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Transition to blended learning: Teachers' pedagogical beliefs, practices and challenges

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ABSTRACT

The purpose of this study was to explore the teachers' transition towards blended learning in Pakistani higher education and to investigate the perceptions about the transition of pedagogical beliefs and challenges that teachers faced during the transition. Prior to the pandemic, higher education institutions began with traditional (physical) instruction. Due to a sudden outbreak, universities were forced to adopt an online mode. The system of dual-mode both from face-to-face and online mode during the situation of COVID 19. The gap was covered by exploring teachers' experiences, pedagogical beliefs, and challenges regarding pedagogical practice in the online mode of blended learning. The transition of instructors towards an online mode of blended learning was confronting. As the instructor transitioned to blended learning, the role of the teacher, work distribution, teacher identity, and pedagogical approaches changed. When a teacher moved, it redesigned their courses. This often results in teachers' facing challenges regarding pedagogical practices due to the changing role of the teacher in online mode. The research study adopted the quantitative approach survey method and was used for data collection from faculty members of public and private universities in Lahore. The sample for this study consisted of 200 faculty members from public and private universities in Lahore. Five public and three private universities were chosen by random sampling and, using stratified sampling, the departments of universities were selected from which 179 teachers (85 male and 95 male) returned the questionnaire, which had a response rate of 90%. The instrument that was adapted by the studies (Marek et al., 2020) and (Hang and Chou, 2015) got permission from both researchers. Through pilot testing to ensure the reliability of the instrument. This questionnaire was tested on fifty university teachers in this study. The overall Cronbach Alpha value of the survey questionnaire was 0.791. Descriptive statistics were used to calculate the frequencies, mean, median, IQR, and SD, while inferential statistics were used to find out the significant differences by using one-way ANOVA and an independent samples t-test. The findings of the study showed that higher workloads and stress were experienced by teachers when they transitioned toward an online mode of instruction. Teachers desired change and adaptability if they were given the opportunity to switch to online classes the next semester. Due to this sudden shift to online mode, teachers showed a higher level of readiness to switch their classes to online mode. Those teachers who had prior experience of teaching online courses or blended learning modes were very comfortable and eased the transition to online mode. The finding revealed that the transition of pedagogical beliefs was medium-level as perceived by teachers, but teachers were more confident about their transition of pedagogical beliefs by integrating the PowerPoint presentation, shared learning materials through the institutional management system (LMS), and face-to-face teaching was successfully carried out through synchronous video. This study also reported that faculty members faced the challenges of assessment designer, social supporter, and technology facilitator. Higher education institutions should facilitate mentoring and theory-based training for instructors that are concerned about instructional technology and online pedagogy. This training is not only necessary in any natural disaster or crisis, but there is a need more training about the use of technology integration in teaching as a standard part of teacher professional development.

Keywords: *blended learning, teachers' experiences, challenges, pedagogical practices, teacher transition towards blended learning*

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Introduction

Cohen and Kupferschmidt (2020) advocated educational institutions as the center of the teaching-learning environment and social interaction between individuals and social groups. For safety precautions, educational institutions have closed to control the spread of COVID. According to the UNESCO (2021) reports, about 200 countries have closed their institutions temporarily to prevent the transmission of the virus. The instruction given by WHO to maintain social distance made it difficult to deliver and impart knowledge physically in educational institutions. During the outbreak of COVID, educational institutions changed the landscape of their teaching and shifted to an online mode (Usmani, 2021). Most institutions have mostly replaced face-to-face teaching with blended learning or online learning (Mail & Lim, 2021). To meet the requirement, universities have designed effective ways and methods of communication for both face-to-face and online teaching. For this purpose, different communication tools of application and interactive online classes generated active learning. This approach to teaching and learning is known as blended learning (Irum et al., 2020). In order to better serve during the outbreak of the COVID situation, teachers try to adapt to the new situation of teaching. E-learning is considered the best solution of this situation (Alsarayreh, 2020), fastest growing trend as online education (Grabe, 2020).

Since the late 1990s, blended learning is frequently used in Cooperate training, higher education and K-12 education. During the intervening years, it has gained in popularity. Different researchers and authors defined blended learning in different ways, some referred are umbrella term as used to described other blends such as combination of online & traditional classroom teaching, different instructional methods & modalities, different pedagogical approaches, Due to different interpretation of this term there is some confusion about what it means. What exactly do we expect when we say "blended learning"? The interchangeable terms such as mixed mode, multi-mode , integrated learning and Hybrid learning to describe the blends traditional learning and online teaching but blended learning the dominant label is always used for represented combination of traditional classroom setting and online learning in an educational platform (Moskal et al., 2013). Due to the sudden change by COVID, 19 universities confronted many problems. Universities had to buy the software required for online mode and have good infrastructure to be able to successfully implement this system, but students from remote areas encountered numerous difficulties during the online system. Hybrid or blended learning was chosen by universities. Furthermore, online learning, virtual learning, and mobile learning are terms that are included in blended learning (Usmani, 2021). In this study, universities in higher education have been pushed into online mode due to the outbreak of COVID-19. A virtual environment has been created and the student has become the virtual learner. To fulfil the requirements of learning, universities have prepared themselves for both modes of instruction, either online or face-to-face teaching. To optimize learning and provide a better way to communicate between teachers and students, different communication technologies and interactive online tools are employed.

By taking Blended learning can be describes as organic blended of complementary face-to-face & online technologies and approaches in a thoughtful manner e.g., traditional learning with web-based approaches and technologies, major continuum of traditional setting to online learning (Garrison & Kanuka, 2004; Graham, 2006; Watson, 2008).

In this study we mean by blended learning is a environment that is integration of traditional classroom setting and on line- instructions or learning activities. Blended learning was top trends to delivered knowledge, argued by American Society for Training and Development. Due to COVID-19 Universities in the Higher Education have pushed into online mode from face-to face teaching. Instructors are adopted this blended learning approach through 'Blended course'. Allen and Seaman (2010) described as blended courses should delivered in combined online and in-person mode of learning. A significant portion of content can be delivered through online discussion and reduced classroom hours (Allen & Seaman, 2010). Blended learning as the pedagogical approach that incorporated classroom's effectiveness, opportunities of social interaction in online environment, the

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active learning environment can be enhanced with the digital technologies rather than amount of instruction delivered (Dziuban, Hartman & Moskal, 2004).

