EMPLOYEE READINESS TO CHANGE AT HIGHER EDUCATION LEVEL DURING COVID-19 PANDEMIC

BY

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DEDICATION

To

My beloved Muhammad ﷺ

My parents

Muhammad Zaheer & Nargis Zaheer

My Dearest Siblings

Muhammad Yasir, Umaiyah Zaheer, Ammad Zaheer

&

My Dearest Husband

Muhammad Adnan Abbasi

ABSTRACT

Title: Employee Readiness to Change at Higher Education Level during COVID-19 Pandemic

The COVID-19 pandemic forced schools and universities worldwide to adopt Online Teaching and Learning (OTL) rapidly. This shift highlights the importance of understanding educators' willingness to accept technology for teaching. Their technology acceptance behavior is a critical cognitive decision that impacts the quality and sustainability of online education. The present study was carried out to identify the level of faculty readiness for online teaching among faculty teachers in universities. The COVID-19 pandemic has led to the widespread adoption of online teaching, and it is crucial to understand the level of readiness among faculty teachers to effectively support them in this transition. The study employed a mixed-method research design with an explanatory sequential design, using stratified random sampling for the quantitative research and purposive sampling for the qualitative data. A sample of 350 faculty teachers from public sector universities in Rawalpindi and Islamabad were selected for the study and 16 teachers were selected for the qualitative study. The level of readiness was assessed using the major factors of UTAUT model developed by Venkatesh & Davis (2012), which was verified through exploratory factor analysis and confirmatory factor analysis. The results showed that the faculty teachers had a medium level of readiness for online teaching. Further analysis was carried out to examine the level of readiness based on gender, age, online experience, and job status. T-test analysis revealed no significant difference between male and female faculty members in terms of their level of readiness for online teaching. Analysis of variance (ANOVA) test results showed a significant difference among the four age groups, (25-34, 35-44, 45-55, 55 above) with younger and middle-aged faculty teachers exhibiting a higher level of readiness as compared to older faculty teachers (above 55). T-test results also revealed a significant difference between contract and permanent faculty members in terms of their level of readiness for online teaching. Contractual teachers are more willing for online teaching comparatively. However, the findings of the study provide insights into the level of faculty readiness for online teaching during the COVID-19 pandemic and highlight the impact of demographic factors on the level of readiness. In the result of qualitative study respondents highlighted the important factors of low and high readiness. High and low readiness factors may be useful for universities and educational institutions in developing strategies and initiatives to support faculty in transitioning to online teaching during pandemics or other

similar circumstances. Additionally, further research can be conducted to explore other factors that may impact the level of readiness for online teaching among faculty teachers. Universities may also provide adequate support and resources to faculty members, including technology and training, to facilitate their transition to online teaching. Additionally, institutions should encourage collaboration and peer support among faculty members to foster a positive and inclusive environment for online teaching. Furthermore, universities can conduct regular assessments of faculty readiness for online teaching to identify improvement areas and provide targeted support where needed.

Keywords: Faculty members, Covid-19 pandemic, Universities, Resources, TAUT, Readiness,

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LIST OF ABBREVIATIONS

Abbreviation	Terms
HEIs	Higher Education Institutions
HEC	Higher Education Commission
UTAUT	Unified theory of Acceptance and Usage Technology
DF1	Demographic Factor 1- (Gender)
DF2	Demographic 2-Age groups
DF3	Demographic 3-Online Teaching Experience
DF4	Demographic-4- Job Nature
DF2	Demographic 2-Age groups
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence
FC	Facilitating Conditions
HM	Hedonic Motivation
TPB	Theory of planned behavior
DIT	Diffusion of Innovation Theory
DTPB	Decomposition model (Theory of planned behavior)
SCT	Social cognitive theory
MM	Motivation Mode
MPCU	The Model of PC Utilization
TAM	Technology Acceptance Model
TAM 2	Extension of TAM
R	Correlation
SD	Standard Deviation
M	Mean
AVE	Average Variance Extracted
CR	Construct reliability
EFA	Exploratory Factor Analysis
CFA	Confirmatory factor Analysis
AMOS	Analysis of Moment Structures
QUAN	Quantitative
QUAL	Qualitative
ANOVA	Analysis of variance
α	Cronbach's

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The advancement and development of our world greatly depends on education. It acts as a powerful force for change, enabling individuals, communities, and entire societies to reach their full potential and contribute to economic and social growth. Learning is essential for personal and societal transformation, equipping individuals with the knowledge and skills needed to navigate new challenges.

In the Qur'an, it is said "And say: My Lord, give me more knowledge." (20:114), emphasizing the importance of seeking education in Islam. Education enables individuals to bring about positive changes in themselves and their communities.

In addition, The Holy Quran emphasizes the importance of change, stating "Unless people change, Allah will not change their condition," (Surah Al-Ra'd, 13:11). To keep pace with the rapidly changing world, higher learning institutions must also adapt and evolve. This often involves implementing organizational changes, such as updating policies and regulations, incorporating new technologies, and responding to changing demands and conditions (Durst, et al., 2023).

In this regard, the change model proposed by Kurt Lewin highlights the importance of considering both the forces pushing for change and the forces resisting it. According to Lewin's model, in order to change, the forces promoting it must be stronger than those defending the status quo. Understanding the challenges and opportunities associated in implementing change inside any organization, including the educational sector, is made easier with the help of this model.

Doherty (2012) made the observation with the recognition that the aforementioned model is more useful as a framework for comprehending the dynamics of changes in organizations. However, the success of a management program can be significantly impacted by the behaviors of employees toward the change (Beer and Nohira, 2000; Georgalis, 2015). Some employees may resist the change, while others may take it as a challenge, and a few may embrace it and make it work to their advantage. There could be various reasons behind this resistance, including a lack of readiness for change among employees, their inability to adopt new settings, and a lack of understanding about the change initiative (Vakola, 2013; Vakola, 2014; Kirrane, 2016).

Likewise, to ensure the successful implementation of change programs, it is important to assess the employees' willingness towards change. This can be done by considering their affective and cognitive readiness and their behavioral support for the change initiative (Mula & Pierro, 2022). Positive feelings about change, or affective readiness, are considered crucial for employees' preparedness. Additionally, cognitive readiness, or employees' positive thoughts and beliefs about the change initiative, is also important, as is their optimistic approach and willingness to support the change (Mardhatillah & Rahman, 2022).

In recent decades, adaptability has become crucial for achieving organizational change. Change management now plays a key role in assessing readiness for transformation. This approach focuses on preparing individuals for successful adoption (Zayim & Kondakci, 2015).

Haffar (2023) emphasized in his research study that, change in individual readiness can positively or negatively contribute to an organization's successful change implementation program. When adaptation to change remains minimal among

employees, it can become problematic for the effective adoption of transition within organizations. The way that people respond to change can have a big impact on how well a management program works. It is crucial to consider employees' affective, cognitive, and behavioral readiness to facilitate a smooth transition and minimize resistance. By assessing and addressing employees' readiness towards change, organizations can increase the chances of successful implementation of the change program (Mathur et al., 2023; Talaja, 2023).

The COVID-19 pandemic has significantly disrupted the worldwide education system, affecting about 94% of students in more than 190 nations, according to a recent UNESCO report (2020). This sudden shift has forced institutions to transition from traditional instructional practices to online teaching and learning methods. The change in conditions has also forced students and teachers to adapt to a new way of obtaining an education, learning from home through the use of technology. The shift to online learning has brought significant changes to the traditional methods of teaching prevalent in the education sector.

Additionally, the transition to online learning has had both positive and negative impacts. On the positive side, students and teachers have more flexibility and convenience in their learning schedules and can access educational materials from anywhere with an internet connection. However, on the negative side, both may experience difficulties with technology and a lack of personal interaction with teachers and classmates. It has been observed and predicted that students who belong to low stratum will have limited or partial access to the available sources in the postmodern world full of advanced technology set out for learning, particularly online learning is the diversified approach (UNESCO, 2020a).

In this phase of COVID-19, worldwide educators highlighted the importance

of preparing for future interruptions in education and the need for institutions to have contingency plans in place. It has also emphasized the need for equal access to technology and resources for all students, regardless of socioeconomic status (Mansor et al., 2020; Masry Herzallah, 2023).

Pakistan ranks 131st globally in technology adoption and holds an overall Global Competitiveness Index position of 110 out of 141 (WEF, 2020). In the Human Development Report, the nation is 154th out of 189 countries (UNDP, 2020). Sachs et al. (2021) place Pakistan at 129th on the SDG index with a literacy rate of 74.5%. SDG4.a underscores information technology role in the government's goal for accelerated digitalization (UNESCO, 2017; GOP, 2018).

It is important to mention that some institutions had already adopted the new teaching method through instructional technology, and not many faculty members had engaged in online instruction until the surge of the COVID-19 pandemic in 2019. This situation created the problem of faculty readiness to change the traditional mode of teaching and learning to online teaching pedagogically and technologically. The remote online instruction question compelled the faculty to seek assistance from their technology departments and instructional designers to initiate imparting education to students (Bessette & McGowan, 2020). The increased demand to integrate technology in higher education has raised concerns regarding faculty readiness, more importantly to switch from traditional way of learning and teaching to virtual based instructions which are also face-to-face practices which are thoroughly taught through online teaching with the help of camera and microphone. The new teaching method disrupted campus activities and obligated the faculty to teach online. There was a call for best practices to deploy and implement a successful online learning experience for faculties and students. Olurinola (2023) highlights that amid the COVID-19

pandemic, many faculty members recognized the significance of being adequately prepared to teach online, particularly during the fall 2020 semester. He further underscored the institutions' role in supporting the faculty and staff in engaging students. Thus, faculty credited the assistance they received from their institutions for getting them prepared to teach online.

In a recent study conducted by Shahid and Aurangzeb (2021) in Pakistan, 48% of participants disagreed with their teachers' proficiency in using online tools for instructional purposes, and 63% expressed dissatisfaction with the online teaching tools during the COVID-19 pandemic. Another 63% indicated hesitancy to participate in online classes. Additionally, the study reported that 59% perceived their online learning experiences as suboptimal, and 60% believed virtual classes did not significantly contribute to knowledge enhancement. A striking statistic emerged, with 71% of respondents expressing the view that online classes were unlikely to yield positive results in terms of achieving good grades. These findings collectively underscore a prevalent perception among students in this study that their teachers lack proficiency in utilizing online teaching tools. This perception raises concerns about the potential impact on their academic performance (Shahid & Aurangzeb, 2021).

Khalid and Zainuddin (2020) conducted an investigation into the preparedness of teachers and students for online learning during the COVID-19 pandemic. The study revealed that educators and students initially welcomed the respite brought about by the break from traditional learning methods. However, over time, feelings of stress and anxiety began to manifest.

Teachers encountered challenges, including a dearth of strategies to effectively engage students, issues related to technology such as access to laptops, internet connectivity, and electricity, and a perceived lack of support from the university.

These outcomes underscore the imperative for comprehensive training and support mechanisms to facilitate the successful implementation of technology-based education.

In relevant to a similar situation in Pakistan HEC Vision 2025 aims to make Pakistani universities "smart" and ready for online teaching. The Higher Education Commission (HEC) envisions a future where universities in Pakistan are equipped with modern technology, infrastructure, and a culture of innovation. In this regard, HEC is working to build a strong foundation of digital literacy, provide faculty training on online teaching methodologies, and invest in e-learning platforms and resources. The key goals are to ensure that all students, regardless of where they live, receive a high-quality education and that universities are adaptable and responsive to changing teaching methods and cultural trends. By 2025, HEC hopes to establish Pakistan as a hub for digital education, where students can receive a globally recognized degree from a smart university.

As per HEC's guidelines, the preparedness of teachers is a crucial factor in realizing the vision of creating "smart universities" by 2025. HEC states that "universities must be equipped with modern technology, infrastructure, and a culture of innovation" to provide students with a quality education through online teaching (HEC Vision 2025). Thus, teacher readiness for online teaching is essential to meet the HEC's goals. Faculty members must be trained to use of technology and teaching methodologies specific to online instruction and must possess the necessary digital skills to effectively engage students in a virtual learning environment. Without teacher readiness, the HEC vision of a smart university cannot be achieved.

In lightening the importance given, this research study aims to determine the readiness of employees who are involved in change or undertaking it. Employees are

willing to switch from traditional practices, opt for advanced technological approaches that have changed the dynamics and practices of teaching, and effectively implement the changes for further organizational changes. When employees are prepared to accept change, they develop confidence in their ability to adapt and succeed, which is essential for the overall success of the change initiative. Trusting in their potential helps employees remain motivated and engaged throughout the change process, which can lead to positive outcomes for the organization. Therefore, it is crucial for organizations to foster a culture that promotes change readiness, where employees feel empowered and supported to take on new challenges and opportunities.

Justification of the term "change" in the thesis topic, focusing on faculty readiness to adopt technological innovations during the COVID-19 pandemic, is purposefully chosen to capture the broader spectrum of transformations occurring in educational practices toward online teaching. Rather than confining the investigation to a specific technology, such as a Learning Management System (LMS), the research explores the overall preparedness of faculty members to embrace the evolving landscape of online teaching. The UTAUT model, built upon various change adoption theories, recognizes that the integration of new technologies necessitates behavioral shifts within organizations. By employing UTAUT factors, the study delves into the intricate dynamics of how faculty members' attitudes and behaviors undergo transformation in response to the introduction of technological changes. The model, therefore, serves as a robust framework to comprehensively assess the readiness of faculty for the broader technological advancements brought about by the COVID-19 pandemic.

Before Venkatesh's (2000) work on theory unification, researchers faced

difficulties selecting the appropriate model to assess instructional technology readiness among the multiple available models. To tackle these concerns, Venkatesh examined eight notable models related to the acceptance of technology. However, there were limitations to these models. Most models only considered cognitive factors, and only a few included social factors, which were not enough to assess individuals' beliefs. Except for a few studies, the majority of participants in the research were students. Moreover, the responses of individuals were based on retrospection as the time of measurement was typically well after they had already made decisions regarding the acceptance or rejection of technology behavior.

Venkatesh introduced a fifth factor to the model in 2012, which he stated had a significant impact on determining a person's motivation towards technology using. This new construct aimed to provide better explanations of users' beliefs about their motivations and intentions in new emerging technological conditions (Guinness, 2015).

In this study, the concept of performance expectancy serves as a crucial metric for evaluating teachers' perceptions regarding the effectiveness of online teaching. It assesses the extent to which educators believe in the usefulness and benefits of the online education system. This involves gauging their perceptions of online education's overall utility and advantages.

EE gauges the perceived ease of use of online teaching tools and platforms. As educators navigate the transition to online teaching, their perceptions of ability to use online teaching tools incorporating technology into their pedagogical practices significantly influence their readiness. Teachers are more likely to embrace online teaching if they perceive it as how they can use it easily and manageable.

In the realm of teacher readiness for online teaching, Social Influence (SI) evaluates the societal pressures exerted by colleagues, administrators, family, and professional networks on an educator's choice to embrace online instructional methods. This metric delves into the external factors shaping the decision-making process, considering the collective impact of various social influences on educators' adoption of online teaching practices.

FC examines the external factors that can facilitate or impede the integration of online teaching into educators' practices. Factors such as access to resources, technical support, and training opportunities are vital in determining the ease with which teachers can adopt online teaching methodologies. Assessing facilitating conditions is essential for understanding the practical barriers that educators may face.

Hedonic Motivation considers the enjoyment and pleasure derived from using technology. In the context of teacher readiness for online teaching, it explores whether educators find satisfaction, enjoyment, or intrinsic motivation in utilizing online tools. Positive hedonic experiences can contribute to sustained engagement and commitment to online teaching practices.

By including these UTAUT factors in the study, we get a detailed picture of what influences teachers in getting ready for online teaching. Imagine it like having a full picture rather than just bits and pieces. These factors help us understand the mental (cognitive), social, and motivational aspects that affect whether teachers feel ready for online teaching.

This way, we can look at the whole situation, acknowledging that adopting technology in education is not just about how easy the tools are to use. It's also about how teachers see the benefits (Performance Expectancy), how much efficient to use

technology (Effort Expectancy), what their colleagues and the school environment say and do (Social Influence and Facilitating Conditions), and whether they find joy and satisfaction in using online tools (Hedonic Motivation).

Additionally, this study considers a few more things about the teachers past experiences with technology, their age, gender, and job status. These demographic factors are important because they can affect how teachers approach and feel about using technology. For example, someone who has used technology often might find it easier to embrace online teaching. Age, gender, and job status also shape attitudes and readiness (Devis, 2003).

1.2 Rationale of the Study

The present study gives considerable attention to the assessment of employee readiness, specifically centering around five crucial factors. Performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation. Recognizing the pivotal role of thorough preparation in the face of changes, particularly in gearing employees towards virtual learning, has become increasingly crucial in the aftermath of the COVID-19 pandemic (Scherer et al., 2021). According to Guskey (2020), online education's effectiveness depends heavily on educators' preparedness to adopt and integrate technology into their teaching practices. Similarly, Xing et al. (2023) assert that teacher readiness plays a crucial role in ensuring the effectiveness of virtual teaching, ultimately improving student learning outcomes. While some authors have predominantly focused on sectors like health, business, and manufacturing in their research on technological relationships, a notable gap exists in understanding the connection between technology acceptance factors and the "ready to change" (Haffar, 2014; Mansoor, 2020). Despite extensive research on organizational readiness to change in various regions, including Europe, America, and

some Asian countries, individual readiness to change in the education sector, particularly within the context of Pakistani culture, has been neglected.

Bakari et al. (2017) argue for increased empirical research in Pakistan, especially in non-technological areas within the education sector. They highlight a deficiency in studies exploring various aspects of education in Pakistan, excluding those related to technological advancements. Moreover, they suggest that many studies have used Weiner's (2009) theory as a framework, which focuses on self-efficacy and self-commitment. However, this theory may not be entirely suitable for studying technological change in education, given that such change requires a more comprehensive approach considering factors like skills, organizational support, and internal motivation.

A study by Koç et al. (2016) emphasizes the need to collect data from multiple universities to provide a broader perspective, challenging the limited scope of studies focusing on individual and organizational readiness. Howard (2021) recommends further implementation of employee profiles at both individual and organizational levels to enhance understanding. In a study on the uptake of online teaching among educators in North India, Sangeeta and Tandon (2020) deliberately excluded variables previously validated by Venkatesh and Davis in UTAUT 2, instead suggesting the incorporation of age and gender as significant variables due to their considerable influence on technology adoption. In response to these considerations, the current research aims to comprehensively understand how age, gender, and experience impact teachers' adoption of online teaching.

Addressing limitations in previous studies, Marten et al. (2019) acknowledged the relatively small population size and self-reported data in their study on "Teachers Readiness," recommending further research with a mixed-method approach. Bolliger

and Halupa's (2022) recent study on instructor readiness for online teaching identified limitations related to geographical scope and a small sample size, prompting suggestions for future research to include a more diverse range of institutions and regions and larger and more diverse participant pools. They also emphasized the need for future investigations to focus on understanding how professional development activities and support systems can assist instructors new to online teaching, especially in light of the pandemic's rapid shift.

In addition, Rafiq, Hussain, and Abbas (2020) conducted a study titled "Analyzing Students' perception to Accept E-Learning" within the Pakistani higher education context, revealing a positive attitude among students. Acknowledging the importance of involving teachers in future research is a noteworthy recommendation, as their perspectives and engagement play a pivotal role in the success of e-learning initiatives. Expanding on this, additional factors from technology acceptance models, such as the Technology Acceptance Model (TAM) and its extensions like the Unified Theory of Acceptance and Use of Technology (UTAUT), could enhance the depth of the study.

Another Pakistani study examines teacher's intentions toward technology usage by business university teachers, using UTAUT 1 model. Findings show significant impacts of social influence, facilitating conditions, self-efficacy, and attitude, while computer anxiety is negative. However, factors like performance expectancy and effort expectancy are insignificant. Research is Limited to Karachi (Nandwani & Khan, 2016). The study deviates slightly from my research on faculty readiness at the University of Rawalpindi and Islamabad, which uses the UTAUT 2 latest model with hedonic motivation.

The study with undergraduate students shows a positive inclination toward

adopting mobile learning (M-learning) in higher education. Performance expectancy, reflecting M-learning's usefulness, is the primary influencer of learners' readiness, followed by effort expectancy and peer influence. However, the limited sample of participants from one university and discipline hinders broader generalization. The study underscores instructors' crucial role in motivating M-learning adoption, recommending further research on instructors' readiness and challenges, higher education (Shorfuzzaman & Alhussein, 2016). The current study follows these recommendations, adopting the Unified Theory of Acceptance and Use of Technology (UTAUT) model, which has now been broadened to include faculty members from 12 universities.

Another study on “Students Attitude to adopt E-learning System in Higher Education Environments," using an extended UTAUT2 model, concentrating on students' intentions. The study suggests future research should target faculty perspectives and should conduct Qualitative or Mixed method study (Qazi et al., 2021). The current study employs a mixed-method approach, focusing on faculty perceptions of online teaching.

Recognizing this gap, the current research aims to comprehensively examine faculty readiness for technological change by employing the Unified Theory of Acceptance and Use of Technology (UTAUT). This model integrates insights from nine influential technology acceptance theories, including factors such as Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), and Hedonic Motivation (HM). The primary objectives are twofold: first, to assess the level of faculty readiness based on UTAUT factors, and second, to explore differences in readiness related to age, gender, job status, and prior experience.

To achieve these objectives, the study will employ a mixed-method explanatory sequential design, addressing limitations identified in previous research by incorporating a larger and more diverse sample, collecting data from multiple universities, and integrating both quantitative and qualitative approaches. The research aims to provide valuable insights into faculty readiness for online teaching in the specific context of the Pakistani education sector.

The investigation into the UTAUT model within the context of Pakistani higher education is crucial for several reasons. Firstly, it allows for an assessment of the technological preparedness of institutions, helping to identify areas that require immediate attention and investment, such as online teaching usefulness, teacher's ability to use technological tools, infrastructure enhancement, faculty training and access to necessary tools. Secondly, the model enables an exploration of the socio-cultural dynamics unique to Pakistan, offering insights into how social influence and contextual factors impact the adoption of technology in education. Moreover, the UTAUT model facilitates a comprehensive user experience analysis, encompassing both educators and students. Understanding the perspectives and challenges faced by these stakeholders is vital for tailoring effective strategies that enhance the overall quality of online teaching. Furthermore, the investigation into the UTAUT model aids in policy formulation, allowing policymakers to craft targeted interventions and guidelines that align with the specific needs and challenges of the Pakistani higher education sector. In essence, the UTAUT model becomes a powerful lens through which the multifaceted aspects of technological adoption can be examined in the wake of the COVID-19 pandemic. Its exploration addresses immediate concerns related to online teaching and lays the groundwork for a resilient and adaptive educational system in Pakistan, better equipped to navigate future technological changes and

advancements.

This study focuses on examining the level of employee readiness for online teaching based on a single variable, rather than being causal-comparative or correlational. During the COVID-19 pandemic, this approach was crucial due to the challenges of data collection and the need for a focused exploration. By narrowing the scope to one variable, the study was able to delve deeply into faculty readiness, considering factors like motivation, technological proficiency, and access to resources based on demographic factors based on demographic factors. This allowed for a clear analysis, aligned with the Unified Theory of Acceptance and Use of Technology (UTAUT) model, and provided valuable insights to inform faculty development and support the successful transition to online teaching.

1.3 Problem Statement

The COVID-19 pandemic forced an abrupt shift to online education in higher institutions, posing challenges for faculty members to adapt rapidly. Many educators were unprepared due to limited tools and the sudden change. Faculty readiness, crucial for educational continuity, involves technological proficiency, curriculum redesign, and motivation. This study focuses on employee readiness, considering factors like a positive attitude, the ability to teach independently, access to resources, and inner motivation (Avidov-Ungar et al., 2022).

To promote readiness in online teaching, development programs must be tailored to individual needs, considering age, gender, experience, and job status. The research aims to identify factors influencing teachers' perception of preparedness. Studies often assume demographic factors play a crucial role in shaping readiness (Scherer et al., 2021).

Despite the urgency imposed by the pandemic, understanding faculty preparedness for online teaching within the Smart University 2025 vision is essential. Successful implementation of this transformative plan requires readiness. The HEC in Pakistan has led initiatives to boost technological infrastructure and resource accessibility in academia. The Prime Minister's Laptop Scheme, a collaborative effort, distributed laptops to eligible students, promoting digital resource access. HEC facilitated digital libraries, free internet, and Wi-Fi services, ensuring seamless connectivity for online educational resources.

In research, HEC grants support technology, innovation, and scientific projects, fostering cutting-edge solutions. The promotion of Learning Management Systems aids online learning and efficient course management. The National Research Program for Universities (NRPU) funds projects across disciplines, contributing to knowledge and technological advancements. Moreover, HEC's quality enhancement cells (QECs) focus on improving education quality and infrastructure by incorporating modern facilities. Additionally, the Pakistan Education and Research Network (PERN), backed by HEC, establishes a high-speed network connecting educational and research institutions nationwide, enhancing communication and collaboration as highlighted by researcher (Kastorff et al. 2022).

This study was started due to the urgent need to address the significant gaps in faculty readiness for online teaching that emerged during the COVID-19 pandemic.

Despite these commendable initiatives, faculty readiness online teaching remains a critical aspect neglected in the whole process. This study is crucial to understand how demographic factors, such as age, gender, experience, and job status, influence readiness, while also considering the motivational factors that play a key role. Additionally, it is aligned with the Higher Education Commission (HEC) Vision

2025, which emphasizes the importance of preparing faculty for the digital transformation in education. By addressing these factors, this study seeks to provide insights that can support the effective implementation of online teaching, ensuring faculty are well-equipped to meet the challenges of the changing educational landscape.

To bridge this gap, a recent research study, utilizing the Unified Theory of Acceptance and Use of Technology (UTAUT) model, delved into investigating faculty readiness to embrace online teaching. This issue is even more important with the Smart University 2025 vision, which requires teachers to be ready for digital learning. There is a need to understand what factors affect faculty readiness and how to address these challenges. Research is needed to help improve faculty preparedness for online teaching.

The UTAUT model is a comprehensive framework that integrates insights from various technology acceptance theories. It is based on five key factors: performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation.

This research has successfully mitigated the limitations discussed earlier by adopting a sequential explanatory design specifically tailored to the challenges posed by the COVID-19 pandemic. The design is based on five key factors, offering a comprehensive exploration of faculty readiness for online teaching within the unique circumstances brought about by the Smart University 2025 vision and the impact of the ongoing COVID-19 crisis."

1.4 Research Objectives

1. To examine the level of employees' (faculty) readiness to change concerning (PE, EE, SI, FC, and HM) at a higher education institution.
2. To compare the employee readiness to change based on their gender (Male, Female) focusing on the dimensions, Performance Expectancy (PE), Effort Expectancy (EE), Facilitating condition (FC), Social Influence (SI), and Hedonic motivation (HM)."
3. To compare the Employee readiness to change across different age groups, focusing on the dimensions, Performance Expectancy (PE), Effort Expectancy (EE), Facilitating condition (FC), Social Influence (SI), and Hedonic motivation (HM)."
4. To compare the employee readiness to change based on their online teaching experience focusing on the dimensions, Performance Expectancy (PE), Effort Expectancy (EE), Facilitating condition (FC), Social Influence (SI), and Hedonic motivation (HM)."
5. To compare the level of Employee readiness to change based on job status (Permanent & Contractual) focusing on the dimensions, Performance Expectancy (PE), Effort Expectancy (EE), Facilitating condition (FC), Social Influence (SI), and Hedonic motivation (HM)."
6. To identify the factors that affect faculty readiness to adopt change.

1.5 Null Hypotheses of the Study

H01: There is no statistically significant difference in employees' readiness to change based on their gender (male, female).

H02: There is no statistically significant difference in employee readiness to change based on their age.

H03: There is no statistically significant difference in employees' readiness to change based on their online teaching experiences.

H04: There is no statistically significant difference in employees' readiness to change based on job status (contractual, permanent)

1.6 Research Questions of study

RQ1: How does the Employee Perceived Readiness to change with reference to performance expectancy?

RQ2: How does the Employee Perceived Readiness to change with reference to effort expectancy?

RQ3: How does the Employee Perceived Readiness to change with reference to social influence?

RQ4: How does the Employee Perceived readiness to change with reference Facilitating Conditions?

RQ5 How does the Employee Perceived readiness to change with reference Hedonic motivation?

RQ6 What are the factors affecting employees' readiness to adopt online teaching?

1.7 Significance of the Study

In recent years, Pakistan has significantly transformed its educational approach, shifting from traditional teaching methods to virtual models. However, the current state of education reveals challenges in managing these reforms, necessitating policymakers to identify and address key issues for significant improvements. The

study aims to investigate the impact of incomplete data on the long-term viability of suggested changes and the influence of the higher education institution's situation on the adoption of educational reforms in Pakistan. Its goal is to illuminate obstacles that policymakers and educational institutions encounter, shedding light on reform management and teaching method improvements.

The imperative of being ready for online instruction holds a central position in ensuring Pakistan's successful adoption of virtual modes. This study contributes to the existing knowledge on change readiness by examining employee readiness for technology adoption, particularly in the context of online teaching. It identifies key factors influencing employee preparedness and offers effective recommendations to enhance readiness. The study contributes to advancing effective teaching modes, leading to better student results. Insights derived from employee readiness for technology adoption inform policy and decision-making in the education sector.

The findings of this research provide actionable advice for individuals preparing for the shift to online education and address gaps in existing research. The study introduces a framework based on employee attitudes and beliefs, identifying critical factors affecting an individual's readiness for online teaching.

This framework serves (facilitating conditions) as a vital guide for organizations aiming to enhance teacher readiness, a crucial factor influenced by the support provided. This study holds significant value for organizations seeking to empower their educators by ensuring access to essential technological tools, quality internet connectivity, and comprehensive training programs. The emphasis on check-and-balance mechanisms and reliable technical support further contributes to creating an environment conducive to effective online teaching. Particularly relevant in the challenging context of the COVID-19 pandemic and the growing dependence on

online instruction, this study underscores the importance of organizational efforts in facilitating a smooth transition period for educators.

The study significantly contributes to understanding faculty attributes and attitudes towards change, specifically their readiness for and engagement with online teaching. Results enhance understanding of how faculty perceive their readiness and ability to adopt and integrate technology into teaching practices. The information gathered from this study proves valuable for educators preparing for the changes brought about by the pandemic, allowing them to raise the standard of learning and achieve better results for students.

This study brings valuable insights for teachers, empowering them to efficiently use technology in online teaching. By understanding factors influencing Effort Expectancy, educators can tailor strategies, reduce challenges, and enhance overall effectiveness in integrating technology. These recommendations boost teachers' confidence in navigating online teaching complexities, ultimately improving the quality of education for students.

Turning to university administration and policymakers, the study addresses societal pressures tied to online teaching adoption. Recognizing social influence's impact on readiness, the findings guide strategic interventions. Conferences, seminars, and technology gatherings become avenues to engage with faculty, address concerns, and foster a positive social influence. Actively involving stakeholders helps build a collective commitment to adopting online teaching methods.

Regarding Hedonic Motivation, the study suggests practical applications for administrators. Implementing performance-based rewards and seminars can motivate faculty, setting benchmarks and creating a positive, engaging environment.

Recognizing and rewarding tech-savvy faculty encourages continuous improvement in online teaching practices.

Emphasizing the critical role of universities, the study highlights the importance of supporting faculty during the transition to online teaching. By incentivizing and promoting teachers who successfully adopt online methods, universities can encourage widespread technology adoption and ensure the success of online learning. These teachers serve as role models and advocates, fostering a supportive community of online educators. The study underscores the need to create a supportive environment to facilitate the adoption of online teaching and technological innovations in academia.

Furthermore, the research is beneficial for university policymakers seeking to improve and promote online teaching, especially during pandemic outbreaks. Findings offer insights into factors influencing the readiness of both male and female faculty to embrace technological change in online teaching. Considering demographic factors such as age and online experience, the study assists policymakers in identifying and addressing specific challenges that may arise during online teaching. Practical recommendations based on employee behavior research facilitate a smoother transition to online teaching, serving as a valuable resource for policymakers shaping policies on disaster change in the education sector.

