The educators' perceptions of the challenges in the adoption of Blackboard System in education in two Saudi institutions

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2024

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Abstract:

The adoption of technology of in teaching and learning has been increased in many institutions over the world. In Saudi Arabia the many universities have been integrated Blackboard System in their academic environment in order to facilitate the learning and teaching process. However; there is lack of studies and knowledge about the factors that impedents the utilize of the technology in teaching process by acdamic staff. The aim of this study was to investigate the educators' views about the obstacles that they encountered when adopting technology in their lessons. The sample of this study was eight educators and two leaders of e-learning from two universities. Semi-structure interview was used for collecting the data from the participants. Deductive analysis was used to analysis the data. The results revealed that there were many types of the challenges that affected educator's implementation and integration of Blackboard System in their teaching. These were lack of insufficient equipment, Poor internet network. Insufficient infrastructure and inadequate number of computers. Also, insufficient training and administrative support. Moreover, they indicated that difficulties with uploading files, insufficient regular computer maintenance, insufficient incentives, insufficient motivation and encouragement. The outcomes from this study presented the unique qualitative insight insto the processes problems and outcomes related to the use of technology in Saudi universities.

Keywords: Blackboard, Challenges, educators and Saudi

1- Introduction

Blackboard System technology is a technology that can support academic staff in terms of delivering their courses and communicating with their students. This technology has a number of tools that facilitate learning and teaching process. Such as recording lectures, online tests, discussion board, share slides, upload and download lectures, presenting PowerPoint and video, creating virtual classroom, online

assessment (Laiw,2008). In the Kingdom of Saudi Arabia most universities have employed Blackboard system in their teaching and learning environment to enhance education environment. For example, the King Saud University, Jeddah university, King Addull Aziz university, King Faisal University, Hail and Al- Jouf University.

Educators' adoption of technology in their daily lessons relatively low and not compatible with the Saudi universities vision. Several reasons affected instructors for adopting technology in their teaching were indicated in previous studies. For instance, Soliman, Hassan and Ata conducted research in 2023 in nursing schools in Ain Shams university. The aim of the paper was to examine learners' perceptions of the use of technology in their education. The study sample was 340 participants. The tool for collecting the data was online questionnaire. The study results revealed that students suffer from lack of communication with their teachers. Also, participants reported that their teachers did not motivate them to use technology in their learning. Moreover, the study outcomes mentioned that there was no technical support and the find difficulty for downloading documents. Finaly, participants find out that they do not have e-learning tools skills to use technology in their learning.

Recently, Kormos and Crawford conducted in USA in 2023. The aim of the study was to investigate the impediments that educators encounter when teaching math online. The participants who took part in this study was 62 educators. The study results revealed that there was no interaction between instructors and their students. Also, the study results indicated that there is technical problems, inadequate resources, insufficient technical training, lack of student engagement. The instructors asked for more professional development training in order to help them to solve any technical issue that might they face when teaching math online. Also, the participants reported that they need technical support , which leads to improve the adoption of technology in teaching math online and overcome any technical problems.New study conducted in 2023 in Spain by Montero-Mesa, Fraga-Varela, Vila-Couñago and Rodríguez-Groba found out that the instructors find

difficulty to deal with technical issue when using online teaching. This is due to educators suffer from insufficient training about the integration of technology in teaching methods. Moreover. Pappa ,Georgiou and Pittich conducted study in 2023 in Germany with sample consist of 21 teachers two of them male and the 19 of them was female. The study outcomes found out that the main and primary issues that can affect teachers use of technology were that insufficient material and inadequate devices, time restrictions, safety, lack of knowledge about new technology and lack of training related to implement new technology in their teaching style. Finaly, the study results revealed that teachers suffer from confidence regarding to the integration of technology in education. Also, Kasneci,Seßler, Küchemann, Bannert, Dementieva,Fischer and Kasneci (2023) argued that instructors and students should increase their knowledge and technical skills in terms of using and benefit from lates technology such as ChatGPT. Nikolopoulou and Gialamas carried out study in 2023 in Greek. The goal of the study was to examine the barriers affected teachers employed to mobile learning in teaching methods. The study sample was 557 of educators. The study results discovered that there were many barriers that impacted teachers use and integrate technology in their teaching technique. These were inadequate of instructor's confidence, classroom conditions, insufficient time, insufficient technical support and resources. Also, the study mentioned that lack of professional development for teachers were cited as factor affected the use of mobile learning in teaching by educators. In recent paper conducted in Jordon by Malkawi Rababah,Al Dalaeen,Ta'amneh, Omari, Alkhaldi and Rabab'ah in 2023. The study sample consisted of 320 instructors. The study aimed to examine the challenges that hider teachers from benefit of new technology. The study investigated barriers that related to administrative, technical, teachers and students. The study findings reported that the barriers related to the administrative were limiting educators to specific ways and techniques and sufficient training program for adopting technology in education environment. Barriers related to technical were mentioned in this study.