Several previous types of research (Concecao, 2006; Choi & Park, 2006) have shown that online teaching is found to be valuable but those who are novice appear to report the workload, challenges related to technology, measuring student's outcome, communication with students and organized the synchronous session. These issues are commonly found in any transition to online teaching. In an emergency, as in the case of COVID-19, several of these challenges have exacerbated that experienced by online teachers under normal circumstances. In general, the instructors shared their experience when they had moved to online teaching (Marshall, Shannon & Love, 2020). A study conducted by Martin et al., (2005) Instructors' role is considered an important role in paradigm shift regarding course designer, facilitator, mentor, subject matter expert and task that performed by online instructor in course design and teaching (Liu et al., 2005) stressed the pedagogical role which include interaction facilitator, Course designer, Profession inspirer & feedback giver, this study had explored the challenges and issues when teachers had performed an online role.

Objectives of the study

The purpose of this study to get perceptive of faculty members regarding experiences that shifted from face-to-face teaching to online teaching and challenges faced by teachers in their pedagogical practices. The objective/s of the study follows

1. To explore the transition towards blended learning related to teachers' experiences, pedagogical beliefs, and challenges regarding pedagogical practices in Pakistan Higher Education.

Research Questions

For this study, the following research questions were addressed:

1. How teachers experienced the transition from face-to-face instruction to online teaching?
2. What teacher thinks about their transition of pedagogical beliefs in blended learning?
3. What were the challenges teachers faced about pedagogical practices during the transition towards blended learning?

Literature Review

Blended Learning

Since the 1990s, blended learning has become a common feature of higher education. In recent years, blended learning is adopted in corporate training, higher education institutions by providing at least some in blended mode. Many researchers assumed that BL Perverseness in higher education would be "emerge as the predominant model of the future" (Waston, 2008). Some described to 'new traditional model" (Rose & Gage, 2006) or "new normal" (Norberg, Dziuban, & Moskal, 2011), Used of blended in pedagogical model might be unnecessary, Specially in Higher education such Mixture are 'Norms and unblended pedagogic situation could be questioned and explored (Oliver & Trigwell, 2005).

In both, the term "Blended learning" is frequently used in Corporate and Academic areas. Rooney (2003) defined blended learning was most top trends that have been identified by the American Society for Training and Development (ASTD) that comes out knowledge delivery industry

Above two definition modalities of instruction versus instructional methods reflected debate on learning because those defined BL in a broader way that all virtual learning system and distance learning are corporate so it was very difficult to find any learning system in which methods and media

were not included (Bonk & Graham, 2006). “Blended learning systems combine face-to-face instruction with computer-mediated instruction” (Graham, 2006). It consisted two traditionally distinct models: typical F2F systems of learning and asynchronous systems. Blended learning emphasized main role of computer technologies and approaches as well (Graham, 2006). Garrison and Vaughan (2008) proposed the BL as organic combination of intelligently chosen and selected face to face & online approaches and technology can be described as blended learning. Garrison and Kanukan (2004) suggested the blended learning are used in a manner that is integrated into selected traditional classroom as well as online learning experiences thoughtfully.

They proposed firstly blended learning would be separated from fully online or enhanced classroom learning experiences. But researchers were not sure so much about how little or much-blended learning is inherent by online learning. According to Garrison and Kanukan (2004) argued that Blended Learning as basic restructuring & reconceptualization of dynamic of teaching & learning, different situational needs, and consideration. That's why not two blended learning designs are the same (Garrison & Kanukan, 2004).

Driscoll (2002) described Blended learning into four concepts, combining web-based technology mode, where educational goals can be completed. Integrating pedagogical approaches with or without instructional technology to optimize their learning, Instruction technology is corporates with f2f instructor-led training, integrating actual job task with instructional technology, On the order hand, she may be argued that different people perceived the meaning of Blended learning in a different way which “illustrates the untapped potential of blended learning” (Driscoll, 2002).

Past studies discussed many reasons to choose blended learning by different instructors, students, and trainers than other learning options. They also proposed basic six explanations such as social interaction, Cost effectiveness, Pedagogy richness, Ease of revision, personal agency and access to knowledge that why chosen or used in blended learning system (Osguthorpe & Graham, 2003). the most common reason that provided in Literature of Blended learning that combined “the best of both worlds". Graham et al., (2013) has explained three reasons like to increased flexibility, cost effectiveness has increased and pedagogy to be improved that why people chose to BL. The Blended approach always based their pedagogy on the belief that to take some benefits of online methods as well as face-to-face interaction in learning experience.

Teacher Attitude and Conception Toward Blended Learning

Bijeikiene, Rasinskiene and Zutkiene (2011) conducted qualitative studies “Teacher’s attitude uses of blended learning in General English” at Vytautas Magnus University (VMU). The researchers had discussed language teachers’ experiences and their practices in teaching-learning with the application of ICT and attitude towards the blending courses that ranged from A1 TO B2, which is created at a foreign language center. The objective of the study explored the challenges of the integration of ICT and raised the quality of English language teaching that depended on appreciation and awareness with ICT. The questionnaire and interview are taken from 24 teachers at VMU. The researchers found that language teachers had showed positive attitude towards blended learning and especially appreciates that aspect of blended learning which related to students' autonomy and independence in their learning. The researchers found that language teachers are complemented with the application of ICT into language teaching (Interactive test, language laboratory multimedia in class multimedia, but teachers are necessary to improve in computer skills that are guaranteed productiveness and effectiveness of blended learning teaching and learning. But some language teachers discussed their doubts concerning the discussion and consultation in the virtual environment activities (Bijeikiene, Rasinskiene & Zutkiene, 2011).

Benson, Anderson and Ooms (2011) carried out research about perspective of teacher's adoption of blended learning practice in the United Kingdom. This study aimed at the academic staff perspective

and attitude and current practice of academic learning. This study is qualitative in nature and case study methodology was used by collecting data through the semi-structured interview with 16 staff members that delivered in 36 business modules. This study explored the variety of factors that influenced the adoption of technology but staff members embraced technology, quality enhancement, achieved differentiation, supporting teaching and learning. This study highly reported the technology on the effectiveness of class communication, access to learning, and general management of students. Three distinct approaches emerged from the analysis of blended learning practice 'Technology for all', 'Bolt-ons' and 'Purely pedagogy' (Benson, Anderson, & Ooms, 2011).

A qualitative study about 'Teacher conceptions of blended learning, blended teaching, and associations with approaches to design'. The participant of this study has selected from two research-based campuses at Australian universities. The data was collected from 22 teachers through interviews. Their responses were analyzed into four qualitative categories of approaches and conceptions. This study also investigated the association amongst several categories of conceptions and approaches to design by taking the outcome of distribution together. This study showed the significant relationship between blending learning and teaching to support student learning. The result of the study showed that teacher conception of blended learning not only focused to achieved learning outcomes by using technological media but also support the critical investigation of students. To develop ideas and understanding of students by association with the conception of blended teaching (Ellis, Steed, & Applebee, 2006).