This study remains highly beneficial even after the COVID-19 pandemic, particularly in the context of Pakistan, where environmental, political, and infrastructural challenges frequently disrupt education. Factors such as smog, roadblocks, and political instability often lead to school and university closures, making it essential for faculty to be ready to deliver online education. Online teaching offers marginalized communities the opportunity to access education from the

comfort of their homes, overcoming barriers such as geographical location, transportation issues, and economic constraints. In Rawalpindi and Islamabad, where communities range from lower-middle-class to elite, and where a significant number of students come from marginalized areas, online teaching is especially beneficial. It provides these students with access to quality education without needing to relocate, making higher education more accessible. Moreover, as the world increasingly adopts hybrid models of education, this study is relevant globally. It aligns with the Higher Education Commission's (HEC) Vision 2025, which emphasizes digital transformation and the importance of faculty readiness for successful implementation. Teachers are crucial to this vision, as without their preparedness, the success of online and hybrid education cannot be fully realized. By examining faculty readiness, this study provides valuable insights for HEC policymakers, helping them address the challenges faced by educators and analyze the current status of their readiness. Ultimately, the study aims to enhance the quality and accessibility of education in Pakistan and beyond, ensuring a more resilient and adaptive education system for the future.

Thus, this study provides a comprehensive analysis of ongoing educational reforms in Pakistan, addressing challenges in reform management, and emphasizing the critical role of readiness for online instruction. Its findings contribute to advancing effective teaching methods, informing policy decisions, and supporting educators, institutions, and policymakers in navigating educational reform complexities, particularly in the context of the COVID-19 pandemic. The study serves as a valuable guide for Pakistan's educational landscape, fostering a successful transition to online teaching and improving overall education quality.

1.8 Delimitation of the study

The primary purpose of this research was to evaluate the degree to which academic staff members are prepared to engage in online teaching based on a variety of factors, including but not limited to demographic factors, hedonic motivation, facilitating conditions, social influence, effort expectancy and performance expectancy.

The search study's restrictions were:

1. The research covered the locality, situated in the Rawalpindi and Islamabad Capital Territory regions of Pakistan.
2. The study focused on public sector universities where teachers are involved in online teaching.
3. The data for the study was obtained from self-reported responses of teachers serving in these universities in different time periods.
4. The study emphasized faculty readiness for online teaching based on five factors.

1.9 Framework of the research study

1.9.1 Conceptual Model

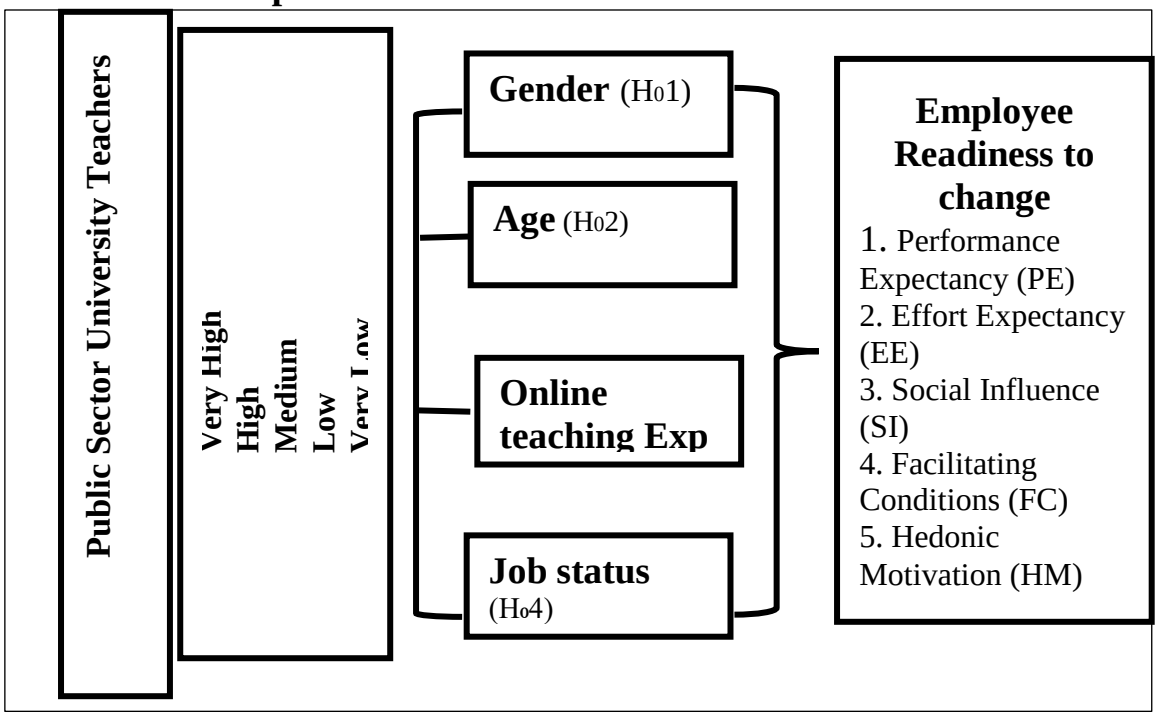

Figure 1: Conceptual Framework of Research (Venkatesh, 2012)

1.10 Operational definition of research variable.

An operational definition is a crucial aspect of research as it helps clearly define the studied variables. It describes a variable in terms of specific, measurable, and observable characteristics, making it possible to quantify and study it. A well-defined operational definition allows for consistency in the measurement and interpretation of data. It helps to eliminate ambiguity and ensure that all parties involved in the study clearly understand the variable being investigated. Moreover, it enables researchers to accurately communicate their findings to others, increasing the transparency and replicability of their study. An operational definition is a key component in establishing the validity and reliability of a research study. Five determinants of readiness (Airasian, Mills, 2012).

Before providing the operational definition of the actual variables measuring

readiness to accept technological change. It is essential to explore and establish a clear and operationalized definition of the term "Change."

Change is a process or state of transition from one condition, form, or state to another. It involves modifications, transformations, or alterations in various aspects of an individual, organization, or system. Change can manifest in diverse forms, such as shifts in behavior, perspectives, structures, processes, or environments.

Technological change is a crucial aspect of broader transformations, encompassing technology adoption, integration, and advancement within individual, organizational, or systemic frameworks. It involves embracing new digital tools, modifying existing processes, and upgrading infrastructure to keep pace with evolving technological landscapes.

Readiness to adopt change refers to an individual’s willingness and preparedness to accept online teaching systems. Readiness to change means one dimension to be considered in employee placement is continued to stay and transition, and it is an evaluation of the employee's current emotional and cognitive awareness.

In the realm of faculty preparing for online teaching, "change" signifies a significant transformation. It goes beyond merely adopting new tools; it involves reshaping how teachers view the usefulness of online teaching (performance expectancy), their confidence in using technology for online teaching (effort expectancy), their influence by other people to embrace technology (social influence), and their perception of university-provided facilities. This change acknowledges the evolving nature of online learning, requiring faculty to adjust their teaching methods and seamlessly integrate technology. Discussing faculty readiness for this change

involves their openness to new teaching approaches, effective use of digital tools, and ensuring education remains meaningful in the online environment.

1.10.1 Performance Expectancy

Performance expectancy in the context of faculty readiness for online teaching refers to the perceived effectiveness and benefits educators believe they will gain from online teaching methods (Bingqing, 2021). In simpler terms, it's about how much faculty members think online teaching will help them in performing their job successfully. This concept is rooted in the Technology Acceptance Model (TAM), which posits that users' perceived usefulness of technology significantly influences their intention to adopt and use it (Davis, 1989). In the realm of online teaching, faculty members' expectations of positive outcomes, improved teaching efficiency, and enhanced student engagement contribute to their performance expectancy, ultimately influencing their readiness to embrace online instructional approaches (Davis, 1989; Venkatesh & Davis, 2000). In this study, the variable is assessed using 9 questions, and the analysis involves calculating the mean and standard deviations of the responses to these questions.

1.10.2 Effort Expectancy

Effort expectancy for faculty readiness in higher education online teaching refers to how easily educators believe they can use online tools. It's about their perception of the effort or difficulty in adopting online teaching methods. If faculty members see it as straightforward and aligned with their skills, they have high effort expectancy. On the contrary, their effort expectancy is lower if they anticipate challenges or a steep learning curve (Bingqing, 2021; Bajaj, 2021). This concept is rooted in the Technology Acceptance Model, highlighting that ease of use influences

technology adoption (Davis, 1989). In this study, the variable is assessed using 13 questions, and the analysis involves calculating the mean and standard deviations of the responses to these questions.

1.10.3 Social Influence

Social influence in faculty readiness for online teaching during COVID-19 means how colleagues, influence from the institution, family influencers, community expectations, professional networks, and government guidelines impact educators' preparedness. If fellow teachers do well with online teaching, if the organization supports them with resources and training, if there's pressure from the community, if they share experiences with peers, and if they follow government guidelines, these social factors shape how ready teachers feel to teach online during the pandemic. It's about how these influences together help educators adapt to online teaching effectively in challenging times (Venkatesh & Davis, 2003; Chandio et al., 2012; Zhang, 2021; Al Raja, 2015; Hong, 2021). In this study, the variable is assessed using 7 questions, and the analysis involves calculating the mean and standard deviations of the responses to these questions.

1.10.4 Facilitating conditions.

Facilitating conditions for faculty readiness in online teaching refers to the support systems and external factors that make it easier for educators to adopt online instructional methods. This includes having reliable technology, offering continuous training, providing quick technical assistance, ensuring access to digital teaching resources, setting clear administrative guidelines, and creating collaborative platforms for communication among educators. In simpler terms, it's about making sure teachers have the right tools, training, and support to teach online comfortably and effectively.

These facilitating conditions remove obstacles and empower faculty for a smooth transition to online teaching in higher education (Sangeeta & Urvashi, 2021).In this study, the variable is assessed using 8 questions, and the analysis involves calculating the mean and standard deviations of the responses to these questions.

1.10.5 Hedonic Motivation.

Hedonic motivation in the context of faculty readiness for online teaching refers to the pleasure and enjoyment faculty members derive from engaging in activities related to online teaching. It encompasses positive experiences and satisfaction linked to internal factors, such as mastering technological tools and receiving positive feedback from students. In this study, hedonic motivation is assessed through 7 specific questions, and the analysis involves calculating the mean and standard deviation of responses (Ggnae, 2005). This quantitative approach aims to measure the average level and variability of hedonic motivation among faculty members, providing insights into the overall satisfaction and enjoyment associated with their engagement in online teaching activities. Fostering hedonic motivation becomes crucial for enhancing faculty readiness and enthusiasm, ultimately contributing to a positive and effective online teaching experience. (Sangeeta, 2021)

1.11 Research methodology of the present study

The current research investigates employee preparedness using a mixed-method explanatory sequential design, emphasizing the roles that age, gender, and previous experience play in the process. Quantitative data are gathered at the first stage of the study so that an initial investigation of the phenomena may be carried out. In order to provide a more thorough explanation and a better understanding of the current situation, the responses that were gathered in the quantitative phase are

employed in the qualitative phase to collect qualitative data. According to Cresswell (2014), this methodology enables the researcher to amass a full grasp of the subject matter that is being investigated, which is why the explanatory sequential research design is a good option for this investigation.

A representative sample of professors from management science and social science faculty at 21 different institutions in the Rawalpindi and Islamabad regions participated in the study. Due to constraints such as time limitations and geographical considerations, only 10 universities were selected for the sample population. The actual population was calculated to be 1145, based on information available on the universities' websites. This information was used to make an informed decision regarding the sample size, ensuring the originality of the data collection and showing how the population represents its representative.

In addition, there were a total of 350 people in the sample, and they were chosen at random from a population of 1200 faculty teachers in the areas of social sciences and management sciences. The response rate was high, with 322 educators providing accurate responses to the distributed questionnaire. The sample population was calculated to be 26% of the total population, and it was selected to represent a diverse group of people regarding gender and educational expertise. There was a total of 350 people, 184 of whom were male and 138 of them were female. This study aimed to investigate the degree to which these educators were prepared to implement online instruction.

The total size of 30% of the total population was selected, with 17% being male and 13% female. The response rate for the sample was 30%, and the return rate for the population was 94%. According to Creswell & Morgan (1970), a sample size of 20% is considered representative of a research study, and a response rate of 50% is

considered good for a serious research study.

The study's second phase, which used the explanatory sequential design, focused on selecting a sample of 16 teachers for further analysis. The selection process was based on the readiness values found in the quantitative data, specifically targeting teachers with both high and low readiness values. This sample size was determined rigorously and systematically to ensure the representativeness and reliability of the research findings. This sample selection aimed to comprehensively examine the research question and provide a deeper understanding of the topic being studied.

Data were gathered using a research method known as stratified random sampling. The sample was divided into smaller subgroups referred to as strata. Data was collected exclusively from government universities located in Rawalpindi and Islamabad, based on gender (male and female), age groups, and experience levels. This approach allows for a more representative sample, as it considers the different demographic characteristics of the population (Sekaran, 2003).

In the second phase of the research, purposive sampling was chosen as the sampling technique. This technique is commonly used in qualitative research, where the sample is selected based on specific criteria to help address the research question. Researchers make an informed judgment about which participants are best suited to provide insights into the phenomenon identified in the first phase. The participants are selected based on specific characteristics that make them particularly relevant to the study. This approach allows the researcher to focus on a smaller, yet meaningful, subset of the population to gain a deeper understanding of the research questions (Yu & Teddies, 2007).

The questionnaire used in the QUAN phase was adapted from five factors developed by Venkatesh and Davis (2012). The resulting tool was comprised of 55 items, 11 items were based on demographic information while 44 questions were based on the factors of employee readiness and have been validated by Mansoor et al (2021) in the situation where teacher's readiness during the COVID-19 is analyzed.

The researcher developed a semi-structured interview tool for qualitative data collection and had it validated by a field expert. The second stage where the data was collected from those who participated, and specific teachers were selected, with each interview session lasting between 50-60 minutes.

The pilot testing used Cronbach's alpha, Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis. This was done to validate the data collection method used in the study (CFA). For the purpose of determining the degree to which university professors are prepared to embrace change, the quantitative data were analyzed with the Statistical Package for the Social Sciences (SPSS) computer program. This made it possible to calculate the mean, standard deviation, kurtosis, and skewness values. The t-test and the ANOVA test were used to compare the differences that existed between the various groups based on factors such as age, gender, and years of experience.

The thematic analysis approach, as established by Braun and Clarke, was utilized in conducting the analysis of qualitative data (2006). Thematic analysis is a technique that is commonly used to find and analyze patterns in qualitative data. This technique, which gives insight into the underlying themes that are present in the data, has been increasingly popular in recent years. Overall, the combination of these methodologies enables a full examination of both quantitative and qualitative data, ultimately resulting in a comprehensive knowledge of the issue being investigated.

Researchers can more meaningfully draw conclusions and make judgments guided by the data as a result which is extracted from the current research.

1.12 Summary of Chapter One

The research that is being done is divided into different sections while in the Introduction chapter it emphasizes the reasons for conducting the research, the issue that is being investigated, as well as the goals, hypotheses, and research questions that have been developed. This chapter also discusses the theoretical framework for the study, including the key variables related to Readiness to change as discussed respectively in first chapter with separate sub-sections. In addition, this chapter provides an overview of the results of the study. A discussion of the delimitations, methodology, and operational definitions of the variables is presented at the end of the chapter. The following section of the report, titled "Literature Review," will present an in-depth analysis of the previous studies and theories connected to the factors investigated in this project. In addition, it will shed light on the existing state of knowledge in the industry and assist in constructing a solid base for the research that is now being carried out. The backdrop and setting of the research will not be fully understood until after this chapter has been completed. This chapter aims to present a complete grasp of the relevant literature, theories, and previous studies linked to the study topic.

CHAPTER 2

REVIEW OF LITERATURE

Three sections make up the review of the pertinent literature. The idea of change is explained in the first section, as well as related ideas; the second half discusses the idea of educational technology and related themes, which are described below. On the other hand, section three provided a more in-depth explanation of the particular explanation of technology adoption model, which serves as the foundation of this research. An in-depth explanation of the literature review is provided in the following:

Section one explained

Broder's perspective of change

- A broader perspective of change (qur'anic thoughts) (Iqbal's thoughts & others)
- Shapes of change,
- Resistance to change,
- Readiness to change,
- Factors affecting change Readiness.
- Theories of change adoption

Section two: Elaborates on specific views of technological change

- Concept of technology and education,
- Technological change in education.
- History of Online teaching,
- Tools of online instruction,
- Demographic factors in the light of various studies.
- Virtual instruction (online teaching)

Section three illustrates the present model of readiness to adopt change.

- Factors of technology adoption model
- Importance of demographic characteristics, Gender, Age. Experience
- Theories of UTAUT.
- Various studies used this model in the context of readiness.
- The link between Readiness and factor of technology adoption model.

Section 1

2.1 Change in Multiple Prospects

A society can bring positive and sustainable changes through communication/mind making/education. The steps of suitable communication through education are a prerequisite when revolution is necessary for the whole society.

Allah says in Surah Rad (Quran 13:11)

انَّ اللَّهَ لَا يُغَيِّرُ مَا بِقَوْمٍ حَتَّىٰ يُغَيِّرُوا مَا بِأَنفُسِهِم.

In fact, until a people change what is inside of themselves, Allah won't change their situation.

The Quran emphasizes the idea of gradual change and provides four strategies for bringing about positive change in individuals and society. The first strategy is *Taleem-e-Kitab-o-Hikmat,* which means educating people about the injunctions of the holy book and the wisdom behind them. The second strategy is *Tazkiyah,* which focuses on the development of human resources through proper education aimed at cultivating positive attitudes, traits, and abilities. The third strategy is *Tazkeer,* which involves giving good advice or exhortation. Finally, the fourth strategy is *Uswa e*

Hasna, which involves being a great example of character integrity. The life of Prophet Muhammad (s.a.w.) serves as a historical guide for those seeking to bring about change through these strategies. Education has a vital and transformative function in the process of upward movement in every region of the world. According to the prophet Muhammad (SAW).

عَنْ أَنَسِ بْنِ مَالِكٍ قَالَ قَالَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ,

وَسَلَّمَ طَلَبُ الْعِلْمِ فَرِيضَةٌ عَلَى كُلِّ مُسْلِمٍ

"Learning and going for knowledge is pre-requisite for every Muslim who is either woman or man." He was the Muhammad (SAW) who transformed Arabs from ignorance to knowledge through his personality's exceptional and extraordinary abilities, which Arab peoples opposed. But gradually, Arabs moved from ignorant to light o knowledge through education. Education is the fundamental instrument for bringing about changes in human behavior, and it prepares individuals to readily accept change and swiftly adapt to their new surroundings. Education has been placed at the forefront of development efforts in all of the advanced nations' strategies for economic growth. In this day and age of rapidly advancing science and technology, educational institutions are not. There is no possibility of change (Bashori, 2018).

According to the Oxford English Dictionary, change means to make or become different. Evolution and development are essential for businesses and are choired in designing strategies, decision making, and innovation. Majority of the schools have contributed to the development of the fundamental concept of Change, and they are in agreement with the varied and consistent aspects of this concept. Thus, the value of Change has always been understood via a variety of channels of expression. Change is the essence of any creature that has life or entity whose survival

finds a good purpose in the existence of life, as was further proved in his research. Even the passage of time would lose its value if Change were not around. Change is a concept that does not have the same connotation for all individuals, situations, and settings due to the fact that change can take many different forms. Changes in the times, people, objects, and circumstances, as well as changes in the organizations themselves, are inevitable (Poole, Dooley & Holmes, 2000).

In addition, according to the different schools of thought, any change is an essential and constant aspect of life. Because life is not a static entity, change and variety are the essence and spice of life, without change life and time has no significance. So, for change is concerned, there is no specific and set pattern for it. It occurs in different ways and in different shapes.

2.2 Iqbal's Thoughts and change

Allama Muhammad Iqbal also favored a change in the subcontinent in the form of revolution, which means a sudden and abrupt change in the Attitude and thinking and political appearance of the Muslims of the subcontinent elevated them spiritually, morally, and politically. It was the time when Muslims were facing dual opposition from both Hindus and the British. Muslims were losing their identity in this opposition.

Through poetry, he changed the mind of people and made them cognitively ready to accept a new situation. Muslims recognized their lost confidence and realized their separate identity under the light of the two-nation theory.

In this way, Iqbal’s poetry did not become the symbol of change on the part of individuals but the whole Muslim nation. Iqbal says no nation can bring change until change is not brought about by individual thinking. Therefore, he strongly urged self-

identity and individuality in the form of *"khudi* "which leads to self-confidence and self-reliance (Ahmad, 2007).

His poetry depicted the success of change based on individuals.

افراد کے ہاتھوں میں ہے اقوام کی تقدیر
ہر فرد ہے ملت کے مقدر کا ستارہ

"Fortune of the state through individual powers ripen each man one start of their ascendant"

2.3 Organizational change

Change refers to the process of becoming different or transforming from one state, condition, or situation to another. It can involve shifts in behavior, systems, structures, or mindsets. In various contexts, like education or organizations, change often means adapting to new technologies, methods, or practices to improve outcomes or respond to external pressures like societal needs, crises (e.g., COVID-19), or innovation (Bennett, 2013).

Every organization must have a hierarchy of power and responsibility, a division of labor, and a set of roles and responsibilities. An organization is created when a group of people work together rationally to accomplish a common objective. An organization is a collection of people whose interactions are set according to a specified structure. These individuals interact with one another and are dependent on one another as they work toward a shared objective (Bovey & Hede, 2001).

Organizational change is linked with the organization's improvement in solving problems and challenges. New leadership management and or new software generates these problems to survive in the competitive business environment, abrupt change, and rapid growth.

The transition from one phase to another reflects the phrase "organization transformation," which describes a shift in the structure of an existing organization. Also, it is concerned with dismantling the current circumstance and constructing a new one in its place (Weeks, 2004). It is a transition that takes place between two different periods in time, and the capacity to compare the organization before and after the transformation is an essential part of it. A change could be a different form, sometimes it is small, and sometimes it is large. Still, it is concerned with growth, variation, and modification. Internal and external pressure are the critical factors linked with the prerequisites of any business to expand and face all challenges. Volatility In the current study social influence is the external pressure to adopt the new change in this abrupt situation. In order to conduct an investigation into the aspects of preparation for change, the various kinds of change should be discussed extensively in the relevant research (Bennett, 2013).

2.3.1 Planned and unplanned change

Organizational changes may be divided into two sections: planned and unplanned. Literature has highlighted the distinction between these two forms of change, with planned change being pre-meditated and unplanned change occurring suddenly and unexpectedly. For example, the implementation of new software in an organization requires careful planning whereas the outbreak of COVID-19 is a prime example of unplanned change.

The goal of a planned change is often to improve a particular situation or to develop a process or structure inside the premises of any institution (Jager, 2022). The unplanned changes such as the COVID-19 may have influence on the organization (Heuvel et al., 2013). Employee attitudes and organizational agility are critical factors for successful adaptation to planned and unplanned changes (Sandström, 2023).

To evaluate preparedness and other goals associated with the change process, it is essential to have a solid understanding of the various forms of change (Oreg, 2006). In the context of organizations undergoing change, there are often two types of change that are investigated: organizational change and individual transformation. There is an overlap between these two phenomena, and it is crucial to consider both the organizational and individual perspectives in the change process. Understanding the different types of change and considering both organizational and individual perspectives are crucial for successful adaptation and growth (Van den Heuvel et al., 2009).

2.4 Individual change

Organizational change management is a complex process that depends heavily on the role of employees. The success of change efforts depends on employees' acceptance, beliefs, and attitudes toward change. Positive employee attitudes can support the implementation of change in an organization, while negative attitudes can lead to resistance and negative impact organizational performance. Therefore, it is crucial for change management practitioners to understand and predict employee’s readiness to change.

The way in which employees see change is one of the most important factors that may be used to forecast their preparedness. A person's propensity to think, feel, or behave favorably or unfavorably toward the object of their attitude is reflected in how they have an attitude toward change. Workers may react to change in a variety of ways, including joy, pleasure, anger, or fear, and the employees' views of the changing scenario are the primary factors that influence the aims and objectives of organizational change (Vakola et al., 2004). According to the findings of certain studies, when employees have a positive attitude toward change, it can lead to high

levels of commitment, low levels of turnover, high levels of performance, and low levels of absenteeism. On the other side, having a negative attitude towards change can lead to resistance, high turnover rates, threats from workers, uncertainty, dissatisfaction, anxiety, decreased efficiency, and diminished organizational commitment (weber & weber, 2001).

The employee's role in organizational change is not limited to attitudes and perceptions toward change. Employee beliefs and attitudes are also crucial in determining the success of change efforts. Researchers have given attention to promoting positive attitudes and behaviors to drive practical stances for different programs intended to change. Employee beliefs and attitudes towards change are influenced by how the change affects their sense of identity in the organization. Individuals are more likely to support change when subjective approaches and needs are accomplished.

Yet, the human component is the most significant, intricate, and predominate factor in enabling the effective and successful implementation of change in a company. Creating a good employee response to change may be facilitated by meeting the fundamental requirements of workers, such as their monetary and psychological requirements. However, the success of change management also depends on effective communication, leadership support, and the alignment of organizational goals and objectives with change efforts.

Thus, employee attitudes and beliefs toward change are critical predictors of successful management changes in organizations. Understanding and addressing employee perceptions, beliefs, and attitudes toward change can help practitioners increase the likelihood of success and minimize resistance to change. By fulfilling employees' needs and promoting positive attitudes and behaviors, organizations can

create a supportive environment for change and drive successful organizational change efforts (Irani and Shah, 2010).

2.4.1 Employee Resistant to Change

Employee resistance to change refers to the attitudes or behaviors hindering the organization's change goals and can stem from fear of failure or losing something valuable (Chreim, 2006). Resistance to change can be divided into two components: attitudinal and behavioral. Both are connected to favorable environment. According to a number of studies, human factors are frequently the cause of unsuccessful attempts at change (Elias, 2009). Employee perception of organizational change is crucial in this regard, and positive attitudes can indicate employee happiness. Thus, organizations need to create a supportive mechanism for successful change implementation. Numerous concepts have been explained through different theories, models, and empirical studies (Erturk, 2008). All of these studies have considered employee readiness as a key factor in implementing sustainable change, and investigations have concluded that organizational success depends on employees who consistently push for change to be successful. The combination of various employee readiness factors can minimize employee resistance (Cinite et al., 2009).

2.4.2 Employee Readiness to Change

When firms are making changes, preparedness is to consider is the readiness. It relates to the views, intentions and attitudes of employees towards the changes being made, as well as the company's capability to accomplish these changes effectively. Employee readiness encompasses factors such as an individual's belief in the change's efficacy, importance, management support, and motivation. Employees' acceptance of the need for change within the company might be ascribed to their positive attitude towards change (Al-Maamari et al., 2018).

In addition, Resistance to change and readiness to change are linked. Recent studies have conceptualized change readiness as the extent to which employees actively support and participate in change initiatives. This is particularly important in today's competitive and dynamic environment where the active support of employees is crucial for an organization's success (Andrew & Mohankumar, 2017). Attitudes and intentions of employees are affective and cognitive precursors of behavior, which can either lead to acceptance or opposition towards change initiatives. Cognitive behaviorists believe that change is an appropriate response to organizational issues when it leads to positive emotions and the belief that the suggested change will be beneficial for the person and groups (Von Treuer et al., 2018).

To ensure successful change readiness, organizations must proactively develop strategies to create a culture of preparedness by influencing two important factors affecting employee behavior: individual optimism and self-efficacy. The willingness and receptivity of employees towards change have been identified as critical for organizations to successfully implement change (Jansen, 2000). Thus, it is essential for companies to have a solid understanding of how to interact with their workforce prior to, during, and after the implementation of change initiatives.

Employee preparedness for change is influenced by a wide range of elements, including the correct procedure, the need for change, the change agent position, participation, surroundings, culture, organizational support, participation, commitment and beliefs. These aspects have been uncovered over the course of many years. These aspects may be divided into two primary categories: individual variables and elements related to the workplace. Although the categorization may change, the necessity of employee preparation for the actual change application stays the same.

Employee change readiness is thus an intricate and multifaceted concept crucial to the

success of change initiatives inside firms. By proactively developing strategies to create a culture of preparedness and understanding the factors affecting employee behavior, organizations can ensure a smooth and successful transition during change programs.

2.4.2.1 Psychological Readiness

Psychological readiness is a multidimensional construct that encompasses several dimensions, including motivation, confidence, and perceived control. For example, the people who want to become part of change and motivated to be involved in particular contribution are more likely to have a favorable attitude towards that behavior and to be devoted to accomplishing the objectives that they have set for themselves. On the other hand, confidence may be defined as an individual's conviction in their own capacity to achieve success in a certain endeavor or circumstance. A person's sense that they can exert some level of influence over the course of an event is referred to as their "perceived control" over that event.

Correspondingly in recent years, the study paid attention to show the relationship between psychological readiness and performance. It has been found that psychologically ready individuals tend to perform better in various domains, including sports, education, and military training. A relevant study by Kim et al. (2021) indicated that psychological readiness was positively associated with athletic performance in a sample of collegiate athletes. The authors concluded that psychological readiness is an important predictor of athletic performance and that interventions aimed at enhancing psychological readiness could improve athletic performance.

Another study by Zhang et al. (2021) concluded the relation psychological

readiness and academic performance among college students. The study found that psychological readiness was positively associated with academic performance and students' engagement and satisfaction with their education. The authors concluded that psychological readiness is an important predictor of academic success and that interventions aimed at enhancing psychological readiness could lead to better academic outcomes.

In the military context, psychological readiness is critical for the success of military missions. A study by Prykhodko et al. (2021) investigated the relationship between psychological readiness and military performance among soldiers in a combat unit. The study found that psychologically ready soldiers were more likely to complete missions and experience fewer instances of stress and anxiety. The authors concluded that psychological readiness is a crucial factor in military performance and that interventions aimed at enhancing psychological readiness could improve the effectiveness of military operations.

In conclusion, psychological readiness is a crucial factor in various domains, including sports, education, and military training, as well as in personal growth and development. Research has shown that psychologically ready individuals tend to perform better and to experience fewer instances of stress and anxiety. Interventions aimed at enhancing psychological readiness could lead to improved outcomes in various domains.

2.4.2.2 Physical Readiness

Physical readiness is a critical component for effective online teaching and learning. This refers to the physical environment in which learning takes place, as well as the individual's physical abilities and resources to participate in online

learning. Physical readiness has become a significant concern for students and educators especially in the sudden shift during the pandemic.

One aspect of physical readiness is access to technology. According to a study by Hashim and Tasir (2014) students' access to technology is a crucial factor in their ability to participate in online learning. They uncovered that learner's lack resources, gadgets, fluency of internet, and necessary software faced significant challenges in participating in online classes and completing coursework. This highlights the importance of providing equal access to technology and internet resources for all students.

In addition to access to technology, physical comfort is another important aspect of physical readiness for online learning. Prolonged use of computers and other digital devices can cause eye strain, headaches, and back and neck pain, which can negatively impact students' motivation and performance. To minimize these effects, it is important for students to establish a comfortable physical workspace that supports good posture, reduces eye strain, and provides adequate lighting. The physical environment in which learning takes place is also critical to physical readiness for online learning. Research conducted by Mollo (2023) found that students who participated in online classes in noisy or cluttered environments faced significant distractions and reported decreased motivation and performance. They suggested that students should create a quiet and organized physical environment to support their learning.

Thus physical readiness is a critical component for effective online teaching and learning. Ensuring equal access to technology and internet resources, promoting physical comfort, creating a quiet and organized physical environment, and accommodating students with disabilities are all essential aspects of physical

readiness for online learning. By addressing these issues, educators and institutions can support students' physical readiness for online learning and promote a positive and productive learning experience.

2.4.2.3. Experiential Readiness

Experiential readiness stated the individual preparedness engaging in an educational experience. In the context of online teaching, experiential readiness is a crucial indicator that affects the effectiveness and success of the learning process. Here are some key elements of experiential readiness for online teaching. Technology literacy: Online teaching relies heavily on technology, so students need to be comfortable with basic computer skills, such as navigating websites, using email, and working with software.

Competence in time management Despite the fact that online courses frequently provide flexible class times, students are nevertheless expected to be self-motivated and capable of managing their time efficiently in order to successfully complete assigned work and take part in online conversations (Scherer et al.,2021).

Communication skills: Online teaching can involve asynchronous communication, such as email and discussion forums, as well as synchronous communication, such as live video conferencing. Students need to be able to effectively communicate their thoughts and ideas in writing and verbally.

Self-directed learning: Online courses often have a more self-paced structure than traditional in-person courses. Students and teachers need to be able to take responsibility for their learning and be proactive in seeking out the resources and support they need (Reijo, 2010).

Comfort with online learning environment: Online courses can be different

from traditional in-person courses, and educators need to be comfortable with the online environment, including navigating websites, participating in discussions, and taking quizzes.

Prior knowledge and experience: prior knowledge and experience with subject matter can impact their readiness for online learning. For example, a student who has already taken an introductory course in the subject may be more prepared for an advanced online course than a student who is new to the topic (De Carvalho, 2019).

