IMPACT OF COVID-19 ON MANAGEMENT EDUCATION: AN EXPLORATORY STUDY ON PUBLIC AND PRIVATE UNIVERSITIES OF PAKISTAN

[1]Mehr Mohsin Raza, [2]Riaz Ahmad, [3]Munawer Javed Ahmad, [4]Muhammad Akram
[1]University of Sargodha, Pakistan
[2,3]Iqra University, Karachi, Pakistan
[4]Bahria university, Islamabad, Pakistan
E-mail: mohsinuos35@hotmail.com, Riaz.ahmad@iqra.edu.pk, Munawer.javed@iqra.edu.pk
Makram@bahria.edu.pk

Abstract The COVID-19 has impacted the entire human life cycle and shifted the paradigm of education, forever. The study aim is to explore the COVID-19 impact on management education at public and private universities of Pakistan. For the purpose, the study applied quantitative research method. The data were collected using purposive sampling technique during the pandemic period through an online survey from the teaching staff of the public and private universities of Pakistan. The data gathered for research highlighted the evolving issues, which were faced by educational institutions in various phases of the COVID-19 and digitizing of management education. Moreover, it has also highlighted the future directions pertaining to digitalization of education. Therefore, based upon the findings, as per researchers' knowledge, this research is to considered first study which shows the impact of COVID-19 on the management education on the higher education of the Pakistan. In line with this, the current study would provide help to academicians and educational managers to consider these prevailing factors in order to improve and sustain quality of education. The research limitations and suggested recommendations are also discussed at the end of the study.
Keywords: COVID-19, digitizing management education, public and private universities, Pakistan

Introduction

Quality higher education services in globalized world increase the jobs prospects and economic sustainability (Raza, Sarwar, & Shah, 2020). The education is considered to be major factor that could help to individuals to improve their living standards that could ultimately help to increase their contribution in the economic development. Along with this significance, the COVID-19 pandemic caused the greatest disruption in educational history, with nearly universal effects on the world's students and teachers. All sectors worldwide including education have been affected by the pandemic. UNESCO reported on 1 April, 2020, that 189 countries had announced that the number of students involved, including those enrolled in tertiary education, had dropped to 1,066,817,855. This represents 61.9% of the total students in 107 countries (Cairns, 2020). Therefore, globally most of the universities had taken a precious decision to change their education system from traditional way to modern teaching (online teaching) while simultaneously cancelling and postponing all on-campus activities to other levels (Li, Sahu, Talwalkar, & Smith, 2020). Investment in Learning Managements System (LMSs), such as, zoom, "Microsoft Teams and Blackboard", is mostly suitable for on-line learning (Lim, 2020). From side to side live or recorded lectures, discussions, online tests and tasks, the instructors can interact virtually with their students. Some teachers and students may, however, face challenges to cope with the new approach.

In a research directed by the International Association of Universities (IAU) examines the global COVID-19 effect on higher education, 9 670 high education institutions received global surveys, including 423 institutions from 109 nations, which fully responded to the survey. In this study the IAU study inspected the COVID-19 impact on higher education globally. The results have shown that this pandemic has affected all institutions. Almost all institutions of higher education (HEIs) said they have been affected by the learning process. This transition from traditional (fact-

to-face) education to online learning is seen by the majority (67 percent) of participants. 24 percent of institutions reported that solutions had been developed to ensure the continuation of the process of learning. Most HEIs have indicated that all campus activities are cancelled. High numbers (91 percent) of institutions are well equipped to communicate effectively with students and staff. The financial situation is that 81 per cent of institutions surveyed expected new students to be lowly enrolled, with serious financial implications for their institutions. More than 50% of institutions said they would carry out exams according to plan, 94% of those organizations said they would apply new performance measures and 6% would carry out the testing as usual.

In other words, global survey of IAU exposed that during a sudden transition to distance learning, HEIs have faced several challenges related to their online learning, technical infrastructure, and their pedagogical skills. As far as infrastructure is concerned, various institutions in the low income economies have described that most the students does not have internet access because they could not bear the cost of internet and digital gadgets . On the other hand, various institutions within the high-income countries described that because of financial implications of LMS investments, they were not prepared to make this transition. In addition, several institutions expressed their concerns – some of the pupils have unequal learning opportunities, while others do not. With regard to skills and pedagogical challenges, a number of institutions have shown that an exclusive distance learning pedagogical approach is being required, but the sudden transition did not allow the faculty members to prepare themselves for this technological development. Therefore, the faculty members lacked the necessary skills. The institutions also took part in this study to another major challenge: distance learning cannot function effectively in all areas of study, for instance, medical studies, unless steadfast online learning implements exist.

The argument above shows that this pandemic has dramatically affected universities all over the world with a view to providing their students with effective and high quality education during this crisis. Most educational institutions are well equipped to offer their students their education, but they have been faced with a number of challenges, especially in low-income countries, because of the sudden transition to distance learning. Among of the low income countries, the Pakistan is also a low income country; therefore here the students did not have the proper resources to manage their study. For example, Raza, Shah, Syeda, and Sarwar (2019) find that Pakistani universities lacked in digital resources at their teaching departments. The management is a broader field and most of the part of it based on numerical basis. In addition, based on the importance of qualified and talented accountants needed by the profession, the education on management is an attractive subject of learning for young students throughout the world. Accordingly, if management education is adversely affected, the profession will suffer badly. After seeking the importance of management education. The current study aim is to explore the COVID-19 impact on the management education of public and private universities in Pakistan and to suggest recommendations to overcome the prevailing challenges.

LITERATURE REVIEW

Covid-19 effect education sectors

Researchers discussed in this area the effects of the COVID-19 on the management education of private and public universities in Pakistan. The influence of COVID-19 was initiated in different countries at different times. The first closing of all universities started on 25 February 2020 in the Bahrain, monitored in United Arab Emirates on 8 March 2020, at that time Saudi and Kuwait on 9 March 2020, Kuwait on 12 March 2020, Oman on 15 March 2020 and on Pakistan February 2020. These countries, similar whole economies were effected through this crisis. According to UNESCO statistics, the total number of students involved in the above discussed countries is 12,085,898 (UNESCO, 2020). With 8,410,264 people totaling approximately 69.5% of all learners in all the Gulf countries, in Saudi Arabia, the number of students affected is the highest.

In Qatar, the lowest percentage of affected students was 1.44% of all affected students in the countries of the GCC. All higher schools in the Gulf countries have moved into e-learning using various LMSs, such as Blackboard, Google form, and Microsoft teams (Bensaid & Brahimi). Among of the above following countries Pakistan that is also a developing county is also effected by the Covide-19 effect. Most the students had switched off their study due to financial crisis because they were unable to buy the latest resources.