A literature reviewed by Kebritchi, Lipschuetz and Santiague (2017) about Teacher's issues and Challenges about teaching Online Courses synthesized by scholars of past studies and indicated the problems of the online training courses. The literature review used Cooper's method to identify challenges in three categories; teacher issues, curriculum creation issues and online learners. The challenges raised by teachers include the preparation of learners, their identification and their engagement. Teachers face problems such as changing teachers' positions, changing from face to face to internet, different teaching styles & time management. The contents concerns included the involvement of content production educators, content integration multimedia integration, the role of content development instructional plans and content development considerations. In order to overcome these issues, higher education institutions needed professional development for instructors, learning facilities for learners and technological assistance of curriculum development. (Kebritch, Lipschutez & Santiague, 2017).

A phenomenology study by (Bailey & Card, 2009) which investigated the effective pedagogical practice for online teaching. This study described the perception of experienced and award-winning E-learning instructors of South Dakota. This study also reflected theories and practices from the literature of college teaching. Chickering and Gamson (1987) had identified seven principles of good practice in undergraduate education also considered for effective online teaching. These principles were also identified for online good practice from different studies cited in different studies. Researchers conducted one-on-one interview explored the eight pedagogical practice emerged from data analysis, 'Fostering relationship. The organization, Technology, Engagement, Communication, Timeliness, High expectation and Flexibility' (Bailey & Card, 2009). Ryan, Carlton and Ali (2004) identified the following six aspects of online education that must be taken into account as teachers move from face-to-face learning settings to online classrooms: the management of professional position problems, the redevelopment/rethinking of classes, the management of connectivity, the creation of relationships, the management of time and technical approaches.

Challenges regarding Pedagogical Practices

Rasheed, Kamsin and Abdullah (2020) conducted a systematic reviewed that aimed to explored those challenges that had faced in the online component. A synthesis review was conducted which aimed to identify the challenges that have faced instructors, educators and institutions in the online component

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of blended learning. According to researchers, many studies have shown several issues that are occurred in blended learning but not accurately highlighted the problems that faced in online components. The challenges that students had faced are Self-regulation challenges, problems about Technological Literacy, Complexity, learners' problems of Isolation, Challenges in Technological Sufficiency, Technological Competency are explored by systematic literature review. The first category of teachers problems are reported in online components of blended learning is 1-'Teacher's technological literacy & competency challenges' while more studied defined challenges that underlying this category, lack of confidence, willing to learn technology, teachers lacks of experiences with creating instructional content on LMS, time management, teachers technological illiteracy, reluctant to used new technology , Challenge that faced students that are training in an online materials and effective approaches, Technological anxiety are explored from several types of research have reported in technological literacy of teachers. The other challenges faced by teachers are 2; Challenges of online videos, Technological & Operational Challenges, Teacher's Beliefs Challenges that had faced in the online component of blended learning. Educational institution's challenges are Technological Provision, Teachers Training Challenges are highlighted from different articles (Rasheed, Kamsin & Abdullah, 2020).

Vaughan (2007) presented students, teachers, and administrator's challenges that have been faced in blended learning in higher education. He explored the problems that are time shortage, support from institution, and facilities of course design, willing to acquire new technology and teaching skills, associated with delivering a course are those factors instructors have faced in developing a blended course. One major challenge, defined by Yang and Cornelious in 2005, is to redesign learning to a constructionist style as teachers transition from a predominantly instructor-led, atmosphere to an online environment. This also leads transition in: Teacher presence, their role, and responsibilities, relationship, Use of technology, and fear about prestige (Yang & Cornelious, 2005).

Abid et al. (2021) conducted a qualitative study that explored the experiences of faculty members about online teaching for the first time during a pandemic. Through interviews, the data was collected from teachers of different universities in Pakistan through thematic analysis. Themes emerged Gender and culture-related problems, online teaching challenges, teachers adopted coping strategies, teaching effectiveness, and instructors' perception of post-Covid's The researchers investigated the different aspects in terms of educational, psychological, and socio-cultural issues. During online teaching, the major challenges that instructors faced were teaching stress, lack of student engagement, and a need for teacher training that enables them to deliver knowledge efficiently. When faculty members shifted to online mode, their gender responsibilities and expectations were heightened. The majority of female faculty members discovered that they were assigned additional responsibilities such as housework in addition to online teaching. According to the findings of the study Abida, Zahid, Shahid and Bukhari (2021) when working from home, male participants did not have any dual responsibilities or roles as female participants (Abida et al., 2021). Differences in achieving a balance between education and technology were identified by both experienced and new instructors. Furthermore, faculty opted for a blended learning approach and raised their understanding of global and future concerns (Abida et al., 2021).

Research Methodology

By using random sampling from the population, eight universities were taken as the sample of study from Lahore, which was almost 33%.
By using a stratified sampling technique, the sample of teachers was selected from public and private universities in Lahore. Taherdoost (2016) proposed that when a population has a lot of variation, stratified sampling is frequently employed. The population is divided into different subgroups, or strata, and then each subgroup is selected by a random sample. The researcher formed strata (education and economy) in this study on the basis of the same department of public and private universities in

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Lahore. The demographic characteristics of teachers (sector, gender, teaching experience, prior experience in the course taught in online or blended learning, faculty rank, undergraduate and post-graduated classes have shifted to online mode).