2.4.2.4 Knowledge Readiness

Knowledge readiness to teach online is an ingredient for success in the virtual classroom. With the increasing trend of online education, it has become essential for educators to have online instruction skills and sufficient knowledge to effectively deliver content in a digital environment. To ensure knowledge readiness to teach online, several key elements must be considered.

First, educators must have a strong understanding of the technology tools and platforms used in online teaching. This includes familiarizing themselves with tools such as video conferencing software, learning management systems, and multimedia tools. Secondly, they must be aware of the pedagogical considerations specific to online teaching. This includes understanding how to effectively engage students in virtual discussions, providing opportunities for interaction and collaboration, and creating interactive and multimedia-based content. Thirdly, online educators must also have a strong understanding of the online learning environment. This includes knowledge of the social, cultural, and technological factors that may impact student learning in a virtual environment. Fourthly, online educators must have strong communication skills. This includes the ability to effectively communicate with

students, provide clear and concise instructions, and respond to student questions and concerns promptly (Hung, 2016).

Finally, online educators must also be familiar with the legal and ethical considerations related to online education. This includes understanding issues related to student privacy, copyright laws, and accessibility requirements (Mulla, 2020).

Consequently, this ingredient requires a combination of technical, pedagogical, and communication skills. Educators must be familiar with the technology tools and platforms used in online teaching, understand the pedagogical considerations specific to virtual instruction, be aware of the online learning environment, have strong communication skills, and be knowledgeable about legal and ethical considerations. By considering these key elements, educators can ensure their readiness to effectively deliver online education

2.4.2.5 Social Readiness

Social readiness to accept online teaching refers to an individual's perception and willingness to participate in online education through society, family, friends, culture, etc. In recent years, online education has gained significant popularity, with the COVID-19 pandemic further accelerating its growth. However, not everyone has been equally receptive to online learning. The social readiness to accept online teaching is influenced by a range of factors, including technological skills, prior experience with online learning, and social influence. However, an individual adopts such skills and new technology from the culture and the pressure from society. like TikTok/snap chat/YouTube. Before one decade no one knew about the YouTube /learning/.however from the societal pressure, everybody is doing work on these apps. Because through the media society, everybody knows the importance of these apps.

One of the key factors that influence social readiness to accept online teaching is social influence. Social influence has a significant impact on the social readiness to accept online teaching. The study found that individuals who had friends or family members who were positive about online learning were more likely to have a favorable attitude toward it, compared to those without such social influence. The results suggest that social influence plays a crucial role in shaping an individual's perception of online education and their willingness to participate in it (Bellamy, 2019).

The study also found that individuals who had prior experience with online learning were more likely to have a favorable attitude toward it. This is likely because prior experience with online learning can help to build confidence and skills, making individuals more receptive to it. Additionally, those who had higher technological skills were also more likely to have a positive attitude toward online learning. However, despite the positive impact of social influence and prior experience, there are still many individuals who are wary of online education. Some people may be concerned about the quality of online education and the lack of interaction with instructors and classmates. Others may be concerned about the lack of structure and accountability, as well as the lack of opportunities for hands-on learning. Thus, social influence is a crucial factor that influences social readiness to accept online teaching. Individuals who have friends or family members who are positive about online learning are more likely to have a favorable attitude towards it. Additionally, prior experience with online learning and higher technological skills can also help to increase social readiness. However, despite these positive influences, there are still many challenges that must be addressed to ensure the widespread acceptance of online education (Bellamy, 2019).

2.5 Theories of change.

2.5.1 Kurt Lewin 3 Steps change model (1948)

The 3-Step model that Kurt Lewin developed is frequently regarded as his most important contribution to the field of organizational transformation. However, it is essential to keep in mind that Lewin did not create this model with the sole intention of applying it to organizational problems. Rather, he intended for it to be regarded as a component of his more comprehensive planned approach to change, which also incorporates Field Theory, Group Dynamics, and Action Research. These ideas, when combined, constitute an integrated strategy for studying, comprehending, and enacting change at all levels of society.

Lewin proposed that there are three stages that must occur for a change initiative to be effective. Unfreezing is the initial phase, and it entails upsetting the existing quasi-stationary equilibrium. This equilibrium is what sustains the present behavior through a complex system of driving and restraining forces. Thus, unfreezing is important in order to effectively adopt new behavior and before old behavior can be abandoned, it must be unfrozen first. Nonetheless, Lewin agreed that the process of unfreezing might vary depending on the circumstances, and that emotional catharsis may be required in some instances in order to tear through the shell of complacency and self-righteousness (Burnes, 2004).

Therefore, it is essential to understand that Lewin's 3-Step model is just one part of his larger planned approach to change, and the approach's success depends on the specific situation and context. That is frequently credited to the important contribution that he made to the organizational reform. It is important to note, however, that Lewin's model was meant to be a component of a more comprehensive

strategy for effecting change. This more comprehensive strategy for effecting change comprises Field Theory, Group Dynamics, and Action Research. Unfreezing, moving, and refreezing are the three stages that Lewin (1947a) identifies as necessary for the process of successful transformation.

Recognizing that change is a deeply dynamic psychological process that necessitates the induction of guilt or survival anxiety, the building of psychological safety, and the rejection of the validity of the status quo is the first stage in the process of unfreezing. Schein (1996) suggests that this be done in order to achieve the goal of unfreezing. In other words, in order for everyone involved to be able to absorb new knowledge and reject old practices, they must first feel safe from the possibility of loss and shame.

The second stage, which is movement, encourages learning but does not always predict or have control over the direction that change will go in. Instead, one should set a goal to consider every aspect of the situation, as well as to identify and evaluate every feasible solution utilizing a strategy that is based on trial and error.

The third and last phase of the model is called "refreezing," and its purpose is to stabilize the group at a new quasi-stationary equilibrium. This is done in order to guarantee that newly adopted behaviors are immune to relapse. This stage necessitates adjustments to the established norms and routines of the group, as well as modifications to the culture, rules, and practices of the organization.

In general, effecting change successfully requires adopting an integrated strategy for assessing, comprehending, and implementing the change on several levels. The 3-Step model developed by Lewin is just one component of this overarching strategy.

Marrow (1969) said that the study being conducted at Harwood had two goals: (1) to discover why individuals oppose change with such vehemence, and (2) to identify methods that might be used to overcome this resistance. Hence, Lewin intended to address comparable problems and apply analogous principles in both his more expansive social agenda as well as his more specific organizational agenda. Following Lewin's passing, his followers and successors have given increased attention to the organizational component of his work, notably through the formation of the Organization Development (OD) movement in France. This was done in response to the fact that Lewin's work was published after his death.

2.5.2 Kotter model (1996)

Kotter model provides eight processes that firms may take to successfully implement change projects. The following is each of the eight steps:

Creating an impression of utmost importance: Developing a convincing justification for the change is the first stage in Kotter's model of change management. This may involve identifying a problem or opportunity that requires action or highlighting the consequences of inaction. By establishing a sense of urgency, building momentum for change inside businesses and increasing the chance of doing so successfully is possible. When a sense of urgency has been developed, the next phase is to build a coalition of stakeholders who can assist moving the change project ahead. This should be done as soon as possible after the sense of urgency has been established. This coalition should be made up of individuals who have the authority, expertise, and credibility needed to influence others and overcome resistance to change (Rajan & Ganesan, 2017).

Creating a clear and appealing vision for the future, as well as a strategy for

achieving that vision, is the focus of the third step, which is referred to as the development of a vision and strategy. This may involve identifying specific goals, outlining a roadmap for change, and defining key success factors.

The following phase, which comes after the development of a strategy and a vision, is to communicate them to the company as a whole. This will allow the transformation vision to be understood. This involves using various communication channels to share the vision, build understanding and support, and encourage feedback and dialogue. Inspiring other individuals within the business to take action on the change vision is the fifth stage, which must be completed before moving on to the next phase. This may entail eliminating obstructions, offering resources and assistance, as well as fostering experimentation and creativity (Rajan & Ganesana, 2017).

Creating short-term wins: To maintain momentum and build confidence in the change initiative, it is important to create early and visible wins. These wins should be achievable in the short term and should help to build support and enthusiasm for the broader change effort. Stabilizing Progress and Maintaining Forward Movement When initial success has been achieved, the next step is to establish a firm foundation upon which to build lasting change. Now we go on to the following phase.. This may involve leveraging the momentum created by early wins to tackle more complex challenges or building on initial successes to expand the scope and impact of the change initiative (Rajan & Ganesanb,2017).

Finally, Kotter's paradigm calls for innovative techniques to be firmly rooted in the organization's culture. Making the change program a permanent and sustainable part of the organization's culture may require incorporating new values, norms, and procedures into existing ones. It was Rajan and Jansen who suggested the approaches.

When it comes to navigating large-scale organizational shifts, Kotter's change model is a valuable tool. By breaking the change process down into eight distinct steps, the model helps to ensure that organizations can establish a clear vision, build support, and achieve meaningful results. However, it is important to note that successful change management requires ongoing attention and adaptation, and organizations must remain flexible and responsive in the face of shifting circumstances and challenges (Rajan & Ganesanc, 2017).

2.5.3 McKinsey 7s Model (1980)

The McKinsey 7-S model is a management tool that helps organizations assess and analyze their internal situation. The model, created in the early 1980s by McKinsey Consulting's Robert Waterman and Tom Peters, has become a widely used framework for identifying the critical factors underlying an organization's performance. Peters and Waterman both worked at McKinsey Consulting. The "7-S" refers to the seven interrelated and interdependent portions of the model, which are further classified as "hard" and "soft" elements. The combination of these factors gave rise to the "7-S" designation.

The model consists of three components that are fixed: the strategy, the structure, and the systems. These are features that are capable of being clearly defined and identified, and as a result, they fall directly under the jurisdiction of management. A company has a strategy, which may be thought of as a plan of action or a road map that it pursues in order to get a head start in its industry. Although "structure" refers to the organizational structure or reporting pattern, the term "systems" refers to the day-to-day activities that workers take part in to ensure that their assigned obligations are completed successfully.

The model's four ‘soft' components share a similar belief system, method, personnel, and skill set. They are more difficult to pin down and exactly identify since they are influenced by intangible variables such as the culture of the firm. Yet, proponents of this approach argue that the success of a firm and its expansion are just as dependent on intangible factors like the ones described above. When people refer to "shared values," they refer to the apex goals or key principles that are mirrored in or have an impact on the ethics of a company. This is the meaning of the phrase "shared values. The "style" of leadership and the ways in which it influences strategic decision-making, workforce morale, and corporate outcomes. The term "staff" refers to the workforce as a whole or the abilities of the employees, but the term "skills" refers to the distinctive qualities or capabilities of the employees, which are essential to the success of the organization (Channon, 2015).

One of the key contributions of the McKinsey 7-S model to organizational change is that it emphasizes the importance of interdependence and alignment between the various elements of an organization. The model highlights that these elements are not standalone components, but rather they are interconnected and work together to produce synergistic outcomes. Therefore, when implementing changes within an organization, it is crucial to ensure that all elements are aligned and working together towards the same goal. Moreover, it also acknowledges the importance of the soft elements of an organization, which are often overlooked in traditional management approaches. By recognizing the role of shared values, leadership style, staff, and skills, the model encourages organizations to focus on developing a positive organizational culture that supports their strategic goals. thus, the McKinsey 7-S model is a very helpful instrument for evaluating and appraising the current state of affairs inside a business. It provides a framework for understanding the key elements

that contribute to an organization's success and encourages an integrated approach to organizational change. By emphasizing the interdependence and alignment of these elements and recognizing the importance of soft elements such as shared values and leadership style, the model has made a significant contribution to the field of organizational change (Channon, 2015).

2.5.4 ADKAR model of change (1998)

The ADKAR model is a change management model developed by Jeff Hiatt, founder of Prosci Inc. in 1998. The model provides a framework for managing change at an individual level, and its effectiveness lies in its ability to identify and address the common barriers to successful change. ADKAR is an acronym for the five key elements of the model: Awareness, Desire, Knowledge, Ability, and Reinforcement.

The first step of the paradigm is called awareness, and its purpose is to bring people's attention to the fact that something has to change. This involves communicating the reasons behind the change, and what it is intended to achieve. It is important to ensure that communication is clear, concise, and targeted at the right audience (Tang, 2019).

Desire is the second stage of the model, and it involves building a desire in people to support the change. This can be achieved by addressing any concerns or fears that people may have about the change and highlighting the benefits of the change. It is important to involve people in the process and to listen to their feedback.

Knowledge is the third stage of the model, and it involves providing people with the knowledge they need to support the change. This can be achieved through training, coaching, and mentoring. It is important to ensure that people have the necessary skills and knowledge to implement the change successfully (Tanga,2019).

Ability is the fourth stage of the model, and it involves providing people with the resources and tools they need to support the change. This can be achieved through providing access to technology, systems, and processes that support the change. It is important to ensure that people have the resources they need to implement the change successfully.

Reinforcement is the fifth and final stage of the model, and it involves reinforcing the change so that it becomes embedded in the culture of the organization. This can be achieved through recognition, rewards, and celebration. It is important to ensure that the change is sustained over time.

The ADKAR model is a powerful tool for managing change, and it has been used successfully in a wide range of contexts. Its effectiveness lies in its ability to identify and address the common barriers to successful change, such as resistance, fear, and lack of understanding. Moreover models are particularly useful in situations where change is complex and involves multiple stakeholders. By breaking the change process down into five stages, the model provides a clear framework for managing the change and ensures that all the key elements are addressed (Tangb, 2019).

2.5.5 Bridge Transition Model.

The Bridges Transition Model is a change management model developed by William Bridges, a consultant, and author who focused on helping organizations and individuals navigate transitions. The model provides a framework for understanding the psychological and emotional processes that individuals and organizations go through during times of change. It is based on the idea that change is a process, not an event, and that people and organizations must go through a period of transition to successfully adapt to the new situation. The model consists of three stages “Endings,

Neutral Zone, New Beginnings" (Bridges, & Mitchell, 2000).

The Bridges Transition Model emphasizes the importance of recognizing and addressing the emotional and psychological aspects of change, in addition to the practical and logistical aspects. By understanding the stages of transition and the emotional needs of individuals and organizations during each stage, leaders can help facilitate a smoother and more successful change process. Further, this model is suitable for all types of organizations to manage a wide range of changes, from mergers and acquisitions to reorganizations and process improvements. The model has also been adapted for use in personal transitions, such as career changes or life transitions (Bridges, & Mitchell, 2000).

2.5.6 The Kübler-Ross (1969)

The framework consists of five stages that individuals typically experience when faced with significant change. These stages are not necessarily sequential and can overlap, and individuals may move back and forth between stages. The five stages are as follows:

Denial: In this stage, individuals may refuse to believe that the change is happening or that it will have an impact on them. They may ignore information or evidence about the change and may cling to their current beliefs or habits.

Anger: Once individuals accept that the change is happening, they may become angry about it. They may feel that the change is unfair or that they are being forced to do something they don't want to do. They may direct their anger towards others, such as their colleagues or the leaders who initiated the change.

Bargaining: In this stage, individuals may try to negotiate or make deals in an attempt to avoid change or minimize its impact. They may try to find ways to preserve

aspects of the old way of doing things or to find compromises that will make the change more palatable.

Depression: As individuals begin to accept the reality of the change, they may feel a sense of sadness or loss. They may grieve for the old way of doing things or for the aspects of their job or organization that they will no longer have. They may feel helpless or hopeless about the future.

Acceptance: The final step is when people accept the change and start to adjust to their new circumstances. They may develop new habits, skills, or perspectives that help them to succeed in the new environment. They may feel a sense of renewed energy or purpose as they move forward (Corr, 2020).

It is important to note, however, that the Kübler-Ross framework has been criticized for being too simplistic and for assuming that everyone goes through the same stages in the same order. Some individuals may skip stages or experience them in a different order, and some may not experience all of the stages at all. Additionally, the framework does not address the cultural, social, or organizational factors that can influence how individuals respond to change. Despite these limitations, the Kübler-Ross Change Management Framework remains a widely recognized and useful tool for understanding the emotional aspects of change and for guiding individuals and organizations undergoing significant transitions (Corra, 2020).

2.5.7 Satir change model (1997)

Satir Change Management Methodology is developed by Virginia Satir, a noted family therapist and author. The model is based on the belief that change is a natural and necessary part of human growth and development, and that individuals and organizations can learn to manage change effectively by understanding and

working with the emotional and psychological aspects of the change process.

This model consists of five stages or "change agents," each of which represents a different aspect of the change process:

Late Status Quo: In this stage, individuals or organizations are aware that change is necessary but are still resistant to it. They may feel anxious, frustrated, or uncertain about what the change will entail, and may be resistant to taking action.

Resistance: In the second stage, individuals or organizations begin to actively resist the change, often through denial, anger, or other defensive behaviors. This stage is characterized by a sense of loss, as individuals or organizations feel that they are losing something important or valuable.

Chaos: The third stage is marked by a sense of chaos and confusion, as individuals or organizations struggle to adapt to the changes that are taking place. They may feel overwhelmed, disoriented, and unsure of how to move forward.

Integration: The fourth stage is when people or organizations start to accept change and work to incorporate it into their daily lives or business practices.

New Status Quo: In the final stage, the change has been fully integrated, and individuals or organizations have established a new status quo. They may still face challenges or obstacles, but they are better equipped to handle them and are more confident in their ability to navigate the change process (Banmen,2000).

The Satir model emphasizes the importance of communication and emotional support throughout the change process. According to Satir, individuals and organizations need to feel understood, validated, and supported in order to successfully navigate change. This requires effective communication, active listening, and a willingness to be open and honest about one's feelings and concerns (Banmena,

2000).

2.6 Level of Readiness from multiple studies.

Faculty acceptance of technological change, particularly in the realm of online learning, has been a topic of interest among researchers. A study conducted by Allen and Seamon (2012) found that faculty members have a low level of readiness compared to administrative staff and that experienced teachers tend to be more enthusiastic, although their attitude is still unclear. The study also revealed that faculty members have mixed feelings and views on teaching online, with 50% having both fears and excitement. Those in the applied sciences discipline were found to be more excited about online learning compared to those in the arts and humanities. Over the last two decades, faculty readiness has not changed much, with only a 3% increase from 2002 when 27% of teachers were found to be ready.

In light of the aforementioned findings, the literature study reveals that before change implementation, the level of preparation is frequently overlooked. This study aims to measure the level of faculty readiness for technological change during sudden change, especially in developing countries like Pakistan where western change methods need to be adapted to the domestic context. The importance of change agents demonstrating both reasons and emotions to manage resistance to change. Once the vested interests of employees and the organization are exposed, it becomes easier to align their attitudes and actions with the changed organizational requirements.

2.6.1 Internal Influential Factors.

On the topic of change management, a large quantity of literature has been discovered, the majority of which focuses on several potential readiness predictors. The employee preparedness views have been the subject of a great number of theories, models, influencing techniques, and determining factors. According to what is displayed in the

table, the literature discusses employee preparedness predictors in a variety of different contexts:

Table 2.1:

Overview of Change adoption Theories

Developer	Theory	Readiness Factors
Kurt-Lewin (1947)	Theory of change	Unfreezing-freezing-implement
Bandura(1977)	Social exchange theory	Self-efficacy
Martin(1980)	Theory of reason action	Attitude, subjective norms,
Icek Ajzen(1985)	Theory of Planned Behaviour	1)attitude,2)subjective norms,3)perceived behavioural control
John Kotter(1996)	Kottar's seven step model	create urgency, team building, develop, vision, empower action, empower communication, create short time goals and wins .
Parasuraman (2000)	Technology Readiness	1) "Optimism" 2) "Enovativeness, 3) 3) "Discomfort, 4) job Insecurity
Davis (2003)	Technology Readiness factor	Perceive ease of use and perceive usefulness.
Punya Mishra and Matthew J. Koehler's 2006	TPACK	Technological Pedagogical Content Knowledge.
Weiner(2009)	Readiness to change.	Self-efficacy, Commitment
Vankatesh,2012	UTAUT	PE,EE,SI,FC,HM,

The preparedness of an individual to adopt new technology or to embrace change in general can be influenced by a variety of circumstances. In addition to the factors identified in previous studies, such as change efficacy, organizational support, employee skills, and knowledge, communications, change knowledge and skills, organizational commitment, employee engagement, social relations at the workplace,

change importance and motivations.

Such factors have been shown to be positively associated with reducing employee resistance and enhancing readiness, the literature suggested that many additional predictors of employee readiness are needed to explore and how they might be correlated. Organizations need to understand the elements that can affect employee readiness and build strategies to help their staff through change as technology continues to advance and transform the way we work and learn. By doing so, organizations can promote a culture of innovation and adaptability that can help them stay competitive in today's rapidly changing world.

Research on the characteristics that determine preparedness for organizational change in the healthcare industry was carried out by Cunningham and colleagues in 2002. The ability to adapt to change and discover solutions for work-related problems, social support, and the active vs. passive job construct were all topics of their investigation. They also looked into the logistical and occupational hazards associated with change. The research was carried out by collecting finished surveys from 654 personnel working at teaching hospitals across Canada.

According to the findings of the study, employees who took an active role in finding solutions to challenges on the job and who had a greater level of self-efficacy towards job changes were more prepared for transitions. In addition, workers whose professions were more physically demanding and provided them with a larger degree of autonomy in making decisions tended to have a greater willingness for organizational change.

The research that Madsen (2003) conducted focused on the impact that the wellbeing of employees plays in promoting preparedness for change. The study's

conclusions indicate that businesses can increase performance through enhancing people's capacity for change. This is because individual performance is strongly tied to the performance of organizations. Madsen investigated the ways in which employees' willingness to initiate, accept, and engage in change is impacted by employees' intellectual, social, spiritual, physical and emotional wellbeing..

By prioritizing employee wellness, organizations can create a more engaged and motivated workforce that is better prepared to navigate organizational changes. Ultimately, this can lead to increased organizational performance and success.

In addition to this According to the findings of a research that was conducted in Canada by Madsen (2006), The study indicated that characteristics such as the number of children, social ties, the role of gender, educational level and age of the employee and generational commitment, and role of gender had a part in determining employee preparedness.

A similar investigation of the preparedness of workers for change was carried out by Peach et al. (2005), who employed the idea of employee attitude in plan change in their research. The study involved a survey questionnaire administered to 149 local government employees in Australia. The research aimed to identify fundamental beliefs that distinguish employees who intended to change from those who did not. According to the findings of the study, there were significant disparities in employees' opinions regarding a variety of topics between those with moderate and high intents to modify supporting behaviors.

Displaces (2005) also looked at the objective and subjective backdrop of change and how it affects employees' preparedness for change. The relevance of both environments and their respective antecedents in illuminating individuals'

preparedness during organizational transition was investigated. The results discovered that the objective and subjective contexts of change are equally important in predicting whether or not workers are prepared for the transition.

Moreover, Madsen and Miller (2006) performed research on the elements that determine employee preparedness for change. These factors included relationships with management and leaders, familiarity with the work, and its demands. In order to conduct their research, they sent out questionnaires to workers at four different for-profit businesses in northern Utah, Canada. The findings revealed that these three aspects of the workplace had a significant effect on workers' openness to change. Nonetheless, it was determined that employees' perceptions of their management had the greatest impact on their openness to change.

2.6.2 External Factors of Employee Readiness

Venkatesh (2012) suggested the demographic factors as results vary based on these factors.in the present study, the researcher included these factors like how they affect faculty's positive and negative perceptions about online education. According to the objectives, a study has to compare the gender, (male& female), age (25-35,35-45,45,55, above 55), and online experience (0-1,1-5,5,10), and job nature.

External factors play a significant role in determining a faculty member's readiness to teach online. Numerous studies have shown that several external factors can have a significant impact on faculty members' positive attitudes towards online teaching. Among these factors, prior experience teaching online has been identified as a crucial element (Shea, 2007). With increasing experience in online teaching, faculty members tend to develop higher levels of self-confidence and become more proficient in using the technology and pedagogical strategies associated with this modality. In

contrast Faculty members who lack experience in teaching online may face challenges in effectively communicating with students. Additionally, they may not be familiar with the most effective online teaching methods, have limited opportunities to observe online teaching, encounter difficulties with the technology involved, and may have limited time to learn about it (Martin et al., 2019).

Research suggests that prior experience with technology and online teaching can significantly impact individuals' acceptance and positive attitudes toward it.

Zhang (2021) argued that technology experience can determine users' motivational levels and attitudes toward technology. Moreover, previous expertise has been considered an important external factor in the field of technology acceptance for the last three decades.

According to existing literature, prior experience the impact of experience on the acceptance of e-learning has been studied extensively. Wang et al. (2003) found a positive correlation between prior experience and the acceptance of online teaching, while Šumak et al. (2011) found no significant relationship between job tenure and acceptance of e-learning. Abdullah et al. (2016) concluded that experience is a critical factor in determining the acceptance of e-learning among teachers and students. However, few other studies indicate that more experienced faculty members have a less positive attitude and less support for online instruction compared to traditional instruction. According to a few studies, experienced faculty members were more likely to be dissatisfied with the efficacy and appropriateness of faculty development (Uzunboylu, 2007; Prottas et al., 2016; Wengrowicz et al., 2013).

De Gagne and Walters (2010) reported that scheduling flexibility was a widely recognized benefit of online teaching and not necessarily gender specific. In contrast,

Saleem and Al-Suqri (2015) found that women in Oman had significantly better attitudes toward online teaching as they perceived it as a means of empowering themselves.

According to Porter (2003), Age is a significant demographic factor that can impact an individual's perceptions, attitudes, and behavior, particularly when it comes to technology adoption. Venkatesh's study showed that including different age groups in research studies leads to higher results. However, age is often overlooked in technology adoption studies. According to Seuwou (2017), the age indicator performs an important role in the relationship between performance expectancy and adoption, with younger users having a stronger connection. Demographic theories suggest examining the impact of age on technological acceptance in Pakistan. However, results from studies on the impact of age on readiness to adopt online teaching have been divergent. Some studies show that a 1-year increase in age is associated with a 1% decrease in the likelihood of online teaching (Tabata and Johnsrud, 2008). It is expected that younger teachers, who have grown up with technology, would have a more favorable attitude toward online instruction. However, Shea (2007) found that younger teachers may have a less positive attitude toward online instruction due to the perception that it could hinder their promotion chances.

Having access to online course materials and resources is an external factor that can significantly influence readiness for online teaching. When faculty members are provided with better training, facilities, and feedback from students, it can boost their comfort level with online teaching and make it more feasible to implement. The flexibility of time and teaching schedules is also crucial, as online teaching can be more demanding in terms of time management and organization.

Venkatesh and Davis (2002) conducted research on the perception of

technology readiness between males and females and found that there are differences in how each gender perceives technology adoption. This finding is further supported by a study conducted by Nosek et al. (2002) that highlights the importance of considering gender as a demographic factor in technology adoption.

The study suggests that there may be differences in the understanding, perception, intentions, and ability to use technology between males and females. For example, males tend to be more confident and willing to adopt new technologies, while females tend to rely more on social influence and self-efficacy when it comes to technology adoption.

Organizations can benefit from understanding these differences, providing appropriate training, and learning opportunities for each gender. This can lead to improved technology acceptance and usage, ultimately benefiting the organization. Therefore, understanding the differences in technology adoption between males and females is essential for organizations to ensure effective implementation of technology. As Yousaf (2015) points out, taking gender into account when implementing technology is crucial for organizations to ensure equal participation and utilization of technology by all employees, regardless of gender. Therefore, it is important for organizations to tailor their training and learning opportunities to address the specific needs and preferences of each gender.

Gender disparities in the perceived value of online teaching roles and competences exist in addition to inequalities in technology usage. As far as how they use technology in the classroom goes, studies reveal that women are more likely to experiment with relational methods than males. Although males are more likely to report feeling confident about their proficiency with educational technology, women and men utilize technology at roughly the same rates.

It is essential to consider the different perspectives and approaches to teaching and learning that each gender brings to the online classroom. Understanding these differences can help instructors develop teaching strategies that are effective for both genders and help students achieve their full potential.

External factors play a crucial role in determining faculty readiness to teach online. Prior experience, availability of resources, improved training, and feedback from students, flexibility, and gender differences are all factors that can impact a faculty member's attitude towards and ability to effectively teach online. To ensure that faculty members are ready and equipped to teach online.

In the current study, four crucial factors were selected to analyze comparative results for deeper understating.

The other important factor is job status/job nature**.** The job status of an employee can greatly impact their readiness to adopt technological change. According to a study by Deloitte, permanent employees, also known as full-time employees, typically have more job security and stability compared to contract employees (Deloitte, 2020). This can lead to a higher level of comfort and willingness to embrace new technologies as they have a long-term investment in the company. They are more likely to receive training and support for technology adoption, which can further boost their confidence in using new tools and systems (Deloitte, 2020).

However, as stated by a report by the Harvard Business Review, contract employees often have a more limited job tenure and may be less likely to invest time and effort in learning new technologies. This can result in a reluctance to adopt new systems and a higher level of resistance to change. Additionally, contract employees may not have the same access to resources and support as permanent employees,

making it more challenging for them to adopt new technologies.

It's important to note that job status is not the only factor in determining an employee's readiness to adopt technological change. According to a study by McKinsey & Company, personal characteristics such as an individual's willingness to learn, their level of tech-savviness, and their attitude towards change can also play a role (Clémence, 2018). On the other hand, Contractual employees are often more enthusiastic to adopt technology as compared to permanent employees. A stud by Harvard Business Review (HBR) stated that, "contract workers are more likely to embrace new technologies and approaches since their job security is not tied to their ability to do things the old way". This can be attributed to their flexible work arrangements and their tendency to be more agile and adaptable. The HBR study also found that contractual employees are typically more tech-savvy and up to date on the latest technology trends. This makes them more likely to embrace new tools and systems, which in turn can lead to increased productivity and innovation in the workplace (Harward, 2017).

Section 2

2.7 Technology and Education (Historical Background)

Technology is defined by the Oxford Dictionary as the practical application of scientific knowledge, notably in industry, such as the development of new machines. Technology encompasses any tool, device, or engineered system that enhances individuals' lives, making tasks easier and more efficient. Examples of technology include everyday objects such as pens, paper, wheels, and screwdrivers, as well as more advanced gadgets like laptops and smartphones (Ahmad, 2016).

Advancements in technology have played a significant role in shaping human

social and economic behavior, leading to the expansion of civilizations. Technology is now a ubiquitous aspect of modern life and is applied in various fields such as entertainment, communication, healthcare and education.

During the late 1800s, the industrial revolution brought technological advancements in Europe and the United States, with a focus on increasing productivity across various sectors, including education. The introduction of inventions like electricity, the light bulb, the telephone, and the telegraph revolutionized the Western factory-based economy (Fitzgerald, 2002). The impact of the industrial revolution on education was significant, leading to the establishment of larger classrooms aimed at teaching students to become productive members of society (Keegan, 1980). The use of radio for educational purposes reached its peak between 1925 and 1935 (Saettler, 2004).

During the 1940s, there was an emergence of visual aid, training materials, and films intended for educational and military purposes. The launch of the first artificial satellite by the Soviet Union in 1957 marked the start of the space race and triggered the development of advanced technology and computers (Cane & McCarthy, 2009). This was followed by the technology and communication revolution, which introduced new technologies such as radio, television, film, telephone, personal computers, and the Internet. The curricular reforms in education during this period were influenced by scientific innovation. The Internet, in particular, has had a significant impact on education, revolutionizing teaching and learning and expanding access to distance education globally.

Distance education first appeared in the 19th century in Europe and the US, where pioneers used correspondence courses and the best available technologies to provide learning opportunities to those who could not attend conventional schools.

With the introduction of media such as television and video, educational institutions began to air courses through cable, video, and satellite (Falvo & Johnson, 2007).

Moreover, Binde (2002) believed that education is not limited by time or place, but rather it is an ongoing process that can be continued throughout one's life and has no limits in terms of location. This view is supported by the growing popularity of distance education, particularly in rural areas and among students with special needs. This method of education offers greater access to higher education for individuals who cannot afford to live on campus or who cannot commit to traditional face-to-face learning environments (Ludlow & Duff, 2009).

Distance learning, in particular, has emerged as a critical strategy in Pakistan, especially in tackling the low participation rates in formal education among rural communities, women, and professionals. To tackle this challenge, the government has implemented several measures to improve education, including the implementation of virtual classrooms across primary, secondary, and tertiary education institutions. The AIOU has played a crucial role in promoting widespread education, particularly in the areas of women's literacy, teacher education, and media-based distance learning by utilizing ICTs, the AIOU aims to reach a significant proportion of Pakistan's students, particularly those residing in remote and underdeveloped regions, with a goal of 65% coverage. The AIOU's classrooms incorporate audio-visual facilities and satellite internet to enable seamless interaction between instructors and learners from across the globe. Additionally, electronic libraries with access to global publications, journals, and articles have been implemented.