The majority of the universities have LMSs, which enabled them to move smoothly from traditional to online learning. This is achieved through various online platforms such as "Zoom, Microsoft teams, blackboards and Google classrooms" (Bensaid & Brahimi). In addition to downloading documents needed to support the learning process, this was done through virtual in-class activities like video conferences, seminars and class discussions. Also available online are all library and registration service. As part of an evaluation mechanism that ensures the use of a fair and effective method for student performance evaluation such as online examination through LMS, open-book examination or replacement of all exams by work, the Ministry of Education has been in permanent contact with universities. However, some of the countries, like Bahrain and the United Arab Emirates, have allowed university students to include or not add final qualifications in their CGPA (Bensaid & Brahimi). In Saudi Arabia, the students were able to defer their study or retire from the courses in the second semester. The Kingdom of Saudi Arabia Minister of Economic Affairs instructed higher education institutions, on the basis of their current average semester level or the last year grade, to calculate the grade but without any negative consequences for their CGPA (Sarea, Alhadrami, & Taufiq-Hail, 2021). In the same vein, as per the instruction of the higher education authority, most of the students in their classes were promoted from one standard to another standard due to COVID-19 impact but most of the universities did not promoted to the students from class to another class, and the universities properly provide the online facilities to their students, like pre lecture video lectures, supported reading material, lectures through zooms, black board and Google forms. The teachers were full time engaged with the students but most of the students were unable to contact with the teachers and were also unable to take the online classes. Therefore, students in management education could face several challenges during the current crisis which could impact on the quality of the results. This involves the evaluation process of the student, the self-efficacy of faculty members, the digitization of management, lecture time and methodology.

Most universities have LMSs that allow them to move from traditional to online learning smoothly. This can be achieved by different online platforms, including zoom, Microsoft teams, blackboards and Google classrooms (Bensaid & Brahimi). In addition to downloading documents needed to support the learning process, this was done through virtual in-class activities like video conferences, seminars and class discussions. Also available online are all library and registration service. As part of an evaluation mechanism that ensures the use of a fair and effective method to evaluate student performance such as online examination through LMS, open-book examination or replacement of all exams by work, the Ministry of Education has been in permanent contact with universities. Some of the countries, however, such as Bahrain and the US, allowed the inclusion or exclusion of final qualifications in the CGPA by university students (CHELGHOUM & CHELGHOUM, 2020). Students have been able to postpone or retire in Saudi Arabia during the second half of the year. On the basis of its current average level of the semester or last year, the Kingdom of Saudi Arabia Economic Minister directed higher education institutions to calculate the level but without negative consequences for the CGPA (Ding et al., 2020). In the same vein, the higher education authority's instruction has shown that most students in their classes have been promoted from standard to standard by reason of COVID-19 impact, but most universities have not promoted students from school to study and these universities provide their students with online facilities, such as video conferences, support Professors were involved with the students in full time, but most of the students could not contact the teachers and could not take online classes. Management training students could therefore meet several challenges during the current crisis that could have an impact on results quality. This includes the student assessment

process, automatic teaching members' self-efficacy, and digitalization of management, time and methodology.

Digitizing the management education

The process of using technology in education, called enhanced technology or e-learning is a digital education. In the past, the management education commission (AEC) requested that rehabilitation of management training become more practice-relevant and produce better quality accountants theory of management education (Koch, Mendelssohn, & McKee, 1990). One such reform is the inclusion of management technology. One of the most important priorities to improve the profession has been the use of recent management technologies (Elliot, 1992; Walsh, 1998). This type of education is therefore becoming popular in business schools worldwide (Friday, Friday-Stroud, Green, & Hill, 2006). These systems have been shown by Watson, Apostolou, Hassell, and Webber (2003) to be used sharply by management educators. Roberts, Kelley, and Medlin (2007) argued that better teaching methods are needed to deliver management topics due to rapid development in the context of management. Therefore, there has been a growing interest in virtual learning (De Lange, Suwardy, & Mavondo, 2003; Marriott*, Marriott, & Selwyn, 2004).

The majority of universities worldwide currently invest LMSs. The integration of digitizing management is seen as a helpful way for instructors to evaluate and provide e-feedback electronically. The increase in e-learning and in particular management has been unlimited (Helfaya, 2019; Mihret, Abayadeera, Watty, & McKay, 2017). By using educational technology, students can receive effective teaching and learning techniques in material delivery in a constructive and timely manner (Mihret et al., 2017; Race, 2014). Helfaya (2019) has found that students are interested in e-assessment and response methods for the teachings of management subjects. E-learning flexibility in time as well as in places for students and teachers has rapidly increased this kind of education (Al-Hadrami & Morris, 2014). However, the failure to interact with students and instructors was the principal criticism of such learning (Sarea et al., 2021). Digitalization of management training may be flexible, but educators can take care of student learning and knowledge (Humphrey & Beard, 2014). If a sudden e-learning change does not result in effective learning, it may have an unexpected impact on student's future prospects (Alhelou, Rashwan, & Abu-Naser, 2021).

The evaluation of management students in pandemic-19

The influence of student performance in online learning is major sudden effect due to the COVID-19. One of the most important subjects discussed in several studies was the effectiveness of e-learning in terms of its impact on performance of the student (Dowling §, Godfrey §, & Gyles, 2003) and (Al-Hadrami & Morris, 2014; Davis, Reeves, & Graff-Radford, 2005). Those studies have shown that some studies have had a positive impact on the performance of students and others have no influence, nonetheless no researchers have found negative impacts on the performance of students. Al-Hadrami and Morris (2014) have accompanied to study the principal factors affecting student performance at a university in Jordan in web-based management. The investigators used mixed approaches and the results had shown the effect on the performance of the students measured according to their final degree on the environment factors, which encompass teacher interactivity, technological effectiveness and a learning environment. Other studies have compared the performances of students in e-learning to traditional learning and have shown no important variance among the performance of students in both types of study (Arbaugh & Stelzer, 2003).

To determine whether or not students learn, it is significant to have an well-organized and efficient assessment technique. Two types of evaluations mainly exist: summative and formative evaluations. To determine the student learning goals achieved in the summative evaluation. In contrast, the formative evaluation is the teacher's continuous evaluation to

understand the needs of learners. As all educational institutions close down, more formative evaluations are needed to gain a better knowledge of student learning (Liberman, Levin, & Luna-Bazaldua, 2020). With regard to the COVID-19 crisis examinations, UNESCO recently sent an investigation to 84 countries which gathered information on how schools conducted their examinations in the end of the six months. 58 of these countries reported having re-scheduled or postponed exams, some countries providing alternate approaches for evaluating tests, such as online examinations, and other countries annulled all examinations and replaced all examinations with projects, plans, and methods for evaluating their courses (Bozkurt & Sharma, 2020).

