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The relationship between some factors affecting remote teaching and some demographic variables among faculty members during the COVID-19 pandemic

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Abstract

Objectives: This study identified barriers associated with faculty members' engagement in remote teaching, and indicated the impact of some demographic variables on the classification of barriers, namely, personal, attitudinal, and contextual factors. **Method:** A descriptive approach was used for collecting and analyzing data. The questionnaire comprised two main sections: (1) the demographic characteristics and (2) factors that are categorized into three main categories: personal barriers, attitudinal factors and contextual factors. Data and Study Sample questionnaire was distributed to 1800 faculty members, and the response rate was 17% for a total of 309 respondents. **Results:** The results indicated that there were 28 significant barriers facing faculty members who teach remotely. Among the top two obstacles were "cheating and plagiarism among students in remote teaching" and the "lack of laws and regulations toward remote teaching". The results also revealed that female faculty members were less anxious toward remote teaching than were male faculty members. In addition, those who taught at humanities colleges were more anxious regarding remote teaching than were those who taught at science colleges. Furthermore, the more experience with teaching that faculty members have, the more resistant they are to virtual teaching. One implication of this study is that the traditional evaluation methods cannot simply be applied to remote teaching. **Conclusion:** Finally, this study recommends that policy makers should take the study results into consideration when developing remote teaching policies, especially in developing countries.

Keywords: barriers, obstacles, faculty members, remote teaching

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العلاقة بين بعض العوامل المؤثرة في التدريس عن بعد وبعض المتغيرات الديموغرافية لدى أعضاء هيئة التدريس بجامعة الكويت خلال جائحة كوفيد-19

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ملخص

الأهداف: هدفت هذه الدراسة تعرف أهم المعوقات التي تواجه أعضاء هيئة التدريس بجامعة الكويت خلال تدريسهم عن بعد، بالإضافة إلى تعرف تأثير بعض المتغيرات الديموغرافية على تصنيف المعوقات المسماة بال شخصية والسلوكية والسياقية. **المنهج:** استُخدم المنهج الوصفي المسحي في جمع البيانات وتحليلها، وتعتبر الاستبانة هي الأداة الرئيسية بالدراسة. وقد انقسمت الاستبانة قسمين: القسم الأول تضمن معلومات ديموغرافية، والقسم الثاني تضمن أهم ثلاثة معوقات رئيسية للتعليم عن بعد، وهي: المعوقات الشخصية ومعوقات الاتجاهات ومعوقات سياقية، كما تضمنت الاستبانة سؤالاً مفتوحاً. وُرِّعت استبانة على 1800 عضو هيئة التدريس، وبلغت نسبة الاستجابة 17% ليصبح المجموع 309 مشاركين. **النتائج:** أشارت النتائج إلى وجود 28 عائقاً كبيراً يواجه أعضاء هيئة التدريس أثناء التدريس عن بعد. من بين تلك العوائق هناك عائقان كبيران جداً، وهما " الغش والسرقة الأدبية بين الطلاب أثناء التدريس عن بعد " و " الافتقار إلى القوانين واللوائح الجيدة المتعلقة بالتعليم عن بعد ". كما أظهرت النتائج أن الإناث من أعضاء هيئة التدريس كانوا أقل قلقاً نحو التدريس عن بعد. وكذلك كان المدرسون في كليات العلوم الإنسانية أكثر قلقاً من المدرسين بالكليات العلمية. ومن جانب آخر، كلما زادت سنوات خبرة أعضاء هيئة التدريس زادت مقاومتهم للتدريس عن بعد. ومن الآثار المترتبة على هذه الدراسة هي أن طرق التقييم التقليدية لا يتيسر تطبيقها على التدريس عن بعد. **الخاتمة:** توصي هذه الدراسة صانعي القرارات بأخذ نتائجها في الاعتبار عند تطوير سياسات التدريس عن بعد، وبخاصة في البلدان النامية.

الكلمات المفتاحية: المعوقات، الحواجز، أعضاء هيئة التدريس، التدريس عن بعد

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Introduction

As the coronavirus pandemic has spread around the globe, lockdown has been imposed in almost all countries. According to UNESCO statistics, more than 1.725 billion learners in 195 countries around the globe have had to stay home due to the closure of schools and higher education institutions following the coronavirus outbreak, impacting approximately 98.6% of the world's student population (UNESCO, 2020). Therefore, most universities and higher institutions have been pushed toward remote teaching. Faculty members are now on the virtual front lines as they face the issue of remote teaching for the first time in their lives. Although remote teaching has been utilized for more than two decades, many obstacles are still faced concerning the successful implementation of remote teaching, especially in developing countries such as Kuwait. Most remote teaching studies have been conducted in Western countries and then imported to developing countries. However, the social and cultural barriers in Western countries are different than those in developing countries. For example, I have been teaching undergraduate students at Kuwait University for more than 15 years. Kuwait University introduced new law 24/1996 to segregate male students from females students in buildings, classes, labs, sections, libraries, and all social activities. When I teach face-to-face, I do not know most of the female students in my classes even by the end of the term because they wear a “nieqab” to cover their faces. It is very difficult to evaluate students wearing a “nieqab” in traditional classrooms as part of the social constraints. Social constraints have more power in Kuwait than laws. Now administrators at Kuwait University are trying to push toward online teaching. How are faculty members at Kuwait University going to teach remotely with major barriers in place, such as personal, attitudinal, and contextual obstacles?

Framework of the Study

The framework for the current study is the classification of barriers, which was originally developed by Pajo and Wallace (2007)

and then modified later by Zamani et al. (2016). The classification of barriers is grouped into the three main categories of personal, attitudinal, and contextual barriers. The definitions of such barriers will be defined later in the manuscript.

The literature has revealed that remote teaching requires different competencies and that skilled face-to-face teachers are not necessarily quality online teachers (Barbour, 2012). These skills are important factors to consider for any higher educational institutions, decision makers and faculty members who want to incorporate quality in their remote teaching. It is easy to overcome barriers such as providing hardware and software, but it is not easy to overcome obstacles such as the quality of remote teaching. For example, Field (2020) suggested that if educators want to assign homework or projects, they should consider what it would be like to complete such assignments on a mobile phone because for some students, that will be their only option. If previous suggestions are taken into consideration, the quality of education would be at risk due to limitations of the mobile screen and its design constraints.

