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Self-Perceived Efficacy of an Online Teaching Workshop on the Confidence Skills in a Sample of Pakistani University Lecturers

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Abstract

The COVID-19 pandemic, in Pakistan, impacted the educational system leading to the abandonment of face-to-face learning. This led to the reshaping of teaching and learning methodologies shifting from on-campus to virtual education. Most teachers were not only lacking in digital literacy but also experience a lack of self-confidence. In this context, a quantitative study based on ABA Experimental design was conducted to investigate the self-perceived efficacy of an online teaching workshop on the confidence skills of a sample of Pakistani university lecturers. A total of 70 participants (M_{age}= 33.14, *SD*=7.02) were recruited via a non-probability purposive sampling strategy. Twenty four males and forty six females attended a workshop and completed pre and post-assessment questionnaires which comprised a demographic questionnaire and Teaching Online Confidence Scale. Paired sample *t*-test was undertaken to compare pre-and-post means of confidence levels in online teaching which showed significant differences in confidence level (p<.05). This study implies that such online training programs need to be nationally recognized and further research is required in Pakistan to investigate the relative and differential effectiveness of online teaching workshops.

Keywords: Online teaching workshop, confidence skills, Covid-19, Coronavirus, universities, lecturers.

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Introduction

Education, which encompasses the learning and teaching knowledge and skills, is a basic and fundamental human right to all people as well as being a key factor to sustainable social, economic, and political development (McMillan & Schumacher, 2010). In todays' educational system, academic achievement of the students is given utmost importance. Academic achievement indicates whether students have accomplished the specified learning outcomes (Kumari, 2020). Furthermore, academic achievement is related to the social and economic development of the countries. Therefore, raising students with the required skills and having the best quality graduates who will be responsible for social and economic developments of the societies have gained importance (Alemu & Feyssa, 2020). As a result, in the learning and teaching process, it has become a necessity to measure the success level of the students' learning achievement. Additionally, determination of academic achievement is required to have quality education and to make successful and effective interventions (Muhammedhussen, 2016). Accordingly, in education systems, examination results have been generally used in measurement and evaluation and testing of knowledge. The obtained results are used effectively in designing teaching environments, determining learning goals, and measuring students' success. However, while some students get through this process more positively and comfortably, some students experience anxiety to some extent during or before the examination.

When the test anxiety is considered as a special type of anxiety, it is highly likely that students will experience this state of tension at every level of education. Text anxiety is a broad term that includes some psychological and behavioral responses when individuals worry about failure on the exams or similar situations (Sarason & Sarason, 1990). It is the tendency to view exams as threatening, and predisposes the individual to experience high levels of state anxiety during assessment and measurement (Putwain & Daly, 2014). Students experience anxiety when they fear of failure and/or worry over performance (Meijer, 2001) and during or prior to taking exams since they desire to get good marks. Previous evidence shows that test anxiety is related to poor academic performance (Romera & de la Fuente Arias, 2021); learning difficulties, and lower achievement (Putwain et al., 2016). Furthermore, some physiological symptoms of anxiety such as facial redness, muscle tension, increased heart rate and feeling panic (Karatas et al., 2013) cause lack of focus and students may become irritable (Keogh et al., 2004). Students who experience these feelings become nervous and anxious not only during the exam but also when they are going to speak in a group. Additionally, their negative thoughts towards themselves can easily distract them (Aysan et al., 2001). Anxiety in education is a problem that needs to be resolved if not taken seriously, which can hinder productivity and lead to a decline in academic ability and learning outcomes, and even physical problems (Mukhliset al., 2020). As a result of the information presented in the literature, it becomes clear that test anxiety prevents students to obtain higher achievement.

Educational Institutes play a vital role in the progress of any nation. However, with the outbreak of the coronavirus disease (COVID-19 pandemic) and subsequent country-wide lockdown, there was a shift in the teaching and learning paradigm in the educational system. A new strain of virus named coronavirus caused the disease COVID-19 where 'CO' stands for corona, 'VI' for the virus, and 'D' for disease. COVID-19 causes Severe Acute Respiratory Syndrome (SARS)/ common cold and now has spread to many countries and territories (Bender, 2020).