Faculty member's self-efficacy on the online teaching

One of the main factors which affects the success of the teacher is the ability of the teachers to meet the unavoidable challenges of the online teaching environment (Horvitz, Beach, Anderson, & Xia, 2015). The independence of teachers in the virtual learning environment is important for fulfilling their tasks (Jia, Bhatti, & Nahavandi, 2014). Zheng, Wang, Doll, Deng, and Williams (2018) found organizational support for LMS to be the most important factor for improving the faculty self-efficacy, for example providing sufficient training or technical support. Ahead of COVID-19, various studies examined the challenges that faculty members have to deal with in online teaching and found that technical concerns such as technological reliability, technological support available, technological skills of instructors and students, enormous workload and lack of human interaction, were among the most important challenges (Liu, Kim, Bonk, & Magjuka, 2007; Perreault, Waldman, Alexander, & Zhao, 2002)."

An efficient use of technology depends, in particular in the educational process, mainly on users' acceptance and their perception of these technologies. Lee and Tsai (2010) studied the self-efficacy of teachers in the teaching process through the Internet. They found that teachers with more web use expertise found greater self-efficacy. Although most universities around the world have LMS, the members of the faculty are not prepared to offer courses almost because the traditional and virtual teaching has suddenly changed. Therefore the quick shift of education to online learning could threaten the quality of education due to the lack of self-effectiveness of teachers (Horvitz et al., 2015).

The Timing of the lectures in the pandemic

In the present situation, teachers have quickly had changed their teaching from traditional teaching to online teaching, nonetheless does this unexpected changeover mean they spend more time teaching? Faculty members have more time online than conventional teachers (Van de Vord & Pogue, 2012). The virtual learning requires teachers to integrate activities that have a positive effect on their students' engagement, performance and attitude (Vatovec & Balser, 2009). In addition, online teaching is more complex than conventional ones with regard to faculty members (Bolliger & Wasilik, 2009; Haber & Mills, 2008). Mixed results on the time spent in online and traditional education were found in the literature. Some studies have shown that online teaching is longer than normal (Tomei, 2006). However, other studies have shown that conventional education takings more time as compere to e-learning (McKenney, Peffley, & Teolis, 2010). Hislop and Ellis (2004) concluded that for both types of learning time is related. In in other words, Worley and Tesdell (2009) studied whether online teaching takes less than conventional teaching. The study was carried out in four sections in the same course: two was consist of online sections, while two were depending on the face to face sections. The instructors recorded each course's tasks every minute. Both types were shown to have similar overall time, although the time for each student in online teaching was 20% higher. Van de Vord and Pogue (2012) studied whether it takes more time for online teaching than conventional teaching. The researcher has registered online courses and traditional courses. The results showed that traditional (face-to-face) teaching usually takes longer than virtual learning per student. "However, the time log

shows that some activities such as student work evaluation, grades and technical problems are online learning has taken longer than face-to-face learning."

RESEARCH METHODOLOGY

The current research is exploratory in nature which purpose is to explore the COVID-19 effect on management education of public and private universities in Pakistan. The present research applied the quantitative research method. A survey was used as data collection instrument and purposive sampling (non-probability technique) for sample selection and finally, snow-ball techniques was used for the data collection. In addition, the literature was involved in the development of the questionnaire items. The initial copy of the survey was submitted in advance of final distribution to a number of academics and questions development experts, to give their feedback on the wordings, content, suitability, coverage by the students about the dimensions of COVID-19. Amendments to the final draft and the current survey were distributed to the target interviewees of lecturers at the Pakistan private and public sectors universities. The research instrument was measured by using a five point Likert Scale which was ranged from 1 to 5. The 1 represent the strongly disagree and 5 represent the strongly agree. The Likert scale is considered to be a good to measure the data on survey based. This argument is supported by various studies who had also use the five point Likert Scale (Ahmad, Ahmad, Farhan, & Arshad, 2020; Ahmad, Bin Mohammad, & Nordin, 2019; Riaz, Ahmed, Parkash, & Ahmad, 2020). Moreover, the sampling unit is selected by professors at Pakistan public and private universities in higher education. The sample method is used only those participants who agree to take part in the research collect data. Due to COVID-19 outbreak the responses were gathered through an online survey. The replies were collected from 30 universities, public and private. Among of these universities, the survey was conducted on 150 respondents. However, after elimination of incomplete answers, the valid numbers of response are 102. To analyze the data, descriptive analytical techniques were applied. This technique was used to explore the faculty's perception on impact of the COVID-19 pandemic on various aspects of management in Pakistani public and private universities.

RESULTS AND DISCUSSION

The majority of educators in the graph (Figure 1) stressed that COVID-19 changed and made the evaluation of student engagement in management with educators better. Significantly, 36% percent of educators in Pakistan universities are strongly agree that evaluation of student management involve themselves has been more effective during the COVID-19 pandemic. While, 30 percent agree. 9 percent disagreed, 20 percent were neutral. Thus, from the majority findings, it could be said that the general view of the evaluation of management students during the COVID-19 crisis has been crucial, and that involvement with educators during the outbreak has become more efficient.
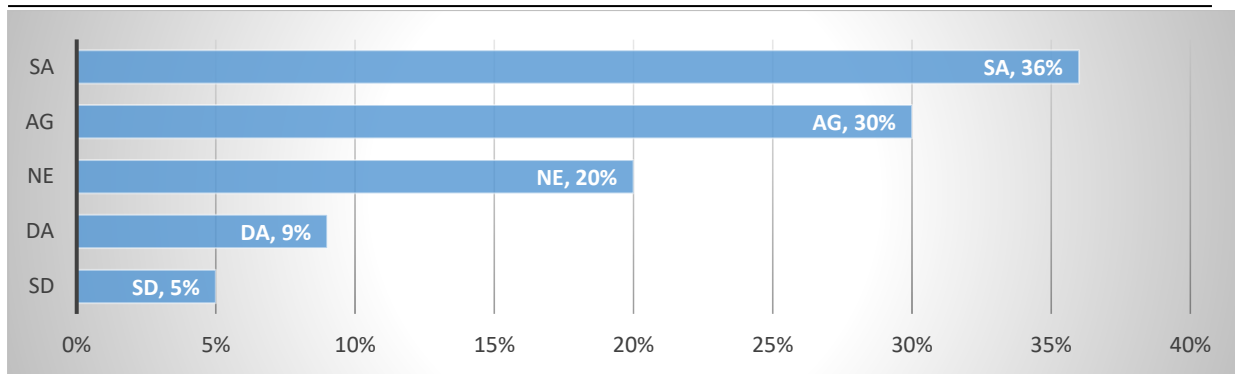
Figure.1 "COVID-19 pandemic made the assessment of the management student's engagement with educators more effective."