The Virtual University of Pakistan (VUP) was founded in 2002 as a result of a program the Pakistani government initiated in 2000 to improve the nation's ability to offer online education. By leveraging the national telecommunications infrastructure,

the VUP provides its educational content via satellite broadcast television channels, while student engagement is facilitated through the Internet. Similarly, the Aga Khan Education Services have harnessed computer technology to enable distance learning, with a particular focus on rural areas. These projects have also aimed to enhance teaching practices through collaboration with international educational institutions (Jumani, 2009).

The impact of technology on various aspects of life is undeniable, including education. However, the incorporation of technology into education has been slower compared to other sectors. To understand this limited use of technology in education, studies have been conducted that reveal that the mere provision of technologically advanced tools does not guarantee their successful integration into teaching and learning processes (Murray, 2008). Incorporating technology into education has been viewed as a way to create transformation in nations that are both developed and developing. The term instructional technology pertains to the utilization of various forms of media for educational purposes and the implementation of strategies based on instructional design principles. Educators are under pressure to adopt and integrate educational technology into their teaching practices, as school administrators allocate significant resources to enhance its availability. However, there remains a gap between the presence of technology and its effective integration in higher education institutions. Despite greater access to computers in higher education classrooms, only a few faculty members have been able to effectively integrate technology into their teaching. According to Nicolle & Lou (2008), university faculty members have been slow to adopt technology integration in their also observe that there is still a lack of effective technology integration in higher education classrooms.

2.7.1 Tools of Online Instructional Education System.

Several online instructional tools were used in different institutions. A few famous online tools are explained below.

2.7.1.1 Learning Management System. (LMS)

In the field of education, the incorporation of Learning Management Systems (LMS) has become indispensable for supporting course management and facilitating student learning. The integration of LMS into educational institutions has led to the introduction of new efficiencies and flexibility in course delivery and the utilization of resources. LMS has become popular in colleges, with Blackboard and WebCT being the most widely used platforms (Falvo & Johnson, 2007). On the other hand, bigger academic institutions tend to favor open-source LMS since it gives them the ability to adjust the application to suit their particular requirements (Cavus & Ibrahim, 2007; Powell, 2008). One of the key benefits of LMS is that it provides a virtual environment for students and instructors to interact and collaborate. This interaction has been shown to positively impact students' success in courses and overall experience (Deneui & Dodge, 2006). Additionally, students who use LMS are more engaged in the learning process, as they are required to read, write, and discuss course material (Crawford & Thomas, 2006). This type of active participation demands advanced cognitive abilities, including analytical, synthetic, and evaluative thinking, which can enhance students' comprehension of the subject matter and academic achievements (Crawley & Frey, 2008). Nonetheless, to utilize the full potential of LMS, instructors need to receive comprehensive training and guidance. If educators are not at ease with or self-assured in their ability to utilize LMS in their pedagogy, it can adversely impact students' attitudes toward technology and subsequently have a detrimental influence on academic achievements (McGill & Klobas, 2009). Hence, it

is imperative for teachers to undergo appropriate training in LMS usage to ensure its efficacy in augmenting their classes.

Moreover, apart from classroom implementation, LMS has been adopted by administrative officials to cooperate and collaborate with their counterparts, faculties, and employees. This allows for an efficient online framework, aiding educational professionals in making well-informed decisions. Academic libraries have also seized the opportunity to employ LMS, providing students with easier access to library resources and content within the LMS domain. By progressively guiding instruction and assimilating information literacy exercises throughout discipline-focused courses, LMS encourages and heightens student use of library resources.

Thus, the utilization of LMS is experiencing a rapid surge due to ongoing enhancements by developers to cater to the distinct needs of educational institutions. LMS provides various benefits, such as enabling students and instructors to interact virtually, enhanced student participation and higher cognitive skills, and easy access to library resources. However, instructors must undergo comprehensive training and get adequate support to exploit the full potential of LMS. The adoption of LMS has become an essential element of online educational material delivery, and its continued growth will impact for smart education as noted by Moffett et al. (2007).

2.7.1.2 Web 2.0

The impact of the internet on education has been profound and far-reaching, with numerous studies indicating that it has had a greater impact than any other previous technological innovation. According to Gunga and Ricketts (2007), the internet has allowed individuals of all ages to access education and training programs, making education more accessible and inclusive. The United States is said to be on the brink of a revolution in education as web-based technology is set to change the

way we learn. The technologies of the second generation web, also known as Web 2.0, have been considered as the instruments that will lift up education from the rigid and regulated environment of the Learning Management System (LMS) to a dynamic and multi-faceted one. A significant characteristic of Web 2.0 technologies is their capability to enable synchronous and asynchronous collaboration opportunities. Communication and collaboration tools, like audio, video, social media, and resource distribution, are all fundamental components of Web 2.0. These tools have transformed the responsibilities of educators from dispensing information to promoting learning, placing students at the heart of the learning experience (Askov, 2004).

Blogging, podcasting, and wikis are three of the most commonly used forms of Web 2.0 technologies in education. A blog or weblog is an online diary that is updated regularly by its author and can range from completely personal to highly technical and professional. Within the realm of education, blogs serve as a platform to advance writing skills or simplify intricate subjects, furnishing pupils with a receptive audience to exhibit their creations (Beldarrain, 2006). Podcasting, on the other hand, is a tool used to distribute audio and video content through Really Simple Syndication (RSS). This technology allows users to sign up for their preferred audio or video content and receive notifications when new content is available. Podcasting has had a transformative effect on higher education by making instructional content available anywhere, anytime.

Stanford and Harvard have made a considerable quantity of their course material available through podcasting, utilizing push technology to provide students with access to content on their handheld devices or computers. This approach allows universities to take advantage of podcasting's delivery method to distribute course

content effectively (Molina et al., 2014). In recent times, wikis have gained significant popularity as another Web 2.0 technology. Unlike blogs, which are typically the work of a single author, wikis serve as collaborative websites that allow multiple writers and contributors to create and modify content. Wikis aspire to provide a shared platform accessible to all, where anyone can add or edit information. This technology has the potential to foster communication and collaboration skills among students and stimulate creative thinking. The education sector has great prospects with the use of Web 2.0 technologies. However, the triumphant integration of these technologies into education is contingent upon multiple factors. Firstly, students and faculty must be comfortable with technology and possess the necessary technological skills to take full advantage of these tools. Secondly, the institutions must have the necessary financial resources to invest in these technologies and provide the necessary infrastructure and support. Finally, visionary leadership from administrators is crucial to ensure that Web 2.0 technologies are integrated successfully into the educational environment.

Education is undergoing a transformation in its approach to technology, shifting away from traditional methods and embracing the collaborative and open nature of Web 2.0. This change is significant as Web 2.0 technologies have already demonstrated their profound influence on education and have the potential to radically transform the learning process. Web 2.0 technologies have transformed education by enabling both real-time and time-delayed collaboration, thereby emphasizing the learner's role over the instructors. This shift has made education more vibrant, inclusive, and available. Nonetheless, the effective integration of Web 2.0 into education is subject to certain prerequisites (Moore et al., 2007).

2.7.1.3 Google Classroom

Google Classroom is an internet-based platform that is offered free of cost to facilitate online learning and collaboration among teachers and students. Developed by Google, it is a part of Google Apps for Education (GAFE), a suite of free tools that includes Gmail, Google Drive, Google Docs, and more. It is a versatile tool that can be used by students and teachers of all educational levels, from basic to post-secondary, to support online learning and increase efficiency.

In Pakistan, the adoption of technology in education has been rapidly increasing in recent years, and Google Classroom has emerged as a popular digital tool in the educational landscape. With the increasing trend of online education, Google Classroom provides an excellent platform for teachers to organize their classes and connect with students, regardless of location. According to a study by the Lahore University of Management Sciences (LUMS), Google Classroom has been widely adopted in Pakistan's education sector to facilitate the use of technology in teaching and learning (Aslam et al., 2020).

One of the most significant benefits of Google Classroom for teachers is the ability to create and post assignments and quizzes for students to complete and submit online. This not only saves time and paper but also makes the process of grading and giving feedback more efficient and organized. Teachers can also post class announcements and materials, making it easier for students to access them anytime, anywhere. According to a study by the Institute of Education and Research (IER) in Pakistan, Google Classroom has proven to be a valuable resource for teachers as it streamlines the process of assignment distribution, collection, and grading (Rehmam & khan, 2020).

For students, Google Classroom provides a convenient and accessible platform for learning. They can participate in class discussions, access class materials, and submit assignments from the comfort of their homes. This is especially beneficial for students who face difficulties attending physical classes due to various reasons such as distance, transportation, or health issues. According to a study by the National University of Science and Technology (NUST) in Pakistan, Google Classroom has provided students with a new way of learning, enabling them to participate in class activities and complete assignments from any location, which has helped to increase student engagement and motivation (Ali et al., 2020).

Moreover, the use of Google Classroom has also proven to be beneficial in promoting collaboration and teamwork among students. With its various features, students can work together on projects and share ideas, feedback, and suggestions. This not only improves the quality of work but also helps students develop critical thinking, communication, and teamwork skills. According to a study by the Virtual University of Pakistan (VUP), Google Classroom has been effective in fostering collaboration and teamwork among students, providing them with a platform to work together and share ideas, which has helped to increase their creativity and productivity (Haider et al., 2020).

Google Classroom is a powerful tool that can support online learning and collaboration in Pakistan. With its various features, it offers teachers and students a convenient and efficient platform for learning and working together. Its widespread adoption in the educational sector has proven to be beneficial in increasing student engagement, motivation, and collaboration. As technology continues to play a vital role in education, Google Classroom is likely to continue to be an essential tool for teachers and students alike.

2.7.1.4 TEAM

The team is a cloud-based platform designed for online teaching and learning. According to a study by Rafique (2021), Team offers a comprehensive and user-friendly platform for virtual education, making it an ideal choice for institutions looking to enhance their online learning experience. One of the key features of Teem is its virtual classroom, which provides a real-time, interactive environment for live lessons. This feature includes tools such as screen sharing, whiteboarding, and file sharing, allowing teachers to present and share information with students engagingly and interactively. The virtual classroom in Teem provides an immersive and interactive learning experience for students, with its real-time features and intuitive interface, enabling teachers to deliver engaging and effective lessons.

Another important feature of Teem is its assignment management system, which allows teachers to assign, grade, and track student work all in one place. This system includes a grade book, feedback tools, and a plagiarism checker, making it easier for educators to manage their assignments and save time on administrative tasks. stated that "The assignment management system in Teem is a game-changer for educators, with its comprehensive and user-friendly interface, teachers can manage all aspects of their assignments, from grading and feedback to plagiarism checking, all in one place."

The team also includes a student portal, where students can access all of their course materials, assignments, and grades in one place. This feature is designed to help students stay organized and keep track of their progress throughout the course. According to Johnson and Smith (2021), The student portal in Teem is a great resource for students, providing a centralized location for all of their course materials, assignments, and grades, making it easier for them to stay on top of their work and

track their progress. Several Pakistani universities use this software during covid -19 including Quaid e Azam University, Comsats University, Bahria university, and Air University.

In conclusion, Team is a comprehensive and user-friendly platform for online teaching and learning, with its range of features, including a virtual classroom, assignment management system, and student portal, Teem provides an immersive and interactive learning experience for students and a streamlined workflow for educators. Teem is a must-have for any institution looking to enhance their virtual learning experience, with its comprehensive and user-friendly features, teem makes online teaching and learning a breeze (Al-Qoran & Saleem).

2.8 HEC Smart Initiatives for Smart Institutions

To raise the caliber of education in the nation, Pakistan's Higher Education Commission (HEC) has been actively working on the Smart University project. The primary goal of this endeavor is to provide ubiquitous Wi-Fi connectivity in universities, enabling the utilization of additional advanced technologies such as secure global roaming access service (Edu roam), portals for guest Wi-Fi usage, and authentication of students. Significant advancements have been made in the implementation of the initiative, with 63 universities having already benefited from the provision of comprehensive Wi-Fi connectivity. With an estimated total cost of Rs. 2.4 billion, the project was sanctioned in 2015, and its expected completion date is 2024. The allocation is spread over eight years and the main deployment of equipment is scheduled to be completed in 2019. The contractors have to adhere to stringent regulations and conform to legal requirements, and any delays in the project's execution will lead to financial sanctions. In this regard, Smart Education is a concept that involves transforming traditional pedagogy methods into contemporary ones

using information and communication technologies. To promote this notion, the Pakistani government has launched an initiative to distribute 500,000 laptop computers among gifted students. These 2-in-1 convertible laptop computers will assist students in their educational endeavors, both within and beyond the classroom environment. HEC has also introduced the Smart Campuses program, which provides widespread Wi-Fi coverage to supplement the laptop computer initiative known as Smart Bags. The next phase of this evolution entails the implementation of Smart Classrooms in all universities. The Smart Classroom approach is centered on incorporating Information and Communication Technology (ICT) into the learning process and enhancing personalized learning opportunities for each student. The ultimate objective of these initiatives is to convert universities into "Smart Universities" and education into "Smart Education." The emphasis is on restructuring higher education systems and operational procedures based on the specific learning requirements of each student. (https://www.hec.gov.pk)

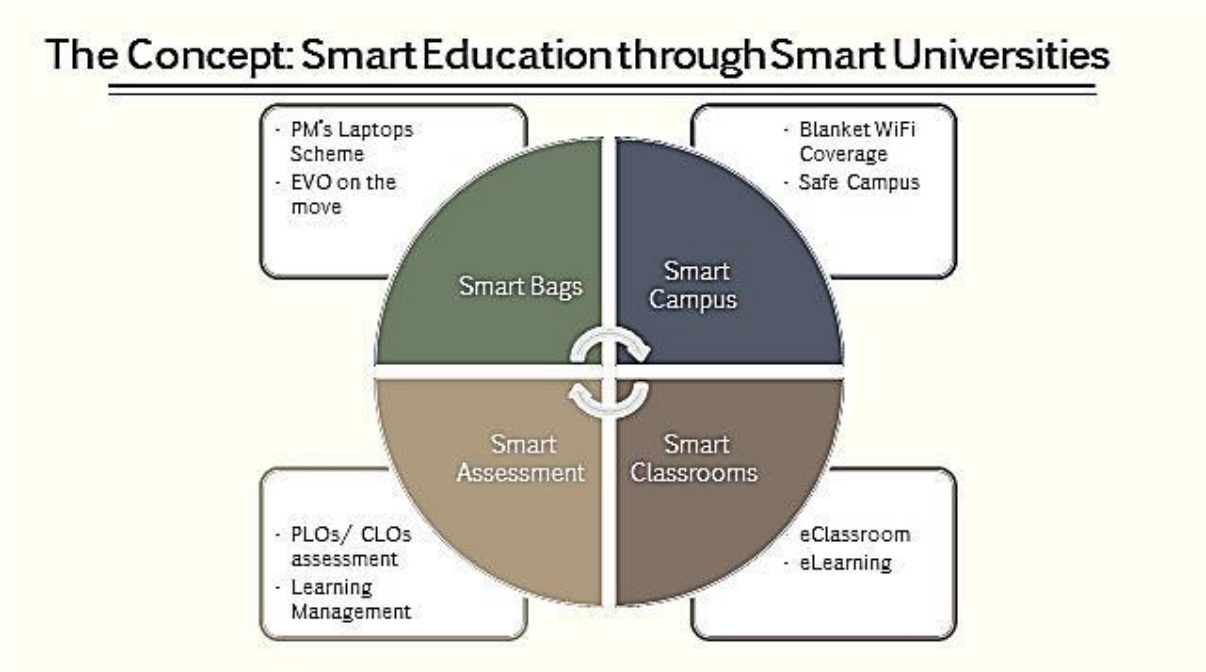

Figure 2: HEC initiative model for online smart campus.

Section three

2.9 Sources of Readiness Factors (Present study)

Various factors that can affect readiness are listed from different sources below.

2.9.1 Theory of Reasoned Action (TRA)

Ajzen developed the Theory of Reasoned Action (TRA) in 1975 to enhance the Information Integration Theory by making a clear distinction between attitude and behavior. Unlike the Information Integration Theory, the TRA recognizes that other variables can impact behavior besides attitude. For instance, if someone has the desire to go out but lacks the financial means, they will be unable to carry out the intended behavior.

In addition, The TRA predicts behavioral intention as a bridge between attitude and actual behavior. Fishbein and Ajzen (1975) added two new components, attitude and social norms, to the theory, which enhances its ability to predict behavioral intention. When someone's attitude prompts them to take a certain action, the expectations of others can cause them to change their plans. Furthermore, subjective norms, which influence behavioral intention, are affected by two factors: normative beliefs (what someone believes others expect of them) and their willingness to conform to these expectations (how much they care about what others think of them).

The primary objective of the Technology Acceptance Model (TRA) is to anticipate and comprehend an individual's disposition towards a specific behavior. It operates under the presumption that people behave rationally and carefully assess the potential consequences of their actions before engaging in a behavior. The model

posits that people utilize the available information to make informed decisions. The Technology Acceptance Model (TRA) is an important instrument for comprehending the factors that affect behavior. Its differentiation between attitude and behavior, as well as the incorporation of social norms, renders it a more comprehensive model for projecting behavioral intent. The premise of the theory is that individuals behave in a rational manner, thoughtfully considering the ramifications of their actions prior to engaging in a behavior (Al-Suqri & Al-Kharusi, 2015).

Constructs	Concepts define	Researcher
Attitude	Attitudes define an individual's supportive)and negative(opposite) behavior	Fishbein and Ajzen (1975)
Subjective Norm	Subjective norms define an individual's acceptance of social pressure to perform or not perform a particular behavior.	Fishbein and Ajzen (1975)

Fig 3: Construct of TRA

2.9.2 Theory of Planned Behaviors.

TPB was designed to overcome the shortcomings of TRA in accounting for behaviors in situations where individuals have little control over their actions. Perceived Behavioral Control (PBC) is an extra factor included in TPB, this element is crucial in forecasting an individual's readiness and actual behavior. Ajzen (1991) stated that PBC is a crucial factor in comprehending human behavior, particularly in situations where individuals have limited volitional control (Ajzen, 2011).

Constructs	Concepts define	Researcher
Attitude	Attitudes define an individual's supportive)and negative(opposite) behavior	
Subjective Norm	Subjective norms describe a person's acceptance of societal pressure to engage in a particular behavior or refrain from doing so.	(Fishbein & Ajzen 1975)
Perceived behavioral control	PBC is the ability to feel the user how to perform it.	(Ajzen,1991),

Fig: 4: Constructs of a theory of planned behavior.

2.9.3 Diffusion of Innovation Theory(DIT)

Rogers (1969) proposed a framework for understanding the process of innovation adoption, which comprises two stages: pre-adoption and post-adoption. The individual chooses whether to continue using the technology or stop using it during the pre-adoption phase. In the post-adoption phase, the customer decides whether to continue or stop using the technology. Few studies discovered that three elements, specifically comparative superiority, intricacy, and congruence, are associated with both the phases of the acceptance process (Agarwal and Prasad, 1998; Sherry, 1998).

Construct	Define construct	Researcher.
Relative advantage	The extent to which new technology is perceived to be better than its predecessor is referred to as relative advantage.	Rogers,1969
complexity	Complexity is the level of difficulty associated with understanding and using a new technology.	
Trial ability	Trialability refers to the possibility of testing a new idea on a limited scale.	
observability	Innovation produces noticeable and tangible results.	

Figure 5: Construct of Diffusion Innovation Theory.

2.9.4 Decomposition Model (Theory of Planned behavior) DTPB

In 1995, Taylor and Todd expanded upon B. F. Skinner's Theory of Planned Behavior by creating the Decomposed Theory of Planned Behavior (DTPB). By decomposing the TPB's variables into finer granules, the DTPB will make the model more accurate. (DTPB) was created to examine the accuracy of predictions made by TPB and TRA regarding an individual's readiness to act. These ideas both attempt to shed light on the origins of individual behavior. The DTPB model is commonly used to determine if a learner is prepared to make use of educational technology. The Technology Acceptance Model is a close analogue to this one. The three basic pillars of TPB are attitude, subjective norm, and perceived behavioral control. With these three factors in mind, the Decomposed Theory of Planned Behavior (DTPB) dissects them to their individual parts. Usefulness, user friendliness, compatibility, social impact, confidence, readily available resources, and technological prowess are just some of the factors to consider (Tylor & Todd,1995).

DTPB’s decomposition of the TPB's variables into these elements makes it a stronger predictor of readiness. The added specificity in the model's components is what makes it more applicable, validated, and valuable for predicting actual user behavior (Ahmad, 2014).

Construct	Decompositions Element	Researcher
Attitude	(Perceived usefulness) (Perceived ease of use) (Compatibility)	Davis,1989
Subjective norm	Peer influence Superior influence	
Perceived behavioral control	Self-Efficacy Recourse facilitation Technology facilitating.	

Figure 6: Constructs of Decomposition model

2.9.5 Social cognitive theory

This theory highlights the interplay between personal and environmental factors in shaping an individual's behavior. Theory places a strong emphasis on the importance of self-efficacy, outcome expectations, and goals as fundamental personal factors that shape an individual's behavior. According to this view, a person's self-assurance in their capacity to carry out a specific action successfully, their anticipation of the potential outcomes that may result from that action, and the objectives they aim to accomplish are crucial in determining their behavior. It also recognizes the impact of environmental factors such as social support, cultural background, gender, socioeconomic status, and physical condition on behavior and cognition. (Bandura, 2002).

Construct	Categorization/description	Researcher
Cognitive factor	Change Relevant Knowledge Change Expectations Change Attitude	Alburt Bandura (1969)
Environmental factor	Social norms Access in community Influence on others.(ability to change Env)	
Factors of behaviors.	Employee Skills Employee Practice Employee Self-efficacy.	

Figure 7: Constructs of social cognitive theory

2.9.6 Motivation Model. (MM)

According to Davis and Boggs (1995), there are two types of motivations that affect the initial system determination: External motivation and internal motivation. External motivation is the drive to engage in behaviours that are thought to be helpful in reaching desired results that are independent of the behaviour itself. This type of motivation often involves the pursuit of external rewards, such as career advancement

or improved work-related outcomes. Perceived usefulness is associated with external motivation. Conversely, intrinsic motivation is associated with the emotional experiences that arise from engaging in an activity, such as feelings of enjoyment and pleasure, without any apparent external reinforcement. Additionally, the perceived level of ease in using a product or service is often linked with the user's sense of enjoyment, which in turn fuels their intrinsic motivation. the perceived usefulness and practicality of the technology plays a more significant role in driving user behavior and intentions than their enjoyment of using it. Additionally, the research highlighted that the positive correlation between perceived usefulness and enjoyment indicates that the effect of enjoyment on user intentions is amplified when individuals perceive computer systems to be more beneficial. This means that increasing the enjoyment factor of a useful system can enhance its adoption, while having little effect on the acceptance of a system that is deemed useless.

Figure 8: *Construct of motivation model*

2.9.7 The Model of PC Utilization (MPCU)

In order to describe human behavior and the variables that affect it, Riandis (1988) presented a framework. The absence of a consensus among diverse fields regarding the correlation between attitudes, values, and other learned behavioral tendencies, and behavior, was a motivating factor for him. Triandis defined behavior

as having objective results that individuals perceive internally and feel reinforces. According to his argument, reinforcement alters the perceived likelihood and value of a behavior, which ultimately affects the perceived outcomes of the behavior and, consequently, the individual's intentions to engage in it. Triandis also underscored that individuals only have knowledge of a fraction of the genuine outcomes of their behavior, thereby distinguishing between the factual and perceived consequences. The former refers to the consequences that the individual foresees, while the latter pertains to the outcomes that occur following the behavior and are evaluated by the individual as either favorable or unfavorable, based on their holistic assessment of the circumstances. Thompson et al. (1992) expanded on Triandis's framework to forecast the usage of personal computers. Their model integrated consumers' attitudes towards usage, social norms dictating usage, and actual usage patterns. Thompson posited that six factors determine technology readiness: job suitability, future-oriented expectations, intricacy, impact on usage, social aspects, and accessibility of facilities. By considering both intrinsic and extrinsic factors that shape human behavior, this framework presents a comprehensive method for comprehending human actions. The model was applied to the specific context of personal computer usage, highlighting the importance of considering attitudes, social norms, and actual behavior in predicting technology readiness.

Construct	Description	Theorist
Jon fit	Perceived consequences are related to job fit.	
Long term consequences	Person satisfaction in the long term of usefulness.	Thompson et al.'s 1991
Complexity	Ease of use the system or difficulty to use,	
Social factors	relate to the influence of the group on a person's behavior.	
Facilitating conditions	Facilities provided by the organization	
Habit	Experience of employee	

Figure 9: Constructs of Personal Computer(PC) utilization model

2.9.8 Extension of TAM (TAM2) (2000)

Two new determinants—social impact and cognitive factors—were added to the Technology Acceptance Model (TAM). The judgement of the task's significance, the calibre of the output, and the perceived simplicity of use are all included in the cognitive instrumental process, while impression management and subjective norms are also taken into consideration to take social influences into account. According to Venkatesh, these additional factors were hypothesized to have an impact on the readiness to adopt technology. The previous model's ease of use factor was kept by Venkatesh as a direct indicator of usefulness, but he added the moderating factors voluntariness and prior experience to the model to affect technological readiness. Further they addressed the critique that the TAM one model did not incorporate subjective norms by including it in their evaluation of quality, which was not present in the original model. This addition was acknowledged by Wu et al. (2011).

Procedure	Construct	Description
Social influence	Subjective norms	Influential people think that they should use the system.(Fishbein &Ajzen,1995,p.302)
	voluntariness	Potential intended users think the adoption decision is not compulsory(Venkatesh & Davis,2000,p.188)
	Image build	Enhance social status.(Moore & Benbasat,1991,p.195)
	Experience	the inclusion of subjective norms in the assessment of readiness
Cognitive factors	Job relevance	The statement refers to an individual's perception of how relevant a particular system is to their job. Venkatesh & Davis,2000,p.191)
	Result demonstrability	Abstract results of using the technology will directly affect perceived (Mowriya&Benasat,1919)

Figure 10: Constructs of TAM 2.

2.10 Key Constructs of Employee Readiness Model (Present study)

The five key factors that influence readiness to adopt technology are mentioned below in detail.

2.10.1 Performance Expectancy (PE)

It pertains to the usefulness and potential benefits of online teaching in accomplishing their academic and pedagogical objectives. The UTAUT model considers it the most crucial construct that gauges an individual's preparedness and real-world adoption of technology. Numerous research studies have proved that this is the most robust predictor for adoption and usage. Scholars have consistently reported that it holds the highest value and has the greatest predictive power among all constructs of the UTAUT model (Sumak et al., 2011). Further investigation has revealed that a person's willingness to accept and use technology is significantly influenced by their performance expectancy (Yang et al., 2010).

The construct of performance expectancy is based on four technology acceptance models, including the Acceptance Model, the Motivational Model, and the Model of PC Utilization. It is measured through eight questions that assess the usefulness, career enhancement, and assistance provided by online teaching in enhancing academic performance. These questions are based on previous high-cited research findings and are analyzed with control variables such as gender, online experience, and age.

2.10.2 Effort expectancy

Effort expectancy pertains to how effortless and uncomplicated individuals perceive the utilization of instructional technology for online teaching to be. It encompasses different aspects of the technology, such as its simple to use, ease of uploading and downloading files, shared screen capabilities, whiteboard use, camera usage, and course design and evaluation. The concept is that through regular utilization of these technological tools, teachers can enhance their self-assurance and

ease with usage, leading to improved effectiveness in online teaching practices. In light of the COVID-19 pandemic, effort expectancy has gained even more significance, given the need for students to acquire knowledge and skills through effective online learning methods. The use of technology like LMS, TEAM, Zoom, WEB 2.0, and Google Meet, which are intuitive and easy to use, has become widespread and has helped with various important tasks like online learning, searching for information, online conferences, effective communication, time management and immediate feedback (Nesaratnam & Taherzadeh, 2014).

It is anticipated that the effort expectancy metric will play a larger role in the evaluation of online teaching for effective teaching during COVID-19. This is due to the fact that online teaching tools are becoming increasingly user-friendly, with intuitive interfaces, the ability to upload files, a shared screen, the ability to control all students, course work making and delivery, etc., all of which greatly accentuate the ease with which the user can access and interact with the tool (Wang et al., 2014). Because of its widespread availability and widespread use, this item has become quite recognizable to people of all ages and demographics. Frequent technology usage can help with important duties like online learning, searching for authentic information, online conferences and online courses at the global level, effective communication, time management, and immediate feedback in the groups.

2.10.3 Social Influence

It denotes that the individual's choice to embrace novel technology is impacted by the conducts, beliefs, and viewpoints of other individuals, as elucidated by Venkatesh et al. (2012).

This aspect is predicated on the theory that people are influenced by the social connections they maintain, including those with their families, friends, and others in

their immediate social circle. The importance of social impact in determining individuals' patterns of technology use has been emphasized in a variety of theoretical frameworks (Davis & Venkatesh et, 2003).

According to the findings of several studies, the significance of social impact is greatest during the preliminary phases of the implementation of new technologies, but it gradually loses its relevance as time passes (Venkatesh et al., 2012). AlAwadhi and Morris (2008) conducted research that discovered the influential role of peer influence in the adoption of online -government services. Nonetheless, the study also noted that when mobile device experience is limited, peer influence has a lesser impact, as outlined by Ghalandari (2012).

Smartphones have also been examined as a platform to study the role of social influence in technology readiness and change implementation. Earlier research has shown that social impact is crucial for technology uptake (Slade et al., 2013, Admiraal et al., 2013; Raman & Don, 2013; Fehrenbacher, 2013; Alrawashdeh et al., 2012). For example, if an individual has a positive opinion of smartphone use due to social effects, there is a high chance that they will start using one (Venkatesh et al., 2012).

It is crucial to acknowledge that social influence has a multifaceted impact on user readiness towards technology adoption Venkatesh et al. (2012) conducted research that evaluated the effect of social influence on user perceptions and established its significant yet intricate role in shaping user readiness. In the compulsory context, people might use the system out of necessity, rather than personal wishes. The variations in the outcomes of several studies on the construct of social influence (Zhou, Lu & Wang, 2010; Chauhan & Jaiswal, 2016) could potentially be explained by its intricate impact on user readiness.

In conclusion, social influence is an essential component in the equation that determines how quickly individuals adapt to new technologies. It is predicated on the theory that people are influenced by the social connections they maintain, such as with their families, friends, and other people in their social circles. According to the findings of several studies, social impact is at its peak during the transitional phases that immediately follow the introduction of a new technology but gradually loses its significance. In the context of cellphones and electronic government services, research has also been conducted on the effect of social influence in the adoption of technology and concluded that it has a major impact. However, social influence plays a complex role in user readiness, and its impact can vary depending on the context and circumstances.

2.10.4 Facilitating conditions

Facilitating conditions represent a wide range of technical assistance, learning settings, systems, laws, technical assistance, etc. in an era when technology is digital. Numerous research studies on each of them, both individually and in combination, have been conducted. Duffy et al, (1996) assert that since the advent of the computing age, processing information has been essential to recreating knowledge utilizing the paradigm of modeling and interaction. The emphasis has switched in the modern era of digital communication technology to utilizing the link between instructional technology and learning with enhanced communication and digital social interaction. Exploring appropriate educational and learning paradigms for the technological age has become urgently necessary as a result of this. The degree to which a person believes that there is an appropriate technological and organizational infrastructure in place to facilitate the adoption of online teaching is one of the facilitating circumstances described in the UTAUT model (Venkatesh et al., 2012).A user is

assumed to have some past knowledge when attempting to adopt a new change in the way he uses technology. The enabling condition construct can be used to describe the elements of resource, technical assistance, prior knowledge, and peer assistance. The availability of a formal or informal organized technical support system from his colleagues, technical assistance, and the institution are enabling conditions for a teacher to employ online teaching as an instructional tool. This concept was adopted from TPB/DTPB and CTAM-Perceived TPB's Behavioral Control. According to Triandis (1979), behavior cannot take place if the environment's objective conditions forbid it. The element of a favorable climate has shown a positive link with facilitating circumstances and attitudes in the context of online education technologies. (Wu, Tao, & Yang, 2007). Venkatesh, Brown, Maruping, and Bala (2008) suggest that user satisfaction, perceptions of technical support, quality of learning materials, mobile device usability, peer support, and motivational encouragement are key factors in a learning environment that emphasizes the use of LMS, TEAM, and Web 2.0 technologies.

