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Kuwait University First Online Learning Experience Imposed by COVID-19: An Assessment of the Usability of the E-Learning Platforms

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ABSTRACT

Due to the education crisis caused by the Corona virus pandemic, Kuwait University (KU) was shut down from March to July 2020 and resumed the academic year with online course delivery in August 2020. In light of KU's first-ever online learning experience, this study aims to assess faculty members' 1 preferences between the e-learning tools, 2 differences in their usability of the two main platforms, Microsoft Teams and Blackboard, and 3 the impact of their rank and/or college affiliation on the usability of the two platforms. A survey was distributed among KU faculty members and was completed by 252 participants. T-test and Analysis of Variance (ANOVA) were used to assess the system usability scores. The results highlighted that faculty members' usability of Microsoft Teams and Blackboard were considered above average while there were no differences in the overall usability between the two platforms.

Key Words: Distance Learning, e-Learning Platforms, Corona virus Covid-19, Microsoft Teams, Blackboard.

Introduction

The development of information technology and communication infrastructure have influenced all fields and sectors of life. Such revolutionary transformation enhanced the emergence of online learning tools and programs during the last two decades. However, the luxury of choosing between campus-based study or online learning was trans-

mitted into an online-must-study as a result of the newly discovered Corona virus (Covid-19) pandemic that invaded all countries since the end of 2019 and persisted its dissemination throughout 2020.

According to the UNESCO (2020), the Corona virus pandemic has caused the largest school and universities lockout and education distraction in history. Kuwait was not an exception; all schools and universities were closed since the growth of casualties due to this pandemic in Kuwait in March 2020. Five months later, in July 2020, Kuwait University (KU) decided to resume the academic year using an online course delivery in August 2020 (Kuna, 2020). This exceptional decision allowed Kuwait, KU precisely, to be involved in the online learning experience for the first time. Based on KU online study regulations, many platforms were approved for instructors to deliver and share the course content, conducting exams, assignments, and for real-time interaction with students. Microsoft Teams and Blackboard were the primary official online platforms permitted by KU because of the integration of those platforms with the KU system which enables students and teachers to use their university ID and password to sign in (Kuwait University Faculty Association, 2020).

While prior research explored the effectiveness of e-learning tools and platforms such as Microsoft Teams (Allison & Hudson, 2002) and Blackboard (Bradford et al., 2007), few researchers investigated faculty members' preferences as of using those tools in Kuwait University. Thus, the need arises to assess the tools used by faculty members during Kuwait University first online learning experience as a result of the Corona virus pandemic in 2020. Specifically, this study is developed to assess faculty members' attitudes; reflected in their: 1- preferences of the e-learning tools, 2- differences in their usability of the two main platforms; Microsoft Teams and Blackboard, and 3- differences that can be attributed to their academic rank and/or college affiliation regarding the usability of the two platforms. Given that Kuwait University has recently inaugurated its first-ever online learning experience in August 2020, studying the effectiveness of the different online platforms across different disciplines can be used to improve Kuwait University's online learning programs in the future

Literature Review

This section outlines prior research as of: 1- online learning experiences during COVID-19, and 2- E-learning tools/platforms.

Online learning experiences during COVID-19

Academia has been witnessing a dramatical surge in the number of publications related to Covid-19 since the outbreak of this pandemic. Many scholars from all around the world are exploring this pandemic and its impact from their disciplines' perspective. Correspondingly, several scholars focused on the impact of e-learning as a compulsory consequence of this pandemic to higher education. This section highlights some examples of the experiences of higher education institutions in online course delivery.

Ichsan et al. (2020) explored the implementation of e-learning in three Islamic universities in Indonesia during the lockdown of COVID-19 through a survey that included 137 student participants from three Islamic universities. The results indicated that e-learning was quite effective 43.07% and generally effective 27.74%. As for the tools used in e-learning, the researchers found that students preferred the use of What's App 56.20%, followed by Google Classroom 22.63%, and Zoom Meeting 4.38%.

In India, Kapasia et al. (2020) assessed the effect of Covid-19 lockdown on graduate and undergraduate students at West Bengal universities. Of the 232 student participants, results indicated that the vast majority of participants 85.8% were using their mobile devices to attend their online classes, and only 14.2% were using a laptop or computer. Similar to the Indonesian experience, most students used Zoom 34.2% and Google Classroom 33.3% to attend their online live classes. Meanwhile, in terms of sharing course materials asynchronously, most students used What's App 39.4% and Google Classroom 31.8%. Students were evaluated mostly through What's App 40.5% and Google classroom 24.9%. The study highlighted the difficulties faced by students during online learning, such as depression, anxiety, lacking the appropriate studying environment at home, and internet difficulties.