Review of Literature

Although there is considerable literature available on barriers to the adoption of remote learning globally, success in the adoption of a specific innovation will depend on the local environment. Adopting innovation in an education system such as remote teaching is a challenging issue because of the nature of the system itself. Levin (2006) mentioned that the “challenge of entrepreneurially induced change is not due to a deficit of ideas or lack of volition on the part of those who seek change. Rather it is due to intrinsic features of the educational system which defy modification”.

Personal Barriers

The literature indicates that face-to-face teaching is perceived as pedagogically more effective than remote teaching (Manca & Ranieri 2016). Personal obstacles are seen as internal factors related to the personal characteristics and behavioral habits of instructors (Zamani

et al., 2016). The principal barrier in this category that discourages faculty members from remote teaching is resistance to change (Chen & Tseng, 2012; Michael, 2013; Sumak et al., 2011; Veiga êvila et al., 2019; Yoo et al., 2012). A study conducted by Khalid & Nyvang (2013) categorized these obstacles at three different levels. The first obstacle is the micro level, which is roughly seen as the individual level, at which the lack of knowledge and motivation is a significant barrier. Second, the meso level is roughly seen as the institutional level, at which the lack of human resources and the lack of hardware and software are significant obstacles. Third, the macro level is roughly seen as the national level, at which the lack of government planning and the lack of educator training are significant barriers.

Attitudinal Barriers

Attitudinal obstacles are mainly associated with faculty members' anxiety regarding the quality of education (Mackeogh & Fox, 2009). The literature reveals that perceived system quality results in more satisfaction in relation to remote teaching and that this satisfaction leads to a greater intention to continue engagement with virtual learning systems (Islam, 2012). Zamani et al. (2016) described this type of barrier as internal factors related to the attitudes and viewpoints of educators regarding features of the remote learning environment. Armstrong (2015) stated that attitudes and behaviors are barriers to the adoption of innovation in education. Individual attitudes and behaviors are often deeply imbedded and difficult to change, particularly in the absence of adequate incentives. Resistance is sometimes a matter of fear of the unknown or a lack of capacity. Resistance to innovation can arise because teachers are either comfortable with the ways in which they run their classrooms and see no need to change their methods (Rogers, 2000) or they lack an understanding of the innovation (Cox et al., 1999). Whether a desired change is related to new pedagogical methods or technology-enabled teaching aids, in the absence of adequate training, teachers are likely to resist such change (Ali & Parveen, 2013). A lack of resources, inadequate training or technical issues are examples of environmental

barriers. Fear and the perceived lack of benefits of an innovation are examples of barriers that are based on the perceptions and attitudes of the people involved (Khalid & Nyvang, 2013).

One of the most critical barriers to the adoption of technology-based learning innovations is the lack of content resources. Creating quality content is time consuming and resource intensive but also critically important. Without quality content, a range of innovative solutions involving more effective learning delivery methods will not be able to achieve growth (Osama & Latif, 2016). Regarding pedagogical and content knowledge barriers, Mishra and Koehler (2006) discussed technological pedagogical content knowledge [TPACK]:

[A]n understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology; and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones" (p.1028-9).

Those who are interested in remote teaching should adopt the TPACK approach to reach a solid and concrete philosophy of education and maintain the quality of education in virtual learning. There are considerable barriers that need to be taken into consideration for successful remote teaching. For example, "the skills to teach in an online environment cannot be assumed to transfer automatically from skills in teaching a face-to-face classroom"; thus, instructors should be provided with appropriate professional development that prepares them for the specific challenges they will face online (Barbour 2012, p.504). A research study conducted by Manca & Ranieri (2016) revealed that barriers such as cultural resistance, pedagogical issues or institutional constraints discourage academics from teaching remotely. The authors found that cultural and social factors such as the erosion

of teachers' traditional roles, the management of relationships with students or the issue of privacy threats limit teaching remotely.

Contextual Barriers

Contextual obstacles are concerned with external factors associated with a lack of technical, infrastructural, and institutional support in regard to remote teaching (Zamani et al., 2016). Many higher education institutions in developing countries suffer from a lack of infrastructure in relation to creating a safe and comfortable distance learning environment. Classrooms are overcrowded, and facilities such as access to electronic libraries, which often requires subscriptions to access global databases, are often missing. In the case of technology-based solutions, the lack of infrastructure increases costs and makes implementation more difficult. The lack of technology infrastructure factors such as high-speed internet connectivity and access to the latest software affects the acceptance and diffusion of technology. Innovation alone is not enough to create an environment that encourages widespread adoption. Offering the latest hardware and software does not necessarily ensure the quality of teaching and learning. A clear and consistent message of support from the leadership of the institution can be the most important factor in the successful deployment of innovation within a system. Leadership support also helps increase teacher support and motivation (Osama & Latif, 2016). Human resource capacity, training and time for IT integration are other important considerations (Gulbahar, 2007). The institutional barrier is critical to the successful deployment of educational innovations (Hill, 2014; Rogers, 2000). Other barriers to remote teaching include hardware availability, high-speed connectivity, maintenance, technical support, teacher training, a lack of policy support, a lack of interest and awareness on the part of policymakers, engagement in inappropriate behaviors such as cheating and cyber-bullying, content security or copyright issues, and evaluation issues. (Manca & Ranieri, 2016; Mehdipour & Zerehkafi, 2013).

Objectives of the Study

The objectives of the current study can be addressed as follows:

- 1 - Identify the personal, attitudinal and contextual barriers for faculty members at Kuwait University that discourage remote teaching.
- 2 - Measure the major indicators of personal, attitudinal and contextual barriers that faculty members at Kuwait University could expect to encounter during remote teaching.
- 3 - Explore and investigate the factors related to some demographic independent variables.