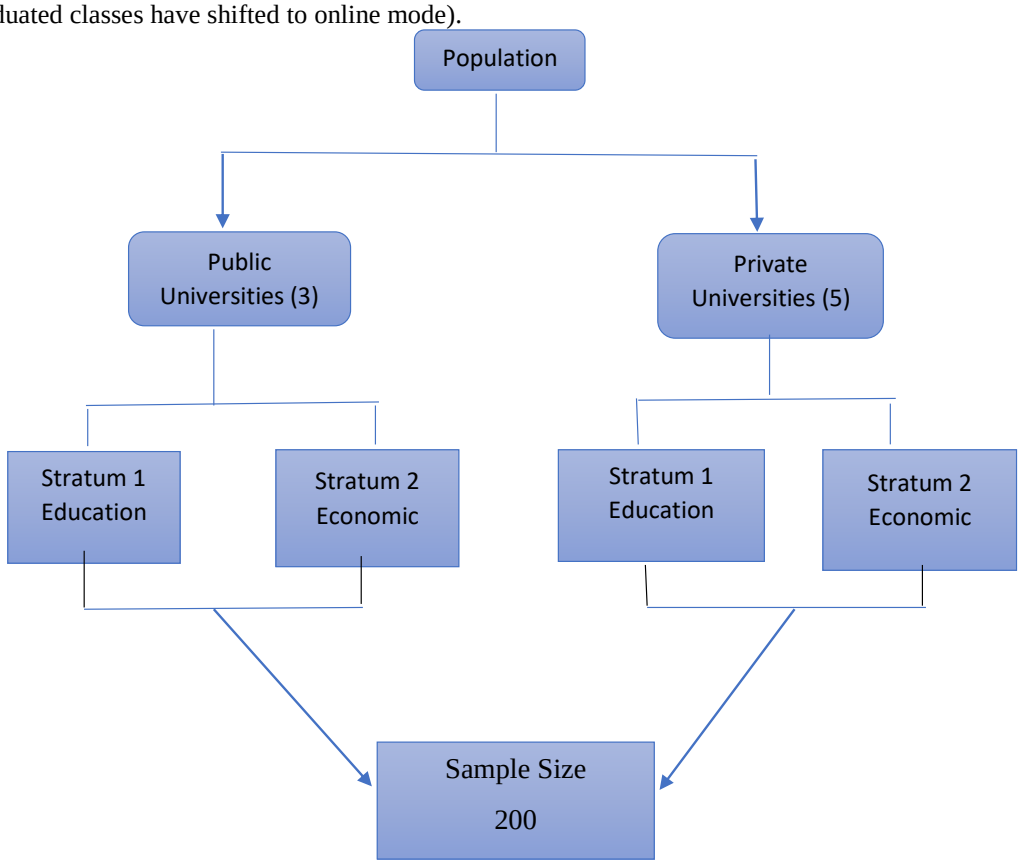

Figure 1: ***Sampling Framework***

Instrumentation

The adapted of three questionnaire from the literature review studies (Marek et al., 2020: Prestridge, 2020; Jimoyiannis et al., 2021; Johnson et al., 2020; Hung & Chou, 2015). on five-point Likert type scale was used for this study. It consisted of four parts: Part I was about teachers' demographic variables such as gender, Sector, Teaching level, faculty rank and years of teaching etc. The second part related to the teachers 'experiences toward transition to online mode instruction. third part consisted of statements related to teachers 'perception about transition of pedagogical beliefs, and fourth part included questions about teachers' challenges faced regarding pedagogical practices in online mode

Table 3.1:
Illustration of the Rating Scale Applied for Data Collection

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

It was a 5-point Likert scale that measured the responses of the faculty members, from strongly disagreed to strongly agreed. It had a value of 1 for strongly disagreeing and 5 for strongly agreeing. The Likert scale defined a range for below average, average, and above-average as well as the level of faculty members' responses.

Validity and Reliability

To check the validity of the survey questionnaire, it was sent to an expert for feedback. An expert gave some suggestions for changes after thoroughly reading the questionnaire. These changes were made by researchers. After feedback from a language expert, the questionnaire was finalized for data collection for this study. through pilot testing to ensure the reliability of the instrument. This questionnaire was piloted on fifty university teachers in this study for this purpose. The test of Cronbach Alpha was used in SPSS. The Cronbach Alpha = 0.742 for the items that measured teachers' experience towards

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transition to online mode instruction, = 0.774 for the items that measured teachers' perception of transition of pedagogical beliefs, and = 0.847 for the items measuring challenges faced by teachers regarding transition of pedagogical practices in online mode. The overall Cronbach alpha was =0.791

Analysis

The researcher ran a series of ANOVA and Post Hoc tests to find out the significant difference by comparing the constructs Teacher experience, Pedagogical beliefs and pedagogical practices to different level of demographic categories

Table1: One Way ANOVA on Teacher experiences towards transition to online mode among years of teaching

	Sum of Squares	Mean Square	F	*p*
Between Groups	4.208	1.052		
Within Groups	42.363	0.243	4.321	0.002
Total	113.587			

* p<0.0

The above table showed that there was significant difference of teachers experiences towards transition of online mode of instruction across the level of years of teaching, F (4174) = 4.321, p < 0.05. A follow up procedure using Tukey post-hoc test was used to determine which category of instructional mode was different.

Post hoc test (Tukey's)

Years of teaching	Years of teaching	Mean Difference	*p*
1-5	16-20	-.53056*	0.001
6-10	16-20	-.50777*	0.004

* *p*<0.05

The above table post hoc Tukey test showed that the mean difference (-.53056 & -.50777) between respondents of 1-5 and 16-20 years of teaching, and respondents of 6-10 years of teaching and 16-20 years of teaching were significant at p<0.05 respectively

Table 2: One Way ANOVA on Teacher experiences towards transition to online mode and transition of pedagogical practices among number of online courses through blended or online course prior to the Covid-19 situation

Construct Demographic Category		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig**
Teacher Experiences Number of online courses	Between Groups	1.813	4	.453	3.342	.01
	Within Groups	23.601	174	.136		
	Total	25.414	178			
Pedagogical Practices Number of online courses	Between Groups	3.169	4	.709	3.835	.00
	Within Groups	39.251	174	.208		
	Total	39.447	178			

The above table 4.13 illustrated that there was significant difference of teacher experiences toward transition to the online mode of instruction among the categories of online course through blended or online mode prior to the covid 19 situation F (4174) = 3.342, p < 0.05. A follow up procedure using post-hoc Tukey test was applied.

Post Hoc Test (Tukey)

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No of online Courses	No of online Courses	Mean Difference	*p*
Zero	Two	.27090*	0.009
Two	3+	-.3334*	0.005

* $p<0.05$

A Tukey post hoc test showed the significant difference of teachers experiences towards the transition of online mode on the no of online courses taught through blended or online mode. The mean difference (.27090 & -.3334) between zero course to two courses taught through blended or online mode, and teaching of two online courses between 3 or more than courses were statistically significant at $p < 0.05$ respectively. The above table 4.20 illustrated that there was significant difference of teacher challenges faced regarding pedagogical practices toward transition to the online mode of instruction among the categories of online course through blended or online mode prior to the covid 19 situation $F (4174) = 3.459$, $p < 0.05$.

Table 3: One Way ANOVA on Challenges faced regarding pedagogical practices among medium of instructional mode.