Figure 2 shows that more than 82 percent (70 percent strongly support the study and 12 percent agree on that), while the minority (2 percent) disagree with this scenario. Educators are supported using online Open Book exams. This result shows the current trend towards using online exams in university-level teaching. It is also evident that during this pandemic most teachers make full use of online teaching and support. This means that COVID-19 has dramatically changed the face of traditional education into online education including evaluation methods.
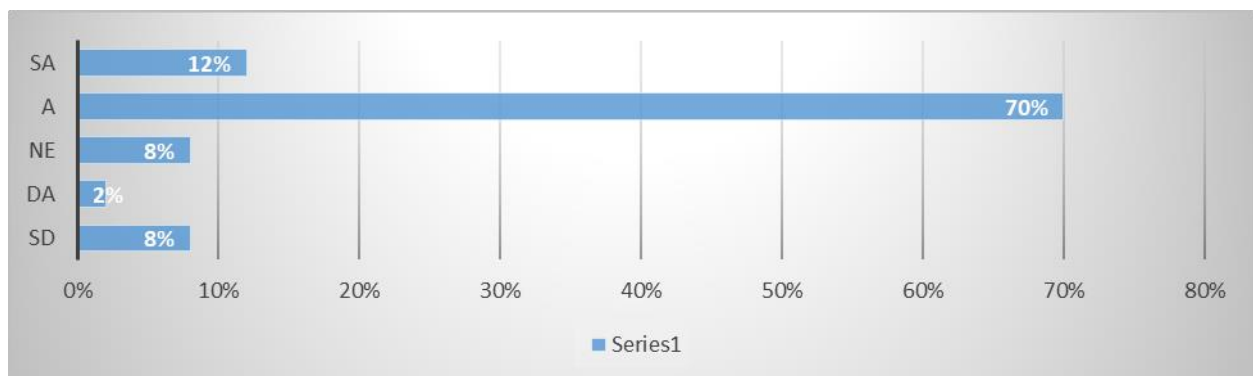
Figure 2: "Because of COVID-19 pandemic, the midterm and/or final exams were conducted online with an open-exam type."

Figure 3 illustrates the educators' views of the effect on digital management education by COVID-19. Nearly 80 percent agree or strongly agree that education should be transformed into digital methods rather than the traditional way students in Pakistan higher education institutions should be taught and educated. Only 12% disagree or strongly disagree in this regard. The researchers could say that apparently, the majority thinks that education is changing and will change in the predictable future, rather than those who try to ignore or at least neglect what is happening in 2020/2021 in the next academic year.
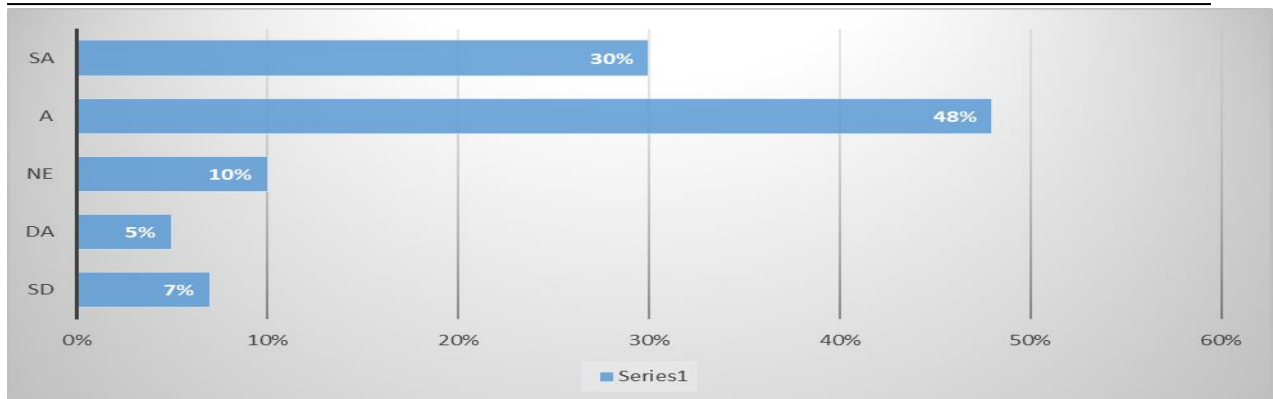
Figure.3: "Because of the COVID-19 pandemic, I believe that totally digitizing management education would be compulsory around the globe."

The focus of this topic (Figure 4) is the assessment of the view that digital management education takes and changes in higher learning institutes in digital terms (private and public sectors). As shown in Figure 4, the graph shows that an overwhelming majority of participants expect digital management training at higher schools to comply in their own right with the requirements of an educational body with an overall 79 percent. This issue is strongly disagree and disagree by only 9 percent of the participants. Therefore, most of the educators considered that the future of management learning by using online learning to promote digitalization by COVID-19 at the management level of the universities.
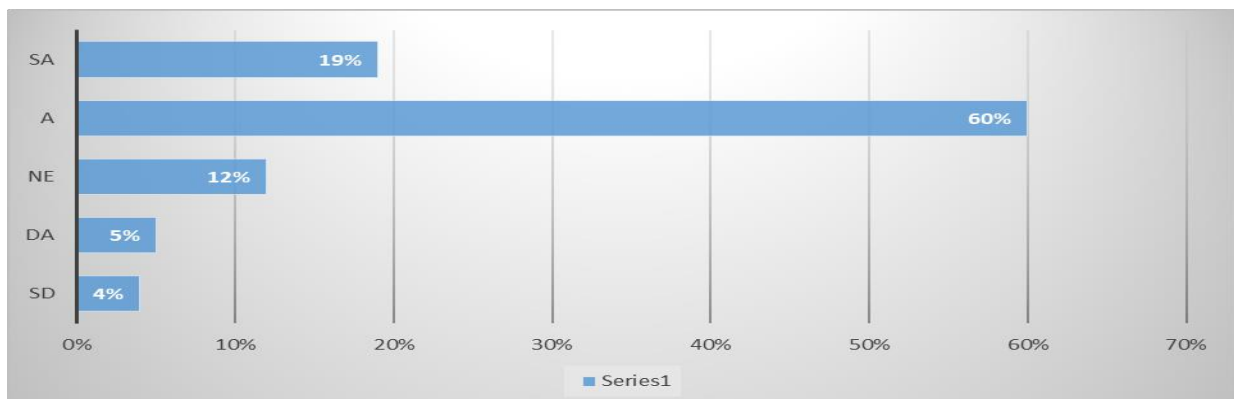

Figure.4: "Because of the COVID-19 pandemic, in my opinion, digitizing management education would be per se an educational authority's requirement."