Significance of the Study

The significance of the study findings can be summarized as follows:

- These findings can help decision makers in higher education institutions effectively incorporate remote teaching into the educational system.
- Faculty members should be encouraged to reconsider their traditional teaching style and to adopt and implement remote teaching immediately, especially in traumatic situations.
- These findings identify the major obstacles that challenge the implementation of remote teaching, especially in developing countries.
- These findings contribute to the literature in the field of educational technology.
- Demographic variables such as gender, teaching experience, type of college, and academic rank play a significant role when designing remote teaching.
- These findings can help course designers avoid major barriers to virtual learning when designing online classes.
- These findings contribute to bettering the quality of remote education.

Problems of the Study

The reviewed literature reveals that studies focusing on faculty members' barriers to involvement in remote teaching in developing

countries such as Kuwait are limited and rare. Most of the existing contributions have focused more on success factors in ICT integration in higher education instead of on barriers (Kabir & Kadage, 2017; Sulaiman & Dashti, 2018). Although there have been several contributions made to the discussion of remote teaching barriers, there is still a lack of consolidated and coherent views on this subject. In addition, in developing countries, there is limited research available on remote teaching barriers; therefore, conducting such a study is a critical issue. In addition, moving from traditional teaching to remote teaching during traumatic times, such as the COVID-19 pandemic, is essential for all higher educational institutions around the globe. Such a movement must deal with many barriers, such as personal, attitudinal, and contextual barriers. For the sake of the current research study, the research addressed the following questions:

Q1: What are the major factors that discourage the faculty members at Kuwait University from participating in remote teaching and to what extent do each of these factors discourage faculty members from participating in remote teaching?

Q2: Are there any differences in the classification of barriers (personal, attitudinal, & contextual barriers) based on faculty members' demographic variables such as gender, nationality (Kuwaiti, non-Kuwaiti), academic rank, teaching experience, and type of college?

Method

The researcher followed an analytical descriptive and inferential approach, which is appropriate for the nature of this study and to answer the research questions.

Measure

A questionnaire was simultaneously designed into two languages (English and Arabic) to gather information about the factors affecting faculty members when teaching remotely at Kuwait University. The questionnaire instrument was initially constructed based on the literature review and then revised, modified, and extended according

to the local environment in Kuwait. It comprised two main sections: (1) the demographic characteristics (e.g., gender, nationality (Kuwaiti, non-Kuwaiti), teaching experience (years), academic rank, and type of college of faculty members (see Table 1) and (2) the list of factors extracted from the literature after modifications. Such factors are categorized into three main categories: personal barriers (five indicators), attitudinal factors (twelve indicators) and contextual factors (eleven indicators). The participants were asked to express the degree to which they perceived each barrier using a 5-point Likert scale (very low = 1 and very high = 5). There was one open-ended question that asked the participants about any comments, suggestions, or barriers they had experienced. Because not all academics check their institutional email addresses, the researcher decided to send the electronic survey via smartphones and through the Kuwait University Faculty Association [KUFA] system. To ensure the validity of the instrument, the researcher sent it to ten arbitrators composed of faculty members from Kuwait University, Gulf University for Science and Technology and Southern Oregon University (Oregon, USA). The arbitrators included four full professors and six associate professors, who were asked to examine and determine the extent of the survey's power in achieving the goals of the research study. Most of the comments were on language errors and the others were on redundant statement. The researcher conducted a pilot study to test the reliability of the instrument in a small portion of the population of the Kuwait University faculty before collecting the actual data. As generally accepted, a Cronbach's alpha coefficient value of 0.8 or greater is considered either good or very good (Ursachi et al., 2015). The Cronbach's alpha coefficient test for the questionnaire was $\alpha = 0.95$.

Participants

The electronic survey, which had been designed in the English and Arabic languages, was sent to 1800 faculty members at Kuwait University; the researcher omitted 400 faculty members who were inaccessible. The response rate was 17% of the 1800 surveys initially set out, for a total of 309 faculty members, as indicated in Table 1. The

participants were asked to identify factors related to remote teaching. The participants of the current study represented all sixteen colleges at Kuwait University. The sixteen colleges are divided into categories: (1) Humanities Colleges (College of Law, College of Arts, College of Education, College of Sharia and Islamic Studies, College of Business Administration, College of Life Sciences, College of Social Sciences), and (2) Science Colleges (College of Science, College of Medicine, College of Engineering and Petroleum, College of Allied Health Science, College of Pharmacy, College of Dentistry, College of Architecture, College of Computing Sciences and Engineering, and College of Public Health).

Table 1*The Demographic Characteristics of the Participants*

	N	%
Gender		
Male	161	52%
Female	148	48%
Nationality		
Kuwaiti	240	78%
Non-Kuwaiti	69	22%
Academic Rank		
Professor	38	12%
Associate Professor	75	24%
Assistant Professor	124	40%
Teacher Assistant	54	18%
Language Teacher	18	6%
Teaching Experience in years		
1-5 years	52	17%
6-10 years	65	21%

Cont. Table 1

The Demographic Characteristics of the Participants

	N	%
> 11 years	192	62%
Type of college		
Humanities Colleges (Business Administration, Arts, Social Sciences, Education, Sharia and Islamic Studies, Law)	190	61%
Science Colleges (Engineering and Petroleum, Science, Medicine, Allied Health, Public Health, Pharmacy, Dentistry, Life Sciences, Computing Sciences and Engineering, Architecture)	119	39%
Total	309	100%

The data analysis was performed using SPSS version 26 for Windows, and Cronbach's alpha values were used to test the internal consistency of the instrument. Further, analysis of variance (ANOVA) and *t*-tests were conducted to measure the inferential statistics between the independent and dependent variables. In this stage, each of the demographic variables was considered an independent variable, and other variables were controlled for.

To examine the normality of distribution in each group, the Shapiro-Wilk test was conducted. The application of Levene's test to the data enabled the researcher to examine the homogeneity of the population variances in the different groups. Tukey's HSD test was implemented to conduct couple comparisons among different groups of faculty members. The qualitative data attained from the open-ended question in the questionnaire were analyzed by coding and categorizing the responses.