Another study in India focused on the usage of Microsoft Teams and students' attitudes toward this platform during the pandemic (Gohiya & Gohiya, 2020). The study included students from all four

academic levels in the Gandhi Medical College. The majority of participants found that the online classes were scheduled well on time, and that their instructors were successful during topic discussions. Notably, more than 80% of the student participants indicated that they adequately understood the topics. While all participating students agreed that instructors were friendly and cooperative during classes, they highlighted the need for more interactive classes and for the use of a digital board; a major concern was poor network connectivity.

Further, Almaiah et al. (2020) focused on the critical challenges of the e-learning systems and the supporting factors of using such systems during the pandemic. The study included 30 students and 31 e-learning systems specialists from five universities in Jordan and one university in Saudi Arabia. One of the challenges emphasized in their study involved change management issues with governmental policies and legislations reflecting the resistance of changing the traditional learning system. Additionally, technical issues of the adopted e-learning systems, such as the difficulties in accessibility, availability, the quality of the website service, and the usability of those services were also highlighted in their study. Finally, the e-learning projects in the Jordanian universities confronted limited financial resources.

Comparable challenges were presented by ZiaulHaq (2020) from a Saudi Arabian university. The main concerns facing the e-learning process were the expenses associated with e-learning, shortage of components and expertise, financial issues, confidentiality, and the protection of personal information, lack of technical support, and the lack of face-to-face interaction. In addition to the connectivity issues, the absence of sufficient instructors and supporting staff was another concern. On a different note, ZiaulHaq (2020) discussed the psychological concerns from the e-learning experience for students and instructors from the lack of guidelines for using the e-learning platforms.

Meanwhile, a study in Vietnam explored the impact of female students' opinions on behavioural intention to use video tools during their e-learning experience as a result of Covid-19. The survey included 254 female students from a university in Vietnam who were involved in e-learning. The majority of participants used Google Meet (N = 211) and Zoom application (N = 144). However, only 14 mentioned they used Microsoft Teams (Bui et al., 2020).

In Italy, Favale et al. (2020) explored the influence of the Covid-19 lockdown enforcement on the campus network of Politecnico di Torino which implemented an in-house e-learning platform to sustain their second semester. Favale et al. (2020) provided a Virtual Private Network (VPN) and Remote Desktop Protocol (RDP) services that allowed faculty members and students to access the campus' internal resources from home. Microsoft Teams was the primary platform for delivering course material. Specifically, more 700 virtual classrooms were scheduled per day, with more than 16,000 students indicating that they joined at least one virtual classroom. (Favale et al., 2020) claimed that faculty and students had positive experiences with the online teaching platform which was confirmed by the number of active classrooms and students engaged in these virtual classes in addition to the positive feedback received from student evaluations. In fact, more than 70% of the students evaluated the quality of the sessions with 4 out of 5 stars.

E-learning tools/platforms

In order to facilitate online learning, higher education institutions around the globe have used both synchronous and asynchronous modes of delivery (Chou, 2002). Synchronous modes of learning involve a live interaction between the instructor and students, typically through a video conference technology. On the other hand, asynchronous modes of learning involve providing students with course material through learning management systems (LMS) without a live interaction (Chou, 2002). Both synchronous and asynchronous modes of delivery are being used in Kuwait University's online learning experience through Blackboard and Microsoft Teams. Thus, work that discusses the implementation of Blackboard and Microsoft Teams in higher education institutions is highlighted.

Blackboard: One of the common LMS is Blackboard (Bradford et al., 2007) - a learning management system used by more than 17,000 institutions around the world (Corcoran, 2014). Blackboard has the ability to provide both synchronous and asynchronous learning. Synchronous delivery can be made through *Blackboard Collaborate (BC)* which also includes a virtual conferencing tool. One of the pitfalls of Blackboard is that it has been reported to be hard to learn (Bradford et al., 2007). For example, a survey of 730 faculty and staff at the

University of Wisconsin found that the platform was time-consuming and lacked flexibility (Carnevale, 2003). Additionally, Bradford et al. (2007) reported that internet inefficiencies, the need for trouble shooting, the steep learning curve, and the cost to be significant downfalls to the implementation of Blackboard.