According to a large number of studies, the construction of suitable conditions is one of the most important components in the process of adopting new technology. In addition, the findings of their study demonstrated that the effort expectancies components included in the Unified Theory of Adoption and Use of Technology may, on occasion, be in conflict with enabling circumstances.

The presence of both the constructs "Performance expectation" and "Effort expectancy" may mitigate the impact that enabling environments have, according to study done by Venkatesh and Davis in the year 2000. According to a review of the literature on earlier research, giving users access to tools, training, and knowledge has a big impact on how they use technology and how likely they are to utilize it in the

future. For the reasons outlined above, enabling environments seem to be a crucial factor in determining whether or not the UTUAT2 model predicts that people will be ready for online teaching as learning tools.

According to the study of Davis, facilitating conditions will alter the study's context. This study seeks to assist teachers in the digital generation in utilizing home-based accessibility and ongoing connectivity. It draws inspiration from Siemens' (2005) connective concept. Like with any new endeavor, organizational support and direction might be the difference between faculty success and failure. This idea was succinctly summed up by Wingo et al. (2017). Institutions that view online education as a vital component of their strategic plan must foster faculty acceptance of online delivery techniques. To do this, administrators must comprehend how faculty view online teaching and what influences those opinions.

Despite this, researchers discovered that when it comes to online instruction, there is frequently disconnect between the requirements of teachers and the practices of administrators (Wickersham & McElhany, 2010).

The results specifically revealed that, occasionally, there was a basic misunderstanding regarding the vision of online training. Teachers believed administrators tended to focus on the quantitative advantages of higher enrolment and less pressure on a physical infrastructure when it came to online instruction, which they perceived as a very personal process considering its impact on teachers (Glass, 2017).

Although one study (Tabata & Johnsrud, 2008) did mention faculty access to hardware and software is limited, training was the more common problem. In the corpus of literature, inadequate training was a common source of annoyance for

administrators.

2.10.5 Hedonic Motivation

Hedonic motivation, or the need for sensory stimulation, is an important factor in the acceptance and use of technology. This phenomenon has been thoroughly studied in the field of information science and is now recognized as a major influencer on how technology is adopted and used. Hedonic motivation is considered to be one of the primary forces behind the widespread adoption of technology, as technology designers often incorporate elements such as pleasing design, useful features, personalization, and multi-functional capabilities to take advantage of this phenomenon (Lee, Cheung, & Chen, 2005).

The higher the level of pleasure an individual derives from using technology, the greater the likelihood of their accepting and regularly utilizing it (Brown & Venkatesh, 2005). Numerous research has validated this notion, and some of these studies show a strong and significant correlation between users' pleasure, their enjoyment of using technology, and the actual use of technology (Thong, Hong, & Tam, 2006). Studies have highlighted the considerable influence of perceived enjoyment on an individual's willingness to adopt novel technology. For instance, in research involving 665 participants, it was found that hedonic context is a reliable predictor of a person's preparedness to adopt technology (Van der Heijden, 2004). Likewise, several other studies have indicated that the degree of enjoyment derived from accessing the mobile Internet is contingent on the setting, such as online teaching (Shin, 2007). According to the findings of several studies, the effect of perceived enjoyment on the utilization of technology is significantly greater than that of other characteristics such as perceived convenience and usability. According to the

findings of a study, the degree to which a person believes they gain satisfaction from using technology can have a greater influence on their likelihood to embrace IT than any of these other characteristics (Turel, Serenko, & Giles, 2011).

2.11 Sources of Readiness Model Constructs

Study construct	variables	Root construct
Performance Expectancy	Perceived usefulness	TAM, TAM-TPB,
	Extrinsic Motivation	MM model
	Job fit	Model of Personal Computer utilization (MPCU)
	Relative advantage	(IDT)
	Outcome	Social cognitive (SCT)
Effort Expectancy	Perceived ease of use	TAM 1-3
	Complexity	MPCU
Social Influence	Subjective norms	TRA, TAM2, TPB/ DTPB, and combined TAM-TPB
	Social factors	MPCU
	Image	DOI
Facilitating Conditions	Perceived behavioural control	TPB/DTPB and combined TAM-TPB
	Facilitating condition	MPCU
	Compatibility	DOI

Figure 11: Sources of Readiness model constructs

2.12 Reasons for Selection Model

Before Venkatesh's (2000) work on theory unification, researchers faced difficulties in selecting the appropriate model to assess instructional technology readiness among the multiple models available. To tackle these concerns, Venkatesh examined eight above mentioned notable models related to the acceptance or

readiness of technology. However, there were limitations to these models. Most of the models only considered cognitive factors, and only a few of them included social factors, which were not enough to assess individuals' beliefs. With the exception of a few studies, the majority of participants in the research were students. Moreover, the responses of individuals were based on retrospection as the time of measurement was typically well after they had already made decisions regarding the acceptance or rejection of technology behavior's measurements were generally cross-sectional. Generalizing the findings to mandatory settings was challenging because the research was done in voluntary usage scenarios.

In a longitudinal study conducted in three different durations, three moderating variables were added, i.e., experience, age, and voluntariness. According to the study, with the exception of the motivational model, the predictive validity of the models was high. Venkatesh then analyzed the common factors among these eight models and found seven significant factors that determined individuals' beliefs. Additionally, the study hypothesized that four factors played a crucial role in determining readiness beliefs and intentions: performance expectancy, effort expectancy, social influence, and facilitating conditions.

Venkatesh introduced a fifth factor to the model in 2012, which he stated had a significant impact on determining a person's motivation towards technology using. This new construct aimed to provide better explanations of users' beliefs about their motivations and intentions in new emerging technological conditions.

Thus, Venkatesh's work on theory unification helped to address the limitations of earlier models of technology readiness and acceptance (Guinness, 2015).

2.13 Discouraging factors for online teaching and learning

Teaching and learning with the aid of technology pose novel challenges for educators, particularly in developing nations where the absence of infrastructure and restricted availability of technology may impede its implementation. Several studies have identified the main challenges faced by teachers in developing countries when it comes to using technology in the classroom. Among the challenges that arise are insufficient interaction between educators and students, deficient technological proficiency and expertise, inadequate information and communication technology (ICT) skills, and suboptimal internet connectivity. Research conducted in Pakistan discovered that limited digital self-efficacy and inadequate internet connectivity were the primary hurdles faced by institutions of higher education. To utilize technology effectively in teaching, teachers must possess the essential digital skills and confidence. Nevertheless, in numerous developing nations, insufficient funding and scarce training prospects can make it challenging for teachers to acquire these competencies (Taheem et al., 2021).

Hamutoğlu and Basarmak (2020) discovered that external barriers, such as inadequate financial resources, limited availability of suitable educational content, and insufficient training opportunities, are major obstacles to the integration of technology in teaching. According to the study, external challenges such as insufficient financial resources, limited availability of suitable educational content, and inadequate training opportunities have a positive correlation with internal obstacles like technological pedagogical self-efficacy, family resistance, guidance, and learning-teaching activity beliefs. These internal barriers can create difficulties for teachers in adopting and incorporating technology into their teaching practices. In addition to these challenges, Sustained adoption of technology in teaching is

significantly impacted by the interplay between a teacher's intrinsic and extrinsic motivation. To promote successful online teaching and learning in developing countries, it is crucial to overcome the challenges that exist. One way to do this is by addressing the lack of adequate infrastructure, training, and support. By providing teachers with the necessary resources, they can improve their digital self-efficacy and motivation to use technology in the classroom. Allocating resources towards infrastructure, training, and support can enable teachers to acquire the essential skills and competencies required for effective utilization of technology in their teaching (Hyndman, 2018).

Moreover, providing adequate support to teachers can also help them overcome the challenges they face when it comes to using technology in the classroom. This support can take the form of technical support, such as help with setting up and using technology in the classroom, as well as pedagogical support, such as guidance on how to effectively integrate technology into their teaching. Finally, promoting digital self-efficacy and motivation among teachers can encourage them to persistently use technology in their teaching. Encouraging teachers to experiment with technology and highlighting its benefits can foster positive attitudes towards its use in teaching. This approach can boost teachers' confidence and motivation, making them more inclined to integrate technology into their lessons. In conclusion, the successful integration of technology in teaching and learning in developing countries requires addressing the challenges faced by teachers. Adequate infrastructure, training, and support, as well as promoting digital self-efficacy and motivation, can help overcome these challenges and facilitate online instructions. By addressing these challenges, online classrooms can become a more effective tool for facilitating learning outcomes, even in developing countries (Zee & Koomen, 2016).

2.14 Summary of chapter two.

Three sections, each addressing a different goal linked to assessing readiness to change, make up this chapter. The study's primary goal is to investigate how willing people are to change based on both internal and external variables.

The first section of the chapter focuses on meeting five objectives, including discussing the broader concept of change. This includes examining the concept of change in the Quranic, Ahadees, and Iqbal, as well as exploring organizational and individual change, shapes of change, broader views of employee readiness to change, and level of readiness from multiple studies. Additionally, internal and external factors of employee readiness to change, and theories of change are also discussed.

The second and third sections of the chapter provide an in-depth analysis of technological change, particularly in the context of online teaching. This section explores online teaching, tools of instructional technology, and the Higher Education Commission's (HEC) decisions about smart universities to meet the 2025 vision.

The third section of the chapter elaborates on the model used in the study, its sources, and the key factors of the UTAUT model. The concluding section of the chapter also examines the obstacles associated with online teaching. Overall, this chapter offers a significant contribution to the field of change management, particularly in the context of higher education. It offers a thorough examination of the elements that affect readiness for change, identifies key trends and insights, and offers recommendations for developing effective strategies to manage change.

CHAPTER 3

RESEARCH METHODOLOGY

This section outlines the methodology employed in this thesis. It encompasses various elements, including the educational research framework, the assessment of the research tool's reliability, and the analytical procedures employed to confirm the hypothesis.

3.1 Research Design

This study adopts a mixed-methods approach to assess the preparedness of employees in public universities in Rawalpindi and Islamabad for online teaching, considering variables like gender, age, and experience. The faculty members' perceptions of online teaching serve as a metric, evaluated using Venkatesh and Davis's (2012) model, encompassing factors discussed earlier. Initially, quantitative analysis explores employee readiness based on age, gender, and experience. The subsequent qualitative phase involves interviews with teachers holding diverse perspectives on online teaching, enhancing understanding based on quantitative results. The research design, represented by the Saunders onion diagram, follows an explanatory sequential approach, integrating philosophical perspective, research approach, method, data collection, techniques, and analysis.

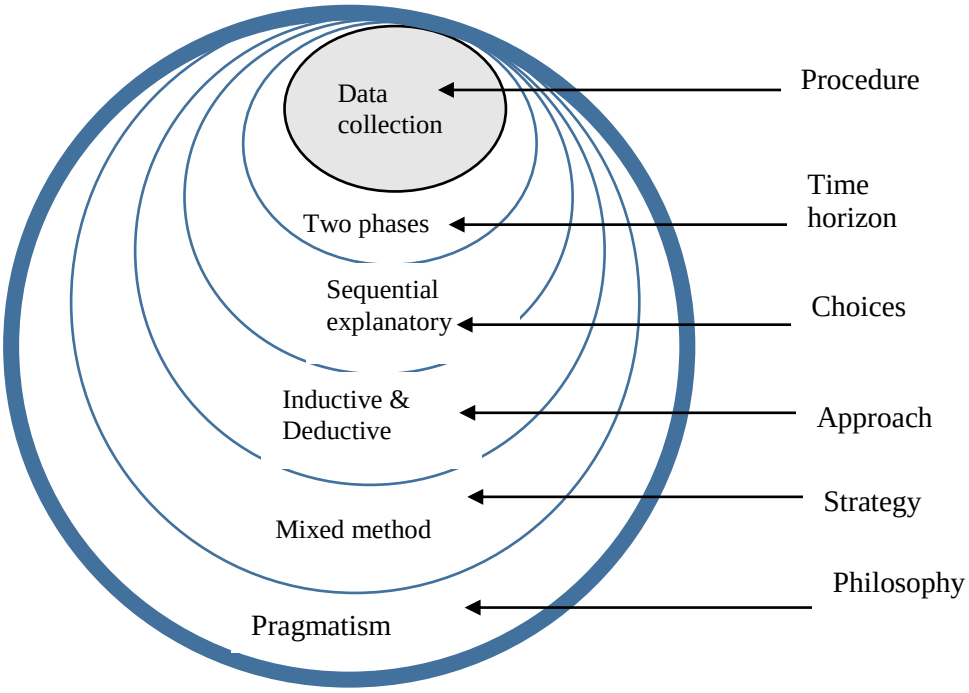

Figure 12: Present Study Research has given by Saunders, (2016)

3.2 Philosophical point of view

This study aligns with a mixed-methods research design rooted in pragmatic philosophy, emphasizing a practical problem-solving approach (Creswell & Creswell, 2017). Pragmatism, allowing methodological flexibility without strict philosophical constraints (Tashakkori & Creswell, 2007), accommodates both deductive and inductive reasoning. Following a deductive approach, quantitative methods explore readiness levels based on various factors using Venkatesh's (2003) model. In the initial phase, deductive reasoning is applied.

Qualitative methods, adopting an inductive approach facilitated by thematic analysis contribute to a deeper understanding of contributing factors. Pragmatism's flexibility allows researchers to select methods suitable for their needs. Each phase involves data analysis, with findings combined and synthesized in the final step of the sequential explanatory design (Saldaña , 2011; Creswell & Plano Clark, 2018).

Chapter four elucidates the integrated relationship between quantitative and qualitative phases, enriching research findings through the combination of deductive and inductive reasoning. This mixed-methods approach is endorsed by scholars like Cherryholmes (1994), Morgan (2007), and Patton (1990) who highlight pragmatism's flexibility in mixed-methods research.

3.3 Research Approach and Time Horizon.

The approach of integrating various research methods was initially introduced by Campbell and Fisk in 1959 when they utilized multiple techniques to investigate the authenticity of psychological characteristics. This sparked a trend of mixing various data collection techniques such as observations and interviews (qualitative data) with traditional surveys (quantitative data). The researchers believed that by integrating multiple techniques, the shortcomings and prejudices inherent in any individual method could be counterbalanced. This led to the development of triangulating data sources, which aimed to find convergence between qualitative and quantitative methods (Campbell & Fisk, 1959).

As time progressed, the emphasis evolved from pursuing alignment to incorporating or linking qualitative and quantitative information. For example, conclusions derived from one method can enlighten the other, or both can be amalgamated into a comprehensive dataset or employed alongside one another to reinforce each other's findings. Combining techniques can also fulfill a broader transformative objective, such as promoting the rights of underrepresented communities. Its increase in popularity can be attributed in part to the mixed approach's ability to provide a more comprehensive and in-depth understanding of study issues. Several benefits, such as the ability to triangulate data, validate results, and get around the weaknesses of one method by focusing on its strengths, make this

method preferable to others that only use a single one (Creswell & Tashakori, 2007).

Furthermore, the mixed-method design can address the limitations of single-method designs and increase the reliability and validity of results. By combining qualitative and quantitative data, researchers can increase the generalizability of their findings and reduce the potential for biases that can arise from using a single method (Tashakkori & Teddlie, 2003).

The advantages of integrating various methods have led researchers globally to establish protocols for mixed methods research, utilizing multimethod, convergence, integrated, and combined designations to refer to such approaches. The researcher outlines these procedures suggested (Creswell and Plano Clark, 2007: Tashakkori and Teddlie, 2003).

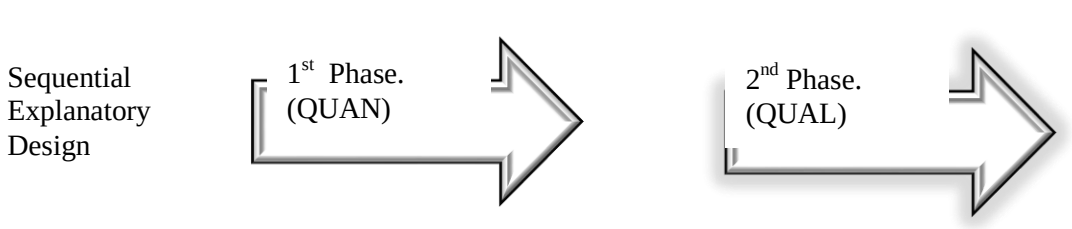

Figure 13: Sequential Explanatory Design by Saunder

3.4 Population of Study

The participants in the present research investigation were individuals employed in the higher education establishments located in the Rawalpindi district and the federally chartered Islamabad. Specifically, the target population was employees working in social and management sciences departments. The sample was drawn from a total of 23 government universities in the aforementioned districts, but the study excluded universities from other regions due to the COVID-19 pandemic, financial restrictions, and geographical limitations.in addition to public universities.

The selection of the sample population was based on the official website of the Higher Education Commission, which listed ten universities having social and management departments. The total number of employees in these universities was 1145, and the researchers believed they were a valuable source of information regarding their respective departments. The sample population consisted of individuals who worked as teachers on a contractual basis and those who held permanent positions at different levels of academic hierarchy, including lecturers, assistant professors, associate professors, and full professors. These individuals worked in the fields of social sciences and management sciences. The population in Rawalpindi and Islamabad was selected based on several factors. The region boasts a significant population of teachers from various ethnic and socioeconomic backgrounds, including rural, suburban, and urban areas. The diversity of this population makes it ideal for data collection, as the information gathered can be applied to a broad range of scenarios and purposes.

Table 3.1

Distribution of research population.

Universities	Delimitation *(SS&MS)*	Faculty *(SS&MS)*	Total Faculty *(SS&MS)*
23	*(23) (Islamabad=17 Rawalpindi=6)*	*(Social Sciences=732 Management sciences=413)*	*(1145)*

Note. Data was collected from the Higher Education commission, s website (HEC) about the number of teachers from public sector universities serving under social sciences and management sciences.

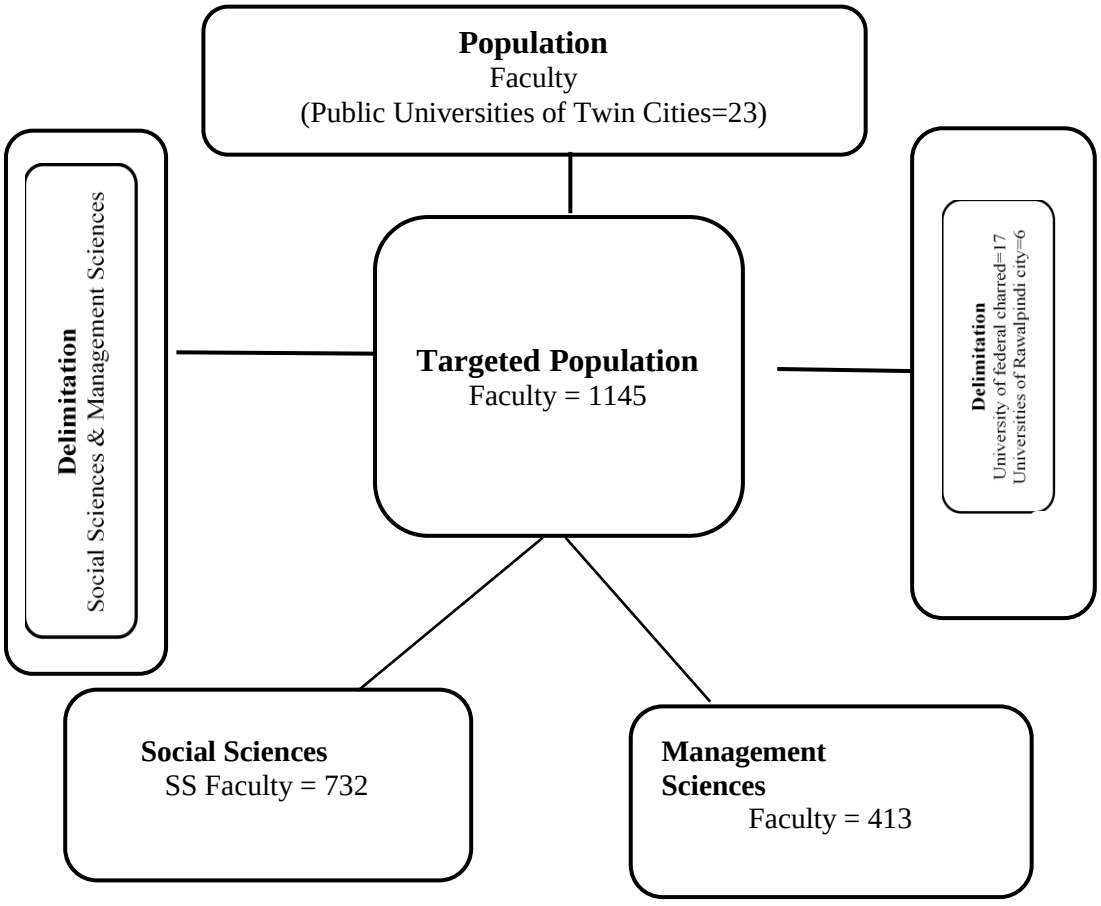

Figure 14: Population of the Study

3.5 Sample of the study (QUAN Phase)

Sample selection is an important step in research because it involves choosing a group of individuals or objects to gather data from, instead of the entire population. This is because it is not possible or practical to gather data from everyone in the

population. A well-selected sample can provide a true representation of the population and helps to ensure accurate results in the research.

.In the current study, the sample size was determined using a table explained by Morrison, Cohen, and Manion, (2018) and a sample size calculator website suggested by Cohen et al (2018). The formula used to calculate the sample size for an infinite population was found to be useful in the websites previously mentioned.

https://www.macorr.com/sample-size-calculator.htm

The formula provided in the previously discussed websites was helpful in determining the sample size required from an infinitely large population.

$$\frac{z^2 \cdot p(1-p)}{e^2}$$

$$1 + \left(\frac{z^2 \cdot p(1-p)}{e^2 N}\right)$$

The P value represents the proportion of a population that has a certain characteristic and is expressed as a decimal. In this case, the P value is calculated as 200 out of a population of 1145 respondents.

The degree of uncertainty surrounding the P value is denoted by "e", which refers to the margin of error. In this particular instance, the margin of error has been computed to be 0.04.To ensure the accuracy of their results, the researcher in this case collected a sample size of 344, which is larger than what the formula would have indicated was necessary. This is done to account for any potential errors or biases in the data.

Table 3.2

Sample of the study.

Universities	Faculty SS&MS	Gender Inclusion criteria	Faculty Response	Rate of return
Universities of Federal chattered=9	SS=230	Male=198	184	
Universities of Rawalpindi City =2	MS=120	Female=152	138	94%
Total=11				
Total Sample Size =322				

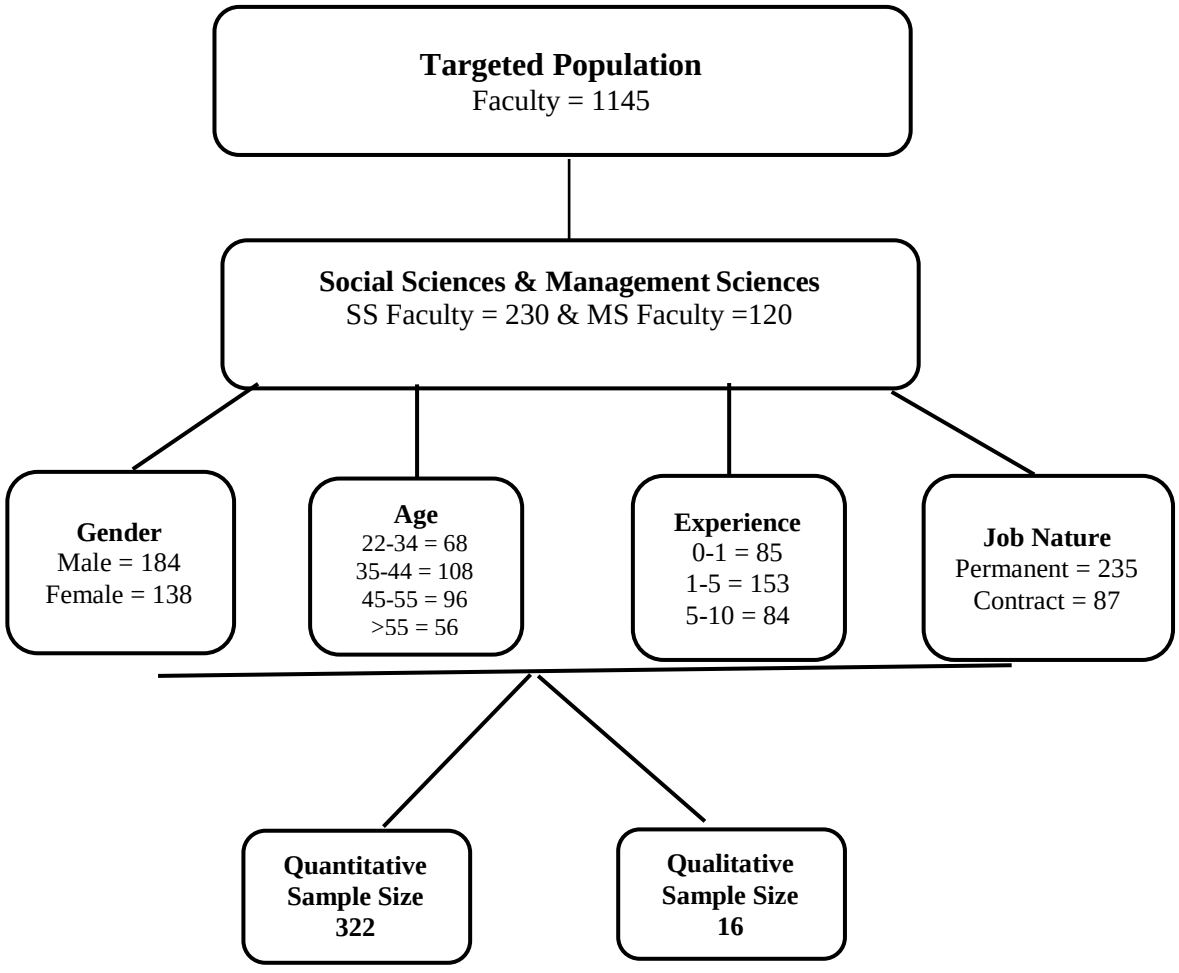

Figure 15: Sample of the Study

The research population under investigation was comprised of 1145 teachers. The number of respondents were 322 as the result of the study's sample size calculated. In order to achieve a sample that is typical of the population, the sample size was further computed within the strata of male teachers (680) and female teachers (465). In addition, the sample size was computed once again for each stratum of men (184) and women (138) using the same methodology. 184 men and 138 women made up the teaching staff of 1145 faculty, making about 30% percent of the entire population. Moreover this study comprised Gender, Age, Online Experience and job status as mentioned detail above.

According to Gay, Mills and Airasian (2012), a sample size of 10 to 20% is considered representative for survey research. Consequently, this study's sample size satisfies the criterion for achieving representativeness. Furthermore, the response rate of questionnaires was 94%, which is considered reasonable for academic research studies that employ questionnaires as a tool (Baruch and Neuman, 2014). According to their recommendations, a response rate of 10% to 50% is deemed acceptable.

As a result, the study's sample size meets the required representativeness threshold, and the questionnaires' response rate is considered very adequate for academic research studies. The sampling procedure used in the study was appropriate for obtaining a representative sample of men and women teachers. The outcomes of this investigation imply that the conclusions of the study can be extended to the teacher population under scrutiny.

3.6 Sampling Technique (QUAN Phase)

In this research, a multistage approach was employed for data collection. The first stratum involved the selection of universities in Rawalpindi and Islamabad.

Moving to the second stratum, social and management sciences faculties were chosen. Subsequently, in the third stratum, data collection further categorized individuals based on gender (male, female), age group, job status (permanent and contract), and online teaching experience. Following these stages, a convenient sampling technique was utilized to select employees based on geographic characteristics due to the unavailability of employees in the universities during the COVID-19 pandemic (Tashakkori & Teddlie, 2009).

Stratified sampling allows for more precise analysis within specific subgroups. By categorizing individuals in the third stratum based on gender, age group, job status, and online teaching experience, the study aims to provide nuanced insights into how these demographic and professional factors may influence the research objectives.

Convenience sampling allowed me to collect faculty readiness data based on accessibility and availability, as it was not feasible to use other sampling techniques during the COVID-19 pandemic. The disruptions caused by the pandemic made it challenging to reach a wide range of faculty members, so convenience sampling provided a practical solution by allowing data collection from teachers who were available and accessible under the circumstances. This approach was the most suitable given the limitations of the situation.

3.7 Sample & Technique (QUAL Phase)

Sequential QUAN----QUAL sampling is a method used in research that involves combining both quantitative and qualitative methods. As per the findings of Kemper et al. (2003), when conducting sequential mixed-methods studies, the data obtained from the first sample is generally acquired through a probability sampling

approach. This information is subsequently employed to guide the selection of the second sample, which is typically gathered through purposive sampling. In this qualitative research, the sample was chosen on the basis of a preceding quantitative study, wherein the participants were prompted to give extreme responses pertaining to their level of preparedness. Among the 30 individuals who demonstrated either high or low levels of readiness, 16 of them consented to participate in further discussions and were subsequently included in the sample size of this qualitative research. The purposive sampling technique was used to examine the data collected from the previous phase. This technique was selected based on the criteria established by scholars such as Creswell (2011), Tashakkuri and Teddels (2002), and Morrison and Manion (2018). Purposive sampling is a type of non-probability sampling method that involves the deliberate selection of a sample based on specific criteria and with a particular objective in view. The purpose of purposive sampling in this study was to expand on the quantitative data outcomes.

3.7.1 Purposive Sampling (Extreme Responses)

In mixed method research, this method is often employed in qualitative research to gain a deep and comprehensive understanding of a phenomenon. By intentionally selecting cases that exhibit certain traits or behaviors, researchers can explore the richness and complexity of the subject (Patton, 2002). This approach is frequently employed in qualitative studies with the objective of comprehending the experiences and viewpoints of individuals or groups. Studying extreme cases helps researchers understand the deeper workings of a phenomenon, revealing patterns or relationships that might not be visible in more common situations.

Purposive sampling stands out as a powerful approach for studies grappling with complex research questions. Its key justification lies in its capacity to meticulously select participants based on specific characteristics or experiences crucial for providing meaningful insights into the intricacies of the research topic. By intentionally focusing on individuals who possess the necessary attributes, this method ensures a depth and relevance to the collected data, ultimately contributing to a nuanced and comprehensive understanding of the complex phenomena under investigation (Tashakkur & Teddles 2002).

The researcher conducted a study and identified 16 respondents, with 7 respondents having a very low level of readiness and 9 respondents having a very high level. The use of extreme and deviant cases can be a valuable way for researchers to gain a deeper understanding of certain phenomena by looking at outliers and variations from the norm. According to Marrison and Manion (2018), the selection of criteria is a critical component in various research methods. Creswell (2011) also highlights the importance of criteria selection in the research process, particularly when conducting a qualitative study.

Table 3.3

Qualitative respondents

Contents	**Readiness Level**	**University Participants**	**Method**	
Contestent:1	Low	UB 1)	Live Record	Audio
Respondent:2	High	UB (1)		
Respondent:3	High	UA (1)	Live Record	Audio
Respondent:4	Low	UA (1)		
Respondent:5	Low	UN (1)	Live Record	Audio
Respondent:6	High	UN (1)		
Respondent:8	High	UAI. (3)		
Respondent:9	High	UAA (1)	Live Record	Audio
Respondent:9	Low	UAA (1)		
Respondent:10	High/low	UF (2)	Live Record	Audio
Respondent:11	Low	UQ (1)	Live Record	Audio
Respondent:12	High	UQ (2)		

A sum of 30 faculty members was identified for this study, although only 16 of them, belonging to the faculties of social sciences and management sciences, consented to partake in the research. The participants consisted of 7 female and 9 male faculty members who were serving as permanent faculty members. The online teaching experience of the participants was diverse, with six of them having over a year of experience while ten had an online teaching experience of either exactly one year or less than a year. Face-to-face interviews were conducted with audio recordings to gather information from the participants.

3.8 Instrument of the Study (QUAN Phase)

The aim of this research is to evaluate the state of readiness of higher education establishments amidst the ongoing COVID-19 pandemic. The technology

acceptance questionnaire developed by Venkatesh and Davis (2012) was adapted for this research.