Results

Major Obstacles for Faculty Members' Participation in Remote Teaching

To answer the first question (Q1) What are the major factors that discourage the faculty members at Kuwait University from participat-

ing in remote teaching and to what extent do each of these factors discourage faculty members from participating in remote teaching? the researcher ranked the questionnaire items using a descriptive analysis test. Table 2 shows a comparison between the ranks of each index with other indicators and is based on descending order. Each category was ranked relative to other categories (personal, attitudinal, contextual). Among the personal barriers, index 1, “I prefer traditional teaching over remote teaching”, was the most important source of faculty members’ anxiety about remote teaching ($M = 3.69$, $SD = 1.24$), whereas the least important source was index 5, “Lack of knowledge toward the environment of remote teaching”, with ($M = 2.72$, $SD = 1.309$). Among the attitudinal barriers, index 6, “I am concerned about cheating and plagiarism among students in remote teaching”, was the most critical source of faculty members’ anxiety toward remote teaching ($M = 3.81$, $SD = 1.29$). The second and third most important sources of faculty members’ anxiety about remote teaching were indexes 7 and 8, “I am concerned about the quality of remote teaching”, and “Large size classes deteriorate the quality of remote teaching”, ($M = 3.45$, $SD = 1.33$; $M = 3.45$, $SD = 1.36$), respectively. “I am concerned about the competence of distance learning platforms, such as Blackboard and Microsoft teams” ($M = 2.98$, $SD = 1.34$) was the least important source of faculty members’ anxiety regarding remote teaching. As Table 2 indicates, across the contextual barriers, index 18, “Lack of laws and regulations toward remote teaching” ($M = 3.81$, $SD = 1.14$) was perceived as a significant barrier across the entire current study. “Lack of technical support” ($M = 3.73$, $SD = 1.15$) was perceived as the second most significant source of contextual barriers. It is clear, as shown in Table 2, that all the indicators of contextual barriers are significant obstacles when ranked in order of descending mean values.

Table 2

Ranking in Descending Order the Inhibitor Indicators of Faculty Members of Kuwait University in Regard to Remote Teaching (n = 309)

	<i>M</i>	<i>SD</i>
Personal barriers to faculty members regarding remote teaching		
1. I prefer traditional teaching over remote teaching.	3.69	1.243
2. Teaching remotely from home is not comfortable, especially with regard to appearing live with students.	2.96	1.376
3. Lack of experience toward how to design and produce remote teaching courses.	2.93	1.356
4. I am concerned about the workload of remote teaching.	2.79	1.313
5. Lack of knowledge toward the environment of remote teaching	2.72	1.309
Attitudinal barriers to faculty members regarding remote teaching.		
6. I am concerned about cheating and plagiarism among students in remote teaching.	3.81	1.291
7. I am concerned about the quality of remote teaching.	3.45	1.337
8. Large size classes deteriorate the quality of remote teaching.	3.45	1.361
9. It is difficult to force female students to appear directly in front of the camera to explain, discuss or present some material related to the course.	3.39	1.372
10. I am concerned over the type of student-instructor interactions.	3.38	1.356
11. It is difficult to confirm students' identity when remote teaching.	3.28	1.345
12. Difficulty of creating exams and projects for students and applying them remotely.	3.28	1.379
13. I am concerned with the illegal dissemination of intellectual property when remote teaching.	3.26	1.416
14. Difficulty assessing learners' tests and projects from a distance.	3.21	1.370
15. I am concerned about managing the remote teaching process.	3.10	1.308
16. It is difficult to provide immediate feedback to the students.	3.04	1.304

Cont. Table 2

Ranking in Descending Order the Inhibitor Indicators of Faculty Members of Kuwait University in Regard to Remote Teaching (n = 309)

	<i>M</i>	<i>SD</i>
17. I am concerned about the competence of distance learning platforms (i.e., Blackboard and Microsoft teams).	2.98	1.341
Contextual barriers to faculty members regarding remote teaching		
18. Lack of laws and regulations toward remote teaching	3.81	1.147
19. Lack of technical support.	3.73	1.155
20. Lack of quality of training that faculty members receive for remote teaching.	3.60	1.159
21. Lack of security in regard to remote teaching.	3.54	1.191
22. Lack of infrastructure readiness (high-speed internet access, availability of quality of hardware and software, etc.).	3.53	1.376
23. Lack of encouragement of Kuwait University officials toward remote teaching.	3.39	1.176
24. Faculty members maintain sanctity inside the corridors of the university, and this is not achieved in remote teaching.	3.35	1.322
25. The rigor of cyber-crime laws prevents me from participating in remote teaching.	3.24	1.285
26. The strictness of the Press and Publications Law prevents me from participating in distance education, especially Article No. 21 (prejudice the dignity of people, their lives, or their religious beliefs, and inciting hatred or contempt for any class of society, etc.).	3.10	1.307
27. Lack of financial support.	3.06	1.301
28. The nature of the course in which I teach is not compatible with remote teaching.	3.06	1.426
Average mean for all items.	3.29	

Differences among Faculty Members' Perceived Impact Barriers According to Their Demographic Information

To answer the second question (Q2) Are there any differences in the classification of barriers (personal, attitudinal, & contextual barriers) based on faculty members' demographic variables such as gender, nationality (Kuwaiti, non-Kuwaiti), academic rank, teaching experience, and type of college? An independent-samples *t*-test was conducted to compare male and female anxiety toward remote teaching based on attitude and contextual barriers. There was a significant difference in the scores for males ($M = 3.4$, $SD = 1.07$) and females ($M = 3.16$, $SD = 1.15$); $t(307) = 2.22$, $p = 0.02$; male ($M = 3.5$, $SD = .92$) and female ($M = 3.29$, $SD = .90$); $t(307) = 2.05$, $p = 0.04$. These results suggest that gender truly does have an effect on anxiety toward remote teaching and that effect is more prominent for males. Specifically, the results suggest that male faculty members appear more anxious than female faculties when teaching remotely (See Table 3). No significant result was found between males and females based on personal barriers.

Table 3

The Comparison of the Inhibitor Effect of Attitudinal and Contextual Barriers Among Male and Female Faculty Members (n = 309)

Variable	Gender	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i> (2-tailed)
Attitude barriers	Male	161	3.43	1.07	307	2.22	.027*
	Female	148	3.15	1.14			
Contextual barriers	Male	161	3.50	.92	307	2.05	.041*
	Female	148	3.28	.89			

Note. * $p < .05$.