Kuwait University introduced Blackboard in 2006, and since then an integration of LMS and Student Information System (SIS) was established. The purpose of this integration is to create identified database and to resolve repetitive and conflicting data (The Adoption of Blackboard at Kuwait University). According to Hamade (2012), faculty members at KU used Yahoo Groups as LMS, before KU introduced the use of Blackboard, in order to support the hybrid or blended teaching processes. Hamade (2012) examined the perceptions of KU students, graduate and undergraduate students, on the use of Yahoo Groups compared to Blackboard. Hamade's study found that graduates' preferred Blackboard due to the functionalities of the system, being made specifically for teaching and learning, and used in most American universities. However, one of the pitfalls of Blackboard's implementation in Kuwait University was the frequent breakdown of the system that sometimes lasts for days (Hamade, 2012).

Likewise, Alshebou and Alawadi (2013) examined the usability of Blackboard from students' perspectives at Kuwait University, in which students showed their acceptance and satisfaction of Blackboard. However, they also highlighted the limitations in using Blackboard, such as the problems in poor internet connectivity, the high costs of printing materials from Blackboard, and the lack of internet subscriptions.

Microsoft Teams

In addition to Blackboard, Microsoft Teams has recently emerged as an effective platform for synchronous and asynchronous modes of course delivery (Allison & Hudson, 2020). Microsoft Teams is a cloud software program that provides video conferencing technologies in addition to other learning management tools (e.g., creating assignment drop boxes and providing feedback) (Martin & Tapp, 2019). Notably, Microsoft Teams is included in the Microsoft Advantage subscription as part of the Office365 suite that most educational institutions have actual subscriptions with. Teams is synced with the other Microsoft applications such

as Outlook, Microsoft Word, Microsoft PowerPoint, One Drive, and Excel, allowing students and instructors to work collaboratively using those Microsoft tools. Notably, a study by Gomez et al. (2020) found that the chat feature in Microsoft Teams allowed for the ease of communication between the instructor and students. Indeed, (Martin & Tapp. 2019) discussed how content delivery in Microsoft Teams followed a social constructivist approach to collaborative learning.

Similarly, Rojabi (2020) examined students' perceptions of online learning via Microsoft Teams at the Open University in Indonesia. The study included 28 undergraduate students of early childhood study program. The results from their study highlighted that the online learning environment supports students in learning. However, a considerable number of students disagreed 25% or strongly disagreed (25%) that online learning through Microsoft Teams helped them in interacting with the instructor or expressing their problems to the instructors is more comfortable.

On the same line of research, the perceived usability of Microsoft Teams platform was examined by (Pal & Vanijja, 2020). In their survey of 1595 students from 5 different colleges in India, they found a marginally high system usability score of 77.20 (maximum score is 100). On the other hand, a study by (Supriyadi et al., 2020) found a marginally poor mean SUS score of 55.5 among a sample of 100 faculty members from the Telkom Institute of Technology Purwokerto.

While this prior research explored the effectiveness of the different e-learning tools and platforms, it has not investigated the effectiveness of those tools in Kuwait University. Given that Kuwait University recently inaugurated its first-ever online learning experience, studying the effectiveness of the different online platforms across different disciplines can be used to guide Kuwait University's online learning programs in the future.

Research Objectives

In light of prior work, the main goal of this paper is to assess the tools used by faculty members during Kuwait University's first online learning experience as a result of the Corona virus pandemic in 2020. Specifically, the study was developed to answer the following research questions:

- 1 - What are faculty members' preferences between the available platforms?
- 2 - Are there differences in faculty members' perceived usability of the two main e-learning platforms, Microsoft Teams and Blackboard?
- 3 - Are there differences in faculty members' perceived usability of Microsoft Teams and Blackboard that can be attributed to their academic rank and/or college affiliation?

Methodology

In order to address this research objective, an opinionnaire of three sections was developed and distributed to the faculty members of Kuwait University via their university email addresses.

Context and limitations

Kuwait University has resumed the second semester for the academic year 2019/2020 on August 2020, after pausing for about 5 months, since March 2020 (KUNA, 2020). The opinionnaire was distributed during the first week of September 2020, after one month of the e-learning experience at KU. Only the usability of Microsoft Teams and Blackboard were examined because they were the only platforms listed as official e-learning platforms in KU online study regulations. The online survey was distributed via the faculty members' official email addresses in cooperation with the Kuwait University Office of the Vice President for Research, in addition to the social media platforms (mainly Twitter and What's App). KU has 16 colleges, all of which were included, and the target was all faculty members and academic support staff, including professors, associate professors, assistant professors, teaching assistants and language instructors.