	Sum of Squares	*Df*	Mean Square	F	*p*
Between Groups	1.895	2	.948	4.442	0.013
Within Groups	37.552	176	.213		
Total	39.447	178			

* $p<0.05$

The above table showed that there was significant difference of challenges faced regarding transition of pedagogical practices among the category of instructional mode, $F (2176) = 4.442$, $p<0.05$. A follow up procedure using Tukey post-hoc test was used to determine which level of instructional mode was different from the other.

Post-hoc Tukey test

Mode of instruction	Mode of instruction	Mean Difference	*p*
Synchronous	Asynchronous	.25896*	0.04
Asynchronous	Combination of both	-.23504*	0.017

* $p<0.05$

The above table post-hoc Tukey test showed that the significant difference among the medium of Synchronous, Asynchronous and Combination of both modes. The mean difference between synchronous mode (p .005) and asynchronous mode further than the mean difference between asynchronous mode and combination of both mode ($p = .002$) were statistically significant at $p < 0.05$. There was no statistically difference between the Synchronous mode and combination of both mode ($p= .867$).

Table 4: One Way ANOVA on Challenges faced regarding pedagogical practices among no of undergraduate classes that have shifted to online mode.

	Sum of Squares	*Df*	Mean Square	F	*p*
Between Groups	3.196	4	.799	5.069	0.005
Within Groups	36.251	174	.208		

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Total	39.447	178			

* p<0.05

The above table showed that there was significant difference of challenges faced regarding transition of pedagogical practices among the no of undergraduate classes that teachers have shifted to online mode, F (4174) = 5.095, p < 0.05.

Table 5: One Way ANOVA on teachers' experiences towards transition to online mode among no of undergraduate classes that have shifted to online mode.

	Sum of Squares	*Df*	Mean Square	F	*p*
Between Groups	1.813	4	.453	2.548	0.13
Within Groups	23.601	174	.196		
Total	25.414	178			

* p<0.05

The above table showed that there was significant difference of teachers' experiences toward transition to online mode among the no of undergraduate classes that teachers have shifted to online mode, F (4174) = 2.548, p < 0.05.

Table 6: One Way ANOVA on teachers' perception about transition of pedagogical beliefs among no of postgraduate classes that have shifted to online mode.

	Sum of Squares	*Df*	Mean Square	F	*p*
Between Groups	4.509	4	1.127	3.489	0.009
Within Groups	56.225	174	.323		
Total	60.735	178			

* p<0.05

The above table showed that there was significant difference of teachers' perception about transition of pedagogical beliefs among the no of postgraduate classes that teachers have shifted to online mode, F (4174) = 3.489, p = 0.009 < 0.05.

Table 7: One Way ANOVA on Challenges faced regarding pedagogical practices among no of postgraduate classes that have shifted to online mode.

	Sum of Squares	*Df*	Mean Square	F	*p*
Between Groups	3.755	4	.939	4.576	0.002
Within Groups	35.693	174	.205		
Total	39.447	178			

* p<0.05

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The above table showed that there was significant difference of challenges faced regarding transition of pedagogical practices among the no of postgraduate classes that teachers have shifted to online mode, $F(4174) = 4.576$, $p < 0.05$.

Findings and Discussion

The present research explored "transition towards blended learning in Pakistani higher education: teacher's pedagogical beliefs, practices and challenges. This study aimed to get perceptive of faculty members regarding experiences that shifted from face-to-face teaching to online teaching, what teachers think about transition of pedagogical beliefs and challenges faced by teachers in their pedagogical practices. The objective of this study is to explore the teacher's experiences toward the transition to online mode, the teacher's perception about the transition of pedagogical beliefs in online mode, Challenges faced regarding teacher pedagogical practices. The finding of this study helps to understand when faculty of higher education was shifted to online instruction mode from traditional mode how they experienced the transition, how their perception about digital pedagogical beliefs was changed during this transition and what challenges they were faced during transition regarding pedagogical practices.

The present research explored the "*Transition towards Blended Learning in Pakistani Higher Education: Teachers' Pedagogical Beliefs, Practices, and challenges*." This study aimed to get perceptions of faculty members regarding experiences that shifted from face-to-face teaching to online teaching, what teachers think about the transition of pedagogical beliefs and challenges faced by teachers in their pedagogical practices. The purpose of this study is to investigate teachers' experiences with transitioning to online mode, teachers' perceptions of transitioning pedagogical beliefs into online mode, and challenges encountered about teacher pedagogical practices. The findings of this study help to understand when faculty of higher education was shifted to online instruction mode from traditional mode, how they experienced the transition, how their perception of digital pedagogical beliefs was changed during this transition, and what challenges they faced during this transition regarding pedagogical practices.

There were 179 faculty members of public and private universities were participated in this study, most respondents were 117 lecturers, 49 assistant professor and 11 associate professors. This research study was quantitative in nature and data was collected through survey techniques. By using stratified sampling faculty members were selected from the public and private of Lahore. A self-developed questionnaire was used for data collection that consisted of two sections. The first section deals with demographic variables while the second part is further divided into three parts. The items in the part A included about teachers experiences towards the transition to online mode instruction, Part B related to teachers' perception about the transition of pedagogical beliefs and part c was related to challenges faced regarding teachers' pedagogical practices. The mean score of the questionnaire items was analyzed by Faqir et al. (2015). According to the scale, (0–2.49) is categorized as Blow Average, (2.50–3.49) is categorized as Average, and (3.50–5.00) is considered above average.

According to the findings of this study, the overall experience of teachers during the transition to online mode was average ($m = 3.38$, $SD = .41$). Opinion Of faculty members about the teacher's experiences towards transitioning to online mode in this data sample were quite diverse. The result has been confirmed based on sample means. The result indicated that although teachers showed positive behavior and were ready to switch to online teaching, they would not be as enthusiastic about transforming their online teaching because they understood it was required for the sudden outbreak of a pandemic for the safety of students as well as themselves regardless how difficult the conversion process was hard for them.

This study revealed that teachers experienced the amount of workload and stress during online mode of teaching. Faculty member are willing to make improvement and changes if they were continuing to online classes. Those teachers who had prior experience of teaching online courses or blended learning modes were very comfortable and eased the transition to online mode

This study also highlighted faculty perceived about students' experience were average towards online classes. The finding also exhibited that institution had not provided sufficient training and support as teachers.

The difference in mean score is found between the female and male faculty members based upon their experiences with the transition to the online mode of instruction.

There is no mean score difference between public and private sector responses regarding teacher experiences in online mode.