These barriers were such as network issues , insufficient time to adopt e-learning tools , technical failures usually happen during teaching online. Issues related to educators were reported by the authors. These were lack of technical skills among educators, negative attitudes towards the use of technology in teaching methods. Finally, the study indicated that the primary issue for students to use technology in their learning was lack of training related to dealing with technology.

Qualitative studies that examined the challenges of integration of technology in education from educators perceptions were limited, and most previous studies conducted in Saudi Arabia that investigated the obstacles that affected educators use of technology in education context were quantitative studies. An increasing number of HE institutions and establishments are implementing eLearning, which has meant fundamental changes to HE pedagogy and how teaching and learning is delivered. However, research into the implantation and use of eLearning and digital technologies in HE is still within relative stages of infancy. Moreover, many quantitative studies have focused on issues and challenges in the initial implementation stages, and little is known about the current state of eLearning in HE, including the challenges and issues faced and the strategies have been effective for by HE institutions with established e-Learning.

 systems in place. Whilst this review has demonstrated an array of benefits and challenges associated with eLearning in HE, overall research findings in the field of eLearning in HE are mixed and inconclusive. Furthermore, likewise in KSA, the implementation of eLearning in HE is a relatively new phenomenon and correspondingly more research in required to identify how eLearning can be effectively implemented in HE. Several authors have called for more research into eLearning in HE in KSA to support its usage and effectiveness (Al-Shamari, 2007; Alharbi, 2011; Dahlan, 2013; Alharbi and Drew, 2014; Alojaiman et al., 2014; Alshammari, 2015; Algahtani, 2017). This includes in areas outside of the main cities such as Riyadh and Jeddah, such as the location of the North and South Universities in this research. Therefore, the intention of this study is to address these gaps

in research to increase knowledge in this extremely important field of research.The intention of this paper was to find out the challenges that educators and instructors face with the implementation of eLearning, by asking the teachers directly. The research question for this study is: What are the challenges to the implementation of eLearning for educators at South and North Universities?

2- Methodology

This paper is a part from my study, and there were tow tools adopted in this these for collecting the data which were questionnaire and interviews. The study conducted in two Saudi university and these universities were given unreal names for ethical considerations. These names were South and North universities. This paper is considered to be qualitative paper. The data were collected for this paper by using qualitative method in order to get more in-depth information from participants about the obstacles that educators encounter when implement the blackboard system in their lessons. In more details the authors were used semi-structure interview with participants who took part in this study.

5.1 Piloting the interview questions

For this study, interviews were undertaken with three teachers employed at the targeted universities located in Saudi Arabia. Two teachers were interviewed via mobile phone, as they were located in the KSA, whereas the third teacher was interviewed in the UK because he was undertaking a PhD study at the time. Prior to the undertaking of the complete interview process, pilot interviews were completed in order to evaluate the most effective approach for acquiring detailed responses from the participants, as well as confirming the interview questions' suitability. Subsequently, the interview and its content were restructured based on the comments of the respondents.

5.2 Sampling Strategies and procedure

The authors used purposive sample was adopted with participants in this study. The educators who selected to participate in this study based on their position, knowledge and experience. This process started with information provided on the questionnaire asking

interested staff members to contact the researcher for further information. In addition, senior staff members (Deans and Heads of Department) were invited to suggest educators based on their knowledge and experience of eLearning in the delivery of teaching and learning. These educators were then approached directly via their institutional email, which included information about the research, contact details for the research team and an invitation to participate in the research. In total, eight members of academic staff and two leaders of eLearning were interviewed for this study. These were four males and four females, which provided a balance between genders. However, all of the four female faculty members were interviewed over the phone, while all of the male members of staff were interviewed face to face (see Table 1)

Table1: Interviewees Within Each University

Participating university	Interviewee's number		The leader of eLearning
	Teachers		
	Male	Female	
South	**4 teachers** Faculty member number 1* Faculty member number 2 Faculty member number 4	Faculty member number 3	1
North	**4 teachers** Faculty member number 8	Faculty member number 5 Faculty member number 6 Faculty member number 7	1
	4	4	2
Total	10		

5.3 Ethical Procedures

The ethical procedures of the University of Glasgow were applied to this study research. The research plan was agreed by the College of Social Sciences Research Ethics Committee in February 2017. Furthermore, permission to contact staff and students at both universities was obtained from the relevant university bodies. Pseudonyms were used to represent each university.