The spread of COVID-19 is a major public health problem (Khan, Niazai, & Saif, 2020). It imposes serious responsibilities on the government to prevent its transmission, reduce its impact, and support control measures. As preventive public health initiatives were essential to avoid its potential spread, all educational sectors were also announced to remain closed till further notification. However, the Higher Education Commission (HEC), Pakistan approved the establishment of IT infrastructure and highlighted the significance of using digital technology in teaching and learning activities throughout the country. The aim was to provide online education and to ensure the continuation of all other academic activities. However, to implement an online education system, students and teachers needed training in the use of digital technology. Certain measures were highlighted by all universities, including the arrangement of training courses for developing technical and operational guidelines for teachers and to ease the online education delivery process (Latif, 2020).

Thus, in view of COVID-19, universities switched from traditional to online education mode so that students would continue their educational programs without interruption. However, digital literacy and online education are associated with a lot of challenges such as lack of teacher preparedness, dearth of essential funds and resources, low student participation, low-quality content, internet issues, etc. Thus, to adequately prepare teachers with digital literacy and to help them work successfully with digital technology, training and workshops need to be arranged (Khalid, 2020). By creating resources and advancing opportunities, the whole society can become part of the digital information system (Khan, Niazai, & Saif, 2020). In the light of various models and theories, the curricula of online teaching programs can be planned, developed, and implemented.

Salmon (2011) put forward a model named "Gilly Salmon's 5 stage model for Online Leaning". According to this model, primarily, the individual's access to online resources and the caliber to employ online teaching strategies are essential. Secondly, the participant's ability to establish an online identity and find others to interact with is important. Thirdly, participants' cooperation and support for everyone's goal is mandatory. In the fourth stage, group discussion, and collaborative interaction start. In the

last stage, participants become fully equipped to employ the system, achieve their goals, use various strategies in implementing assessments, both formative and summative, develop parameters for online assessments, grade their assignments, online presentations, etc. Every stage once is mastered, participants also develop technical skills to online resources.

It is highlighted that online teaching activity goes beyond undertaking classes on a laptop/ PC instead it is a constellation of mental, emotional, and societal processes (Macdonald, 2004). Online teaching is the source of engaging others in active and participatory learning methods. Furthermore, these activities are cost-effective because existing resources are used and are adapted and these activities can be facilitated with face-to-face environments that help in participants' exchange of knowledge (Richard, 2005). Herrington, Reeves, and Oliver (2010) suggested that via online teaching, students are assigned various tasks and assignments which in turn stimulate group cohesiveness among them to employ robust and practical knowledge. Also, online teaching allows faculty members to depict their creativity, innovation, and vision. On the contrary, it must require a lecturer 's skills, time, and devotion to making presentations and videos.

According to the above-mentioned key features of developing online teaching skills, an online teaching workshop was designed as per the Online Education course curriculum using both the process and product model of curriculum development. This is a service-driven course designed to meet the teaching and learning needs of faculty members of all disciplines. It was designed to examine different approaches to teaching and learning. The course was based on multi-dimensional approaches: Cognitive-Behavioral, Humanistic, and Social Learning theories. The methodologies of learning and teaching include the use of oral, audio, video, or upload of recorded lectures, self-directed learning, but also the use of social media to facilitate live sessions, and interactive discussions.

The outbreak of COVID-19 and social distancing made an enormous change in the teaching system i.e., from face-to-face to virtual teaching. Online teaching requires digital literacy, web skills, and confidence for effective teaching among lecturers. Anderson, Standerford, and Imdieke (2010) shed the light on the lack of self-efficacy and confidence in online teaching and emphasized the collaboration and societal exchange among individuals that may serve as a contributing factor to gaining confidence. He cited Bandura's (1977) study, "novel behaviors learned through the observation and modeling, once an individual learns through the observation then coded information can be used to perform in actions" (p. 22). Anderson et al., (2010) designed a course for teachers who were involved in online teaching. That course enhanced the confidence and self-efficacy of teachers in online teaching. Lortie (1975) recommended that teachers teach through the

"apprenticeship of observation" (p. 61). In other words, teachers teach in the way that they had been taught. In the Pakistani context, institutes emphasize face-to-face learning and therefore most teachers have expertise in it.