Table 4 shows an independent-samples *t*-test used to compare Kuwaiti and non-Kuwaiti faculty members' anxiety toward remote teaching based on personal and attitude barriers. There was a significant difference in the scores for non-Kuwaiti ($M = 3.34$,

$SD=1.03$) and Kuwaiti ($M=2.93$, $SD=1.05$) faculty members; $t(307)=-2.90$, $p = 0.004$; non-Kuwaiti ($M=3.62$, $SD=.95$) and Kuwaiti ($M=3.21$, $SD=1.15$); $t(307)=-2.658$, $p = 0.008$. These results suggest that nationality does have an effect on anxiety toward remote teaching and that effect is more prominent for non-Kuwaiti faculty members. Specifically, the results suggest that non-Kuwaiti faculty members appear more anxious than Kuwaiti faculty members when teaching remotely. However, there was no significant result between Kuwaiti and non-Kuwaiti faculty members regarding contextual barriers.

Table 4

The Comparison of the Inhibitor Effect of Personal and Attitudinal Barriers Among Kuwaiti and non-Kuwaiti Faculty Members (n = 309)

Variable	Gender	n	M	SD	df	t	p (2-tailed)
Personal Barriers	Kuwaiti	241	2.92	1.05	307	-2.90	.004**
	Non-Kuwaiti	68	3.34	1.03			
Attitudinal barriers	Kuwaiti	241	3.21	1.14	307	-2.65	.008**
	Non-Kuwaiti	68	3.61	.95			

Note. ** $p < .01$.

Table 5 demonstrates an independent-samples t -test used to compare the type of college, i.e., humanities (included seven colleges) and science colleges (included nine colleges), toward remote teaching based on personal, attitudinal, and contextual barriers. There was a significant difference in the scores for humanities colleges ($M=3.21$, $SD=1.02$) and science colleges ($M=2.89$, $SD=1.06$) in regard to personal barriers; $t(307)=-2.624$, $p = 0.009$; between humanities colleges ($M=3.65$, $SD=1.2$) and science colleges ($M=3.08$, $SD=1.13$) in regard to attitude barriers; $t(307)=-4.50$, $p = 0.00$; and between humanities colleges ($M=3.67$, $SD=.86$) and science colleges ($M=3.23$, $SD=.90$) in regard to contextual barriers; $t(307)=-4.14$, $p = 0.00$. These results suggest that the type of college does have an effect on anxiety toward remote teaching and that effect is more

prominent for humanities colleges. Specifically, the results suggest that humanities colleges show more anxiety than science colleges when teaching remotely.

Table 5

The comparison of the Inhibitor Effect of Personal, Attitudinal, and Contextual Barriers Among Humanities and Science Colleges (n = 309)

Variable	Type of College	n	M	SD	df	t	p (2-tailed)
Personal barriers	Science Colleges	190	2.89	1.06	307	-2.62	.009**
	Humanities Colleges	119	3.21	1.02			
Attitude barriers	Science Colleges	190	3.08	1.13	307	-4.51	.000**
	Humanities Colleges	119	3.65	1.02			
Contextual barriers	Science Colleges	190	3.23	0.90	307	-4.14	.000**
	Humanities Colleges	119	3.67	0.86			

Note. ** $p < .01$.

ANOVA was conducted to investigate the impact of the classification of barriers on academic ranks (see Table 6). The results revealed a significant effect of the classification of barriers on academic ranks at the $p < .01$ level for the three conditions, ($F(4, 304) = 6.827$, $p = .000$). Post hoc comparisons using Tukey's HSD test for personal barriers indicated that the mean score for full professors ($M = 3.39$, $SD = .97$) was significantly different than that for assistant professors ($M = 2.70$, $SD = .93$). The post hoc test also indicated that the mean score for teacher assistants ($M = 3.42$, $SD = 1.02$) was significantly different than that for assistant professors ($M = 2.70$, $SD = .93$). However, the mean score for associate professors ($M = 3.00$, $SD = 1.09$) did not significantly differ from those of professors, assistant professors, teacher assistants, or language teachers. Taken together, these results suggest that academic rank truly does have an effect on personal barriers. Specifically, the current results suggest that full professors and teacher assistants are more conservative than assistant professors when teaching remotely.

Table 6

ANOVA for the Personal, Attitudinal, and Contextual Barriers Among Faculty Members Based on their Academic Ranks (n = 309)

		Sum of Squares	df	Mean Square	F	p
Personal barriers	Between Groups	28.51	4	7.12	6.82	.000**
	Within Groups	317.41	304	1.04		
	Total	345.93	308			
Attitude barriers	Between Groups	29.14	4	7.287	6.21	.000**
	Within Groups	356.35	304	1.17		
	Total	385.50	308			
Contextual barriers	Between Groups	24.48	4	6.12	7.94	.000**
	Within Groups	234.22	304	0.77		
	Total	258.71	308			

Note. ** $p < .001$.

ANOVA revealed a significant effect of attitudinal barriers at the $p < .01$ level for the three conditions, $F(4, 304) = 6.216$, $p = 0.000$. A post hoc test for attitudinal barriers indicated that the mean scores for full professors ($M = 3.77$, $SD = 1.056$), associate professors ($M = 3.42$, $SD = 1.074$), teacher assistants ($M = 3.46$, $SD = 1.11$), and language teachers ($M = 3.74$, $SD = 1.08$) were significantly different than those for assistant professors ($M = 2.96$, $SD = 1.08$). However, professors ($M = 3.77$, $SD = 1.056$) did not significantly differ from associate professors, teacher assistants, or language teachers. These results suggest that academic rank truly does have an effect on attitudinal barriers. In other words, the current results suggest that full professors, associate professors, teacher assistants, and language teachers are more conservative than assistant professors when teaching remotely (see Table 7).