Before taking part in the research, the participants were provided with a statement that clearly set out the aims of the research and gave details of the procedure that would be followed. The participants gave written consent to take part in the study, and those taking part in the interviews gave consent for their interview to be audio recorded. They were also advised that they could withdraw from the process at any time, and that all of the information would be destroyed once it had achieved its purpose. The participants were given codes to preserve their anonymity and all of the data collected were stored securely.

5.4 Interview Data Analysis Processes

Qualitative data from semi-structured interview were firstly translated from Arabic to English, providing transcripts as the main units for analysis. Initially, the transcripts were subjected to a detailed line-by-line reading to ensure that no information or nuance had been lost in translation. Subsequently, a second more focused reading was undertaken to organise the data according to the study research questions. This included a process of coding, whereby sections of text within the transcripts were allocated a number relating to particular research question(s). These sections of texts were then organised by research question, and subjected to a further focused reading. During this stage, codes were allocated to sections of texts indicating their relevance to emergent themes and sub-themes from the research already undertake as part of this study. Finally, findings were summarised in a narrative format, and are presented in themes and sub-themes under the main research questions in the results section of this study.

- Results:

In the interviews, the academic staff were asked to identify the challenges that prevented them from using and implementing eLearning tools in an effective way. Overall, several of the challenges reported by the academic staff were not surprising, and a wide range of them were related to the integration and employment of eLearning tools in the academic environment more generally. The challenges reported by the interviewees are presented below.

Faculty member number 1 (from South University) said that in his view, the main issue was that he lacked knowledge and skills concerning the use of new technology, for example Blackboard. This meant that he lacked the enthusiasm and willingness to implement the LMS into his teaching. With regard to the general challenges to the employment and implementation of eLearning in his college, he stated that these were a lack of skills among students regarding the use of the LMS, and insufficient numbers of computers for students in labs, which pointed to an inadequate infrastructure. He commented that more help was needed in relation to infrastructure support. He added that the students did not communicate well with their teachers, and that there were often problems with the network and internet access. Faculty member number 1 also mentioned that staff did not receive sufficient training on the use of the technology, and that the necessary administrative support was not in place, so teachers were therefore unwilling to try it.

Faculty member number 2 (from South University) focused on two main problems: a lack of training and a lack of skills. These meant that in the beginning he did not embrace the idea of using eLearning, and he was using the computer to simply record the grades of the students and to communicate with colleagues. His lack of training meant that he did not have a good understanding of how to use the system, and this meant that he lost interest. "I also observed that the university had not prepared teachers, students, or sufficient classrooms prior to implementation of eLearning," he added. Faculty member number 3 (from South University) talked about challenges in general

on behalf of her colleagues. She said that the major challenges they faced were a lack of communication with the students, and the fact that the students were not aware of the benefits of the LMS. Another major problem encountered by academic staff was the lack of time for preparing eLearning lectures, due to their already heavy workload. She also cited technical problems as impediments to the successful adoption and integration of eLearning tools in teaching techniques. On the one hand, there were insufficient numbers of computers and laptops, and on the other hand, the computers they did have were not regularly maintained. Staff did not receive enough training on how to use the new technology such as the Blackboard system, which was why they did not benefit from the Blackboard functions and only used PowerPoint. There were also no trainers in the university specialised in the integration of eLearning – both technical expertise and administrative support were lacking. There was therefore no incentive, motivation or encouragement to use the eLearning tools, and most staff were not interested or did not have the time. Furthermore, the lack of English language skills among staff and students was also a barrier.

The main barrier faced by faculty member number 4 (from South University) was a lack of awareness of the benefits of technology in teaching. He claimed that he and his students preferred to use traditional methods because that allowed them to interact with each other better than in the online environment, which made interaction impossible. He continued by saying that another reason why he did not use eLearning in his teaching was a shortage of knowledge and skills related to the integration and employment of eLearning, and his heavy workload. He also added that interactions in virtual learning could not occur in the same way as with traditional methods, and that he was not sure about his role in virtual learning.