With necessary modifications for an academic context. This approach was supported by Bryman (2008) if the purpose and substance of the questions were not altered. The questionnaire is based on five factors: It consists of 55 questions, with the first ten questions being demographic questions to gather basic information about the participants. To gauge the individual-level perception of faculty members regarding successful change, a five-point Likert scale is employed in the questionnaire, with the scale spanning from "strongly disagree" (1) to "strongly agree" (5). Before collecting extensive data, a trial assessment was carried out to evaluate the dependability and authenticity of the research tools. A small group of participants was given the questionnaire as part of a pilot test to obtain feedback and identify any necessary adjustments. After ensuring a level of readiness ranges of reliability, the research instruments were used for data collection.

It was determined that the use of a questionnaire was the most ideal instrument for data collection since it is a typical tool in quantitative research for analysing study variables. This finding led to the conclusion that the use of a questionnaire was the most appropriate tool for data collection. In addition, past research studies on these factors have also made use of questionnaires as a data collecting method, making it the option that is the most appropriate choice for the current study. In addition, the data-collecting process may be completed with a large number of participants in a very short time, making the use of the questionnaire a method that is both economical and successful in terms of data gathering.

It was used, but certain adjustments were made to fit the specific requirements of the current research. After confirming that the reliability ranges were within

acceptable parameters through a pilot test, a questionnaire was utilised for the actual data collection.

The choice to use the UTAUT questionnaire from 2012 makes a lot of sense for a few important reasons. Firstly, this questionnaire is known for being really good at figuring out how people accept technology, so it's a reliable tool for understanding how users behave.

One strong reason is that it gives us a baseline to compare with previous research. By sticking to the same measurement over time, we can see how technology acceptance has changed before and after the disruptions caused by COVID-19.

The UTAUT model, based on the questionnaire, gives us a solid theoretical framework to understand technology acceptance. Even though things have changed due to COVID-19, the core ideas of the UTAUT model still apply, allowing for a clear analysis.

Considering the challenges posed by COVID-19, using a well-established questionnaire like UTAUT is practical and saves time. Plus, it opens up opportunities to compare data from before the pandemic, helping us understand how these unprecedented changes affect how people accept technology.

Maintaining consistency in measurement tools is important for tracking changes over time. The UTAUT questionnaire, being used consistently in various studies, allows us to keep this consistency and analyse how technology acceptance evolves.

Another important reason for choosing this questionnaire is that it aligns with the situation created by COVID-19. The foundation of this questionnaire was built on understanding how people accept technology for online learning. Since COVID-19

brought about a significant technological shift, using a questionnaire developed for understanding technology acceptance in online learning fits well with the changes we've experienced during the pandemic.

3.8.1 Variable 1 (Performance expectancy)

The concept of performance expectancy is similar to perceived usefulness, as proposed by Venkatesh in his Technology Acceptance Model (TAM). This variable has nine statements, coded as PE1 to PE9, which measure an individual's attitude toward the use of online teaching.

The inclusion of performance expectancy in the measurement of technology acceptance is supported by numerous studies in the literature that have reported that performance expectancy is a valuable factor in digital environment acceptance and has a significant impact on technology acceptance.

3.8.2 Variable 2 (Effort Expectancy)

The second variable in the model used to assess the adoption and acceptability of technology in education relates to how user-friendly the technology system is. This variable is indicative of the teacher's perception of their capability to use the technology and their overall attitude towards it. The construct contains 13 statements, coded as EE1 to EE13 that state the system's easy usage.

As Mcfarland and Hamilton (2006) suggested, effort expectancy is a crucial factor that significantly influences an individual's beliefs and intentions towards technology. Furthermore, research has shown that the easier a teacher perceives the online teaching system to be, the more likely they are to use it (Islam, 2013).

3.8.3 Variable 3 (Facilitating Conditions)

In a study cantered around an individual's belief in the technical infrastructure available to support online teaching, facilitating condition is a key factor. This factor is concerned with the availability of technical resources within an institution that can facilitate the use of an online teaching system. This factor comprises eight statements (FC1 to FC8) and is considered the most significant factor in determining an individual's acceptance of online teaching. The rationale behind including this factor in the study is that it signifies an individual's perception of possessing the requisite resources and knowledge to utilize the online system effectively within the institution. An individual's level of preparedness to adopt the online teaching system is positively correlated with their belief in having adequate resources and support. In other words, the stronger their conviction about possessing the necessary resources, the higher their readiness to adopt the online teaching system.

3.8.4 Variable 4 (Social Influence)

The acceptance and utilisation of new technologies are both significantly impacted by social influence. An individual's perspective of how other people, such as their family, friends, and co-workers, feel about their usage of a new technological system is what we refer to as social influence. This factor has been shown to have a strong connection to user intention and readiness and is considered to be a prominent factor in the early stages of the readiness to adopt the technology (Xu, 2012).

The study's eight statements (SI1, SI2, SI3, SI4, SI5, SI6, SI7) likely relate to how different groups of people may influence an individual's willingness to adopt the technology. These groups may include family members, colleagues, top leadership, and societal needs.

3.8.5 Variable 5 (Hedonic Motivation)

Hedonic Motivation is the 5th variable of this study It refers to a person's feelings of de motivation and pleasure while using a system, moving toward the objectives. In the current study, this factor consists of seven statements (HM1, HM2, HM3, HM4, HM5, HM6, HM7).

Hedonic Motivation is based on internal motivating factors that are related to inner feelings. Both internal and external factors play a crucial role in technology acceptance (Venkatesh in the technology acceptance model, 2012). In this model, facilitating conditions are related to external motivational factors, and hedonic motivation is related to internal motivation (Ahmed, 2016).

This factor was selected due to its reflection of the instructor's and learners' impressions of using educational technology for online teaching. According to motivation theory (Yang, 2013), hedonic motivation is a key factor in technology adoption among users and has a positive relationship with users' readiness and behavior.

3.9 Demographic variables

Demographic variables, also called personal variables or control variables, play a crucial role in research by helping researchers eliminate the possibility of alternative explanations for the dependent variables or outcomes (Tuckman, 1999). These variables typically include characteristics such as gender, educational level, age, race, and status.

In the context of technology acceptance models, researchers often select control variables based on the demands of their research. For example, in a study of readiness for online teaching, age, gender, and online teaching experience were

selected as control variables based on the suggestions of previous researchers (Venkatesh, 2012).

3.9.1 Demographic Factor (DF) 1 (Age)

The study categorized participants into four age groups: 25-34 years old, 35-44 years old, 45-55 years old, and over 55 years old. The results showed that 68 respondents (21.1%) were in the age group of 25-34 years old, 102 respondents (31.7%) were between 35-44 years old, 96 respondents (29.8%) were in the age group of 45-55 years old, and 56 respondents (17.4%) were above 55 years old. It is suggested to use age as a moderating or control variable in such studies.

Table 3.4
Employee distribution based on age

Age Group	Frequency	Percentage
25-34	68	21.1
35-44	102	31.7
45-55	96	29.8
Above 55	56	17.4

3.9.2 Demographic Factor (DF) 2(Gender)

In the current study, the distribution of gender among the participants was analysed. It was found that 184 males participated, making up 57.1% of the sample, while 138 females participated, accounting for 42.9% of the sample. Although the majority of the respondents were male, there was still significant and noticeable participation from females.

Table 3.5

Employee distribution based on Gender.

Gender	Frequency	Percentage
Male	184	57.1
Female	138	42.9

3.9.3 Demographic Factor (DF) 3 (online Teaching Experience)

Prior experience is the demographic attribute of a person's involvement in the organization over time (Sun & Zhang, 2006). Moreover, in this study, experience is pointed out in the number of years faculty members are involved in online teaching. The user's belief about the target technology system is based on their practice and experience they have used before. They can express their feelings, positive attitude or negative attitude and belief about the further usage. In Venkatesh's (2000) viewpoint, experience is a crucial moderator that aids in elucidating user behavior in information systems.

Table 3.6

Employee distribution based on Online Teaching Experience

Groups of online teaching experience	Frequency	Percentage
0-1	85	26.4
1-5	153	47.5
5-10	84	26.1

Present research study of online teaching experience was divided into three groups. 26.4% of the respondents, which is 85 people, had 0-1 years of experience. 153 respondents, which is 47.5% of the sample, had 1-5 years of experience. Lastly, 84 respondents had 5-10 years of experience and made up 26.1% of the total sample.

3.9.4 Demographic Factor (DF) 4 (Job Nature)

Job status, whether permanent or contract, can significantly impact an employee's readiness to engage in their work. Permanent employees may feel more secure and committed to their job, while contract employees may experience higher levels of uncertainty and job insecurity, leading to different levels of motivation and readiness (Venkatesh, 2002).

Despite the potential barriers faced by contract employees, such as job insecurity and uncertainty, they have demonstrated a willingness to embrace new technologies, including online technology, to extend their contracts. This highlights the importance of motivation and adaptability in the face of changing job circumstances, regardless of employment status (Davis, 2007).

Table 3.7

Employee distribution based on job status.

Job status	Frequency	Percentage
Permanent	235	83.0
Contract	87	23.0

In the above table shows the distribution of job status. It can be seen that a total of 235 permanent faculty members participated in this study which comprises 73% of the entire sample. Out of 322 participants, 87 contract faculty members participated, which is 27% of the current sample. Many of the respondents were permanent faculty although significant and observable participation was witnessed from the contractual faculty as well.

3.10 Instrument Coding

Before the actual tool validation and pilot trial data were assigned to codes. The details of data coding are mentioned in the table.

Table 3.8

Instrument Coding

Segments	Constructs	Items Numbers	Instrument items coding
Part I	Demographics	**12**	DF1- DF12
Part II	Performance Expectancy	**9**	PE1,PE2,PE3,PE4,PE5,PE6,PE7,PE8,PE9
	Effort Expectancy	**9**	EE1, EE2, EE3,EE4, EE5,EE6, EE7,EE8, EE9, EE10, EE11,EE12,EE13
	Social Influence	**7**	SI1,SI2,SI3,SI4,SI5,SI6,SI7
	Facilitating conditions	**8**	FC1,FC2,FC3,FC4,FC5,FC6,FC7,FC8
	Hedonic Motivation	**7**	HM1,HM2,HM3,HM4,HM5,HM6,HM7

3.11 Pilot Testing

The most effective way to assess the validity and reliability of a survey questionnaire is through pilot trials (Saunders, 2016). In this study, two universities, National Defense University Islamabad, and Foundation University Rawalpindi, were selected for the pilot trials of the questionnaire. The final data collection and analysis did not involve these universities. A total of 150 teachers were selected for the pilot trials of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Administering the research tool before the actual data collection process is a critical

role, as it helps to refine the instrument and identify any difficulties faced by the respondents during the response.

The number of respondents selected for the pilot trials can vary based on different researchers. Fink (2013) and Dillman (2014) suggested that 10 people are enough for the pre-testing process, 75-100 is a good sample size while 100-200 for pre-testing, and confirmatory factor analysis is a very good number of respondents. The researcher selected the highest sample size for the safer side in this study.

In the first step of the questionnaire, the researcher took permission from the relevant person to use it for the study. After obtaining permission, the researcher and supervisor discussed the questionnaire and made necessary changes to the statements. In the second step, a few teachers were selected to test the instrument's reliability. Subsequent to collecting responses, Cronbach's alpha and confirmatory factor analysis were employed to assess the extent to which the intended constructs were accurately measured. This study measured an internal consistency reliability of 0.9, indicating high reliability. A reliable questionnaire should demonstrate a strong correlation and measure the intended underlying construct effectively. An initial pilot study was carried out in order to determine whether or not the research methods would be effective and applicable within the context of Pakistan's educational system before the actual study was carried out. Experts first examined the instruments to see whether or not they were legitimate, and then they investigated whether or not they were reliable. These measures were performed in order to guarantee that the tools were suitable for use in the target culture. This study examined the reliability and validity of various factors of readiness to change scales. constructs were examined using exploratory factor analysis (EFA), confirmatory factor analysis, and Cronbach's alpha, in addition to item-rest correlation and factor loading. Experts in the relevant fields also looked

over the surveys to ensure that they were legitimate. The reliability analysis of the questionnaire is critical because it provides evidence of the consistency and accuracy of the questionnaire in measuring the intended variables or constructs (Field, 2009, 2013).

3.11.1 Reliability Analysis

To ensure the dependability and consistency of research tools, a reliability analysis is performed using SPSS. The value of Cronbach's alpha ranges from 0 to 1, and a higher value indicates higher reliability of the scale.

Table 3.9

Reliability Analysis

Variables	**No of Items**	**Cronbach's alpha (α)**
Performance Expectancy	09	.915
Effort Expectancy	13	.923
Social Influence	07	.911
Facilitating Condition	08	.948
Hedonic Motivation	07	.917
Respondent Readiness	44	.894

The above table provides information on the levels of dependability for each of the scales used to measure the variables. The Performance Expectancy variable, comprised of 9 items, demonstrated a high level of internal consistency with a Cronbach's alpha of .915. Similarly, the Effort Expectancy variable, consisting of 13 items, yielded a Cronbach's alpha of .923, indicating strong reliability. Social

Influence, comprising 7 items, achieved Cronbach's alpha of .911, suggesting a high level of internal consistency. The Facilitating Condition variable, encompassing 8 items, demonstrated excellent reliability with a Cronbach's alpha of .948. Hedonic Motivation, consisting of 7 items, exhibited a strong level of internal consistency with a Cronbach's alpha of .917. Lastly, the composite variable Respondent Readiness, composed of 44 items, achieved Cronbach's alpha of .894, indicating robust reliability across the encompassed items. These high alpha values signify that the measurement scales for each variable and the composite variable possess strong internal consistency, affirming the reliability of the instruments in capturing the intended constructs.

Table 3.10
Item Reliability Statistics of Performance Expectancy Scales

Items	Item-Rest Correlation	Factor Loading
PE1	.735	.714
PE2	.784	.850
PE3	.724	.856
PE4	.793	.883
PE5	.743	.847
PE6	.713	.746
PE7	.605	.596
PE8	.706	.548
PE9	.636	.516

In the performance expectancy scale, all item-rest correlations are above 0.60. The highest item-rest correlation is PE4 which is 0.793 and the lowest item-rest correlation of PE7 is 0.605. The highest value of factors loading 0.883 is also PE4 and lowest factor loading value of PE9 is 0.516.

Table 3.11
Item Reliability Statistics of Effort Expectancy Scales

Items	Item-Rest Correlation	Factor Loading
EE1	.593	0.586
EE2	.606	0.593
EE3	.685	0.851
EE4	.692	0.858
EE5	.616	0.574
EE6	.618	0.577
EE7	.672	0.871
EE8	.692	0.857
EE9	.591	0.630
EE10	.502	0.601
EE11	.524	0.596
EE12	.446	0.621
EE13	.424	0.560

In the effort expectancy scale, all item-rest correlations are above 0.40. The highest item-rest correlation is EE4 which is 0.694 and the lowest item-rest correlation of EE13 is 0.424. The highest value of factors loading of 0.871 is also EE8 and the lowest factor loading value of EE13 is 0.560.

Table 3.12
Item Reliability Statistics of Social Influence Scales

Items	Item-Rest Correlation	Factor Loading
SI1	.585	.600
SI2	.692	.711
SI3	.711	.749
SI4	.831	.875
SI5	.773	.843
SI6	.760	.796
SI7	.772	.821

In the social influence scale, all item-rest correlations are above 0.60. The highest item-rest correlation is SI4 which is 0.831 and the lowest item-rest correlation of SI1 is 0.585. The highest value of factor loading of 0.875 is also SI4 and the lowest

factor loading value of SI1 is 0.600.

Table 3.13
Item Reliability Statistics of Facilitating Condition Scales

Items	Item-Rest Correlation	Factor Loading
FC1	.775	0.799
FC2	.885	0.909
FC3	.761	0.784
FC4	.821	0.850
FC5	.823	0.844
FC6	.782	0.794
FC7	.822	0.855
FC8	.813	0.848

In the facilitating condition scale, all item-rest correlations are above 0.40. The highest item-rest correlation is FC2 which is 0.885 and the lowest item-rest correlation of FC3 is 0.761. The highest value factor loading of 0.909 is also FC2 and the lowest factor loading value of FC3 is 0.784.

Table 3.14
Item Reliability Statistics of Hedonic Motivation Scales

Items	Item-Rest Correlation	Factor Loading
HM1	.915	.937
HM2	.931	.955
HM3	.926	.953
HM4	.902	.915
HM5	.845	.849
HM6	.903	.907
HM1	.876	.880

In the hedonic motivation scale, all item-rest correlations are above 0.40. The highest item-rest correlation is HM2 which is 0.931 and the lowest item-rest correlation of HM5 is 0.845. The highest value of factors loading 0.955 is also HM2 and the lowest factor loading value of HM5 is 0.849.

The above table shows the rotated factor matrix, Varimax with Kaiser

Normalization is used to identify the factors. The results show that 5 factors are extracted and each item has a value of >0.50 for contribution in the same factor.

3.11.1 Exploratory Factor Analysis (EFA)

In order to determine the total number of components that make up the scale, exploratory factor analysis is utilized. The use of this strategy is an effective method for determining factors based on items. In a broader sense, factor analysis is a collection of methodologies that, by evaluating correlations between variables, decreases the number of variables into fewer factors, which, in turn, explains a significant portion of the initial data in a manner that is more cost-effective. (Nargundkar, 2005)(Appendix j).

3.11.3 Confirmatory Factor Analysis

To assess the suitability of the model for practical application, Confirmatory Factor Analysis (CFA) was conducted using AMOS 27.0 with a sample size of n=322, following the method of maximum likelihood estimation (Arbuckle, 1994). The analysis aimed to evaluate the latent structure encompassing all constructs in the proposed conceptual model.

Examination of loading values for variable items was crucial in this assessment. Results revealed that all variables surpassed the recommended threshold of 0.50 for average variance extracted, and reliability exceeded the 0.70 threshold. As indicated in Table 3.9, all latent constructs demonstrated favorable psychometric properties, providing confidence in their validity.

The scales associated with all first-order factors were deemed to possess satisfactory validity properties, in accordance with guidelines from Bagozzi and Yi (1988) and Hair et al. (2010). The validation of all scales for first-order factors was successfully achieved, confirming the measurement model.

Researchers adhered to recommended standards, suggesting that factor loadings above the cutoff value of 0.60 are ideal, and additionally, standardized factor loadings greater than 0.50 are deemed acceptable. The factor loadings (estimated values) extracted from AMOS output for each variable were scrutinized accordingly. Performance expectancy (measured by nine items - PE1 to PE9), effort expectancy (measured by thirteen items - EE1 to EE13), social influence (measured by seven items - SI1 to SI7), facilitation condition (measured by eight items - FC1 to FC8), and hedonic motivation (measured by seven items - HM1 to HM7) all exhibited factor loadings equal to or greater than 0.50.

Given that no item demonstrated a factor loading below 0.50, all items will be retained for further analysis. This outcome reinforces the conclusion that the measurement model demonstrates sound validity. The CFA results affirm the validity of the measurement model, establishing a robust foundation for its utilization in subsequent research investigations (Cua et al., 2001)(Appendix .K).

3.12 Instrument validation process.

While developing or designing a survey questionnaire, validity and reliability are essential characteristics to take into consideration. These features guarantee that the instrument properly measures what it is designed to measure, thus it is important to pay attention to both of these aspects. Validity refers to the extent to which a piece of testing equipment assesses the concept that it was developed to evaluate. Validation of tools may be accomplished using a variety of approaches, the most frequent of which are referred to as content validity, construct validity, face validity, criterion validity, and convergent validity. These methods guarantee that the instrument delivers a valid and reliable evaluation of the intended construct and assist establish the instrument's dependability. Also, these methods verify that the

instrument is valid. Therefore, it is essential to consider both validity and reliability when adapting or creating a survey questionnaire in order to ensure that the instrument is suitable for the purpose that it is intended for and produces reliable results. Validity refers to the degree to which an instrument accurately reflects reality, while reliability refers to the degree to which it determines.

3.12.1 Content validity

The study "Teacher's Readiness" aimed to validate a tool for assessing teacher readiness using three methods: content validity, construct validity, and reliability. The researchers first focused on content validity to ensure that the tool accurately measured teacher readiness. This involved evaluating the clarity of language, practicality, and relevance of the 55 statements in the tool.

Seven experts with doctorate degrees in language, tool development, and educational management were chosen to evaluate the statements. The experts were sent a survey questionnaire and used a 3-point Likert scale to rate each statement as "relevant," "irrelevant," or "needing improvement" (Cassepp-Borges et al., 2010). Based on the experts' feedback, the researcher made changes to the tool as needed.

In simpler terms, the study validated the tool by having experts review the language and questions to make sure they were clear and relevant. Any changes made to the tool were based on the experts' suggestions. Details are attached in (APPENDIX D).

3.12.2 Construct Validity

Nachmias and Nachmias (2008) state that measuring the instrument that is tied to the idea and theoretical assumptions is how construct validity is proven. According to Hair et al., this is accomplished through the use of factor analysis (2019). The

researchers wanted to get a good picture of the structure of the data in SPSS, therefore they employed factor principal component analysis with varimax rotation in their investigation. The Kaiser-Mayer Olkin (KMO) test and the Bartlett's test of sphericity were the two statistical examinations that were carried out in order to determine whether or not factor analysis was appropriate. The fact that the KMO test produced values larger than 0.5 suggests that the data may be used for factor analysis and should be treated as such. The fact that Bartlett's test returned a p-value that was less than 0.05 indicates that the data may be utilized successfully in component analysis.. The researchers also tested each item under each construct/principle and removed items with low loading (less than 0.4) from the assessment. Constructs with an eigenvalue of less than one were also eliminated from the assessment as described in exploratory factor analysis. (Appendix L)

3.12.3 Usability

The study aimed to assess the usability of the survey questionnaire, specifically its content composition. Usability refers to the ease of use and user-friendliness of a system and is an important aspect of survey design. According to Barnum and Dragga (2001), usability is crucial in making a system that meets the needs and requirements of users. To achieve good usability, the design of the questionnaire should be visually appealing, with clear and legible typography, and a balanced design that is not too dull or overwhelming (Fanning, 2005).

The recommendations made by earlier research on usability and document design were taken into consideration when writing this thesis. The information in the questionnaire was laid up in a way that made it simple to read and understand; for example, there were line separators used to separate the various pieces of data, and checkboxes were provided for respondents to utilize while responding to the various

questions. It was a priority to make the questions brief and uncomplicated, and we tried to steer clear of those that were overly wordy or took up more than two lines. The components of the questionnaire were separated into titles that were explicit and to the point, which made it simpler to explore. The legibility of the information was improved by taking into consideration the spacing between letters, words, lines, and paragraphs in accordance with standards for visual design, which helped to improve readability. The design of the questionnaire as a whole was constructed in a way that made it simple for respondents to comprehend and straightforward to complete.

3.13 Data Collection Procedure (QUAN Phase)

This study collected both quantitative and qualitative data to examine the level of readiness to change among employees in higher education. The data collection procedure included a self-administered online questionnaire to collect quantitative data and interviews with a sample of participants to collect qualitative data. The questionnaire was designed to measure various factors that influence readiness to change, while the interviews were conducted to gain a deeper understanding of employees' perspectives on change in the higher education sector. Details of data collection procedure is given below.

The researcher personally visited the universities of Rawalpindi and Islamabad to distribute the research tools. The aim was to gather data from the public sector universities in these cities. To achieve this goal, the researcher went to each university in person to administer the tools.

The first step in the process was to obtain consent from the teachers to meet with them individually. The population list was obtained from the Higher Education Commission of Pakistan website (www.hec.edu.pk) with the approval of the

university administration. The heads of departments and other relevant authorities were informed prior to the actual visit to the universities.

A total of 344 questionnaires were distributed among eight universities through multiple visits. The data collection process was challenging due to the COVID-19 pandemic as many teachers and students were not readily available on campus. Nevertheless, the researcher was persistent and was able to complete the data collection process, although it took a considerable amount of time.

Out of the 344 questionnaires distributed, 322 were used for further analysis. Before entering the data into the SPSS software, all necessary data screening tests were conducted to ensure the validity and reliability of the data. This involved checking for missing values, outliers, and ensuring that the data was consistent with the research objectives.

Overall, the researcher went to great lengths to ensure that the data collected was accurate and reliable. By visiting the universities in person and obtaining consent from the teachers, the researcher was able to gather valuable data that contributed to the understanding of the research topic.

3.14 Analysis Procedure (QUAN Phase)

The study aims to gauge respondents' readiness by exploring five key dimensions, contributing factors to their overall preparedness. Descriptive analysis involves computing means and standard deviations for each dimension, assessed through a five-point Likert scale. The level of readiness (low, medium, high) is determined based on these values. The dependability of the data is ensured using Cronbach's alpha and Gutman's intersection correlation approaches.

Inferential statistics draw conclusions about a larger population based on

sample data. T-tests and ANOVA were used in the study for comparisons. T-test assesses if there's a significant difference between means of two unrelated groups, while ANOVA identifies differences among means of multiple groups. Correlation analysis, quantified through correlation coefficients, measures relationships between variables. The researchers used these statistical tools, aligning with established practices, to examine findings in gender and age groups, ensuring robust and informed conclusions.

3.15 Data collection technique & Procedure (QUAL phase)

In this current study, the method of data collection used was a semi-structured interview. According to O'Leary (2014), this method is used when the researcher requires in-depth and detailed information within the context of the topic and field being studied. The semi-structured interview method was employed as it provides guidelines for the researcher while still allowing for some level of flexibility. This is beneficial as it allows the researcher to pose and probe additional questions, as noted by Roulston (2010).

The specific structure of the interviews used in this study was based on the Sami method, which aimed to collect detailed information from the participants. The semi-structured interview followed a protocol that had been developed beforehand and was designed to collect data on specific factors related to the topic being studied.

3.15.1 Semi structure interview technique (QUAL Phase)

In this study, we formulated seven essential questions, inspired by Venkatesh and Devis' factors, to validate quantitative data through semi-structured interviews. These questions guided the exploration of employee readiness, focusing on factors such as Performance Expectancy, Effort Expectancy, Social Influence, Facilitating

Conditions, and Hedonic Motivation. Additionally, we investigated the influence of demographic factors and factors fostering or hindering employee readiness.

Participants (n=16) were selected from those who provided contact information during quantitative data collection, and interviews were scheduled based on their convenience. All participants were experienced online teachers, and a minimum age requirement of 25 years was set. The sample size aligns with recommended ranges by Authors (Creswell, 2013; Boyd, 2001 and Collins, 2007).

A pilot test was conducted before actual interviews to refine the questionnaire based on participant feedback, following Harding's suggestion (2013). This iterative process ensured the appropriateness and effectiveness of the questions.

3.16 Analysis procedure (QUAL Phase)

In this study, thematic analysis was employed to assess teachers' readiness for online teaching during the COVID-19 pandemic. Sixteen faculty members from universities in Rawalpindi and Islamabad participated in semi-structured interviews to validate quantitative data and explore factors influencing low and high readiness, as well as challenges in online teaching. The thematic analysis followed Victoria Clark and Virginia Brawn's (2019) model, involving a six-step process.

The semi-structured interviews allowed free expression of thoughts on readiness, encouraging, and discouraging factors, and overall factors affecting readiness. Two types of employees were considered in the analysis, and seven questions were posed to participants. The Braun and Clarke method of thematic analysis involved familiarization with data, generating initial codes, searching for themes, reviewing, and refining themes, defining and naming themes, and writing up the analysis. This approach provided a comprehensive understanding of teachers'

readiness levels during the COVID-19 pandemic.

3.17 Study Delimitation

The following might be listed as the limitations of this study: The individual readiness of faculty teachers at the university level was the primary focus of this research project, which was designed to evaluate such preparation. For the purpose of this research, only universities located in the cities of Rawalpindi and Islamabad were chosen for the sample. The data came mostly from the departments of social sciences and management sciences located in Rawalpindi and Islamabad's higher education institutions.

It is important to note that this study excluded any universities or colleges located in rural areas. Additionally, only teachers were selected as participants in the study and no other stakeholders, such as students or administrators, were considered. The data collected was limited to the individual readiness of teachers in the social sciences and management sciences departments and did not take into account other departments or faculties within the universities.

Overall, the delimitations of the study were carefully chosen to narrow the focus to a specific aspect of higher education institutions, specifically the individual readiness of faculty teachers in the social sciences and management sciences departments of universities located in the Rawalpindi and Islamabad districts. By focusing on this specific aspect, the study aimed to provide a more in-depth and detailed understanding of the individual readiness of teachers in these areas.

3.18 Ethical considerations

The study, in addition to providing valuable information, also took into account several ethical considerations to ensure the fair treatment of participants.

Firstly, the research process was designed to be parametric, giving participants the choice to opt-in or out of the study without any pressure. This ensured that participants were not forced to participate in the study against their will and maintained their autonomy.

Secondly, the confidentiality of the participants was given the utmost importance. The study took steps to protect the identities of participants by ensuring that they remained anonymous throughout the research process. This prevented any potential victimization or harm to the participants and respected their privacy.

Lastly, the study sought permission from all relevant stakeholders, including the universities, before the data collection process began. This ensured that all necessary approvals were obtained and that the study was conducted following ethical standards and guidelines. The researchers were committed to ensuring that the study was conducted responsibly and respectfully, taking into account the well-being of the participants and respecting their rights.

3.19 Chapter Summary

The fundamental structure of the study design is broken down in extensive detail in the chapter that focuses on the technique of the research. The current investigation used a mixed-method approach that was sequentially organized to explain previous findings. The purpose of this study was to evaluate the preparedness of the workforce taking into account factors such as expected levels of performance and effort, social impact, favorable conditions, and hedonistic incentives. The research was carried out at 23 different public and private institutions in the Rawalpindi and Islamabad areas of Pakistan. The sample for the study consisted of twelve different institutions of higher education that both provide social sciences and management sciences. Although two universities were chosen for the pilot tests, those

institutions were not included in the final approach for collecting data. Participants in the pilot trials were 150 educators.

Each of the instruments that were utilized in the research had an overall dependability ranging from 0.87 to 0.96, which is an excellent level of reliability. The selection of the sample for the investigation was carried out using a method known as stratified random sampling. The participants were divided into two categories according to their gender, age group, amount of prior experience teaching online, and current employment position. In order to acquire qualitative data, a technique called purposive sampling was utilized.

Various statistical methods were employed to assess the data, such as calculating the mean, standard deviation, conducting t-tests, and performing analysis of variance. The reliability of the instruments used in the study was evaluated through exploratory factor analysis (EFA), confirmatory factor analysis (CFA), internal variable correlation, and Cronbach's alpha. As a result, a mixed-method design with an explanatory sequential design was utilized for the purpose of measuring employee preparedness in relation to performance expectancy, effort expectancy, social impact, enabling circumstances, and hedonic motivation. Throughout the study, dependable instruments were utilized, and several statistical methods were utilized in the analysis of the data. The selection of the study sample was accomplished via the use of stratified random sampling, and the collection of qualitative data was accomplished through the use of purposive sampling. The findings of the study might be valuable for firms to boost their workers' preparation for online teaching if they choose to implement these recommendations.

CHAPTER 4

RESULTS AND ANALYSIS

The purpose of this study was to determine how ready faculty professors are to teach based on five important elements. These categories were performance expectancy, effort expectancy, social influence, enabling circumstances, and hedonic motivation. Descriptive analysis was used in the study, and the measurements that it comprised were skewness, kurtosis, mean, standard deviation, reliability, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and internal item correlation. Comparing the levels of preparation among faculty teachers according to factors such as their age, the amount of prior teaching experience they had, their gender, and their work status was the second goal of the study. The researchers applied statistical tests such as T-test, ANOVA, and post hoc analysis to achieve this objective.

The study involved a sample of 322 teachers from different universities in Rawalpindi and Islamabad, with varying gender, age, and online teaching experiences. The researchers used a mixed-method approach, which included an explanatory sequential design to explore and explain the data. In the quantitative phase, the researchers measured the level of readiness among the faculty teachers using a questionnaire based on the five key factors. The questionnaire consisted of 9 statements for performance expectancy, 13 for effort expectancy, 9 for facilitating conditions, 7 for social influence, and 7 for hedonic motivation. In the qualitative phase, extreme responses were selected to further explain the data.

This study analysis is based on three sections.

Section 1: Demographic analysis

Section 2: Descriptive and inferential

The survey forms that were distributed to the participants comprised two sections. The first portion of the report included the demographic information of the participants. Characteristics such as gender, age, years of online teaching experience, and work setting were considered. Questions on the theoretical underpinnings of the investigation were asked for in the second part of the survey. We used a 5-point Likert scale to evaluate the replies. Responses were used to establish associations between the study's variables.

4.1 Employee Demographic Information

Table 4.1

Demographic Information based on gender, Age, year of experience, and job status.