Research Tool

A survey of three sections was deployed using Microsoft Forms, with participants having the choice to answer in Arabic or English. The first section elicited participants' demographic information section. The second section involved a series of questions that assessed faculty members' perceived usability of Microsoft Teams, and the third section involved questions assessing faculty members' perceived usability of Blackboard.

System Usability Scale

In order to assess the usability of the different platforms, the System Usability Scale was administered. The SUS is a 10-item survey that assesses multidimensions of usability including the complexity of the tool and the users' need for training and support (Brooke, 1996). Specifically, the survey asks respondents to rate their agreement on 10 statements on a 5-point Likert scale of "strongly disagree" to "Strongly agree". For example, the second item of the survey states "I found this system unnecessarily complex". To calculate SUS scores for each participant, guidelines from Brooke (1996) were followed. Specifically, the score contributions from each item are summed. The score contribution is the scale position subtracted by 1 for the following items: 1, 3, 5, 7, and 9. Meanwhile, the score contribution is 5 subtracted by the scale position for the following items: items 2, 4, 6, 8, and 10 (Brooke, 1996).

The SUS was selected since it is technology agnostic (Bangor et al., 2008), meaning it was not devised to assess one form of technology. The scale has been widely used in usability research (Bangor et al., 2008; Orfanou et al., 2015; Al-Omar, 2018) and has been validated as a tool to measure system usability (Peres et al., 2013; Martin et al., 2015). Thus, it was employed in this study to compare Microsoft Teams and Blackboard.

Data Analysis and Results

In total, 252 participants 109 males, 143 females completed the survey; (see Figure 1 for a summary of the participants' affiliated colleges). The participants represented the following academic ranks in KU: professors $N = 28$, associate professors $N = 49$, assistant professors $N = 89$, teaching assistants $N = 57$, and language instructors $N = 29$. In order to answer the research questions, statistical analyses were computed using SPSS 25.0, and a significance level of 0.05 was used in all analyses. The results are presented as mean $\pm$ standard deviation (SD) unless otherwise denoted.

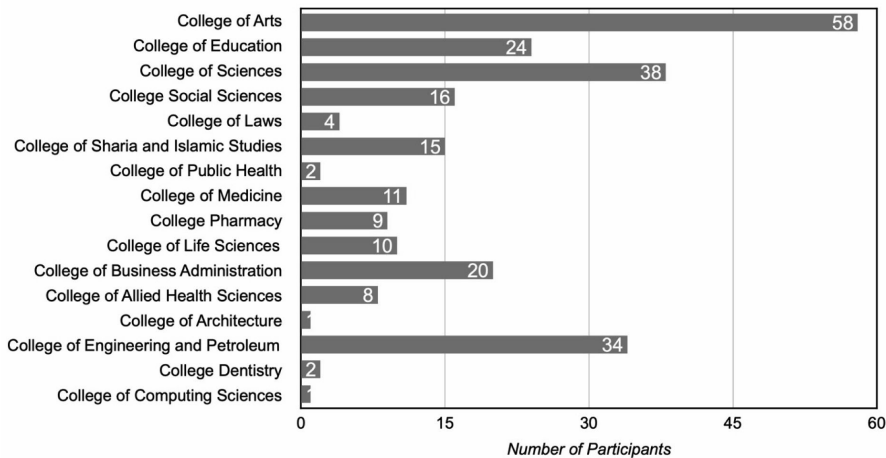


Figure 1: Total number of participants affiliated colleges

Research Question 1: What are faculty member's preferences between the available platforms?

To answer this research question, faculty members' responses to three questions were analysed:

- 1 - What tools did you use to deliver class material and lectures?
- 2 - What tools did you use to assess students for major examinations?
- 3 - How did you hold office hours?

All participants indicated that they used Microsoft Teams to deliver class material and lectures $N = 246$ except 7 participants only, followed by email, MyU, Moodle, and Blackboard. Figure 2 shows the total number of users of each tool. In terms of assessing students on major examinations, the majority utilized Microsoft Teams $N = 177$, followed by Moodle $N = 59$, and Blackboard $N = 33$, in addition to other tools as displayed in Figure 3. Finally, the majority of participants used Microsoft Teams to hold office hours followed by MyU, Zoom, and phone calls, see Figure 4 for more details. Taken as a whole, these results indicated that faculty members overwhelmingly preferred Microsoft Teams to deliver course materials, assess students, and hold the office hours compared to other platforms.