While the diagram in Figure 5 is inspected, it is clear that the majority with almost 77 percent of teaching staff expect digital management learning to be accepted in the recent era of digital education. While, only 9 percent of participants disagree or strongly disagree. Therefore, the teaching staff's overall perception is that digital management is the common trend for education in the short term.
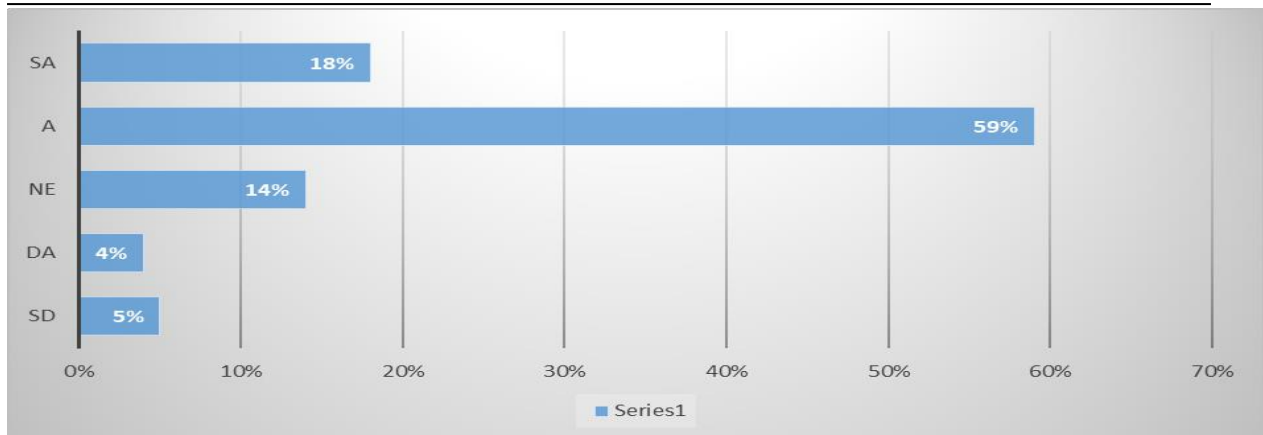
Figure.5: "Because of COVID-19, in my opinion, digitizing management education would be the common trend of the education institutes."

Next, as shown in Figure 6, the majority of teachers 76 percent are able to teach online, while minorities 10 percent show that they have less ability to teach online. This result shows the current trend towards using the online teaching methods for private as well as public universities at university level. In other words, the COVID-19 has changed the way to full online teaching in higher education management because educators are able to provide management courses with practically different methods of teaching.
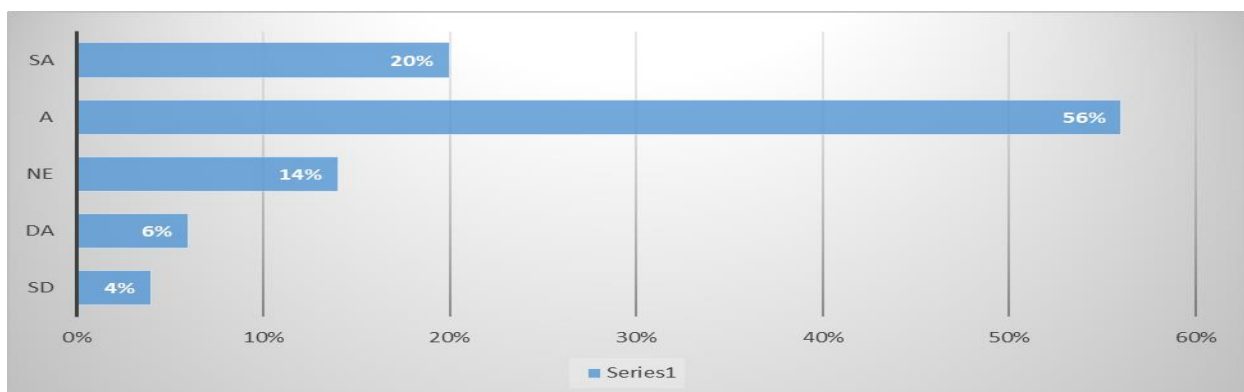

Figure.6: "During the COVID-19 pandemic, I am capable of using online teaching methods to deliver course's contents."

Figure 7 shows the responses of the educators have to the technical know-how necessary to use the available online methods of teaching. The results show that 84 percent of educators believe that during the COVID-19 outbreak the required technical abilities are available to handle digital management education. In other words, the minority 7 percent disagrees or strongly disagrees about this. There is, therefore, an interest in training your faculty to use the adopted LMS, including the required technical skills, by most institutions in the GCC area. However, it is extremely important to upgrade the technical skills of educators to cope with the pandemic. In addition, improved skills were not voluntary, but were necessary in order to achieve the institution's aims and to meet needs in this sensitive time.
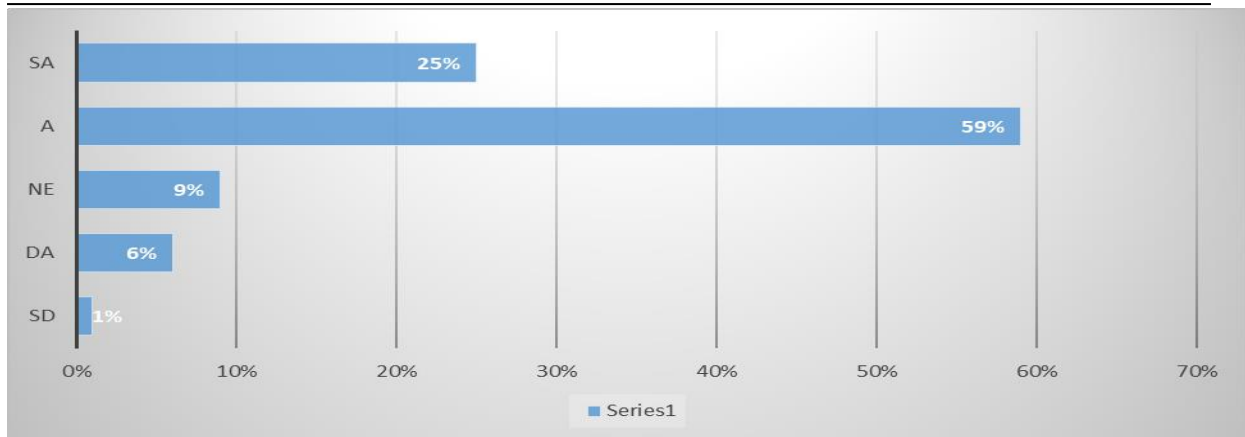
Figure.7: "During the COVID-19 pandemic, I possess the technical skills to use the online teaching methods."