Efficacy in online teaching has been extended to both technological and pedagogical skills. Teacher-oriented with both skills displayed higher confidence in virtual classrooms. In this connection, Hampton et. al. (2020), explored the teaching self-efficacy level and satisfaction in nursing faculty who taught at least one online course graduation in nursing. Findings showed the participants had relatively high self-efficacy and satisfaction in online teaching after getting training. Likewise, Corry and Stella (2018) reviewed the literature on the teacher's perceived self-efficacy in online education and examined the literature of the previous 15 years on online teaching. The data review covered three areas of research ease of adopting online teaching, the role of demographics and experience variables in online teaching, and changes in teacher self-efficacy in professional development before and after taking the training. The findings of the study concluded that a lack of relevant and empirically validated literature exists on teaching efficacy in online education.

Evidence suggests the similarities between face-to-face teaching and online teaching, knowledge, dispositions, and skills are required in unique ways in both aspects. Reimers, Schleicher, Saavedra, and Tuominen (2020) presented resources to continue online teaching during COVID-19. One of the major sources is professional development which is established through communication tools apart from knowledge and content. Thus, confidence is the key feature of professional development and is essential for effective teaching.

The current study was designed to investigate the self-perceived efficacy of an online teaching workshop on confidence skills in a sample of Pakistani university lecturers. The online teaching workshop is of 10 hours duration (8 hours of teaching and 2 hours of self-directed learning) over a period of 2 days was conducted to familiarize the participants with the fundamentals of online course design and to boost their confidence skills.

Objectives of the Study

1. To examine the pre and post workshop teaching confidence skills in online teaching.
2. To test whether there will be a significant difference between the pre-and post-assessment scores on the teaching confidence skills measuring scale.

Research Hypothesis

H_1: There will be a significant difference between the pre-and post-assessment scores on the teaching confidence skills measuring scale.

H_0: There will be no significant difference between the pre-and post-assessment scores on the teaching confidence skills measuring scale.

Methodology

Quantitative research based on Experimental Design (ABA) was conducted to investigate the self-perceived efficacy of an online teaching workshop on the confidence skills in a sample of Pakistani university lecturers.

Sample

The population for this study was university lecturers and the sample was selected via a non-probability purposive sampling technique. A total of (N = 70) participants were recruited from various Campuses of Riphah International University (Lahore Campus, Al Mizan Campus, Malakand Campus, Faisalabad Campus). All participants were faculty members with at least 16 years of education and currently were engaged in teaching online.

Research Instrument

A demographic questionnaire and teaching confidence scale, developed by Rassool (2020), consisting of 10 items were used.

The procedure of Data Collection

Pilot Study. Foremost, a pilot study (n=18) was conducted on faculty members of the Psychology Departments of all campuses of Riphah International University. A total of 26 Participants were recruited initially for the pilot study, however, the data of only 18 participants were retained who attended the complete workshop i.e., both days of training, and filled both pre-and-post assessment questionnaires. Participants were requested to provide feedback to improve the quality of teaching and learning and the course itself. They reported a question that was ambiguous that related to module satisfaction "which module they liked the best and the least". Therefore, it was omitted before initiating the main study.

Main Study. The main study was executed in two phases. In the first phase, 54 Participants were recruited, however, the data of only n=24 participants were retained who attended the complete workshop. During the second phase, 50 participants were

recruited, and the data of only n=28 participants were retained. Both the Pilot study and Main Study were conducted in three Stages.

The first phase (Pre-Assessment). The pre-assessment questionnaire was administered to participants. The questionnaire comprised a Demographics and Teaching Confidence Scale. The questionnaire was sent via email to all faculties.

Second Phase (Workshop). Subsequent to pre-assessment an Online Workshop "Learning on how to teach online", comprised of seven modules were delivered to participants in two days. The aims of the course were to address several key issues about teaching and learning in the digital age, and some key considerations that need to be addressed while designing learning environments and assessments. In addition, the course discussed the benefits and challenges of moving classes from face-to-face to Online and the ways to develop an effective Online learning environment. Through this workshop, some key considerations were examined that need to be addressed while designing learning environments and assessments. Course and lesson plans were developed for online teaching and learning activities based on universities' requirements. Different types of assessments to be used online were discussed and how to utilize reflective practices in the planning and implementation of online learning and teaching activities was discussed.

Reflective Practices, Mini-Lecture-Live sessions, Discussion groups, Collaborative Learning, and Problem-Based Learning were discussed. Most of the presentations were based on live sessions using Zoom Video Communications. The presentations were in segments of 30 mins with 10 minutes of reflective activities.

Structure of the Course: The course consisted of 7 modules.