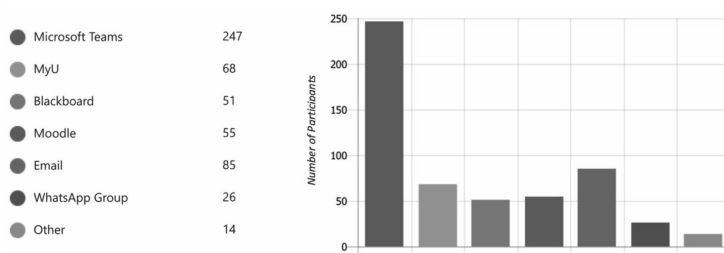


Figure 2: The tools used by participants to deliver class materials and lectures

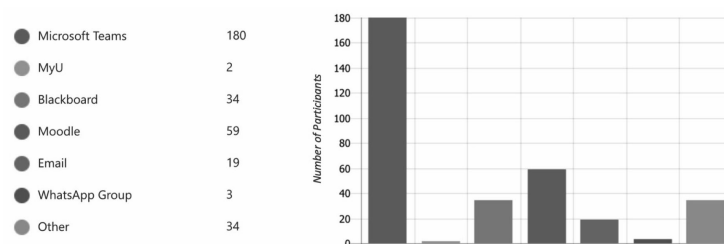


Figure 3: The tools used by participants to assess students in the major examinations

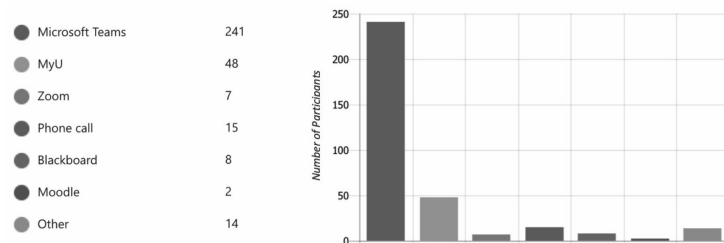


Figure 4: The tools used by participants to hold the office hours

Research Question 2: Are there differences in faculty members' perceived usability of the two main e-learning platforms, Microsoft Teams and Blackboard?

The second research question is to assess whether there are any differences in faculty members' perceived usability of Microsoft Teams when compared to Blackboard. In order to assess whether there are differences in the faculty members' perceived usability between the two platforms, *t*-test was computed with the independent variables being the overall SUS score from each participant and the dependent variable was

the educational platform (Microsoft Teams or Blackboard). Prior to running this analysis, assumptions were checked. Specifically, assessment of the box-and-whisker plot (Dawson, 2011) revealed one outlier from the SUS scores. Therefore, the analyses were conducted both with and without the one outlier to identify their influence on the results. The outlier was found to have no significant impact on the significance of the results and therefore, the full analysis (with outliers) is presented here. In addition, normality was confirmed by visually inspecting the histograms and quantile-quantile (Q-Q) plots of the scores (Miot, 2017). Finally, the Levine's Test for Equality of Variances revealed that the scores did not violate the assumption of homogeneity of variances $p=0.072$. Based on these findings, the analysis was completed as originally planned.

The results of the *t*-test showed that the *overall* perceived usability of Microsoft Teams 72.15 ± 41.014 was not significantly different from Blackboard 67.38 ± 32.248 , $p = 0.114$, see Table 1 for summary statistics of the *t*-test. These results indicated that participants' overall perceived usability of the two platforms was not different. Having said that, the usability of both platforms was considered acceptable, as prior work by Sauro (2011) indicated that a score of roughly 68 was considered *above average* usability. While both platforms received high scores on usability and while there were no differences in the perceived usability of faculty members on those two platforms, only 24% of participants indicated they have used Blackboard $N = 60$, while 76% have not used the platform $N = 189$ as part of their online teaching experience.

Second, in order to assess whether there were any differences in the 10 components of the SUS scale between Microsoft Teams and Blackboard, 10 independent sample *t*-tests were computed with the dependent variables being scores for each of the 10 SUS questions respectively. The independent variable was the educational platform (Microsoft Teams or Blackboard). Prior to analysis, assumption checking was conducted, and the analysis proceeded as originally planned. While we did not find differences in participants' overall perceived usability of the two systems, the results from the 10 different independent sample *t*-tests showed that there are statistically significant differences in four of the ten usability attributes, (see Table 1 for summary statistics). Specifically, participants found that Blackboard was more complex and required more time to learn to use the system when compared to Microsoft Teams, and

that they preferred to use Microsoft Teams more often than Blackboard. On the contrary, participants found that Microsoft Teams had more system inconsistencies when compared to Blackboard.