This study also highlighted a teacher's perception of the transition of pedagogical beliefs into an online mode. When teachers switched into online mode, they integrated technology into the online teaching and learning environment to facilitate the learner. The faculty members perceived medium degree of transition of pedagogical beliefs towards online mode. However, the teacher's view of power point presentations is that they are an effective way to teach efficient learning. The data that lay in the middle number showed that teachers' perceived understanding could be enhanced by multiple sources of teaching, whether they integrated digital pedagogies into their teaching or not. Different approaches and ways were used by teachers to optimize the students' learning. The teacher believed student learning was not fixed by place or any time. The abrupt switch to online mode Teachers has changed their mode of delivery through digital teaching. The learning management system software provided by the institution was helpful for virtual teaching. Teachers use this software to share materials with students, and face-to-face teaching is done through synchronous videos.

There was found no difference between male and female mean score of teacher's transition of pedagogical beliefs towards online mode. Both genders perceived similar about the transition of pedagogical beliefs.

There is no mean score difference between public and private sector of responses about teacher experiences toward online mode.

The study reported that teacher faced many challenges regarding pedagogical practice when they transitioned to online mode. The mean value of items showed that teachers faced the problem of "student engagement in critical and reflective thinking, having difficulty getting to know Student in online learning, difficult to timely feedback to student work and problems of designing exams questions. The median that lied in the middle number of data showed the consistent result of challenges regarding teachers' pedagogical practices.

There is no difference found between the female and male mean score regarding pedagogical practices during transition to the online mode of instruction.

There is no difference in mean score between the public and private sectors regarding teachers' challenges regarding the transition of pedagogical practices in online mode.

Discussion

The main purpose of this present study was to explore the transition towards blended learning in higher education: teachers' pedagogical beliefs, practices, and challenges. Data was collected from public and private universities of teachers in Lahore. Through stratified sampling techniques, teachers were selected from public and private teachers in Lahore. Due to COVID, students shifted to online mode, which became difficult for teachers and students. The teachers faced challenges with the emergence of instructional technologies and strategies.

The objective of the study was "to explore the teachers' experiences towards the transition to an online mode." The findings of this study highlight that higher work loads and stress are experienced by teachers when they transition toward an online mode of instruction. Teachers desired to changes and adaptability if they were given the opportunity to switch to online classes the next semester. Due to this sudden shift to online mode, teachers showed higher readiness to switch their classes to online mode. (Table 4.7). Those teachers who had prior experience of teaching online courses or blended learning modes were very comfortable and eased the transition to online mode. This has also been supported my finding, Marek et al., (2020), that explored the teachers' experiences converted to virtual learning during the pandemic, which showed the higher level of workload and average stress level experienced by teachers, as well as the positive response of faculty members when converted to virtual teaching. Another study by Austin er al., (2005) indicated that teachers of secondary school found workload and stress This heavy workload indicates a distorted work-life balance and time management concerns Another study that is parallel to the current study by Johnson, Veletsianos and Seaman (2020) stated that the majority of respondents that made their courses after a drastic change to online mode showed concern and support for their students; anxiety and stress felt by faculty respondents during the transition; engaging their students through productive work showed their students' support. The same finding that supported my research finding, conducted by Abida et al., 2021, that indicated teaching stress related to the delivery of online content. To create a balance between professional and personal life, it creates stress. Content preparation through multiple devices, selection of content, and making educational videos all contributed to creating stress. Furthermore, teachers showed their preparedness towards online learning and willingness for technological and pedagogical adaptation. Another result in favour of these current findings, a study by Aditya (2020), highlighted that teacher from different schools in Yogyakarta showed a perception of readiness with regard to pedagogical aspects, technological aspects, and psychological aspects. They perceived their readiness to conduct digital teaching.

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The objective of the study was to "explore the teachers' perceptions about the transition of pedagogical beliefs in the online mode of blended learning." The present study highlighted that teacher showed a good attitude regarding the transition of pedagogical beliefs towards the online mode. They were more confident about the PowerPoint presentation during this transition. Teachers had the strong belief that learning was not fixed by place or time. (Table 4.8). This concept has also been matched to the findings by Jimoyiannis et al., (2021), who concluded that the new teacher role and innovative pedagogical skills used in online learning had bridged the gap between interaction and communication with students during COVID 19. Another study by Mahaye (2012) concluded that through blended learning by using different techniques and strategies that enabled the students to interact with teachers and access the materials. The present findings of this study indicated that teachers' confidence could be enhanced through multiple sources of teaching. They thought that an LMS was the best platform for sharing their material during online teaching. The finding has also been supported by Usamni (2021), who concluded that technology plays a vital role in blended learning. She explored the role of LMS, where material is shared by teachers, interaction and communication with teachers takes place effectively, and it is easily assessable for students and instructors to enhance their teaching experiences. The study by Abida et al. (2021) indicated that teachers uploaded the learning materials on LMS and, through group discussion in an online environment, they are helpful to reinforce the student role in online learning. They were more confident about teaching through synchronous video. The same teacher's perception was part of the study by Kundu and Bej (2021), who explored the teacher's perception of digital pedagogies. The study also supported the same finding that teachers mentioned the 40 pedagogies that had been successfully implemented in virtual learning. 32 pedagogies that fell into synchronous teaching were found more suitable and effective for virtual learning. The finding also demonstrated that teachers have invoked multiple plates from Google Meet, Zoom, and Google Classroom according to the needs of the learner and contents that are delivered in online teaching. According to a case study of a private school conducted by Basilaia & Kvavadze (2020), the experience of implementing successful online education through Google Meet during the pandemic was beneficial to both teachers and students. Aditya (2020) explored that teacher conduct online discussions for effective learning of the students and also provide feedback on their learning. The majority of teachers were familiar with the use of learning management systems and Google classroom.

The objective of the study was to "*explore the challenges regarding teachers' pedagogical practices in an online mode."* The findings of this study highlighted that teacher faced problems engaging the students in critical thinking. Teachers also faced challenges regarding timely feedback of student work, student-teacher interaction, challenges in providing technical support, and challenges in the use of communication tools. The findings of the current study's "lack of instructor-teacher interaction" and "difficulty in timely feedback" were correlated by (Korkmaz & Toraman, 2020). Another study by Sunasee (2020) explored the instructor's challenges in the teaching of chemistry during a pandemic. He highlighted that it was a challenge for instructors to increase student engagement in the online teaching of chemistry during COVID. It has also been supported by my studies by previous study findings (Farooq et al., 2020) that found maintaining student engagement in online learning became challenging for teachers because teachers were unaware of the dynamics of teacher-learner interaction in an online environment, which is why it became challenging for teachers. Moreover, due to a lack of formal training, teachers faced the challenges of the online assessment. They were unfamiliar with designing, marking, and conducting online exams. The previous finding is in line with the current result of the study.