Module 1: Context of Online learning

Module 2: Planning Online Learning

Module 3: Teaching, Learning Activities, and Support

Module 4: Facilitating Online Discussions

Module 5: Assessment: Online Learning

Module 5b: Feedback: Online Learning

Module 6: Self-Evaluation, Feedback, and Reflection

Module 7: Learning and Teaching Resources

Third Phase (Post Assessment). Post-assessment was done at the end of the workshop on the second day. The questionnaire was comprised of the Demographics and Confidence Scale.

Analysis and Interpretation of Data

The Cronbach's alpha coefficient reliability for the teaching confidence scale comes out to be (α=.68) which reflects moderate reliability.

Table 1

Descriptive Statistics of Demographic Variables of the Sample.

Variables	*f*	(%)	Min	Max
Age			27 years	60 years
Gender				
Male	24	33.3		
Female	46	66.7		
Education				
Masters	50	72.5		
PhD	20	27.5		
Years of Experience			1 year	25 years

Note. *f* = Frequency, %=Percentage, *M* = Mean, *SD* = Standard deviation

Table 1, the descriptive statistics depicts the majority of the participants fall within the age range of 27 to 60 years. Most of the participants were females and possessed a master's degree. The participants had a minimum of 1 year of experience and a maximum of 25 years.

Table 2

Pre-Workshop Assessment Computed in Confidence Levels in Teaching Online.

Variable	Pre-Assessment (*n*=70)	
	M	*SD*
Confidence skills	16.17	2.88

Table 3

Post-Workshop Assessment Computed in Confidence Levels in Teaching Online.

Variable	Post-Assessment (*n*=70)	
	M	*SD*
Confidence skills	18.05	3.79

Table 4
Paired Sample T-Test to Compare Means, Pre and Post Assessment Computed in Confidence Levels in Teaching Online.

Variables	Pre-Assessment (*n*=70)		Post-Assessment (*n*=70)				95% Cl		Cohen's
	M	*SD*	*M*	*SD*	*t* (69)	*p*	*LL*	*UL*	*d*
Confidence skills	16.17	2.88	18.05	3.79	2.01	.04	.01	2.21	0.55

Note. *p<.05, *LL*= lower limit, *UL*= upper limit, *Cl*= Confidence Interval.

The paired samples t-test was conducted to assess the differences in confidence skills in online teaching before and after receiving the workshop. These results showed significant differences indicating a significant boost in confidence levels after attending the workshop.

Discussion

Online education and E-learning recently have been endorsed by the Higher Education Commission (HEC), Pakistan for the continuation of academic activities during the COVID-19 pandemic. Higher education programs have been offering faculty training programs to equip them with online teaching skills. These training programs help faculty members to deal with the burden of adapting their traditional teaching strategies according to widely expanding digital technologies (Salmon & Wright, 2014). Faculty members often show resistance to attending training workshops due to excessive academic responsibilities and time constraints. Therefore, a few effective and helpful training workshops need to be organized (McQuiggan, 2012). In the current study, a total of 70 faculty members (M_{age} = 33.14, *SD*= 7.02) attended an Online Teaching workshop (Males= 24, Female=46). Furthermore, subsequent to the pilot study, during the main study the workshop was delivered in two phases to two separate batches to make it convenient and comprehendible and to ensure maximum participation. According to Hoyos and Cano (2016), teachers need guidance regarding how to moderate, how to assign students different online teaching activities, how to ensure their maximum participation, and how to grade their assignments. Therefore, a workshop needs to be arranged for professionals to help them develop these skills to effectively manage online teaching challenges. Thus, this online teaching workshop also aimed to introduce faculty members to online learning and how to facilitate online discussions. It intended to examine several key issues about teaching and learning in the digital age, and some key considerations that need to be addressed while designing learning environments and assessments.

Through this workshop, the benefits, and challenges of moving classes from face-to-face to online were discussed along with how to develop an effective online learning environment. Furthermore, how to develop different types of assessments to be used online and how to utilize reflective practices in the planning and implementation of online learning and teaching activities were also addressed. Hoyos and Cano (2016) also investigated the efficacy of a workshop regarding developing online teaching skills and fostering moderating skills among faculty members of Colombian Public University. The findings showed that the participants had a better understanding of online processes. They learned some technical competencies and reported their effectiveness in their professional development.