Table 1

T-Test results for the overall SUS scale and each of the 10 subscales

Question	Mean Blackboard ($\pm$ SD)	Mean Teams ($\pm$ SD)	Mean Difference	p	95% Confidence Interval	Effect Size (Cohen's d)
I think that I would use this system frequently	3.71 ($\pm$ 1.32)	4.09 ($\pm$ 1.13)	0.378	0.041	[0.015, 0.740]	0.309
I found this system unnecessarily complex	2.32 ($\pm$ 1.29)	1.85 ($\pm$ 1.07)	0.473	0.009	[0.121, 0.826]	0.397
I thought that the system was easy to use	3.77 ($\pm$ 1.23)	4.11 ($\pm$ 1.069)	0.337	0.051	[0.002, 0.676]	0.295
I think that I would need the support of a technical person to be able to use this system	2.37 (+ 1.20)	2.06 (+ 1.24)	0.307	0.081	[0.038, 0.653]	0.254
I found that the various functions in the system were well integrated	3.84 ($\pm$ 1.19)	3.60 ($\pm$ 1.13)	0.236	0.148	[0.084, 0.55]	0.207
I thought that there was too much inconsistency in the system	2.05 ($\pm$ 1.18)	2.30 ($\pm$ 1.21)	0.245	0.030	[0.102, 0.59]	0.209
I would imagine that most people would learn to use the system very quickly	3.44 ($\pm$ 1.20)	3.92 ($\pm$ 1.06)	0.489	0.004	[0.185, 0.793]	0.423
I found the system very cumbersome to use	2.21 ($\pm$ 1.35)	1.99 ($\pm$ 1.22)	0.218	0.220	[0.131, 0.566]	0.171
I felt very confident using the system	3.76 ($\pm$ 1.38)	3.90 (1.09)	0.139	0.915	[-0.358, 0.636]	0.113
I needed to learn a lot of things before I could get going with the system	2.66 ($\pm$ 1.43)	2.56 ($\pm$ 1.30)	0.098	0.603	[-0.467, 0.272]	0.073
Overall	67.38 $\pm$ 32.248	72.15 $\pm$ 20.590		0.114		0.129

Note: bolded items are those that were statistically significant ($p < 0.05$)

Research Question 3: Are there differences in faculty members' perceived usability of Microsoft Teams and Blackboard that can be attributed to their academic rank and/or college affiliation?

In order to assess the relative effect of the academic rank of faculty members on their perceived usability of *Microsoft Teams and Blackboard*, Analysis of Variance (ANOVA) was computed with the independent variable being the academic rank (Language Instructor, Teaching Assistant, Assistant Professor, Associate Professor, and Professor) and college affiliation (College of Arts, College of Education, College of Sciences, College of Social Sciences, College of Law, College of Shari'a and Islamic Studies, College of Public Health, College of Medicine, College of Pharmacy, College of Life Sciences, College of Business Administration, College of Allied Health Sciences, College of Architecture, College of Engineering & Petroleum, College of Dentistry, and College of Computing Sciences and Engineering). Meanwhile, the dependent variable was the SUS scores for 1- Microsoft Teams and 2- Blackboard for the first and second ANOVA tests respectively. Prior to running this analysis, assumptions were checked. Specifically, assessment of the box-and-whisker plot (Dawson, 2011) revealed one outlier from the SUS scores. Therefore, the analyses were conducted both with and without the one outlier to identify their influence on the results. The outlier was found to have no significant impact on the significance of the results and therefore, the full analysis (with outliers) is presented here. In addition, normality was confirmed by visually inspecting the histograms and quantile-quantile (Q-Q) plots of the SUS scores (Miot, 2017). Finally, the Levine's Test for Equality of Variances revealed that the SUS scores did not violate the assumption of homogeneity of variances $p > 0.05$.

The results from the first ANOVA indicated that both the academic rank and college affiliation had no significant impact on faculty members' perceived usability of *Microsoft Teams*, $p > 0.05$, (see Table 2 for a summary of the ANOVA results). These results indicated that the usability of Microsoft Teams does not differ between different academic ranks and college affiliation.

