1

Interview Questions

1. How would you define the main purposes of e-learning?
2. What advantages and disadvantages of e-learning do you see?
3. For what purposes do you use e-learning tools, including Blackboard?
4. What pedagogic goals does it facilitate?
5. To what extent are the objectives of learning with the use of Blackboard achieved?
6. To what extent do you use Blackboard?
7. Do you define yourself as a confident user of this tool?
8. What difficulties do you experience when using this tool?
9. What limitations or barriers do you see for obtaining more technology literacy in relation to this tool?
10. What main factors encourage faculty members to increase or, in turn, decrease the usage of Blackboard on classroom instructions?
11. According to your perception, what is the attitude of students to e-learning?
12. Are they satisfied with using Blackboard?
13. What difficulties do they experience when using it?
14. From your personal perspective, how can these difficulties be mitigated?
15. Is there any other e-learning tool that may be more applicable for faculty in the future?

فاعلية استخدام البلاك بورد في التعليم والتعلم من وجهة نظر أعضاء هيئة التدريس بجامعة الملك عبد العزيز

داليـة بنت جمال الغامدي

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مستخلص. تقوم المؤسسات التعليمية المتزايدة في الوقت الحالي، وخاصة في التعليم العالي، بتطبيق التعلم الإلكتروني لدعم التعلم التقليدي أو استبداله. وعلى الرغم من ذلك توجد العديد من العوائق والقيود التي تحول دون تطبيقه الناجح والتي ينبغي تقييمها لضمان تطوير التعلم الإلكتروني الذي يسهل عملية التواصل، ويراعي الفروق الفردية بين المتعلمين بالإضافة إلى أنه يسهل الوصول إلى المعلومات، ويساعد المعلمين على تقديم المحتوى. ولذلك هدف هذا البحث النوعي لدراسة مدى فاعلية استخدام البلاك بورد في التعليم والتعلم من وجهة نظر أعضاء هيئة التدريس بكلية التربية بجامعة الملك عبد العزيز. وباستخدام البحث النوعي السردي، تم جمع البيانات من خلال عمل مقابلات مع العينة التي بلغ عددها ١٢ عضوة من كلية التربية بجامعة الملك عبد العزيز بجدة. وللتأكد من صدق البيانات، فإن أخذ العينات والمنهجية والتصميم وتحليل البيانات يتوافق مع موضوع البحث وكان مناسبًا للإجابة على أسئلة البحث واستخلاص النتائج. وكشفت النتائج عن اتجاهات المشاركين الإيجابية نحو استخدام البلاك بورد. كما سلطت الضوء على العديد من العوامل التي تساهم في تحسين عمليتي التعليم والتعلم في التعليم العالي منها تطوير أدوات لدعم المقررات البحثية والتركيز على تحقيق نواتج التعلم للطلاب باستخدام البلاك بورد.

الكلمات المفتاحية: التعلم الإلكتروني؛ بلاك بورد؛ التعليم والتعلم؛ أعضاء هيئة التدريس؛ كلية التربية، جامعة الملك عبد العزيز