Conclusion

The integration of digital pedagogies into teaching built a new learning environment by using innovative strategies. Due to nescience with the online system, several teachers understood this sudden transformation of teaching as a threat or challenge. There is still a gap between faculty's opinions about the integration of technology and its implementation in an online context. The study of teacher perception is most important where online learning is considered a new phenomenon, especially in developing countries like Pakistan. Unfortunately, Pakistan is included in those developed countries that have yet to establish a systematic framework and comprehensive and broad infrastructure that facilitate online teaching and learning circumstances such as virtual classrooms.

The result indicated that although teachers showed positive behavior and were ready to switch to online teaching, they would not be as enthusiastic about transforming their online teaching because they understood it was required for the sudden outbreak of a pandemic for the safety of students as well as themselves regardless how difficult the conversion process was hard for them. Teachers experienced the amount of workload and stress during the transition toward online mode. The findings of this research concluded that gender makes differences regarding the teachers' experiences of transitioning to online mode instruction. The result highlighted that faculty members had a positive perception about the transition of pedagogical beliefs. When teachers switched into online mode, they integrated technology into the online teaching and learning environment to facilitate the learner. During this transition, they perceived positivity regarding pedagogical beliefs. Teachers' perceptions may be described in the context of the integration of technology when they transition towards an online mode as favoring or opposing the use of technology. Beliefs are assumptions or opinions about something that is held to be true. The decision about the integration of technology depends upon the teacher's beliefs.

The study showed the challenges that teachers faced during transition. It takes time to redefine pedagogical practices and professional identity. When teachers shift from traditional face-to-face teaching to the online mode of blended learning, they try to recreate existing course design and pedagogical approaches without any training. The replication of traditional methods of learning and teaching does not leverage the dynamic nature of digital or online learning environments, so some instructors failed to make a transitional shift in their teaching approach by creating a teaching-learning environment in which they disseminate information with students. The sudden transformation from traditional face-to-face teaching to online mode is quite challenging for faculty members especially those who were novices towards online mode. The main challenges that teachers faced in "Assessment designer", "Technology facilitator" and "Social supporter"

Recommendations

This study sheds some light on a topic that will be useful to future researchers. Here are some recommendations for faculty members, future researchers, and policymakers.

1. Every university must invest in an established IT department, technology tools, licensed software, and good servers for effective blended learning without any constraints.
2. The recommendation that is based on the study to enhance the effectiveness of online teaching suggests that higher education should offer a blended learning model across the universities and arrange professional development and formal training for faculty members to address the problems that are faced in the online mode of education.
3. The suggestion is based on the finding that faculty members should be equipped with technological skills to enhance student engagement by integrating synchronous and asynchronous teaching in blended learning.
4. The educational institution should be organized sequentially and continually to provide technological training about integrating digital technology into teaching and to introduce modern tools for the successful implementation of online learning
5. The present study adopted the quantitative approach to get the perceptions of faculty members about their experiences and challenges. More studies could be done to get in-depth insight using mix-method studies.

REFERENCES

Abid, T., Zahid, G., Shahid, N., & Bukhari, M. (2021). Online Teaching Experience during the COVID-19 in Pakistan: Pedagogy–Technology Balance and Student Engagement. *Fudan Journal of the Humanities and Social Sciences*, *14*(3), 367-391.

Allen, I. E., & Seaman, J. (2010). Class differences: Online education in the United States, 2010. *Sloan Consortium (NJ1)*.

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *The Journal of Asynchronous Learning Networks*, 5(2), 1–17.

Bailey, C. J., & Card, K. A. (2009). Effective pedagogical practices for online teaching: Perception of experienced instructors. *The Internet and Higher Education*, *12*(3-4), 152-155.

Benson, V., Anderson, D., & Ooms, A. (2011). Educator's perceptions, attitudes and practices: blended learning in business and management education. *Research in Learning Technology*, *19*(2), 143-154.

Bijeikienė, V., Rašinskienė, S., & Zutkienė, L. (2011). Teachers' attitudes towards the use of blended learning in general English classroom. *Studies about languages*, (18), 122-127.

Calderhead, J. (1996). Teachers: Beliefs and knowledge. (Eds.), Handbook of educational psychology (pp. 709–725). New York: Macmillannstruct. Rev

Castro, R. (2019). Blended learning in higher education: Trends and capabilities. *Education and Information Technologies*, *24*(4), 2523-2546.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE bulletin*, *3*, 7.

Conceição, S. C. (2006). Faculty lived experiences in the online environment. *Adult education quarterly*, *57*(1), 26-45.

Conrad, D. (2004). University instructors' reflections on their first online teaching experiences. *Journal of Asynchronous Learning Networks*, *8*(2), 31-44.

Cowan, P., Neil, P. S., & Winter, E. (2013). A Connectivist Perspective of the Transition from Face-to-Face to Online Teaching in Higher Education. *International Journal of Emerging Technologies in Learning*, *8*(1).

Czerniewicz, L., Trotter, H., & Haupt, G. (2019). Online teaching in response to student protests and campus shutdowns: academics' perspectives. *International Journal of Educational Technology in Higher Education*, *16*(1), 1-22.

Driscoll, M. (2002, March 1, 2002). Blended Learning: Let's get beyond the hype. eLearning, 54.

Dziuban, C. D., Hartman, J. L., & Moskal, P. D. (2004). Blended learning. *Educause Center for Applied Research Bulletin*, *2004*(7).

Effendi, H. (2019, February). Blended Learning Effectiveness in Improving Learning Access in Higher Education. In *5th UPI International Conference on Technical and Vocational Education and Training (ICTVET 2018)* (pp. 298-301). Atlantis Press.

Ellis, R. A., Steed, A. F., & Applebee, A. C. (2006). Teacher conceptions of blended learning, blended teaching and associations with approaches to design. *Australasian Journal of Educational Technology*, *22*(3).

Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration?. Educational technology research and development, 53(4), 25-39

Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). COVID-19 and remote learning: Experiences of parents with children during the pandemic. *American Journal of Qualitative Research*, *4*(3), 45-65.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, *7*(2), 95-105.

Graham, C. R. (2006). Blended learning systems. *The handbook of blended learning: Global perspectives, local designs*, *1*, 3-21.

Graham, C. R. (2009). Blended learning models. In *Encyclopedia of Information Science and Technology, Second Edition* (pp. 375-382). IGI Global.

Graham, C. R., & Allen, S. (2005). Blended learning environments. In *Encyclopedia of distance learning* (pp. 172-179). IGI Global.