Table 2
Summary of ANOVA Results

Model	Factor	Sum of Squares	df	Mean Square	F	p	η^2
Microsoft Teams	College Affiliation	6098.104	15	406.540	406.540	.486	.069
	Academic Rank	3269.700	4	817.425	817.425	.103	.038
	College Affiliation x Academic Rank	16966.2-43	36	471.285	471.285	.299	.171
Blackboard	College Affiliation	5561.433	11	505.585	1.358	0.235	0.293
	Academic Rank	6809.338	4	1702.334	4.571	0.004	0.337
	College Affiliation x Academic Rank	6215.627	11	565.057	1.517	0.168	0.317

Meanwhile, the results from the second ANOVA indicated that the college affiliation had no significant impact on faculty members' perceived usability of *Blackboard*, $p > 0.05$. Meanwhile, academic rank had a statistically significant impact on faculty members' perceived usability of Blackboard, $p = 0.004$, see Table 2 for a summary of the ANOVA results. Because of this, post-hoc analyses were conducted to determine differences within the levels of academic rank. Specifically, pair wise comparisons were run where reported 95% confidence intervals and p-values are Bonferroni-adjusted. The post-hoc results showed that the SUS scores for language instructors to be 44 points (95% CI [11.900, 76.850], $p < 0.01$) less than Teaching Assistants, 53.329 points 95% CI [21.871, 84.607], $p < 0.01$) less than Assistant Professors 51.581 95% CI [19.511, 83.51], $p < 0.01$) less than Associate Professors, and 46.375 points 95% CI [7.663, 85.087], $p < 0.01$ less than Professors. In other words, these results indicated that language instructors did not perceive Blackboard to be usable when compared to all other faculty members from our sample.

Discussion

The main objective of this paper is to explore the tools used by faculty members during Kuwait University's first online learning experience as a result of the Corona virus pandemic in 2020. The main findings from the study are as follows:

- Faculty members overwhelmingly preferred Microsoft Teams to deliver course materials, assess students, and hold the office hours compared to other platforms.
- Faculty members' perceived usability of both Microsoft Teams and Blackboard were considered *above average* while there were no differences between the two platforms.
- Language instructors did not perceive Blackboard to be usable when compared to all other faculty members.

The first finding from this study indicated that faculty members overwhelmingly preferred Microsoft Teams to deliver course materials, assess students, and hold office hours compared to other platforms. The preference of Microsoft Teams over other platforms might be referred to several reasons. First, Microsoft Teams is one the two official platforms approved by KU that are integrated to the KU system and require signing in with faculty member's KU username and passwords. The integration of Microsoft Teams with the other Microsoft applications (e.g., Outlook, Microsoft Word etc.) could allow students and instructors to work collaboratively using those Microsoft tools and thus might explain their preference (Martin &Tapp, 2019). Additionally, faculty members' preference of Microsoft Teams can be explained by prior research by Gomez et al. (2020) that found that the chat feature in Microsoft Teams allowed for the ease of communication between the instructor and students.

In addition to faculty members' preference of Microsoft Teams, the results indicated the use of an unofficial platform (MyU) by 67 participants to deliver course material and by 48 participants to hold office hours. MyU is a mobile application allowing educators and students to connect by sending notices, reminders, and creating discussion in a social network-like experience (MyU, 2020). Although the same features are available in Microsoft Teams such as sharing files-being audio, video, PDF, and any other file type, sending announcements, and creating discussions, the reason for continuing to use this app instead of the KU approved platforms could be referred to that faculty members might have already used that tool from January-February 2020 before the university shutdown, and hence faculty members might not want to confuse students with the new platforms.

Future work should illicit qualitative feedback from course instructors and students on the features that they preferred amongst the different platforms.

The second finding from the study highlighted that faculty members' perceived usability of both Microsoft Teams and Blackboard were considered above average while there were no differences in faculty members' perceived usability between the two platforms. While Microsoft Teams was recently introduced to faculty members, a potential reason for the high usability score could be related to the extensive training programs that KU offered with cooperation with KU E-learning Centre and all KU colleges (E-Learning Centre, 2020). The training workshops for both Microsoft Teams and Blackboard were initiated in May 2020 for all KU affiliates, faculty members, academic staff, students, and administrative staff. The workshops were offered in both Arabic and English languages. Workshops were divided into basic and advanced levels and were offered on a weekly basis and in different times of the day- morning and evening (E-Learning Centre, 2020). The high usability of Microsoft Teams in our sample ($SUS = 72.15$) can be corroborated by previous work by (Pal & Vanijja, 2020) that found that the mean SUS scores was also high at 77.20 for a sample from 5 different universities in India. On the other hand, a study by (Supriyadi et al., 2020) found a marginally poor mean SUS score of 55.5 among a sample of 100 faculty members from the Telkom Institute of Technology Purwokerto.