The dominant sense of responsibility towards the students during the pandemic is very clear, as could be seen in Figure 8. There is no mistake because this unexpected, sudden event has hindered the semester and compulsory rules that made it hard to teach and turn the lessons into digital format. Figure 8 illustrates how the majority of the faculty shows the patience to learn how to deliver the contents of the COVID-19 courses by using new digital methods. Therefore, based on these findings, it could be seen most of educators are humble to deliver their lectures. The key results could be seen in the following Figure 8.
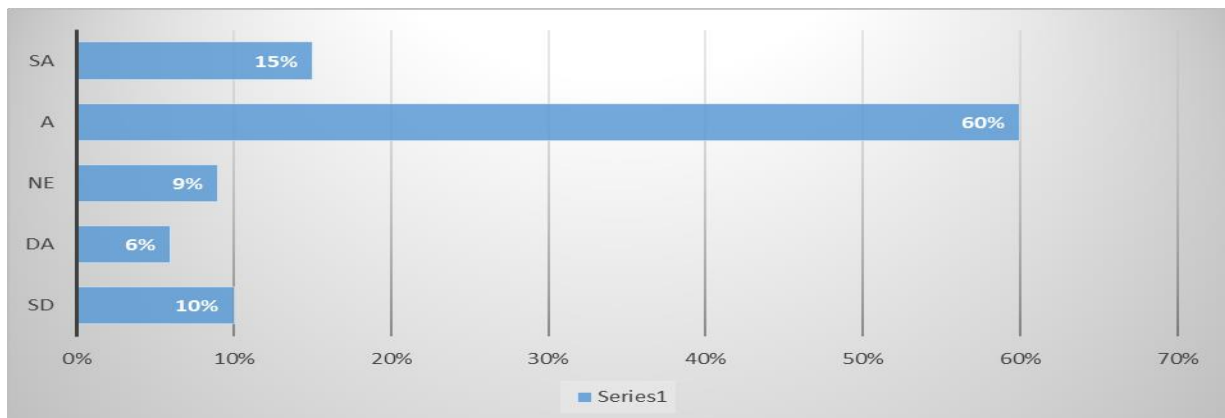

Figure 8: "During the COVID-19 pandemic, I possess the patience to get acquainted with using the new digital methods to deliver course's content to my students."

In Figure 9, the majority of educators 75 percent considered that the assessment of management students by on-line methods is sufficient during COVID-19. Nevertheless, only 19 percent of respondents considered to be a minority of the total participants that is 18 percent presume that an online evaluation technique would not be effective in evaluating management students during COVID-19. The researchers therefore conclude that the future direction of digital management training is predictable based on the statistics that have been obtained. The participants were asked to estimate the number of hours they had taught per week before and during the pandemic in order to test the impact of the COVID-19 pandemic on the time of lectures.
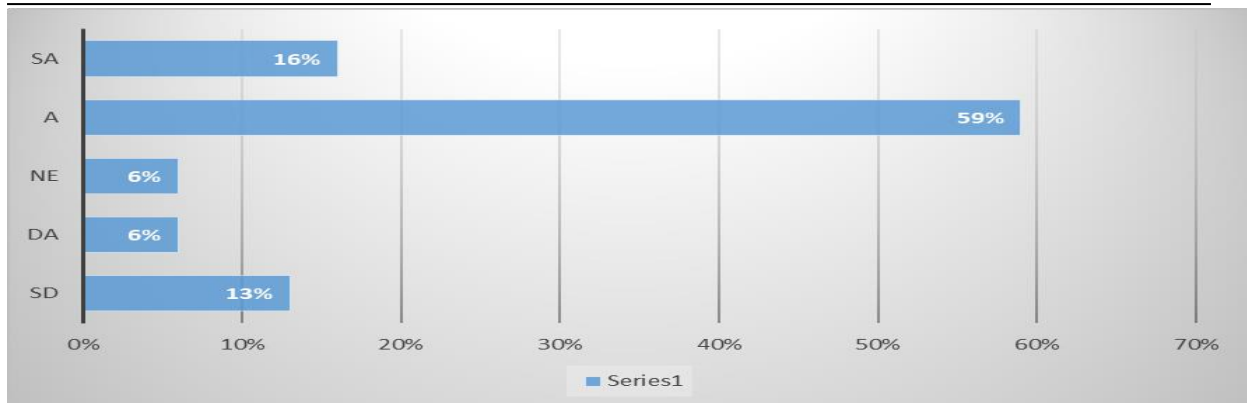
Figure. 9: "Because of COVID-19 pandemic, I think that evaluating management students by only online teaching methods."

As shown in Figure 10, the pandemic saw a significant drop in the lecture time compared to the timing before the COVID-19. As shown in this figure, the reading time of 3-5 hours increased significantly in the meantime, 38 percent in the crisis. The 6-8 hours range dropped from 38 percent to 37 percent, while the 9-12 hours of reading decreased from 37 percent to 23 percent. Therefore, eLearning could be interpreted as reducing the period of time required for teaching and lecturing by faculty members. This may be because teacher use their lecture time and prepare for their classes more effectively, but at the same time it may be because instructors have not done the same things after the pandemic as their previous efforts by eliminating certain activities and evaluations, for example formative evaluations due to lack of face to face communication.
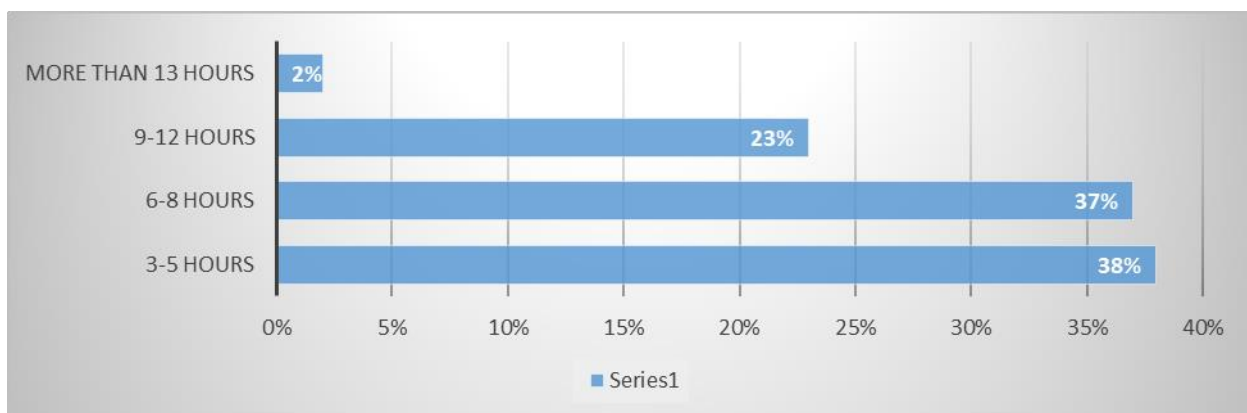

Figure 10: "During the COVID-19 pandemic, in average, how long did you spend for teaching/ lecturing in virtual class per week?"