Above all, the findings of the current study revealed an upsurge in the confidence levels of faculty members after receiving an online teaching workshop. The current study outcomes are in congruence with the findings of various studies undertaken by a number of researchers on the efficacy of teaching workshops. Ye He (2014) investigated the efficacy of online teacher education courses on the confidence levels of educators to teach online. This course was designed according to the Universal Design for Learning and was implemented by 24 educators. The findings illustrated positive feedback from educators. They reported high perceived self-efficacy and confidence in potential online teaching in the future. According to Yusnita et al. (2018), professional education and training are deemed essential for teachers' competence and performance. In this study also a training module was introduced to 35 teachers and a post-assessment was carried out to evaluate teachers' competence. The findings were in harmony to the current study's outcome i.e., with the training the teacher's knowledge increased and it had a positive effect on their performance. Likewise, Afshar and Doosti (2016) also concluded in their study that insufficient subject knowledge, less acquaintance regarding employing resources, and lack of professional commitment results in demotivation, less confidence, poor job performance, and dissatisfaction. Therefore, it implies that for teachers' confidence in teaching methods, training and workshops play a vital role.

The findings of the current study are also in line with research conducted by Assadi and Murad (2017) to examine the impact of teachers' training model on teachers' educational and professional development. The findings revealed that the level of knowledge and skills were enhanced after receiving training. Likewise, Price et al., (2016) also investigated the improvement in online teaching by employing various teaching strategies. Three focus groups were conducted to identify the workshop efficacy and perception of effective teaching rituals. Faculty members reported endorsement, obligations from students, and space for faculty improvement. Whereas students reported cohesiveness, availability, encouragement, and diverse learning.

Conclusion

The findings of this study showed that the online teaching workshop helped improve the confidence skills of a sample of Pakistani university lecturers. Additionally, the contents of the workshop were reported by the participants as appropriate and relevant in meeting the educational and training needs of the participants. Different strategies such as Utilizing reflective practices in planning / implementation and teaching activities were proven effective in raising confidence of the participants in online teaching.

Limitations

Certain limitations of the current study highlight the importance of future research on this topic. Firstly, a total of 130 faculty members participated in the study but the data of only 70 participants were retained because of their completion of the pre-and-post assessment questionnaires and attended workshops on both days (response rate = 53%). The dropout rate was high due to academic responsibilities and time constraints and therefore the course design, delivery, and outcome may not be generalizable to other educational settings.

Secondly, the participants were recruited from various campuses of Riphah International University (Lahore Campus, Al Mizan Campus, Malakand Campus, Faisalabad Campus). Other public and private universities could also be approached but due to the lockdown, the consent from other universities and engaging their faculty members was challenging. Thirdly, the study was based on the self-administration of questionnaires, therefore, it is not possible to rely completely on the self-reported data. Furthermore, participants' engagement in online teaching activities; their cognitive, social, and emotional development was not directly monitored and evaluated.

Recommendations

Further research needs to be conducted with a more representative sample of faculty members of both public and private sectors and replicate the study in different settings. Quasi-experimental designs can also be employed to explore teachers' development and for a better understanding of the impact of online teaching programs. The long-term impact of the outcome of the workshops can be monitored directly by collecting students' feedback and other collateral evaluation. This Online teaching course can also be adapted for the student population as well to equip them with Online learning skills.

References

Anderson, D. L., Standerford, N. S., & Imdieke, S. (2010). A self-study on building community in the online classroom. *Networks: An Online Journal for Teacher Research*, *12* (2), 261-261. Retrieved from http://journals.library.wisc.edu/index.php/networks/article/download/261/392.

Afshar, H. S., & Doosti, M. (2016). Investigating the Impact of Job Satisfaction/Dissatisfaction on Iranian English Teachers' Job Performance. *Iranian Journal of Language Teaching Research*, *4* (1), 97-115. Retrieved from https://eric.ed.gov/?id=EJ1127427 .

Assadi, N., & Murad, T. (2017). The Effect of the Teachers' Training Model "Academy-Class" on the Teacher Students' Professional Development from Students' Perspectives. *Journal of Language, teaching and research, 8 (2).* Retrieved from http://academypublication.com/ojs/index.php/jltr/article/view/jltr0802214220 .

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84* (2), 191-215. doi:10.1037/0033-295X.84.2.191.