While Blackboard was introduced in KU since 2006, the results of this study indicated that most faculty members have chosen the newer platform (Microsoft Teams) instead of using an older platform (Blackboard) that was introduced 15 years ago at KU. A deeper analysis of the results indicated that participants found that Blackboard was more complex and required more time to learn to use the system when compared to Microsoft Teams, and that they preferred to use Teams more often than Blackboard. On the contrary, participants found that Microsoft Teams had more system inconsistencies when compared to Blackboard. These results correspond to prior research by (Carnevale, 2003) and (Bradford et al., 2007) that found that Blackboard has been perceived to be difficult to learn by both faculty members and students.

Finally, the third finding from this paper indicated that there were

differences in the perceived usability of Blackboard based on faculty members' academic rank. Specifically, language instructors did not perceive Blackboard to be of high usability when compared to all other faculty members. However, there were no differences in the perceived usability of Microsoft Teams based on academic rank or college affiliation. These results call for a further qualitative investigation to understand the features used and the type of training on Blackboard received by language instructors when compared to other faculty members. Overall, the findings from this paper can be used to guide Kuwait University's online learning training programs for faculty members.

Conclusion, Limitations, and Future Work

The main findings from this study show the high usage of Microsoft Teams to deliver course materials, assess students, and hold office hours compared to other platforms, such as MyU, Moodle, What's App group, and Blackboard. In terms of the usability of the e-learning platforms, the results revealed that the perceived usability of both Microsoft Teams and Blackboard were considered *above average*. Finally, language instructors did not perceive Blackboard to be usable when compared to all other faculty members.

However, there are several limitations that need to be identified that could lead to interesting avenues for future research. While this study investigated the usability of online learning platforms, future iterations of this research should examine the usability of the examined platforms from the students' perspectives to get a holistic perspective on the usability of those tools. Second, while this research explored the usability of Microsoft Teams and Blackboard, future research should examine the usability of other e-learning platforms such as Moodle, especially its usage to assess students in major examinations, and compare it with the existing exam tools in Microsoft Teams and Blackboard. Finally, while this study explored the utility of online tools in Kuwait University, future work should extend this work to other higher educational institutions in Kuwait to compare and contrast the e-learning experiences amongst different institutions.

تقييم فاعلية المنصات التعليمية في جامعة الكويت خلال أولى تجارب التعليم الإلكتروني إثر جائحة كورونا

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ملخص

تعطل التعليم في جامعة الكويت من شهر مارس وحتى شهر يوليو لعام 2020 بسبب جائحة كورونا، التي تسببت بأكبر انقطاع عن التعليم على مستوى العالم. واستأنفت جامعة الكويت الدراسة شهر أغسطس بعد اعتماد التعليم الإلكتروني لأول مرة في الكويت. وتهدف الدراسة الحالية إلى التعرف على تقييم أعضاء هيئة التدريس في جامعة الكويت للمنصات التعليمية المستخدمة في أولى تجارب الجامعة للتعليم، وذلك للوقوف على مدى استخدام هذه المنصات من قبل أعضاء هيئة التدريس وإدراكهم لفاعليتها، وأثر الرتبة العلمية وتخصص الكلية على ذلك. تكونت أداة الدراسة من استبانة إلكترونية أرسلت إلى البريد الإلكتروني الجامعي للهيئة التدريسية، وشارك بالإجابة عليها 252 عضو هيئة تدريس من جميع الكليات في جامعة الكويت، وعددهم 16 كلية؛ الإنسانية منها والعلمية. أظهرت نتائج الدراسة استخدام أغلب أعضاء الهيئة التدريسية والأكاديمية في جامعة الكويت لمنصة مايكروسوفت تيمز في التدريس والتقييم، ولم تسفر النتائج عن وجود أي فروقات ذات دلالة إحصائية بين مدى فاعلية منصة تيمز أو منصة بلاكبورد لدى المستخدمين.

الكلمات المفتاحية: التعلم عن بعد، المنصات التعليمية، كورونا- كوفيد ١٩، تيمز، بلاكبورد.

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