In Figure 11, most people 38 percent appear zoom to use as a main tool for their pedagogical development. As a second tool, the Microsoft Teams seemed to hold the majority of online software used in the university for educators are 37 percent. At a third, Google Classrooms, which accounted for 23 percent of total respondents. Fourth place is live with 4 percent for Blackboard. These results shadow the main role played in the pedagogical process by Microsoft and Zoom software packages using the online method. Those results show that Pakistan universities focus on educational platforms which are more interactive for teaching.
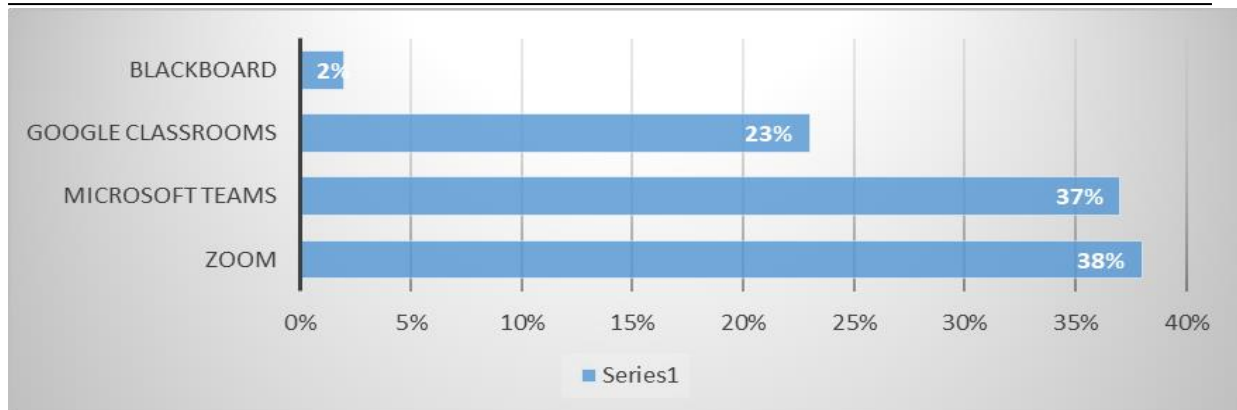
Figure.11: "During the COVID-19 pandemic, which online software tools do you use in your online sessions?"

CONCLUSIONS, LIMITATIONS AND FUTURE DIRECTIONS

Universities are striving hard to play key role in the social and economic development of Pakistan (Raza, Sarwar, & Shah, 2020). If the education system of universities could not be improving, then, their economic contribution could be reduced. Therefore, the purpose of current study is to explore the impact of COVID-19 on the management education of public and private universities of Pakistan. The data was collected from the faculty of management. The key findings of the study have shown the key role of COVID-19 in digital management education in general and in specific along with stimulating findings. Pakistani universities members of the management faculty have a positive perception about the impact of the viral outbreak on the teaching process and the online distance learning transformation. The results showed that management educators have changed their teaching methods so that the affected changes in delivery methods following the COVID-19 outbreak are addressed. On the other hand, online learning is increasingly efficient in the management of your time as the weekly time for lectures and preparation has fallen due to this pandemic. Compared to the time required during the crisis, most respondents reported that it took longer before the pandemic. The study results show that the Pakistan educational institutions focus on interactive LMS, such as Microsoft teams and the zoom to support the e-learning process. While, some of the universities also using the black boards for their learning management system. All these responses indicated the impact of COVID-19 on digital age management and education renovation. Most of faculty surveyed believes that digital management training are compulsory, and universities are in line to implement programmers supporting this type of training.

In addition, management educators believe that this pandemic is the beginning of management education and is now back on the horizon. With regards to COVID-19's role in ensuring that staff are ready, the results have revealed that the majority of respondents agree that their responsibility for students has been increased by this pandemic. While the participants indicated their technical skills are necessary, their technical skills must be improved, new techniques learnt and new challenges addressed, so that they can meet the objectives and goals of the organization as well as achieve their timetable and pedagogical objectives. This research is primarily designed to examine and examine the teaching staff's perceptions in Pakistan public and private universities. The limitations found in research and this research are no exception, since supporting this investigative study is recommended for a supportive qualitative interview with open-ended questions. Therefore, this point should be taken into account in the future. It is recommended to carry out other global parallel studies covering other countries and cultures in order to increase the generalizability of this study. In addition, the study was limited on public and private universities, a future research could be conduct along with schools.

REFERENCES

Ahmad, R., Ahmad, M. J., Farhan, M., & Arshad, M. A. (2020). THE RELATIONSHIP WITHIN GREEN MARKETING STRATEGIES AND MARKET PERFORMANCE OF PAKISTAN SMES. *Hamdard Islamicus, 43*(2..), 204-216.

Ahmad, R., Bin Mohammad, H., & Nordin, S. B. (2019). Moderating effect of board characteristics in the relationship of structural capital and business performance: An evidence on Pakistan textile sector. *Journal of Studies in Social Sciences and Humanities, 5*(3), 89-99.

Al-Hadrami, A., & Morris, D. (2014). Accounting students' performance in web-based courses: The case of the Hashemite University of Jordan. *World Review of Business Research, 4*(1), 19-35.

Alhelou, E. M., Rashwan, A.-R. M., & Abu-Naser, S. S. (2021). The Role of Using Cloud Computing in Improving the Quality of Accounting Education in Palestinian Universities in Light of the Covid-19 Pandemic. *Journal of Economics, Finance and Accounting Studies, 3*(1), 11-32.

Arbaugh, J., & Stelzer, L. (2003). Learning and teaching management on the web: What do we know. *Educating managers with tomorrow's technologies*, 17-51.

Bensaid, B., & Brahimi, T. COPING WITH COVID-19: Higher Education in the GCC Countries.

Bolliger, D. U., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance education, 30*(1), 103-116.

Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education, 15*(1), i-vi.

Cairns, R. (2020). Exams tested by Covid-19: An opportunity to rethink standardized senior secondary examinations. *Prospects*, 1-15.

CHELGHOUM, A., & CHELGHOUM, H. (2020). The Covid-19 Pandemic and Education: Big Changes ahead for Teaching in Algeria. *ALTRALANG Journal, 2*(02), 118-132.

Davis, P., Reeves, J., & Graff-Radford, S. (2005). Improvements in functionality reduced pain differ on emotional status across diagnostic subgroups in migraine and orofacial pain. *The Journal of Pain, 6*(3), S72.

De Lange, P., Suwardy, T., & Mavondo, F. (2003). Integrating a virtual learning environment into an introductory accounting course: determinants of student motivation. *Accounting Education, 12*(1), 1-14.

Ding, X., Yin, K., Li, Z., Lalla, R. V., Ballesteros, E., Sfeir, M. M., & Liu, C. (2020). Ultrasensitive and visual detection of SARS-CoV-2 using all-in-one dual CRISPR-Cas12a assay. *Nature communications, 11*(1), 1-10.