Bender, L. (2020). *Key Messages and Actions for COVID-19 Prevention and Control in Schools.* Retrieved from https://www.google.com/aclk?sa=L&ai=DChcSEwjOpPOzqeHpAhWVFEKHdHzD4QYABABGgJ3cw&sig=AOD64_0YoqtQnV70et4wIhtN0kuH_z1Q&q=&ved=2ahUKEwjEpOmzqeHpAhUDExoKHVt3AroQ0Qx6BAgMEAE&adurl.

Corry M., & Stella, J. (2018). Teacher self-efficacy in online education: A review of the literature. *Research in Learning Technology, 26.* Doi: 10.25304/rlt.v26.2047.

Hampton, D., Culp-Roche, A., Hensley, A., Wilson, J., Otts, J. A., Thaxton-Wiggins, A., & Moser, D. K. (2020). Self-efficacy and Satisfaction with Teaching in Online Courses. *Nurse Educator, 45* (6), 302-306. doi: 10.1097/NNE.0000000000000805.

Hoyos, J. E., & Cano, L. H. (2016). E-moderating and e-tivities: The implementation of a workshop to develop online teaching skills in in-service teachers. *PROFILE Issues in Teachers' Professional Development, 18* (1), 97-114. Retrieved from http://dx.doi.org/10.15446/profile.v18n1.44269.

Herrington, J., Reeves, T., & Oliver, R. (2010). A guide to authentic e-learning. New York, NY: Routledge.

Khalid, L. (April 30, 2020). *COVID-19 and educational crises.* Pakistan Today. https://www.pakistantoday.com.pk/2020/04/30/covid-19-educational-crises/ .

Khan, A. A., Niazi, S., & Saif, S. K. (2020). *Universities unprepared for switch to remote learning.* University World News. https://www.universityworldnews.com/post.php?story=20200326141547229 .

Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago, IL: University of Chicago Press.

Latif, A. (2020). *Pakistan: Pandemic leaves education in limbo. The country disregarding surging cases to ease lockdown but little clarity on the future of the academic activity.* Retrieved from https://www.aa.com.tr/en/asia-pacific/pakistan-pandemic-leaves-education-in-limbo/1846602.

McQuiggan, C. A. (2012). Faculty development for online teaching as a catalyst for change. *Journal of Asynchronous Learning Networks, 16*(2), 27-61. Doi: 10.24059/olj.v16i2.258

Macdonald, J. (2004). Developing competent e-learners: The role of assessment. *Assessment and Evaluation in Higher Education, 29* (2), 215-226. http://dx.doi.org/10.1080/0260293042000188483.

Price, J. M., Whitlatch, J., Maier, C. J., Burdi, M. & Peacock, J. (2016). Improving Online Teaching by Using Established Best Classroom Teaching Practices. *The Journal of Continuing Education in Nursing, 47*(5), 222-227. Retrieved from https://doi.org/10.3928/00220124-20160419-08.

Rassool, G. Hussein. (2010). *Teaching Confidence Scale: Pilot Studies and Testing*. Lahore: RICPP.

Reimers., F, Schleicher., A. Saavedra, J., & Tuominen, S., (2020). *Supporting the continuation of teaching and learning during the COVID-19 Pandemic Annotated resources for online learning.* Retrieved from www.oecd.org/education.

Richards, C. (2005). The design of effective ICT-supported learning activities: Exemplary models, changing requirements, and new possibilities. *Language Learning and Technology, 9* (1), 60-79. Retrieved from http://llt.msu.edu/vol9num1/richards/.

Salmon, G., & Wright, P. (2014). Transforming future teaching through "Carpe Diem" learning design. *Education sciences, 4*(1), 52-63. http://dx.doi.org/10.3390/educsci4010052.

Yusnita, Y., Eriyanti, F., Engkizar, E., Anwar, F., Putri, N. E., Arifin, Z., & Syafril, S. (2018). The Effect of Professional Education and Training for Teachers (PLPG) in Improving Pedagogic Competence and Teacher Performance. *Journal of education and teacher training, 3* (2). doi: https://doi.org/10.24042/tadris.v3i2.2701

Ye, He. (2014). Universal design for learning in an online teacher education course: Enhancing learners' confidence to teach online. *MERLOT Journal of Online Learning and Teaching*, *10* (2), 283-298. Retrieved from http://www.oecd.org/ education/Supporting-the-continuation-of-teaching-and-learning-during-the- COVID -19-pandemic.pdf