Demographic Factors	**Categories**	**Frequencies**	**Percentages**
Gender (DF1)	Males	184	57.1
	Females	138	42.9
Job status (DF2)	Permanent	283	83.0
	Contract	87	23.0
Age (DF3)	25-34	68	21.1
	35-44	102	31.7
	45-55	96	29.8
	Above 55	56	17.4
Experience (DF4)	0-1	85	26.4
	1-5	153	47.5
	5-10	84	26.1

The composition of the study participants by gender is shown in Table 4.1. The current sample consists of 322 people, with 184 (or 57.1%) being male and 138 (or 42.9%) being female. Although men accounted for the majority of responders, there was clear evidence that women were also actively involved. Seventy-eight

people responded and were between the ages of 25 and 34, making up 21.1% of the overall sample. Of the study's sample, 102 participants (or 31.7% of the total) were aged 35 to 44. Around 29.8 percent of the total respondents were between the ages of 45 and 55. In addition, only 56 people (17.2 percent of the total) were 55 and above.

Distributions of participants' prior online teaching experiences are also shown in Table 4.1. Around 26.4 percent of the whole sample consisted of people with less than one year of experience, which corresponds to the demographics of 85 respondents. The bulk of the research sample (153 people, or 47.5%) had experience levels between one and five years. Of the total number of responses, around 26.1% had experience levels between 5 and 10 years. This included 84 participants.

In Table 4.1, we can see how the study's participants were split up by their various occupations. A total of 235 full-time professors (73% of the total sample) agreed to take part in the research. The current sample size is 322 people, of whom 87 are contract faculty members (about 27 percent). Although part-time professors made up the bulk of responders, we saw evidence of considerable and noticeable participation from permanent faculty.

4.1.1 Employee's Gender Distribution

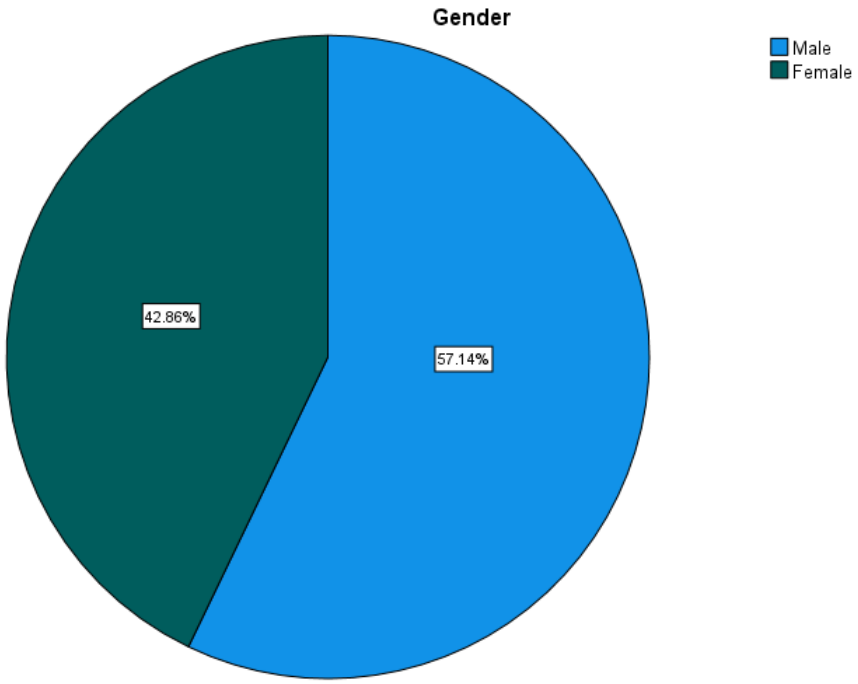

Figure 16: Employee distribution based on gender

The gender breakdown of the research participants is shown in figure 4.1 provided in the previous section. One may see the split between the genders in Figure 4.1. One can observe that 184 male participants, or 57.1% of the overall sample, took part in the research. Female respondents make up 42.9% of the total sample size (138 out of 322). Although men made up the bulk of responders, there was also clear evidence of active engagement from women.

4.1.2 Employee, s Age Distribution

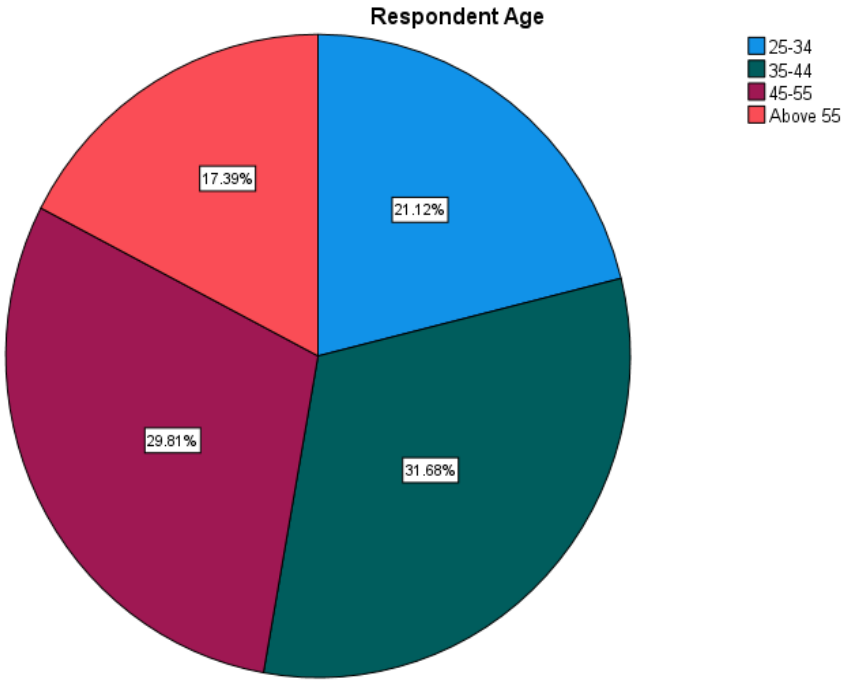

Figure 17: Employee distribution based on Age

The age distributions of the people who participated in the study are shown up there in figure 4.2. In addition, there is a pie chart that illustrates these divisions included in the image. Seventy-eight individuals answered the survey, and of them, 21.1% were between the ages of 25 and 34, making up a portion of the whole sample. 102 participants in the study's sample, which accounts for 31.7% of the total, were between the ages of 35 and 44. About 29.8 percentage points of the respondents were between the ages of 45 and 55. Despite this, only 17.4 percent of the total sample consisted of those aged 55 and older.

4.1.3 Employee's Online Teaching Experience

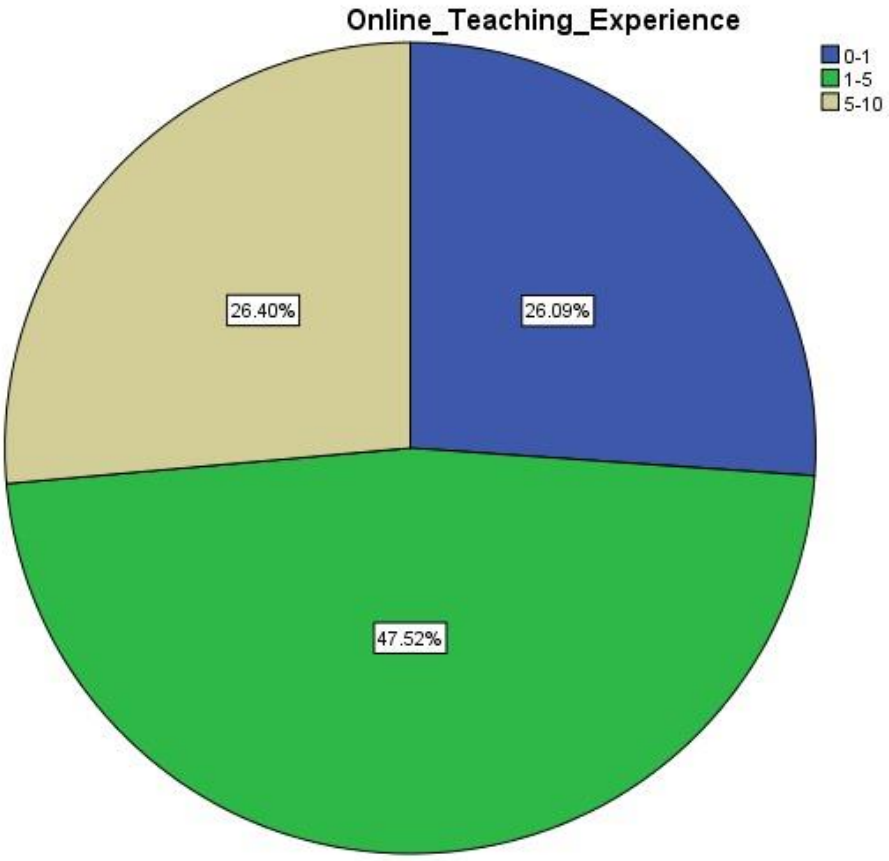

Figure: distribution based on Online Teaching Experience

Figure 16 above demonstrates the distribution of the respective online teaching experience of the study participants. The visual distribution of online teaching experience visualized through a pie chart. It can be seen that a total of 85 faculty members have up to 1 year's online teaching experience (26.4%) participated in this study. Out of 322 participants, 153 faculty members have participated (47.5%) of the current sample. However, 84 participants (26.1%) had 5-10 years of online teaching experience.

4.1.4 Employee job nature Distribution.

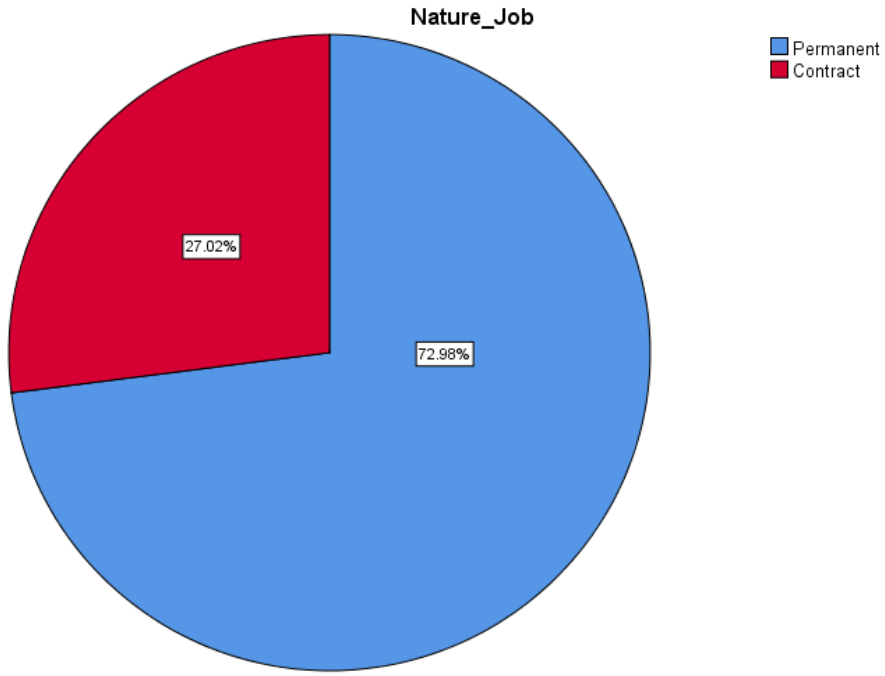

Figure 19: Employee distribution based on job status

Figure 4.1.4 depicts the visual distribution of the nature of the job through a pie chart. It can be seen that a total of 235 permanent faculty members participated in this study which comprises 73% of the entire sample. Out of 322 participants, 87 contract faculty members have participated, which is 27% of the current sample. A majority of the respondents were permanent faculty although significant and observable participation was witnessed from the permanent faculty as well.

4.2 Descriptive Analysis

In this chapter's part on descriptive statistics, information is presented regarding the many aspects of preparedness, including performance expectancy, effort expectancy, social influence, enabling factors, and hedonic motivation. A number of statistical analyses, such as mean score, percentage, skewness, and kurtosis, were performed on each of these variables. These tests had two purposes: first, they

determined the level of preparation in each dimension; second, they identified any possible problems with the data.

The exploratory factor analysis, the confirmatory factor analysis, and the Cronbach's alpha analysis were utilized in this portion of the study in order to evaluate the instrument's reliability. These tests were carried out in order to examine the consistency and stability of the questionnaire, as well as to guarantee that the data that was obtained was trustworthy and valid.

The researchers were able to acquire a better grasp of the degree of preparation among the faculty professors by examining the descriptive statistics. They were also able to identify any prospective areas for development that may have been present. This information was then put to use in the development of targeted interventions and strategies to improve the level of readiness among faculty teachers in a variety of dimensions, including performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation.

4.3 Normality of Data

Table 4.2

Item-wise Descriptive and Normality Analysis based on (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Hedonic Motivation) (N=322)

Items	Minimum	Maximum	Mean	SD	Skewness	Kurtosis
PE1	1	5	3.41	1.146	-.464	-.670
PE2	1	5	3.40	1.232	-.331	-.981
PE3	1	5	3.26	1.149	-.269	-.796
PE4	1	5	3.38	1.165	-.382	-.761
PE5	1	5	3.16	1.114	-.152	-.772
PE6	1	5	3.34	1.136	-.341	-.714
PE7	1	5	3.33	1.137	-.429	-.573
PE8	1	5	3.40	1.154	-.528	-.531
PE9	1	5	3.36	1.200	-.371	-.811
EE1	1	5	3.09	1.212	-.074	-1.035
EE2	1	5	3.09	1.257	.005	-1.101
EE3	1	5	3.42	1.142	-.553	-.509
EE4	1	5	3.44	1.138	-.679	-.321
EE5	1	5	2.95	1.166	.115	-.908
EE6	1	5	3.02	1.206	.024	-1.016
EE7	1	5	3.42	1.145	-.479	-.593
EE8	1	5	3.45	1.108	-.678	-.292
EE9	1	5	3.52	1.153	-.715	-.311
EE10	1	5	3.15	1.216	-.299	-1.037
EE11	1	5	3.29	1.155	-.313	-.916
EE12	1	5	3.33	1.269	-.371	-.985
EE13	1	5	3.26	1.149	-.276	-.885
SI1	1	5	2.82	1.308	.096	-1.205
SI2	1	5	3.18	1.475	-.226	-1.358
SI3	1	5	2.96	1.325	-.340	-1.262
SI4	1	5	3.18	1.393	-.340	-1.215
SI5	1	5	2.96	1.380	-.119	-1.230
SI6	1	5	3.12	1.308	-.396	-1.047
SI7	1	5	3.22	1.391	-.506	-1.035
FC1	1	5	2.43	1.492	.309	-1.647
FC2	1	5	2.73	1.638	.034	-1.783
FC3	1	5	2.19	1.385	.705	-1.048
FC4	1	5	2.34	1.460	.455	-1.433
FC5	1	5	2.53	1.543	.320	-1.537
FC6	1	5	2.57	1.617	.357	-1.550
FC7	1	5	2.44	1.503	.267	-1.694
FC8	1	5	2.59	1.544	.192	-1.618
HM1	1	5	2.51	1.561	.375	-1.512
HM2	1	5	2.51	1.587	.468	-1.410
HM3	1	5	2.46	1.577	.552	-1.278
HM4	1	5	2.36	1.504	.648	-1.125
HM5	1	5	2.46	1.557	.477	-1.406
HM6	1	5	2.64	1.662	.286	-1.626
HM7	1	5	2.77	1.656	.030	-1.741

Table 4.2 Descriptive statistics were used to provide an overview of the research components, which included performance expectation, effort expectation, social

influence, enabling conditions, and hedonic motivation. These statistics encompassed key metrics such as minimum and maximum values, mean, standard deviation, kurtosis, and skewness. Furthermore, in order to facilitate better comprehension of the respondents' responses, the mean scores were transformed into percentages. There are five components of readiness: hedonic motivation, social influence, facilitating conditions, performance expectations, and effort expectancy. The level of readiness was assigned a score from 0 to 5 on a scale from 0 to 10. The Likert scale went from strongly disagree to strongly agree.

The results of the mean value of performance expectancy of nine items are given in table 4.2 The mean value and percentage of PE1 (M=3.41, 68.2%), PE2 (M=3.40, 68%), PE3 (M=3.26, 65.2%), PE4 (M=3.38, 67.6%), PE5 (M=3.16, 63.2%), PE6 (M=3.34, 66.8%), PE7 (M=3.33, 66.6%), PE8 (M=3.40, 68%) and PE9 (M=3.36, 67.2%). The values of kurtosis and skewness between ±1.0 are considered as excellent kurtosis and skewness values fall between 1.0 and 2.0, however numbers between these extremes are also acceptable (George & Mallery, 2010). PE1 has a skewness of (-.464) and a kurtosis of (-.670). PE2 (Skewness=-.331, Kurtosis=-.981), PE3 (Skewness=-.269, Kurtosis=-.796), PE4 (Skewness=-.382, Kurtosis=-.761), PE5 (Skewness=-.152, Kurtosis=-.772), PE6 (Skewness=-.341, Kurtosis=-.714), PE7 (Skewness=-.429, Kurtosis=-.573) and PE8 (Skewness=-.528, Kurtosis=-.531) and PE9 (Skewness=-.371, Kurtosis=-.811) fall within an acceptable range of ±1.0 which is an excellent and acceptable range for further analyses of variables.

The results of the mean value of effort expectancy of thirteen items are given in table 9.2. The mean value and percentage of EE1 (M=3.09, 61.8%), EE2 (M=3.09, 62.8%), EE3 (M=3.42, 68.4%), EE4 (M=3.44, 68.8%), EE5 (M=2.95, 59%), EE6 (M=3.02, 60.4%), EE7 (M=3.42, 68.4%), EE8 (M=3.45, 69%), EE9 (M=3.52,

70.4%), EE10 (M=3.15, 62%), EE11 (M=3.29, 65.8%), EE12 (M=3.33, 66.6%) and EE13 (M=3.26, 65.2%). The values of skewness and kurtosis of EE1 (Skewness=-.074, Kurtosis=-.1.035), EE2 (Skewness=-.005, Kurtosis=-1.101), EE3 (Skewness=-.553, Kurtosis=-.509), EE4 (Skewness=-.679, Kurtosis=-.321), EE5 (Skewness=-.115, Kurtosis=-.908), EE6 (Skewness=-.024, Kurtosis=-.1.016), EE7 (Skewness=-.479, Kurtosis=-.593), EE8 (Skewness=-.678, Kurtosis=-.292), EE9 (Skewness=-.715, Kurtosis=-.311), EE10 (Skewness=-.299, Kurtosis=-1.037), EE11 (Skewness=-.313, Kurtosis=-916), EE12 (Skewness=-.371, Kurtosis=-.985), and EE13 (Skewness=-.276, Kurtosis=-.885) fall within an acceptable range of ±2.0 which is an excellent and acceptable range for further analyses of variables.

The results of the mean value of the social influence of seven items are given in table 9.2. The mean value and percentage of SI1 (M=2.82, 56.4%), SI2 (M=3.18, 63.6%), SI3 (M=2.96, 59.2%), SI4 (M=3.18, 63.6%), SI5 (M=2.96, 59.2%), SI6 (M=3.12, 62.4%) and SI7 (M=3.22, 64.4%). The values of skewness and kurtosis of SI1 (Skewness=-.096, Kurtosis=-.1.205), SI2 (Skewness=-.226, Kurtosis=-1.358), SI3 (Skewness=-.340, Kurtosis=-1.262), SI4 (Skewness=-.340, Kurtosis=-1.215), SI5 (Skewness=-.119, Kurtosis=-1.230), SI6 (Skewness=-.396, Kurtosis=-.1.047) and SI7 (Skewness=-.506, Kurtosis=-1.035) fall within an acceptable range of ±2.0 which is an excellent and acceptable range for further analyses of variables.

The results of the mean value of facilitating conditions of eight items are given in table 9.2. The mean value and percentage of FC1 (M=2.43, 48.6%), FC2 (M=2.73, 54.6%), FC3 (M=2.19, 43.8%), FC4 (M=2.34, 46.8%), FC5 (M=2.53, 50.6%), FC6 (M=2.57, 51.4%), FC7 (M=2.44, 48.8%) and FC8 (M=2.59, 51.8%). The values of skewness and kurtosis of FC1 (Skewness=-.309, Kurtosis=-.1.647), FC2 (Skewness=-.034, Kurtosis=-1.783), FC3 (Skewness=-.705, Kurtosis=-1.048), FC4 (Skewness=-

.455, Kurtosis=-1.433), FC5 (Skewness=-.320, Kurtosis=-1.537), FC6 (Skewness=-.357, Kurtosis=-.1.550), FC7 (Skewness=-.1267, Kurtosis=-1.694) and FC8 (Skewness=-.192, Kurtosis=-1.618) fall within an acceptable range of ±2.0 which is an excellent and acceptable range for further analyses of variables.

The results of the mean value of hedonic motivation of seven items are given in table 9.2. The mean value and percentage of HM1 (M=2.51, 50.2%), HM2 (M=2.51, 50.2%), HM3 (M=2.46, 49.2%), HM4 (M=2.36, 47.2%), HM5 (M=2.46, 49.2%), HM6 (M=2.64, 52.8%) and HM8 (M=2.77, 55.4%). The values of skewness and kurtosis of HM1 (Skewness=-.375, Kurtosis=-.1.512), HM2 (Skewness=-.468, Kurtosis=-1.410), HM3 (Skewness=-.552, Kurtosis=-1.278), HM4 (Skewness=-.648, Kurtosis=-1.125), HM5 (Skewness=-.477, Kurtosis=-1.406), HM6 (Skewness=-.286, Kurtosis=-.1.626) and HM8 (Skewness=-.030, Kurtosis=-1.741) fall within an acceptable range of ±2.0 which is an excellent and acceptable range for further analyses of variables.

Section 2

Descriptive Analysis of Statement

4.3.1 Statement Analysis of Performance Expectancy

Table 4.3

Statement Mean Score of Performance Expectancy

Statement	Mean	Remarks
Online teaching is valuable for my professional carrier.	3.40	High
Online teaching increases the chances to achieve educational goals.	3.40	High
Online teaching enables me to collect student's information quickly	3.26	High
Online teaching increases my presentation skills for effective communication	3.42	High
Online teaching can help me to accomplish things quickly.	3.16	Medium
Online teaching provides an opportunity to validate information during lecture.	3.34	High
Online teaching enhances my performance to use technology in education.	3.33	High
Online teaching increases knowledge about new educational technological innovations.	3.40	High
It is more convenient for me to teach internationally due to online teaching.	3.36	High

The above table shows the mean and standard deviation value of each item of performance expectancy which is 1st dimension of readiness. The statement *"Online teaching increases my productivity"* has *the* highest mean value (Mean = 3.42, high level of performance expectancy), and the statement *"Online teaching enables me to collect student's information quickly"* lowest mean value (Mean = 3.16, medium level of performance expectancy). Performance expectancy is measured with nine statements, eight statements out of nice statements mean score is high level and only one statement has medium level of performance expectancy.

4.3.2 Statement Analysis of Effort Expectancy

Table 4.4

Statements Mean score of Effort Expectancy

Statement	Mean	Remarks
I can communicate with online audio and video conferencing easily.	3.09	Medium
I can deploy various teaching and learning strategies when using ICT.	3.09	Medium
I can use office applications, such as Open Office, Microsoft Word, and Microsoft PowerPoint, easily	3.42	High
I am able to manage my time efficiently.	3.44	High
I can solve technical problems during online teaching.	2.58	Low
I can easily upload and download learning content in various forms from different sources (such as video, audio, slides, notes, and exercises	3.52	High
I can use a learning management system (LMS) and Google Meet for online teaching.	3.42	High
I frequently use the internet to search for solutions to my problems, often relying on resources such as YouTube, etc.	3.45	High
I can make my lectures interesting to engage the students	3.02	Medium
I can use a learning management system (LMS) and Google Meet for online teaching.	3.15	Medium
I can design courses for online teaching	3.29	High
I can evaluate students easily during online teaching.	2.95	Medium
I can handle academic dishonesty from students.	3.26	High

The above table shows the mean and standard deviation value of each item of effort expectancy which is the 2nd dimension of readiness. The statement *"I can easily upload and download learning content in various forms from different sources (such as video, audio, slides, notes, and exercises"* has *the* highest mean value (mean = 3.52, high level of effort expectancy) and the statement *"I can solve technical problems during online teaching"* lowest mean value (mean = 2.58, low level of effort expectancy). Effort expectancy is measured with thirteen statements; six statements out of thirteen statements mean score is high level, five statements mean score is medium and only one statement has low level of effort expectancy.

4.3.3 Statement Analysis of Social Influence

Table 4.5

Statements Mean Score of Social Influence

Statement	Mean	Remarks
People who are important to me think that I should deliver the online lecture	2.82	Medium
Individuals with influential behaviors have expressed interest in my teaching online.	3.18	Medium
Society invokes me to deliver online lectures during the COVID-19 pandemic	2.96	Medium
Students expect me to deliver lectures online during the COVID-19 pandemic	3.18	Medium
It needs time to deliver online lectures during covid-19	2.96	Medium
I am required by the administration to adopt online teaching due to the COVID-19 pandemic	3.12	Medium
The government of Pakistan's policy and HEC instructions forced us to take online classes during COVID-19	3.22	High

The above table shows the mean and standard deviation value of each item of social influence which is 3rd dimension of readiness. The statement *"Government of Pakistan's policy forced us to take online classes during COVID-19"* has *the* highest mean value (mean = 3.22, high level of social influence), and the statement *"People who are important to me think that I should deliver the online lecture"* lowest mean value (mean = 2.82, medium level of social influence). Social influence is measured with seven statements, six statements out of seven statements mean score is medium level and only one statement has high level of social influence.

4.3.4 Statement Analysis of Facilitating Condition

Table 4.6
Statements Mean Score of Facilitating Condition

Statement	Mean	Remarks
The organization provides enough knowledge necessary to teach online	2.43	Low
Educators are trained to engage students through effective communication techniques.	2.53	Low
IT experts facilitate us to fix problems during online teaching sessions	2.19	Low
University provides incentives for best performance	2.34	Low
Technology skills are provided through training for online teaching	2.73	Medium
University provides us with internet/laptop for home base teaching.	2.57	Low
Organizations purchase software based on the specific needs and requirements of their employees	2.44	Low
Organizations provide backup power to ensure uninterrupted online teaching when there is no electricity.	2.59	Low

The above table shows the mean and standard deviation value of each item of facilitating condition which is the 4th dimension of readiness. The statement *"Technology skills are provided through training for online teaching"* has *the* highest mean value (mean = 2.73, medium level of facilitating condition) and the statement *"IT experts facilitate us to fix problems during online teaching sessions"* lowest mean value (mean = 2.19, low level of facilitating condition). Facilitating condition is measured with eight statements, seven statements out of eight statements mean score is low level and only one statement has medium level of facilitating condition.

4.3.5 Statement Analysis of Hedonic Motivation

Table 4.7

Statement Mean score of Hedonic Motivation

Statement	Mean	Remarks
I like online teaching to teach my students.	2.51	Low
I enjoy using Learning Management System/zoom/Google Meet to teach online	2.51	Low
The actual process of using the system is more pleasant to teach online	2.46	Low
Online teaching is interesting to teach online	2.46	Low
I feel excited to deliver an online lecture	2.36	Low
I feel happy to see people doing online teaching	2.64	Medium
It is my pleasure to be a part of the online teaching community	2.77	Medium

The above table shows the mean and standard deviation value of each item of hedonic motivation which is the 5th dimension of readiness. The statement *"It is my pleasure to be a part of the online teaching community"* has *the* highest mean value (mean = 2.77, medium level of hedonic motivation), and the statement *"I feel excited to deliver online lecture"* lowest mean value (mean = 2.36, low level of hedonic motivation). Hedonic motivation is measured with seven statements, four statements out of seven statements mean score is low level and only two statements have medium level of hedonic motivation.

(Objective 1) To examine the level of Readiness based on (PE, EE, SI, FC, HM)

4.4 Level of Employee Readiness to Change

The below table shows the mean and standard deviation values of each dimension of the respondent readiness variable. There are five dimensions:

Performance Expectancy, Effort Expectancy, Social Influence, Facilitating condition, and Hedonic Motivation. These contribute toward the respondent's readiness. The data is collected using a five-point Likert Scale, so the minimum response is 1 and the maximum response is 5, 1= = strongly disagree and 5 = strongly agree.

The interpretation of mean scores is based on the study of Hamzah, Juraime, and Mansor's (2016) suggestion. The benchmark is given in the table below.

Table 4.8

Recommended table to measure the level of readiness.

Mean Score	**Interpretation**
1.00-1.80	Very Low
1.81-2.60	Low
2.61-3.20	Medium
3.21-4.20	High
4.21-5.00	Very High

Table 4.9

Level of employee Readiness

Factors	Mean	Std. Deviation	Level
Performance Expectancy	3.28	0.80	High
Effort Expectancy	3.47	0.71	High
Social Influence	2.95	1.10	Medium
Facilitating Condition	2.49	1.30	Low
Hedonic Motivation	2.56	1.47	Low
Respondent Readiness	3.06	0.72	Medium

The results show that facilitating condition and hedonic motivation have mean low mean values i.e., 2.49 and 2.56, respectively. The social influence dimension has an approximately medium mean value of 2.95 and a standard deviation of 1.10. The performance expectancy and effort expectancy mean values are higher, and the standard deviation is lower than that of all other dimensions. The mean value of performance expectancy is 3.28 (SD = 0.80) and the effort expectancy means the value is 3.46 (SD = 0.71). The overall respondent readiness mean value is medium i.e., 3.06 with a standard deviation of(SD= 0.72) which is near to average responses.

H01. There is no significant differences in employee readiness for online teaching concerning their gender (male, female).

4.9 Employee Comparison based on Gender.

Independent sample t-tests are inferential statistics used to compare the means of two groups that may be linked by common characteristics. In statistics, the t-test is used to test hypotheses, among others. An independent sample t-test was used to confirm that there were significant differences between the means of the genders. Independent sample t-test analysis was performed by computing preparedness along five categories using a questionnaire. The respective p-values for the two groups are shown in the tables below. If the p-value is less than 0.05, then there is a statistically significant difference between the groups, and if it's larger than 0.05, then there is no difference.

Table 4.10

Comparison of Performance Expectancy Scores based on Male and female

	N	Performance Expectation		*t*	*p*	*d*	Mean Difference	95% CI	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	3.28	0.78	-0.218	.835	-0.02	-.019	-0.20	0.16
Female	138	3.30	0.84						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

A comparison of male teachers' (M=3.28) and female teachers' (M=3.30) performance expectations reveals no statistically significant difference (t= -0.209, p >.05) in the data shown in the table above. High standards of performance were placed on both male and female teachers. The findings make it clear that there is no difference in the expected performance of the teaching group based on gender.

4.10 Gender Comparison based on Effort Expectancy

Table 4.11

Comparison of Effort Expectancy Scores of male and female respondents

	N	Effort Expectancy		*t*	*p*	*d*	Mean Difference	95% CI	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	3.57	0.76	2.08	.038	0.31	.166	0.01	0.32
Female	138	3.40	0.67						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

The results of the mean values in the table demonstrate that there is a

significant difference between the effort expectations of male instructors (M=3.57) and female teachers (M=3.40) (t=2.080, p .05). Both male and female teachers had high expectations for their performance. The findings show that gender affects the teaching group's expectation of effort. Compared to male teachers, female teachers score relatively low on the effort expectancy scale.

4.5 Gender comparison based on Social Influence

Table 4.12

Comparison of Social Influence Scores of male and female respondents

	N	**Social Influence**		***t***	***p***	***d***	**Mean Difference**	**95% CI**	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	3.03	1.09	1.340	.181	0.15	.166	-0.08	0.41
Female	138	2.86	1.12						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

In the above table, the results of mean values show that there is no significant difference in social influence (t= 1.340, p > .05) of male teachers (M=3.03) and female teachers (M=2.86). Both male and female teachers had a medium level of social influence. Results clarify that gender does not play any role in the social influence of the teaching group.

4.6 Gender comparison based on Facilitating Condition

Table 4.13

Comparison of Facilitating Condition Scores of male and female respondents

	N	Respondent Readiness		*t*	*p*	*d*	Mean Difference	95% CI	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	2.52	1.25	0.340	.734	0.03	.050	-0.23	0.34
Female	138	2.47	1.38						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

Mean value results reveal that male teachers (M=2.52) and female teachers (M=2.47) do not significantly vary in facilitating condition (t= 0.342, p >.05), as shown in the table above. A lack of facilitating conditions existed for both male and female teachers. The findings reveal that there is no correlation between gender and the facilitating the conditions of teachers' group.