Dowling §, C., Godfrey §, J. M., & Gyles, N. (2003). Do hybrid flexible delivery teaching methods improve accounting students' learning outcomes? *Accounting Education, 12*(4), 373-391.

Elliot, R. (1992). The third wave breaks on the stores of Accounting education. *Critical Thinking, interactive learning, and technology. New York: Arthur Anderseen & Co*.

Friday, E., Friday-Stroud, S. S., Green, A. L., & Hill, A. Y. (2006). A multi-semester comparison of student performance between multiple traditional and online sections of two management courses. *Journal of Behavioral and Applied Management, 8*(1), 66-81.

Haber, J., & Mills, M. (2008). Perceptions of barriers concerning effective online teaching and policies: Florida community college faculty. *Community College Journal of Research and Practice, 32*(4-6), 266-283.

Helfaya, A. (2019). Assessing the use of computer-based assessment-feedback in teaching digital accountants. *Accounting Education, 28*(1), 69-99.

Hislop, G. W., & Ellis, H. J. (2004). A study of faculty effort in online teaching. *The Internet and higher education, 7*(1), 15-31.

Horvitz, B. S., Beach, A. L., Anderson, M. L., & Xia, J. (2015). Examination of faculty self-efficacy related to online teaching. *Innovative Higher Education, 40*(4), 305-316.

Humphrey, R. L., & Beard, D. F. (2014). Faculty perceptions of online homework software in accounting education. *Journal of Accounting Education, 32*(3), 238-258.

Jia, D., Bhatti, A., & Nahavandi, S. (2014). The impact of self-efficacy and perceived system efficacy on effectiveness of virtual training systems. *Behaviour & Information Technology, 33*(1), 16-35.

Koch, M. S., Mendelssohn, I. A., & McKee, K. L. (1990). Mechanism for the hydrogen sulfide-induced growth limitation in wetland macrophytes. *Limnology and Oceanography, 35*(2), 399-408.

Lee, M.-H., & Tsai, C.-C. (2010). Exploring teachers' perceived self efficacy and technological pedagogical content knowledge with respect to educational use of the World Wide Web. *Instructional Science, 38*(1), 1-21.

Li, T., Sahu, A. K., Talwalkar, A., & Smith, V. (2020). Federated learning: Challenges, methods, and future directions. *IEEE Signal Processing Magazine, 37*(3), 50-60.

Liberman, J., Levin, V., & Luna-Bazaldua, D. (2020). Are students still learning during COVID-19? Formative assessment can provide the answer. *World Bank Blogs.* https://blogs. worldbank. org/education/are-students-still-learning-during-covid-19-formativeassessment-can-provide-answer.

Lim, M. (2020). Educating despite the Covid-19 outbreak: lessons from Singapore. *Times Higher Education, 20*.

Liu, S., Kim, K.-J., Bonk, C. J., & Magjuka, R. (2007). What do online MBA professors have to say about online teaching. *Online Journal of Distance Learning Administration, 10*(2), n2.

Marriott*, N., Marriott, P., & Selwyn, N. (2004). Accounting undergraduates' changing use of ICT and their views on using the Internet in higher education–a research note. *Accounting Education, 13*(sup1), 117-130.

McKenney, C. B., Peffley, E. B., & Teolis, I. (2010). Comparison of time investment in common teaching practices among three instructional methods. *HortTechnology, 20*(1), 245-249.

Mihret, D. G., Abayadeera, N., Watty, K., & McKay, J. (2017). Teaching auditing using cases in an online learning environment: The role of ePortfolio assessment. *Accounting Education, 26*(4), 335-357.

Perreault, H., Waldman, L., Alexander, M., & Zhao, J. (2002). Overcoming barriers to successful delivery of distance-learning courses. *Journal of Education for Business, 77*(6), 313-318.

Race, P. (2014). *Making learning happen: A guide for post-compulsory education*: Sage.

Riaz, S., Ahmed, R., Parkash, R., & Ahmad, M. J. (2020). Determinants of Stock Market Investors' Behavior in COVID-19: A Study on the Pakistan Stock Exchange.

Roberts, F. D., Kelley, C. L., & Medlin, B. D. (2007). Factors influencing accounting faculty members' decision to adopt technology in the classroom. *College Student Journal, 41*(2), 423-436.

Sarea, A., Alhadrami, A., & Taufiq-Hail, G. A.-M. (2021). COVID-19 and digitizing accounting education: empirical evidence from GCC. *PSU Research Review*.

Tomei, L. (2006). The impact of online teaching on faculty load: Computing the ideal class size for online courses. *Journal of Technology and Teacher Education, 14*(3), 531-541.

UNESCO, U. (2020). COVID-19 educational disruption and response. *UNESCO*.

Van de Vord, R., & Pogue, K. (2012). Teaching time investment: Does online really take more time than face-to-face? *International Review of Research in Open and Distributed Learning, 13*(3), 132-146.

Vatovec, C., & Balser, T. (2009). Podcasts as tools in introductory environmental studies. *Journal of Microbiology & Biology Education: JMBE, 10*(1), 19.

Walsh, M. (1998). The global approach to an accounting qualification. *Accounting and Business*, 25-26.

Watson, S. F., Apostolou, B., Hassell, J. M., & Webber, S. A. (2003). Accounting education literature review (2000-2002). *Journal of Accounting Education, 4*(21), 267-325.

Worley, W. L., & Tesdell, L. S. (2009). Instructor time and effort in online and face-to-face teaching: Lessons learned. *IEEE Transactions on Professional Communication, 52*(2), 138-151.

Zheng, Y., Wang, J., Doll, W., Deng, X., & Williams, M. (2018). The impact of organisational support, technical support, and self-efficacy on faculty perceived benefits of using learning management system. *Behaviour & Information Technology, 37*(4), 311-319.

Survey Questionnaire

1. "COVID-19 pandemic made the assessment of the management student's engagement with educators more effective.

2. Because of COVID-19 pandemic, the midterm and/or final exams were conducted online with an open-exam type.

3. Because of the COVID-19 pandemic, I believe that totally digitizing management education would be compulsory around the globe.

4. Because of the COVID-19 pandemic, in my opinion, digitizing management education would be per se an educational authority's requirement.

5. Because of COVID-19, in my opinion, digitizing management education would be the common trend of the education institutes.

6. During the COVID-19 pandemic, I am capable of using online teaching methods to deliver course's contents.

7. During the COVID-19 pandemic, I possess the technical skills to use the online teaching methods.

8. During the COVID-19 pandemic, I possess the patience to get acquainted with using the new digital methods to deliver course's content to my students.

9. Because of COVID-19 pandemic, I think that evaluating management students by only online teaching methods.

10. During the COVID-19 pandemic, in average, how long did you spend for teaching/ lecturing in virtual class per week.

11. During the COVID-19 pandemic, which online software tools do you use in your online sessions."