Table 7

Multiple Comparisons Among Faculty Members Based on Academic Rank for Attitudinal Barriers (post hoc tests) (n = 309)

(I) Academic Rank	(J) Academic Rank	Mean Difference (I-J)	SE	p
Professor	Associate Professor	0.354	0.215	0.471
	Assistant Professor	0.816*	0.200	0.001**
	Teacher Assistant	0.307	0.229	0.666
	Language Teacher	0.035	0.309	1.000
Associate Professor	Professor	-0.354	0.215	0.471
	Assistant Professor	0.462*	0.158	0.030*
	Teacher Assistant	-0.046	0.193	0.999
	Language Teacher	-0.318	0.284	0.796
Assistant Professor	Professor	-0.816*	0.200	0.001**
	Associate Professor	-0.462*	0.158	0.030*
	Teacher Assistant	-0.509*	0.176	0.034*
	Language Teacher	-0.781*	0.273	0.036*
Teacher Assistant	Professor	-0.307	0.229	0.666
	Associate Professor	0.046	0.193	0.999
	Assistant Professor	0.509*	0.176	0.034*
	Language Teacher	-0.271	0.294	0.888
Language Teacher	Professor	-0.035	0.309	1.000
	Associate Professor	0.31833	0.284	0.796
	Assistant Professor	0.781*	0.273	0.036*
	Teacher Assistant	0.271	0.295	0.888

Note. * $p < 0.05$, ** $p < 0.01$.

ANOVA revealed a significant effect of contextual barriers at the $p < .01$ level for the three conditions, $F(4, 304) = 7.946$, $p = 0.000$. A post hoc test for contextual barriers indicated that the mean scores for full professors ($M = 3.71$, $SD = 1.032$), teacher assistants ($M = 3.62$, $SD = .81$), and language teachers ($M = 4.04$, $SD = .74$) were sig-

nificantly different than those for assistant professors ($M = 3.10$, $SD = .81$). Although the mean score for associate professors ($M = 3.42$, $SD = .97$) was higher than the mean score for assistant professors, the result revealed no significant difference. In addition, professors ($M = 3.71$, $SD = 1.03$) did not significantly differ from associate professors, teacher assistants, or language teachers. The present results suggest that academic rank truly does have an effect on contextual barriers. Specifically, assistant professors are more liberal (less conservative) toward remote teaching than are full professors, teacher assistants, and language teachers.

Table 8 presents ANOVA which was conducted to investigate the impact of the classification of barriers on teaching experience. There was a significant effect of the classification of barriers on teaching experiences at the $p < .01$ level for the three conditions, ($F(2, 30) = 6.17$, $p = .002$). Post hoc comparisons using Tukey's HSD test for personal barriers indicated that the mean score for a teaching experience of 1-5 years ($M = 2.57$, $SD = .96$) was significantly different from the score for those who had 11 years or more of teaching experience ($M = 3.14$, $SD = 1.01$). However, there was no significant effect between faculty members who had teaching experience of between 1-5 years and those with experience of between 6-10 years.

Table 8

ANOVA of the Personal, Attitudinal, and Contextual Barriers Among Faculty Members Based on Their Teaching Experiences

		Sum of Squares	df	Mean Square	F	p
Personal barriers	Between Groups	13.409	2	6.705	6.170	.002**
	Within Groups	332.522	306	1.087		
	Total	345.931	308			

Cont. Table 8

ANOVA of the Personal, Attitudinal, and Contextual Barriers Among Faculty Members Based on Their Teaching Experiences

		Sum of Squares	df	Mean Square	F	p
Attitude barriers	Between Groups	13.667	2	6.833	5.623	.004**
	Within Groups	371.835	306	1.215		
	Total	385.501	308			
Contextual barriers	Between Groups	10.920	2	5.460	6.742	.001**
	Within Groups	247.798	306	.810		
	Total	258.717	308			

Note. ** $p < .01$.

ANOVA for attitudinal barriers indicated a significant effect of the classification of barriers on teaching experiences at the $p < .01$ level for the three conditions, $F(2, 306) = 5.623$, $p = .004$. A post hoc test for attitudinal barriers indicated that the mean score for those with a teaching experience of 1-5 years ($M = 2.90$, $SD = 1.136$) was significantly different than those who had 11 years of experience or more ($M = 3.45$, $SD = 1.098$) (see Table 9).

Table 9

Multiple Comparisons Among Faculty Members Based on Their Teaching Experiences

Dependent Variable	(I) Years of Teaching Experience	(J) Years of Teaching Experience	Mean Difference (I-J)	SE	p
Personal barriers	1-5 Years	6-10 Years	-.44615	.19395	.057
		> 11 Years	-.57244*	.16296	.001**
	6-10 Years	1-5 Years	.44615	.19395	.057
		> 11 Years	-.12628	.14959	.676
	> 11 Years	1-5 Years	.57244*	.16296	.001**
		6-10 Years	.12628	.14959	.676

Cont. Table 9

Multiple Comparisons Among Faculty Members Based on Their Teaching Experiences

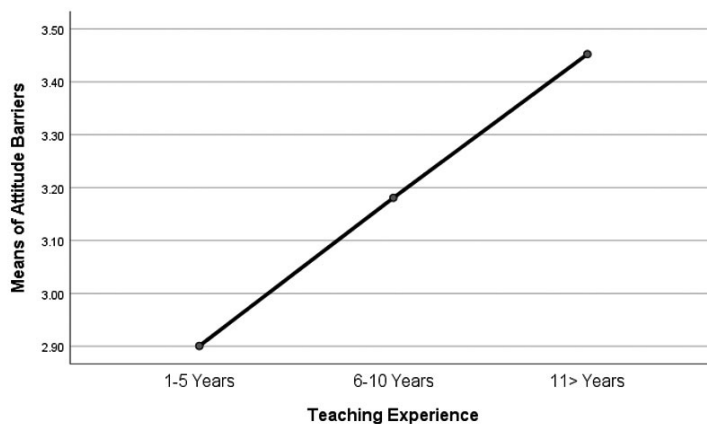
Dependent Variable	(I) Years of Teaching Experience	(J) Years of Teaching Experience	Mean Difference (I-J)	SE	p
Attitude barriers	1-5 Years	6-10 Years	-.28013	.20509	.360
		> 11 Years	-.55162*	.17233	.004**
	6-10 Years	1-5 Years	.28013	.20509	.360
		> 11 Years	-.27149	.15819	.201
	> 11 Years	1-5 Years	.55162*	.17233	.004**
		6-10 Years	.27149	.15819	.201
Contextual barriers	1-5 Years	6-10 Years	-.19406	.16743	.479
		> 11 Years	-.47556*	.14068	.002**
	6-10 Years	1-5 Years	.19406	.16743	.479
		> 11 Years	-.28150	.12914	.076
	> 11 Years	1-5 Years	.47556*	.14068	.002**
		6-10 Years	.28150	.12914	.076

Note. **p < .01.