For faculty member number 5 (from North University), the main issue preventing her from adopting eLearning tools into her teaching was first her workload. She mentioned that she found it difficult to use eLearning tools to deliver her courses since she had some obligations that meant she was not available to reply to her

students' questions and inquiries. The second issue was a technical issue. Technical problems were experienced most of the time, and there was a lack of technical support for technical problems. She complained that there was no technical support in her university outside the hours of the support team's work day, which were from 8 am to 2:30 pm. She continued by saying that she had attempted to call them and send them an email but that she had received no reply. When she was asked about the challenges in general in her institution, she said that some faculty members suffered from a lack of interest in integrating technology into teaching. For example, her major was Islamic Studies and she had no interest in adopting eLearning tools into her subject as she did not see any benefit from using technology with her materials.

These issues were repeated by faculty member number 6 (from North University), who indicated that there were technical challenges in her university. She said that some of her students had told her that they could not upload their homework to the Blackboard system and that also they had difficulties downloading the lectures from the LMS system. She also emphasised that her workload did not allow her to become involved in eLearning practices. She mentioned that eLearning increased her workload because she had to prepare the content, the lectures and discussions for virtual classes or discussion forums for her students, which required a lot of time. She indicated that teaching online was not easy because it required more time and a lot of effort, especially when recording lectures, recording videos, preparing the lessons with PowerPoint slides and finally uploading the lectures on the Blackboard system in order for them to be available to the students.

Faculty member number 7 (from North University) talked about the challenges in general in her university. She mentioned that there were many challenges such as a lack of technical infrastructure and the low speed of the internet. She said that Blackboard needs a high internet speed and a strong connection to the internet in order to work effectively, as without these, it could not be accessed all the time due to technical issues, the slow speed and the insufficient technical infrastructure. She continued by saying that there was a lack of

technical skills and English language skills among the teachers and students. She also mentioned that there was a lack of computers for students in the computer labs. She also indicated that a lack of time and a heavy workload this was the main barrier to the successful implementation of eLearning.

Most of these problems were reiterated by faculty member number 8 (from North University). He said that his colleagues suffered from a deficiency of incentives, not enough time, a lack of institutional support and inadequate training. He said that his university should provide a computer allowance for academic staff as that would increase and encourage the use of technology in the education process. He also mentioned that there was no support for academic staff for designing eLearning courses. Some students and teachers did not have the necessary skills. He said, "I would like to use virtual classroom and electronic test and provide links to websites related to my subject, but I do not have sufficient skills". He also said that educators needed the necessary training in order to improve their skills in adopting and integrating eLearning tools in their teaching style.

In the opinion of the leader of eLearning at South University, unfortunately some educators suffered from an adequate of awareness, knowledge and interest in technology, especially the Blackboard system, which had been used for one year. He added that some teachers thought that the Blackboard system was complicated software, and that they needed specific high-level skills to employ it in the education and learning process. For example, teachers whose major was Arabic or Islamic Studies rarely or never used technology in their teaching. He also indicated that teachers lacked the skills for integrating and using technology for the delivery and design of their courses. On the other hand, in order to solve this issue, the university had provided workshops at the end of the year that aimed to assist educators who had difficulties with integrating the LMS into the education and learning process. After these sessions, they noticed that everybody had learned that the LMS was not as difficult as they had imagined, and it did not require specific programming skills. Finally, he said that there was no

clear policy from the university to activate eLearning and he agreed that workload was a crucial reason preventing teachers from adopting eLearning into their teaching. The eLearning leaders had asked the decision makers in the university to give the teachers who used eLearning in their teaching incentives, for example reducing their workload as a kind of encouragement, but the institution was not able to do this as it did not have the authority to make this kind of modification.

The leader of eLearning at North University said that the majority of educators did not integrate and implement the Blackboard system in their teaching style and methods. He felt that this was because they suffered from a lack of knowledge and skills related to this program. They thought that in order to use the Blackboard in teaching they needed to have a high level of technical skills and a background in software. He also mentioned another problem, which was that faculty members lacked experience in dealing with technology, and therefore lacked interest. Some colleges did not motivate or even ask their educators about the integration and adoption of eLearning tools in their teaching style. There was also a lack of awareness of its benefits, and poor English language skills among teachers. He also added that although they had attempted to train the teachers and educators, since they had negative attitudes and lacked interest, it was difficult. Regarding the technical challenges that educators faced, he added that faculty members could send his department an email or message via the Blackboard system or call them by phone for technical support when they encountered any technical issues.