Graham, C. R., Allen, S., & Ure, D. (2003). Blended learning environments: A review of the research literature. *Unpublished manuscript, Provo, UT*, 1-32.

Gurley, L. E. (2018). Educators' Preparation to Teach, Perceived Teaching Presence, and Perceived Teaching Presence Behaviors in Blended and Online Learning Environments. *Online learning*, *22*(2), 197-220.

Hrastinski, S. (2019). What do we mean by blended learning?. *TechTrends*, *63*(5), 564-569.

Hung, M. L., & Chou, C. (2015). Students' perceptions of instructors' roles in blended and online learning environments: A comparative study. *Computers & Education*, *81*, 315-325.

Jimoyiannis, A., Koukis, N., & Tsiotakis, P. (2020, December). Shifting to emergency remote teaching due to the COVID-19 pandemic: An investigation of Greek teachers' beliefs and experiences. In *International Conference on Technology and Innovation in Learning, Teaching and Education* (pp. 320-329). Springer, Cham.

Jimoyiannis, A., Koukis, N., & Tsiotakis, P. (2020, December). Shifting to emergency remote teaching due to the COVID-19 pandemic: An investigation of Greek teachers' beliefs and experiences. In *International Conference on Technology and Innovation in Learning, Teaching and Education* (pp. 320-329). Springer, Cham.

Johnson, N., Veletsianos, G., & Seaman, J. (2020). US Faculty and Administrators' Experiences and Approaches in the Early Weeks of the COVID-19 Pandemic. *Online Learning*, *24*(2), 6-21.

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, *46*(1), 4-29.

Khader, F. R. (2012). Teachers' pedagogical beliefs and actual classroom practices in social studies instruction. *American international journal of contemporary research*, *2*(1), 73-92.iew of educational research, 62(3), 307-332.

Korkmaz, G., & Toraman, Ç. (2020). Are we ready for the post-COVID-19 educational practice? An investigation into what educators think as to online learning. *International Journal of Technology in Education and Science (IJTES)*, *4*(4), 293-309.

Kundu, A., & Bej, T. (2021). COVID 19 response: An analysis of teachers' perception on pedagogical successes and challenges of digital teaching practice during new normal. *Education and information technologies*, 1.

Liu, X., Bonk, C. J., Magjuka, R. J., Lee, S. H., & Su, B. (2005). Exploring four dimensions of online instructor roles: A program level case study. *Journal of Asynchronous Learning Networks*, *9*(4), 29-48.

Mahaye, N. E. (2020). The impact of COVID-19 pandemic on education: navigating forward the pedagogy of blended learning. *Research online*.

Marek, M. W., Chew, C. S., & Wu, W. C. V. (2021). Teacher experiences in converting classes to distance learning in the COVID-19 pandemic. *International Journal of Distance Education Technologies (IJDET)*, *19*(1), 40-60.

Marshall, D. T., Shannon, D. M., & Love, S. M. (2020). How teachers experienced the COVID-19 transition to remote instruction. *Phi Delta Kappan*, *102*(3), 46-50.

Marshall, D. T., Shannon, D. M., & Love, S. M. (2020). How teachers experienced the COVID-19 transition to remote instruction. *Phi Delta Kappan*, *102*(3), 46-50.

Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, *42*, 34-43.

McQuiggan, C. A. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration*, *10*(3), 1-13.

Moskal, P., Dziuban, C., & Hartman, J. (2013). Blended learning: A dangerous idea?. *The Internet and Higher Education*, *18*, 15-23.

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era. *Pakistan journal of medical sciences*, *36*(COVID19-S4), S27.

Norton, L., Richardson, T. E., Hartley, J., Newstead, S., & Mayes, J. (2005). Teachers' beliefs and intentions concerning teaching in higher education. *Higher education*, *50*(4), 537-571.

Oliver, M., & Trigwell, K. (2005). Can 'blended learning'be redeemed?. *E-learning and Digital Media*, *2*(1), 17-26.

Orey, M. (2002, February). One year of online blended learning: Lessons learned. In *annual meeting of the eastern educational research association, Sarasota, FL*.

Osguthorpe, R. T., & Graham, C. R. (2003). Blended learning environments: Definitions and directions. *Quarterly review of distance education*, *4*(3), 227-33.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of educational research*, *62*(3), 307-332.

Perry, D., & Steck, A. (2019). Changes in faculty perceptions about online instruction: Comparison of faculty groups from 2002 and 2016. *Journal of Educators Online*, *16*(2), n2.

Prestridge, S. (2010, April). The alignment of digital pedagogy to current teacher beliefs. In *ACEC2010: Digital diversity conference*.

Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, *144*, 103701.

Redmond, P. (2011). From face-to-face teaching to online teaching: Pedagogical transitions. In *Proceedings ASCILITE 2011: 28th annual conference of the Australasian Society for Computers in Learning in Tertiary Education: Changing demands, changing directions* (pp. 1050-1060). Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).

Richardson, V. (2003) 'Preservice teachers' beliefs', in Raths, J. and McAninch, A.C. (eds.) Teacher Beliefs and Classroom Performance: The Impact of Teacher Education Greenwich, Connecticut: Information Age, pp. 1-22.

Rooney, J. E. (2003). Blending learning opportunities to enhance educational programming and meetings. *Association Managment*, 55(5), 26-32.

Stine, L. J. (2010). Teaching basic writing in a web-enhanced environment. *Journal of Basic Writing*, 33-55.

Tartavulea, C. V., Albu, C. N., Albu, N., Dieaconescu, R. I., & Petre, S. (2020). Online Teaching Practices and the Effectiveness of the Educational Process in the Wake of the COVID-19 Pandemic. *Amfiteatru Economic*, *22*(55), 920-936.

Usmani, S. (2021). COVID-19 Pandemic and Blended Learning: A Quantitative Assessment of Revised Community of Inquiry (RCoI) Framework. *Journal of Education and Educational Development*, *8*(2).

Valiathan, P. (2002). Blended learning models. *Learning circuits*, *3*(8), 50-59.

Vaughan, N. (2007). Perspectives on blended learning in higher education. *International Journal on E-learning*, *6*(1), 81-94.

Yang, Y., & Cornelious, L. F. (2005). Preparing instructors for quality online instruction. *Online Journal of Distance Learning Administration*, 8(1), 1–16.

Young, J. R. (2002, March 22). 'Hybrid' teaching seeks to end the divide between traditional and online instruction. Chronicle of Higher Education, pp. A33.

Zainuddin, Z., & Keumala, C. M. (2018). Blended learning method within Indonesian higher education institutions. Jurnal Pendidikan Humaniora, 6(2), 69-77.