ANOVA for contextual barriers indicated a significant effect of classification of barriers on teaching experience at the $p < .01$ level for the three conditions, $F(2, 30) = 6.742, p = .001$). Post hoc tests for contextual barriers indicated that the mean score for those with a teaching experience of 1-5 years ($M = 3.06, SD = .652$) was significantly different than those who had experience of 11 years or more ($M = 3.54, SD = .93$). Taken together, these results suggest that teaching experiences has an effect on remote teaching; i.e., the more experience that faculty members have with teaching, the more conservative they are toward remote teaching. Figure 1 is presented as an example to explain the relationship between teaching experience levels and the means of attitude barriers. Almost the same relationship exists between teaching experience levels and personal and contextual barriers.

Figure 1

The Relationship Between Years of Teaching Experiences and the Means of Attitude Barriers



Discussion

Since technology is changing constantly, it is difficult to control cheating and plagiarism through laws and regulations only. Therefore, faculty members need to develop a strong evaluation method, such as binary or parallel evaluation, with different strategies of student assessments. In addition, student conduct plays a huge role in cheating and plagiarism; therefore, this matter is worth further investigation for higher education institutions.

The findings of the present study reveal that external contextual barriers are the main barriers that discourage faculty members from engaging in remote teaching. Among these factors, anxiety about the “lack of technical support, $M = 3.73$, $SD = 1.15$ ” and the “lack of quality of training that faculties receive regarding remote teaching, $M = 3.60$, $SD = 1.15$ ” are perceived as the most prominent barriers for faculty members in becoming involved with remote teaching. These findings are in line with previous studies that have found low-quality remote teaching, technological limitations and copyright policies related to the adaptation of remote teaching (Pounds & Bostock,

2019). Concern about the “lack of financial support, $M = 3.06$, $SD = 1.301$ ” and “the nature of the course, $M = 3.06$, $SD = 1.42$ ” are the least important inhibiting factors. Although the surveyed faculty members of Kuwait University are interested in remote teaching, the results indicate that they are concerned about the quality of their remote teaching and about the large class size that deteriorates the quality of remote teaching ($M = 3.45$, $SD = 1.337$, $M = 3.45$, $SD = 1.36$). Among the least significant obstacles to attitudinal barrier classification are difficulties related to providing immediate feedback to the students ($M = 3.04$, $SD = 1.30$) and the lack of competence regarding distance learning platforms ($M = 2.98$, $SD = 1.34$). The analysis of the findings related to the obstacles that discourage academic staff from teaching remotely confirms previous research on barriers and obstacles to the adoption of these methods (Brown, 2012; Gao et al., 2012; Manca & Ranieri, 2013; 2015; 2016; Rogers-Estable, 2014; Scott, 2013; Veletsianos & Kimmons, 2013; Veletsianos et al., 2013).

Another result of the present study indicate that faculty members at Kuwait University prefer traditional teaching over remote teaching ($M = 3.69$, $SD = 1.24$). Research indicates that relationships with professors play a key role in students’ retention. If such relationships weaken or break entirely in the shift to remote learning, thousands of students could flounder and even drop out (Field, 2020). Psychologists, on the other hand, have referred to this relationship as fear of change, fear of switching to different methods for teaching and being unwilling to adopt new technologies (Chen & Tseng, 2012; Sumak et al., 2011; Yoo et al., 2012). Resistance from teachers can be countered through better communication and program design and through sustained engagement, where direct engagement is either not possible or has failed, putting in place alternate or parallel systems that produce results can have a positive impact (Osama & Latif, 2016). The “lack of security on remote teaching” ($M = 3.54$, $SD = 1.19$) and the “lack of infrastructure readiness” ($M = 3.53$, $SD = 1.37$) are perceived as contextual barriers in the current study. One way to address these

challenges is to include infrastructure delivery in the solution being developed. A number of educational innovators have sought to provide the necessary infrastructure as part of the package of services being offered (Osama & Latif, 2016). The number of faculty members who are anxious is quite high when considering the lack of encouragement from decision makers at Kuwait University toward remote teaching ($M = 3.39$, $SD = 1.17$). Another major barrier revealed from the current study is the difficulty of forcing female students to appear directly in front of the camera to explain, discuss, or present some material related to the course ($M = 3.39$, $SD = 1.37$). Social constraints that have more power than laws and regulations play a huge role in preventing female students from showing their face in front of the camera.

Faculty members at Kuwait University are concerned about the type of interaction between students and instructors ($M = 3.38$, $SD = 1.35$). Confirming students' identity during distance education and creating exams and projects for students and then applying them remotely are perceived with the same level of difficulty by faculty members ($M = 3.28$, $SD = 1.34$, $M = 3.28$, $SD = 1.37$, respectively). Although faculty members maintain their sanctity inside the corridors of the university, the results indicate the opposite in remote teaching ($M = 3.35$, $SD = 1.32$). In addition, faculty members worry about the illegal dissemination of intellectual property in remote teaching ($M = 3.26$, $SD = 1.41$). The toughness of cyber-crime laws prevents faculty members from participating in remote teaching ($M = 3.2$, $SD = 1.28$). Another barrier is the difficulty of assessing learners' exams and projects from a distance ($M = 3.21$, $SD = 1.37$). Finally, "the strictness of the press and publications law" and "managing the remote teaching process" ($M = 3.10$, $SD = 1.30$, $M = 3.10$, $SD = 1.30$) are also perceived barriers of the present study.