Table 2 The faculty members' and leaders of eLearning's responses to the research question regarding challenges:

Q: What are the challenges that you have faced in incorporating eLearning technology into the education process in your institution?	
Participants	**Interview results**
Faculty member 1	-Insufficient skills and knowledge among teachers. -Insufficient skills among students. -Insufficient communication between students and teachers. -Poor internet network. Insufficient infrastructure and inadequate number of computers. - Insufficient training and administrative support. -Difficulties with uploading files.
Faculty member 2	- Inadequate training and a lack of skills. -Teachers and students unprepared for new technology, and unprepared classrooms.
Faculty member 3	- Insufficient communication with students. -Deficiency of awareness among students. -Deficiency of time. -Technical problems. - Insufficient technical and administrative support. - Insufficient computers for students. -Inadequate English language skills among students and teachers. - Insufficient interest. - Insufficient training. - Insufficient regular computer maintenance. - Insufficient incentives. - Insufficient motivation and encouragement.

Faculty member 4	-Deficiency of awareness, skills and knowledge. -Heavy workload. -Inadequate knowledge about teacher's role in virtual learning.
Faculty member 5	-Workload. - Insufficient technical support and interest among instructors. -Technical issues.
Faculty member 6	- Not enough time. -Technical issues.
Faculty member 7	- Insufficient technical infrastructure, low speed of the internet and deficiency of computers for students in the computer labs. -Deficiency of technical skills and poor English language skills among both students and faculty members. - Insufficient time. -Heavy workload.
Faculty member 8	- Insufficient institutional support. - Insufficient time. - Not enough training. - Not enough incentives. - Insufficient support for designing online courses. -Inadequate training and skills among both faculty staff and students.
Leaders of eLearning from South University	➢ Insufficient awareness among faculty members. ➢ Not enough knowledge. ➢ Inadequate interest. ➢ Not enough skills. ➢ Lack of a clear policy from the university to activate eLearning.

	➢ Workload.
Leaders of eLearning from North University	➢ Insufficient knowledge.
	➢ Not enough technical skills.
	➢ Insufficient interest.
	➢ Lack of motivation from heads of department.
	➢ Poor English language among faculty members.
	➢ Insufficient experience of dealing with technology.

Discussion

Interviews with academics indicated that academics used a very limited number of the eLearning functions and tools available to them – in general, they only used the tools that were essential for the delivery of their course. For instance, the interviewees stated that it was common for academics to use only a small number of eLearning tools – those that they are familiar with – with PowerPoint being the most frequently used eLearning tool. Similarly, previous research has shown that whilst faculty members utilised Blackboard for uploading lectures, these were often prepared and presented in PowerPoint, and other functions such as videoconferencing and online tests were not used (Algahtani, 2017). Moreover, research by Vovides et al. (2007) also reported that most teachers used only PowerPoint to deliver their lessons.

Difficulties with using new technologies such as Blackboard were cited as key reasons for the lack of utilisation of eLearning tools by educators in higher education. The interviewees stated that they rarely used eLearning in lectures and discussions due to experiencing technical difficulties in the past, such as slow internet speed, difficulties with students joining the virtual class, and a lack of technical support. Moreover, some educators stated that they never used eLearning tools or technology in their teaching roles, and some did not see any value in using technology; they preferred to teach with traditional methods and have direct contact with their students.

Furthermore, the interviews with leaders of eLearning revealed that academic staff were encouraged to utilise eLearning within their teaching roles, via the provision of the latest technologies such as Blackboard 9.1. Nevertheless, Blackboard's features, such as discussion forums, virtual classrooms and blogs, were not utilised by academic staff. The leaders reported that they provided academic staff with support in employing technology in their teaching roles, by installing desktop computers, free WiFi and laptops, to enable them to have easy access to eLearning tools. The leaders also discussed providing training on the benefits of the use of eLearning in teaching. However, they reported that faculty members who had negative attitudes towards the LMS and lacked basic IT skills were unlikely to utilise eLearning tools in their teaching. Suggestions from leaders to improve the use of eLearning in teaching within their higher education institution included providing educators who have integrated eLearning tools into their teaching with a reward, such as sending him/her to a famous university in order to attend workshops or a conference. This idea is in agreement with Saudi Vision 2030 for academic education.

These challenges were also mentioned in new studies that conducted in developing and undeveloping nations. For example, Pappa ,Georgiou and Pittich conducted study in 2023 in Germany , the study results were in agreement with this study results. Also, the outcomes from this study in agreement with study carried out in USA by (Kormos and Crawford ,2023). Moreover, study conducted in Greek by (Nikolopoulou and Gialamas,2023). However, in developing countries there were two studies conducted in 2023 were in agreement with this study results. These studies were conduted in Egypt by Soliman,Hassan and Ata, and in Jordon by Malkawi Rababah,Al Dalaeen,Ta'amneh, Omari, Alkhaldi and Rabab'ah.

This study provides an original contribution to the literature in the field of eLearning in higher education, as it is the first research to examine perceptions towards and utilisation of eLearning in two higher education institutions in Saudi Arabia. The findings from this study provide a significant insight into the challenges and barriers to

implementing and utilising eLearning for academic staff and students, despite substantial investment from the Saudi Government in terms of introducing and incorporating the use of technologies in higher education (Ministry of Education, Education and Vision, 2030).

The results showed that a number of factors acted as barriers to the implementation and utilisation of eLearning in these higher education settings in KSA. These barriers included a lack of skills amongst teaching staff and students, and a lack of training, administrative support and clear policy on eLearning in universities, in addition to technical problems, English language difficulties and heavy workloads. The findings highlighted a need for clear policies and strategies for implementing and utilising eLearning within universities in KSA, and more education, training and technical support to increase the effective utilisation of eLearning by teaching staff and students.

Whilst this dissertation offers a unique and insightful contribution to the research literature on perceptions of the utilisation of eLearning in higher education institutions in Saudi Arabia, it was not without challenges and limitations. The generalisation of the results from this study is constrained by limitations in the recruitment of participants. For example, the findings are limited to two relatively newly established universities in Saudi Arabia. In addition, the research solely focused on participant educators. Moreover, the overall accessing, recruiting and collecting data from female participants was challenging for this study, due to the cultural segregation of males and females within Saudi society. Male and female academics and students work within segregated campuses, and thus gaining access as a male researcher to female participants is difficult.

Future research is therefore required to assess the generalisability of the results of this paper to wider populations. For instance, it would be interesting to investigate whether the findings from this study can be replicated across a larger number of universities and within more established universities in Saudi Arabia. Additionally, further research is required with female participants in this area, in order to assess the generalisability of the findings from this study to female populations,

and to explore the similarities and differences in the perceptions and utilisation of eLearning amongst male and female populations. In order to overcome some of the challenges faced in this study in recruiting and collecting data from female participants, it may be beneficial to employ female and male researchers, who could communicate, discuss and conduct the research more flexibly with members of the same sex. Moreover, as this study research focused on the perceptions of educators and students, future research exploring the perceptions and experiences of other stakeholders, such as heads of department, faculty administrators and IT staff, with regard to the implementation and utilisation of eLearning within higher education institutes, may also be an interesting extension of this research. Finally, future research may also be beneficial in other educational contexts in Saudi Arabia, such as industry and technical colleges, community colleges, and perhaps even private institutions, in order to compare attitudes towards the use of eLearning across different contexts. In undertaking this further research to increase the generalisability of the findings from this study, the data collection tools and measures developed for this study could be adapted to suit the requirements of other populations and groups.

Finally, additional limitations encountered in this study are associated with the collection of qualitative data via interviews. Whilst qualitative methods such as semi-structured interviews are useful in mixed-methods research for providing a more in-depth understanding of quantitative results and a further explanation of novel findings (Onwuegbuzie and Leech, 2005), there are also associated risks such as social desirability and researcher bias (Cohen, Manion, & Morrison, 2013). In order to improve the validity of the interview questions, experts assessed the contents of the interview schedules for clarity and coherence, especially with regard to the language translation. Moreover, in attempting to overcome challenges such as social desirability bias and researcher bias, the researcher acknowledged these limitations, and measures were taken to reduce the associated risks. For example, researcher bias was acknowledged in the design of the qualitative research tools and when conducting interviews. Moreover,

participants taking part in interviews were ensured of confidentiality and anonymity, to encourage honest and truthful responses. Nevertheless, the generalisability of the qualitative findings from this study are limited due to a relatively low number of participants (N = 8 educators; N = 2 leaders) from within only two Universities in Saudi Arabia, and thus, further qualitative research is required with a larger and more diverse sample of participants, across a larger number of universities. In undertaking this further research, the interview research tools developed for this study could be adapted to suit different participant groups and populations

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