The findings of the current study were congruent with those of previous literature that have revealed many different barriers discouraging teachers from engaging with remote teaching. For example, such barriers include illegal dissemination of intellectual property, low-

quality remote teaching, technical problems, additional workload, inadequate support and rewards, immediate feedback issues, lack of control, concerns about intellectual assets and lack of quality training (Pounds & Bostock, 2019; Reed, 2012; Seaton & Schwier, 2014; Shannon et al., 2012; Zamani et al., 2016).

Among the major results of the current study is that females are less conservative in regard to remote teaching than males are. These gender differences could be due to females who sit at home more than males and therefore have plenty of time to access online education. This result supports McSporrán & Young (2001) study titled “Does gender matter in online learning?” that found that gender matters and favors females in regard to virtual learning. In contrast, this result disagrees with previous studies that have found that gender has no significant effect on virtual learning (Aljaraideh, 2019; Harvey et al., 2017). In addition, a study conducted by Zamani et al. (2016) found that female faculty members are more anxious toward remote teaching than male faculty members.

Nationality does have an effect on anxiety toward remote teaching in favor of non-Kuwaiti faculty members. The researcher attributes this result to the non-Kuwaiti faculty members’ fear of losing their jobs or their being less exposed to technology than Kuwaiti faculty members. This result supports previous research that found that Kuwaitis were more satisfied with smartphone learning than non-Kuwaitis (Sulaiman & Dashti, 2018). Type of college also has an effect on anxiety toward remote teaching and that effect favors humanities colleges. This outcome could be attributed to the nature of humanities studies, as they rely on real human interaction more than science studies. This result supports a previous study that found science majors more involved in mobile learning than humanities majors (Alfailakawi, 2004).

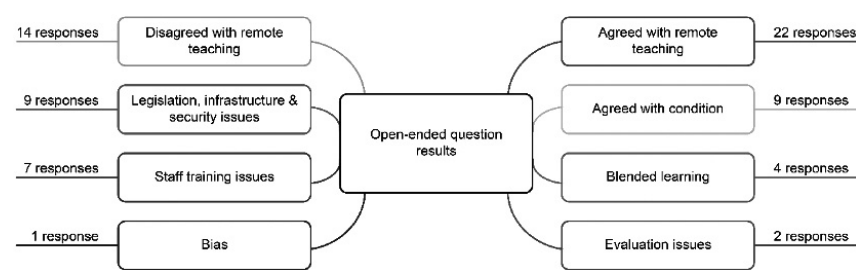
The results of the present study indicate that assistant professors are less anxious about remote teaching than other faculty members. Assistant professors might be more involved in teaching activities than other faculty members who are more involved in strong research programs. The results of the current study reveal that the more

teaching experience a faculty members has, the more they reject remote teaching. This outcome could be due to the comfortability level of these faculty members regarding the traditional manner of teaching and them not wanting to take the risks related to changing their teaching method. This result conflicts with previous studies that found higher academic ranks such as full professors to prefer online learning more than assistant professors (Aljaraideh, 2019).

The data from the open-ended question revealed 47 valid responses. Figure 2 explained the coding responses. The majority of the responses (22) were coded as “agreed with remote teaching,” while the second largest group of responses were coded as “disagreement with remote teaching” (14 responses).

Figure 2

The Open-ended Question Results



Practical Implications

One implication of this study is that traditional evaluation methods cannot simply be applied to remote teaching. Creating new laws and regulations for virtual learning should not be overly tough or soft. The proposed laws and regulations should respect both the faculty members and students and their freedom of speech without extreme constraints. In addition, issues such as privacy, security, copyrights, and faculty sanctities should be taken into consideration when proposing virtual learning laws. The researcher suggests that future professional activities involve skills needed when dealing with complex problems, sometimes in careers and jobs yet to be created.

Traditional teaching methods are generally only used in preparation for routine tasks and existing jobs, thus requiring the creation of new approaches capable of stimulating creativity and autonomy, which are essential for the present and future demands of remote teaching.

The quality of remote teaching is one of the strongest predictors of a successful online course. Strong engagement in remote teaching training will create robust quality for a remote teaching program. By understanding the factors that influence remote teaching, policies and/or programs can be implemented to support online instructors, which, in turn, will result in higher quality virtual courses. Good faculties must be “VOCAL: visible, organized, compassionate, analytical, and leaders-by-example” (Mandernach et al., 2006, p.251). This study provides important statistics on remote teaching barriers that can be used by researchers to construct a pragmatic research direction on this topic.

Conclusion

The study identified 28 important factors that play a huge role in remote teaching. For example, cheating, plagiarism, and the lack of laws and regulations toward remote teaching are among the top barriers identified in the current study. Faculty members prefer traditional teaching methods over remote teaching methods. Other significant barriers are the lack of technical support, the lack of quality of training, the lack of security of remote teaching, and the lack of infrastructure readiness. Furthermore, faculty members are concerned about the quality of remote teaching and large-sized classes that deteriorate the quality of remote teaching. The results of the present study are consistent with previous research studies that have identified major obstacles toward online teaching. Regarding the demographic variables, this study revealed many significant results. For instance, it was found that females are less concerned and anxious toward remote teaching than males. Second, the results indicate that non-Kuwaiti faculty members appear more anxious than Kuwaiti faculty members when teaching remotely. Third, the results suggest that humanities colleges showed more anxiety than science colleges when teaching

remotely. Fourth, the current results suggest that assistant professors are less anxious than other faculties when teaching remotely. Finally, the results indicate that the more teaching experience a faculty member has, the more conservative they will be toward remote teaching.

Limitations

There were several limitations of this study. First, while quantitative findings cannot be generalized beyond this study population, the transferability of these findings may be possible to other higher institutions in similar circumstances to Kuwait University and to institutions in other developing countries. Second, the researcher could not gain access to all faculty member phone numbers to increase the sample size of the study. Third, conducting remote teaching in a traumatic situation should not be compared with doing so in a well-suited environment.

Future Recommendations

The researcher anticipates that this descriptive study will set the stage for multisite virtual teaching. Conducting qualitative research on this topic while involving educators, students and decision makers may contribute to overcoming the limitations of the current research. A longitudinal study with multiple data collection points might be another robust option for tracing the barriers for the same subjects after a specific period of time.

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