4.7 Gender Comparison based on Hedonic Motivation

Table 4.14

Comparison of Hedonic Motivation Scores of male and female respondents

	N	Hedonic Motivation		*t*	*p*	*d*	Mean Difference	95% CI	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	2.63	1.44	0.874	.383	0.10	.146	-0.18	0.47
Female	138	2.48	1.53						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

Mean values demonstrate that male instructors have a higher hedonic motivation

(M=2.63, p >.05) than female teachers (M=2.48, p >.05), as seen in the table above. The hedonic motivation of both male and female educators was low. The findings make it clear that the teaching group's hedonic motivation is unrelated to participants' genders.

H01. There are no differences in Employee Readiness concerning their gender.

Table 4.15

Overall all Employee Readiness is based on gender

	N	**Respondent Readiness**		***T***	***p***	***d***	**Mean Difference**	**95% CI**	
Gender		***Mean***	***SD***					**Lower**	**Upper**
Male	184	3.10	0.69	0.414	.679	0.047	0.033	-0.13	0.19
Female	138	3.06	0.75						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

Two groups, male (N = 184) and female (N = 138), are compared in the table above. Males have a mean readiness score of 3.10 (SD = 0.69) while females score 3.06 (SD = 0.75). The result of the t-test in the column labelled "t-value" is less than the predetermined threshold of 1.96. Cohen's d =.047 denotes a lower effect size, while the p value for the male and female group for responder preparedness was >.05, with a confidence range of -.13 to 0.19. (Coladarci, Cobb, Minium, & Clarke, 2010). This result suggests that the mean difference between male and female respondents' levels of readiness is insignificant. So, on the basis of the above results, HO1 is accepted.

HO2. There is no significant difference in employees' readiness for online teaching based on job status (contract, permanent)

4.8 Employee Readiness based on the Nature of the Job

To confirm the statistical significance of the variations in mean values between the two (2) groups, permanent and contract, an independent sample t-test was used. A questionnaire was used to determine the readiness across five variables, and an independent sample t-test was used to examine the results. The p-values for the two groups are shown in the tables below. A p-value of less than 0.05 shows a statistically significant difference between the groups, whilst a non-significant difference is indicated by a p-value of higher than 0.05.

Table 4.16

Comparison of readiness score of permanent and contract employees' respondents

	N	**Respondent Readiness**		***t***	***p***	***d***	**Mean Difference**	**95% CI**	
Job Nature		***Mean***	***SD***					**Lower**	**Upper**
Permanent	235	2.95	0.72	-5.67	.000	-.04	-.485	-0.65	0.32
Contract	87	3.44	0.57						

Note: df = 320; *d = Cohen's d*; CI = Confidence Interval and * = $p < 0.05$

When comparing permanent teachers (M=2.95) and contract teachers (M=3.44), the following table shows that there is statistically significant difference in the nature of the job (t= -5.670, p .05). The readiness of permanent teachers is poor, whereas that of contract teachers is high. The results highlight the importance that job characteristics play in determining a teaching team's readiness level. So, on the basis of the above results, HO2 is rejected.

H03. There is no significant difference in employee readiness for online teaching concerning their age.

Analysis of Variance (ANOVA) by Age

ANOVA analysis shows that there is a statistically significant difference between group means or not. The results show that respondent readiness has a significance value of 0.000 which shows that readiness has a significant mean difference between the different age groups.

Table 4.17

One-way ANOVA regarding of Age of Respondents

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.077	3	8.359	19.110	.000
Within Groups	139.099	318	.437		
Total	164.176	321			

As can be seen from the above table, there is a statistically significant difference between the groups overall (F=19.110, p .05). Yet, we are unable to identify which subsets showed variation. Thankfully, the tables in the Multiple Comparisons section that provide the outcomes of the Tukey post hoc test can tell us this.

Differences between the categories are shown in the Multiple Comparisons table below. When doing post hoc tests on a one-way ANOVA, the Tukey post hoc test is often used, however there are many variants available. In the table below, we can see that there is a statistically significant age difference between the groups across all measures used in the research.

Table 4.18

Comparison among Employee Age groups(Post Hoc)

(I) Respondent's Age	(J) Respondent Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
25-34	35-44	.18410	.10354	.286	-.0833	.4515
	45-55	.51463*	.10483	.000	.2439	.7854
	Above 55	.79996*	.11935	.000	.4917	1.1082
35-44	25-34	-.18410	.10354	.286	-.4515	.0833
	45-55	.33053*	.09405	.003	.0876	.5734
	Above 55	.61586*	.11000	.000	.3318	.8999
45-55	25-34	-.51463*	.10483	.000	-.7854	-.2439
	35-44	-.33053*	.09405	.003	-.5734	-.0876
	Above 55	.28533	.11121	.052	-.0019	.5725
Above 55	25-34	-.79996*	.11935	.000	-1.1082	-.4917
	35-44	-.61586*	.11000	.000	-.8999	-.3318
	45-55	-.28533	.11121	.052	-.5725	.0019

*. The mean difference is significant at the 0.05 level.

The above table shows the mean difference between different age groups. The age group 25 years to 34 years respondents readiness is not significantly different from the age group 35 years to 44 years (mean difference 0.18410), similarly age group 25 to 34 years is a slightly higher mean difference with 45 years to 55 years (mean difference 0.51463), however, 25 to 34 years age group have more mean differences with above 55 years age of respondents (mean difference 0.79996), so we can conclude that 25-34 years have significant mean difference with 45-55 and above 55 years groups. So, on the basis of the above results, HO3 is rejected.

Analysis of Variance (ANOVA) by Experience

Whether or not there is a statistically significant difference between group means is determined via analysis of variance (ANOVA). A significance score of 0.000 indicates a statistically significant mean difference in respondents' levels of readiness across the various experience groups.

H04. There is no significant difference in Employee Readiness concerning online teaching Experience.

Table 4.19

Comparison among employee online teaching experience groups.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.651	2	2.325	4.650	.010
Within Groups	159.525	319	.500		
Total	164.176	321			

The preceding table simply illustrates a generally significant difference between various experience groups; however, as the value indicates (F=4.650, p .05), we can learn more about the differences within each group by consulting the Multiple Comparisons tables, which include the Tukey post hoc test findings. The table below shows that there is a statistically significant difference between the groups of people with different levels of experience teaching online.

Table 4.20

Detail Comparison of Employee online Teaching Experience through (Post hoc)

(I) Online Teaching Experience	(J) Online Teaching Experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
0-1	1-5	-.08342	.09603	.660	-.3095	.1427
	5-10	-.31520*	.10880	.011	-.5714	-.0590
1-5	0-1	.08342	.09603	.660	-.1427	.3095
	5-10	-.23178*	.09566	.042	-.4570	-.0065
5-10	0-1	.31520*	.10880	.011	.0590	.5714
	1-5	.23178*	.09566	.042	.0065	.4570

*. The mean difference is significant at the 0.05 level.

The above table shows the mean difference between different experience groups. The experienced group up to 1-year respondents' readiness is not significantly different from the experience group 1 year to 5 years (mean difference -.08342), similarly, the online teaching experience up to one year is a slightly higher mean difference with 5-10 years (mean difference -.31520). The experienced group of 1-5 -year respondents' readiness is significantly different from the experience group 5 year to 10 years (mean difference -.23178), so we can conclude that 0–1 year experience has no significant mean difference with 1-5 but significant difference from 5-10 years groups. So, on the basis of the above results, HO4 is rejected.

4.9 Internal Variables Correlation

In statistics, two variables are said to be "correlated" if there is a detectable link between them. This measure works well when comparing variables that are linearly related to one another. Correlation is also described as the development of a link between variables in the research study.

A correlation coefficient, sometimes indicated by the r, quantifies the degree of association. It is a metric for assessing linear relationships and is frequently referred to by its namesake, Pearson. If a curved line is desired to demonstrate the relationship, more sophisticated correlation techniques need to be employed. On this scale, the correlation coefficient might go from + 1 to 0 to -1. It's possible to describe the total correlation between two variables as either +1 or -1. A positive correlation exists when one variable grows larger as another grows larger; a negative correlation exists when one variable decrease and another decreases. Value 0 indicates a lack of any correlation at all. The values of each variable's correlation with every other variable are listed below.

Table 4.21

Correlation among the Respondent Readiness Scale Variables

Variables	Performance Expectancy	Effort Expectancy	Social Influence	Facilitating Condition	Hedonic Motivation	Respondent Readiness
Performance Expectancy	1					
Effort Expectancy	.41**	1				
Social Influence	.32**	.73**	1			
Facilitating Condition	.54**	.62**	.44**	1		
Hedonic Motivation	.63**	.88**	.54**	.83**	1	
Respondent Readiness	.71**	.66**	.53**	.59**	.62**	1

*** Correlation is significant at the 0.01 level (2-tailed)."*

The results in the above table show the relationship between the variables of the study. Performance expectancy has a positive and significant relationship with effort expectancy (r=.41**), social influence (r=.32**), facilitating condition (r=.54**), hedonic motivation (r=.63***), and respondent readiness (r=.71**). Performance expectancy has a moderate and significant relationship with effort expectancy and social influence but a significant positive correlation with facilitating condition, hedonic motivation and respondent readiness. Effort expectancy has a positive and significant relationship with social influence (r=.73**), facilitating condition (r=.62**), hedonic motivation (r=.88**), and respondent readiness (r=.66**). Effort expectancy has high significant positive correlation with social influence, facilitating condition, hedonic motivation .Social influence has a positive and significant relationship with facilitating condition (r=.44**), hedonic motivation (r=.54**), and respondent readiness (r=.59**). Social influence has high significant positive correlation with facilitating condition, hedonic motivation and respondent readiness. Facilitating condition has a positive and significant relationship with hedonic motivation (r=.83**) and respondent readiness (r=.59**). Facilitating condition has a high significant positive correlation with hedonic motivation and respondent readiness. Hedonic motivation also has a highly positive and significant relationship with respondent readiness (r=.62**). The results show that all variables positively and significantly correlate with each other.

Table 4.22

Alignment of Objectives, Hypotheses, and tests

Research Objectives	Research Hypotheses	SPSS Tests
Objective 1 Assess the level of readiness among employees based on Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition Hedonic Motivation.		Mean, standard deviation
Objective (2) Compare the level of readiness among employees (faculty) based on gender.	**H0**: **Fail To Reject overall.** **Partially Rejected in one Factor.** No significant difference among employees (faculty) based on Gender	t-test
Objective (3) Compare the level of readiness based on employee Age.	**H0**:**Rejected** There is a significant difference in employee readiness based on employee Age.	ANOVA (Analysis of variance
Objective (4) Compare the level of Readiness among employees based on online teaching experience.	**H0**: **Rejected** There is a significant difference among employees (Faculty) based on prior online teaching experience.	ANOVA (Analysis of variance)
Objective (5) Identifying Encouraging factors toward high readiness and Reason for low readiness	**Research Questions 5 & 6** What are the encouraging factors that influence employee readiness? What are the reasons that influence employee readiness?	Thematic Analysis

4.10 Qualitative data analysis

In the current study, a qualitative approach was taken to understand the level of readiness among faculty members in regard to online teaching. 16 participants, teachers from different universities in Rawalpindi and Islamabad, were selected for the study. These participants included Lecturers, Assistant Professors, and Associate Professors. The data collection process was based on semi-structured interviews, which were live Audio recorded with the participants' prior permission.

This qualitative study aimed to validate the quantitative data collected in the research and understand the different aspects of online teaching readiness. This study aimed to analyze the level of performance expectancy, effort expectancy, social influence, facilitating conditions, and hedonic motivation among the faculty members. Furthermore, it aimed to explore the reasons behind low and high readiness levels and the challenges faced by teachers during online teaching.

The semi-structured interview technique was used to allow teachers to express their opinions and experiences without any restrictions freely. The questions focused on the teachers' readiness level and the factors that encourage and discourage them from adopting online teaching. During the interviews, the participants were eager to answer the questions and share their experiences and suggestions.

The model of Victoria Clark and Virginia Brawn (2006) was adopted as a framework for the thematic analysis. The process was applied systematically to understand the data collected during the interviews. The study followed six steps of the thematic analysis approach, including transcribing the interviews, identifying the themes, coding the data, reviewing the themes, and writing a report on the findings.

The researcher aimed to gather in-depth information about teachers' readiness

level and the factors affecting their engagement with online teaching during the COVID-19 pandemic. Based on the results, the study can help understand the barriers that hinder teacher readiness and develop solutions to overcome them.

Table 4.23

Demographic Profile of respondents

SR	Name	Professionals	Gender	Positions	Codes
1	Participant:2	Faculty member	Males	Contractual	UB2
2	Participant:2	Faculty member	Both	Lecturer	UA2
3	Participant:2	Faculty member	Females	Assistant	UF2
5	Participant:2	Faculty	Both	Professors	UAA2
5	Participant:2	Faculty	Both		UN2
6	Participant:3	Faculty	2M 1 F	Professors.	UAI3
7	Participant3	Faculty	2M 1F		UQ3

Table 4.24

Employee response on performance expectance

RQ	Major themes	Sub themes/Codes	Description	FRQ
What is the level of performance expectancy?	Usefulness	Increase literacy rate,	Online teaching increases the literacy rate, especially in Pakistan. A big example is AIOU	8
		Global teaching	We participated effectively in international seminars without hesitation	7
		Effective Communication skills	It enhance effective communication skills.	6
		Learning opportunity	It is a great opportunity for the teaching career all over the world	4
		Easy to access	Everything is just a click away.	6
		Learned presentation technique.	The teacher learned the presentation techniques and to present is the main part of a teaching career.	9
		Less Facial expression	The teacher can't understand the nature of students.	3
		Less effective	Less effective for science subjects.	6
		Less Facial expression	Teacher can't understand the nature of students.	5

1. Increase the literacy rate

The first subtheme identified in the study was the level of readiness for online teaching. The responses from the participants showed a highly positive attitude toward online teaching. This theme was repeated by 8 participants. Many of the respondents shared similar views that online teaching has the potential to increase the literacy rate and contribute to the economy of Pakistan, as evidenced by the success of Allama Iqbal Open University.

Additionally, some participants highlighted the importance of online teaching for students who are unable to afford tuition fees and transportation costs. They emphasized that online teaching is essential not just for Pakistan but also for other

developing countries. These responses indicate a positive outlook toward online teaching and a belief in its potential to positively impact education and society.

2. Easy to access.

The participants in the study expressed a repeated theme of the ease of access to online teaching. 8 out of the 10 participants shared the same opinion, stating that it is convenient as it saves time and allows access to courses and conferences that may have been difficult to attend otherwise. They mentioned that with just one click on the computer mouse, they can easily access online teaching resources.

One respondent emphasized the usefulness of online teaching, as it allows them to search for relevant information during lectures, which is impossible in traditional in-person lectures. A few more participants recorded their opinion that online teaching is a flexible way to communicate with students through WhatsApp or learning management system portals. They also mentioned that attending training, online conferences, and webinars is just one click away and does not require any travel or expenses.

However, one participant countered the opinion by mentioning that although online teaching provides flexibility to arrange makeup classes, it is longer to manage compared to traditional in-person teaching.

2. Global Teaching

Several respondents shared their views on the benefits and effective use of online teaching. A common theme among the majority of the respondents was that online teaching increases the chances of globally accepted education. 7 time repeated this sentiment. They highlighted that online teaching sessions provide opportunities to teach at an international level, and this has become more feasible due to the COVID-

19 pandemic.

A few participants expressed their excitement about online teaching. One of them reported that after a long time, they were finally appointed as a weekend lecturer in the US. The respondent mentioned that they were previously scared to apply for international opportunities, but that changed with the advent of online teaching.

Less than four respondents provided their views on the effectiveness of online teaching for teachers who take it seriously. They shared that it is a fruitful experience for those who are passionate about teaching. One respondent reported that they now have 4000 international students following their instructions through his YouTube channel, and they feel more confident in delivering lectures to a global audience.

3. Effective Communication

The fourth sub-theme that was identified from the collected data was effective communication. This theme was considered to be the most important one by the majority of the respondents, as was mentioned more than 9 times. The respondents emphasized that online teaching requires much more effort and hard work compared to traditional teaching methods. The reason for this is that online teaching often involves unforeseen situations during the session that require the teacher to be flexible and put in extra effort to ensure the delivery of an easy and effective lecture.

According to the respondents, teachers who are skilled in online teaching methods tend to be even better in live sessions. This is because the nature of online teaching demands good communication skills, and the teachers who possess these skills are more likely to be successful in their efforts to convey the material to their students.

Three of the respondents who shared the same office agreed with this

statement and commented that they have observed teachers with great knowledge and highly effective communication skills. These teachers are able to deliver their lectures in a clear and concise manner, which makes the material easier to understand and retain for students.

Effective communication was considered to be a critical aspect of successful online teaching by the majority of the respondents. Teachers who possess good communication skills and are able to adapt to the challenges of online teaching are more likely to be successful in delivering their lectures and ensuring that their students receive a high-quality education.

4. Online workshops and Training

Many respondents who are in favor of online teaching have pointed out that they never had the opportunity to attend any training sessions, workshops, or international conferences in person. However, after participating in several online sessions, they were able to start their careers as trainers.

Moreover, they have mentioned that teachers have taken online courses from renowned institutions like Washington University, which has helped them to advance their professional development. The economic situation in Pakistan is still developing, and the country does not have the resources to fund such activities as participating in international conferences.

Therefore, online education is the best alternative for Pakistan to keep up with the latest advancements in education and professional development. By participating in online education, teachers can gain international exposure, interact with clients from different countries, and have access to various experiences that are crucial for their professional growth. The results will be more beneficial for both the teachers and

the country as a whole, making it indispensable for the education system to embrace online education.

5. Less effective

Less than five respondents who are unhappy and not ready to teach online were highly against this online teaching system. I saw a lot of hatred against this system on this person's face. First, he asked me a question whether my study supports this system. After my answer, he felt relaxed with listening to my answer that, "it has no impact on a teacher's carrier, so it is irrelevant. Techer's career is tied to teaching abilities, knowledge, and the method they use in teaching" one other university employee records his negative remarks as he said that" it is less effective for students with zero benefit.

6. Less Facial Expression

One of the challenges that have been raised by individuals who are less receptive to online teaching is the limitation it poses on the ability of teachers and students to effectively communicate through facial expressions. In traditional classroom settings, such expressions can play a crucial role in helping teachers gauge students' understanding and adjust their teaching approach accordingly. However, in the online teaching format, this dynamic can be compromised by technological barriers that impede clear visibility and reduce the level of engagement between teachers and students. This can lead to a sense of passivity among students, which can in turn impact on the teacher's ability to enjoy teaching. Despite these challenges, educators can still leverage various tools and techniques to optimize the online teaching experience and promote meaningful interactions with their students.

Table 4.25

Employee detail Responses based on Effort expectancy

MT	ST/Codes	Description	FRQ
Easy or Difficult Level of Expertise	Easy Application use	Initially, it was difficult to handle but after that it become easy.	6
	High Workload	Online teaching increases the workload for the whole day.	7
	Easy Course design	Yes designing a course is easy now. Already worked.	6
	Self-directed	we use self-directed learning to handle all issue	9
	Student's involvement	It is quite difficult to involve the student.	
	OT Strategies	We have enough knowledge for online teaching.	6
	Solve technical problem	Initially, it was quite difficult but slowly we can solve little issues.	5
	Course Evaluation	Very difficult to evaluate students. students cheating	5
	Handle academic dishonesty	Students are not serious regarding knowledge. They cheated all the time	6

1. Easy Application use

The second research question focused on the perceived ease or difficulty of using technology during online courses. According to various respondents, the system was initially challenging to use, but they eventually adapted to performing in the virtual classroom. However, some respondents noted that it was not as simple to use for those who lack technical expertise.

The researcher also observed that teachers with prior experience in online teaching felt more confident in using the application, designing the course, and communicating with students. A few respondents who worked at Allama Iqbal Open University stated that they were already experts in using online applications and

courses because the university had already initiated blended learning and launched an LMS portal a few years ago.

On the other hand, less than 5 people had a different opinion, stating that the online system was simpler and more enjoyable to use. They appreciated the convenience of online teaching and enjoyed it just as much from home as they did from the office. Some lessons were even held in the evening, allowing them to be in a more relaxed and focused mindset, leading to better learning outcomes.

2. High workload

High workload themes highlighted by the respondents are negative views/low levels of readiness online education, many respondents noted that compared to traditional teaching methods, using technology for online education requires a significant amount of effort, especially in terms of maintaining communication with students through WhatsApp and uploading materials. This can be mentally draining but is deemed necessary for the learning process. Additionally, some respondents mentioned that they have had to seek out resources such as YouTube videos to learn how to effectively use the online system, which further adds to their workload.

3. Easy Course Design.

The majority of the respondents recorded their experiences with a positive attitude, indicating that course design is relatively easy to develop, particularly for those who have prior experience. This theme was highlighted more than six times in the data, which suggests that the ability to design a course is a common perception among respondents. The ease of course design was attributed to the prior experience and knowledge that respondents already possessed, which allowed them to apply their skills and apply them in the course design process. This highlights the importance of

having a solid understanding of instructional design principles and techniques, as well as a good foundation in the subject matter being taught. In conclusion, the results suggest that course design is seen as an accessible and manageable task for those who have the necessary skills and knowledge, which can be acquired through training, education, and experience

4. Easy Online teaching strategies.

Most of the respondents have emphasized that teachers are knowledgeable in utilizing online teaching strategies, as they have learned from various sources such as YouTube. This has enabled them to effectively impart knowledge and engage students in a virtual learning environment. The widespread availability of instructional videos and tutorials on YouTube has made it a valuable resource for teachers seeking to improve their online teaching skills. As a result, they are able to create engaging and interactive lessons that keep students interested and motivated to learn. Additionally, the use of technology has enabled teachers to adapt to the changing needs of their students and provide them with personalized learning experience. The use of online teaching strategies has therefore become a crucial aspect of modern education, enabling teachers to reach a wider audience and provide a more inclusive learning environment for all students.

5. Self-directed learning

The common themes were highlighted by the respondents with low and high readiness respondents. Based on the responses collected, it appears that the majority of individuals have acquired their skills for online teaching through a combination of self-directed learning and seeking guidance from various sources. The most commonly mentioned source of information was YouTube, where individuals have

been able to find tutorials, videos and other content related to online teaching. Additionally, they have also relied on the experiences and advice of colleagues and peers who have already gone through the process of becoming an online teacher.

Self-directed learning has been a critical aspect in this process, as it has allowed individuals to take charge of their own learning journey and seek out the information and resources they need to succeed in their new role. This approach to learning has been instrumental in helping them develop the knowledge and skills they need to deliver effective online lessons and engage with their students in meaningful ways.

6. Solving technical issue

This theme was highlighted in both extreme responses (high and low readiness). The online teaching platform has faced numerous challenges, with teachers expressing their frustration with the various technical difficulties they encounter. These difficulties range from internet connectivity issues, slow software performance, electricity disruptions, and the need to manage the problems faced by students and internal software issues. The teachers have emphasized that they are not technicians, but educators, and it is not their responsibility to solve technical problems. Despite these difficulties, teachers have been making every effort to provide quality education to their students, even with these hindrances. However, the technical issues have added an extra layer of stress to an already demanding profession.. The theme of teachers' ability to handle technical issues during online learning has been brought to light five times. The response from the teachers was mixed, with a few of them indicating a positive attitude towards handling technical problems. However, the majority of respondents who had no prior online experience

expressed negative views on this matter. One of them pointed out that the responsibility of handling technical problems should lie with the university, which should provide training for teachers or technical support.

This situation highlights the challenges that educators face while transitioning to online learning and the importance of providing them with proper support and resources. With technology being a crucial aspect of modern education, it is imperative that teachers are equipped with the necessary skills to overcome technical difficulties. It is also the responsibility of universities to ensure that their faculty has the necessary tools and support to deliver high-quality online education.

7. Students' involvement

The theme of student involvement during online teaching was highlighted by 8 respondents, and the majority of these respondents expressed negative views that it is a challenging task to engage students in the virtual classroom.

On the other hand, he received an extremely positive response and was highly motivated to use technology in all aspects of teaching and shared his positive attitude towards learning and using new technology. He mentioned that he had recently purchased a new camera and software, a camera stands from China to improve his teaching. I felt excitement on his face to use technology as he was a tech-savvy person.

Despite the positive view of this one teacher, the majority of the negative responses came from female teachers. They were less likely to be receptive to technology and the subsequent generation. This disparity in attitudes toward technology adoption among teachers could have a significant impact on the quality of education delivered to students.

8. Students Evaluation

The majority of teachers who have a low level of readiness have expressed their concern about the difficulties of accurately evaluating students' performance in an online learning environment. They argue that students are more likely to cheat during exams, which makes it challenging to provide accurate assessments of their knowledge and understanding. As a result, teachers are concerned that online teaching may not provide an effective way to evaluate students, leading to potential negative impacts on their learning and progress.

9. Handle Academic dishonesty.

The respondents had negative extreme responses toward online teaching highlighting this theme. As the researcher observed, teachers were in anger during the response. A teacher is facing difficulties in handling academic cheating in an online education setting. The lack of monitoring during quizzes and exams, coupled with students using internet excuses, presents challenges for the teacher. The teacher believes that students need to have a sense of responsibility and concern for their learning as they have faced the worst attitude of students during online teaching. Students were concerned with this attendance only. Furthermore, they added that the quality of online education does not depend only on teacher readiness but learner readiness as well.

Table 4.26

Employee detail responses based on social influence

RQ	MT	ST/Codes	Description	FRQ
What is the level of social influence??	Influential Behaviour	Imposed	This system is imposed on students and teachers.	5
		positive		
		Influential people	Yes, our behavior affects my family colleagues and surrounding friends.	7
		Bound to the institution,	We are influenced but we are bound to the institution's policies.	7
		Societal need	Social needs pushup to adopt new technology or way of teaching to be updated.	5
		Adoption by the covid.	It is only adopted by COVID. otherwise it's not a proper way to teach	4
		No influence	We aren't influenced by other people or family members.	3
		Up to date	As a tech-savvy person, I updated	5

1. Imposed by the Government/HEC

The fourth most common theme in the survey was about how other people's behavior affects our decision to adopt new technology. Some people with low levels of readiness to adopt new technology said that they had to use it because it was required by the government, universities, or other top authorities.

2. Positive influence

On the other hand, the respondents with high readiness said that their family, friends, colleagues, and the community around them also influenced their decision to use new technology. Due to the COVID-19 pandemic, virtual education has become necessary and new apps and technologies, like smartphones, have been introduced to support this transition.

However, some people have had to use these new systems because they were

required to by the government and universities.

3. Up to date.

When questioned about influencing behavior, few other respondents said that they would adopt a new technology system. They stated that “there is no doubt that few educators stay up-to-date with the latest technology or teaching methods,(and I am one of them) but in this case, students and faculty are compelled to make a change, as the university faces stiff competition in the market and among

4. Influential people.

According to respondents, professionals have a choice in adopting technology. They were not forced to participate in online teaching, but as employees, they followed the instructions provided by their organization. Family and friends also had an impact on their technology adoption decisions.

In other words, a significant proportion of individuals exhibit a positive response toward new technologies upon their entry into the market. This trend is particularly observed among individuals with a penchant for technology. It is worth noting that societal demand may also contribute to the increased adoption of technology. However, the adoption of technology is not solely dependent on individual preferences. The workplace environment can also influence an individual's decision, as can the opinions of family and friends.

Conversely, individuals exhibiting low levels of readiness towards technology were found to be in disagreement with the notion that participation in technology adoption is a matter of personal choice and not something that can be forced upon them.

Table 4.27

Employee responses based on Facilitating Conditions.

RQ	MT	ST/Codes	Description	Frequency
What is the level of facilitating condition? /	Facilitated conditions	Poor technical Assistance	We don't have any technical assistants during online teaching.	8
		Bad quality software and internet	Initially, bad quality software and the internet was provided, and the software crashed in every day..	9
		already provided accessories in 2013	Everything is provided in 2013 in AIOU, provided cameras, mic everything.	4
		Non-availability of ICT assistance	No, IT assistance found on the spot	5
		Slow speed internet	Fast-speed internet was not provided at the time of COVID-19..	3
		Self-Assistance	Self-internet devices and laptops are used in the institution.	4
		Poor quality training provided,	The training was not professional. It's just a time pass training session	7

1. Technical Assistance

The respondents, who are teachers at the institution, reported that they faced challenges with the facilitation resources provided by the university. They mentioned that the IT department was unresponsive and claimed that the systems were fixed and could not be changed, forcing the teachers to find their own solutions to problems. This included logging onto their laptops as a backup in case of internet outages. The teachers also expressed frustration that the university did not provide them with laptops or internet access at home, even during the COVID-19 pandemic.

Additionally, the teachers reported initially experiencing poor internet quality and malfunctioning learning management system (LMS) software. However, after six months, these issues improved, and the teachers were able to deliver their lessons

more smoothly. However, they were still unable to comment on the overall quality of the internet and other related matters

On the other hand, few respondents were against the current system and argued that in developing countries, these issues cannot be resolved. They felt that as teachers, they are overworked but not provided with proper resources or facilities. In simpler terms, they believe that teachers in developing countries are not given the necessary support or resources to do their job effectively, despite having a high workload.

2. Less provided accessories.

The respondents who replied to the survey were unhappy with their current situation. They said that they come from middle-class families and cannot afford to purchase high-quality laptops. Despite this, they are still required to take classes on their devices during the COVID-19 pandemic, causing them and their colleagues' difficulty. In simpler terms, the respondents are frustrated because they are expected to use their devices for work, even though they are not of good quality, and they cannot afford to upgrade them.

3. Self-assistance

The second theme of the survey focused on technical support for teachers during emergencies. Several teachers had positive things to say about the technical support they received, but some mentioned that they had to find solutions on their own because the IT department wouldn't allow them to make changes to the systems. Some teachers even used backup systems like their personal laptops in case of internet outages. The majority of teachers found that watching videos on YouTube helped resolve their technical difficulties.

However, respondents who asked about the conditions for online teaching

reported that the internet connection was slow, which was a major obstacle for online education. High-speed internet was seen as the most important factor for successful online learning. Unfortunately, students were discouraged from pursuing online lessons due to these internet issues.

4. Poor Quality Training.

In their responses, a considerable number of individuals working for different organizations raised concerns about the quality of training provided by their institutions. They stated that the training sessions are often carried out only as a formality and do not effectively impart new knowledge or skills. These respondents emphasized that the lack of quality in training has rendered the sessions insufficient for their professional development.

It is important to note that quality training is a crucial aspect of any organization's growth and success. Providing employees with the necessary tools, knowledge, and skills through effective training programs helps to improve their performance and contributes to the overall growth of the organization. Quality training also enhances employee morale, motivation, and job satisfaction, leading to a more positive and productive work environment.

Unfortunately, it seems that the institutions in question have failed to understand the importance of providing quality training. By neglecting the quality of training, they are hindering the growth and development of their employees, which can have long-lasting negative effects on the organization's performance. It is imperative that these institutions recognize the importance of quality training and make the necessary changes to improve the educational value of their training sessions.

Table 4.28

Employee responses based on hedonic motivation

RQ	MT	ST/Codes	Description	FRQ
What is the level of hedonic motivation	Inner motivation	Fatigue	I feel fatigued to use technology. It's hectic work.	12
		Fear	I feel fear in using technology.	6
		Less practice	Actually, due to less practice on the laptop, it takes time and not producing as we need in a result.	6
		Exited	OH, I am very excited and curious to know new things. wonderful experience u have ever seen	3

The major question was about the inner motivation for online using the system. whether they feel excited or feel boring. The people who have a negative attitude toward online teaching and learning highlighted that they are feeling fatigued/pressured/depressed “It has never been exited and satisfying to work online”

Respondents who have a high level of readiness for new technology express excitement about learning about new advancements. They are interested in the use of technology in online teaching and various software applications. One respondent stated that they are always eager for new technology to come out, even if it is not yet available in their country. They went on to show the writer a number of software and gadgets they had acquired during the COVID-19 pandemic, which they had purchased from foreign countries.

Table 4.29

Encouraging factors highlighted by the respondents toward the readiness

RQ	MT	ST/Codes	Description	FRQ
What are the other factors influenced behaviour toward readiness??	Influential Behaviour	Leadership tech-savvy	Leadership and top management must be tech-savvy people.	10
		Students/teacher's training,	Students must be trained and skillful along with the teachers.	12
		Institutional support	Technological support should be provided	13
		Reward system	The teacher must be rewarded based on their performance.	11
		Technical skills	Employees must be hired with technical skills	7
		New software is updated by the institution.	Intuition must be updated with the new technology and software.	6
		Develop technological culture	Technological culture bring change in universities.	9

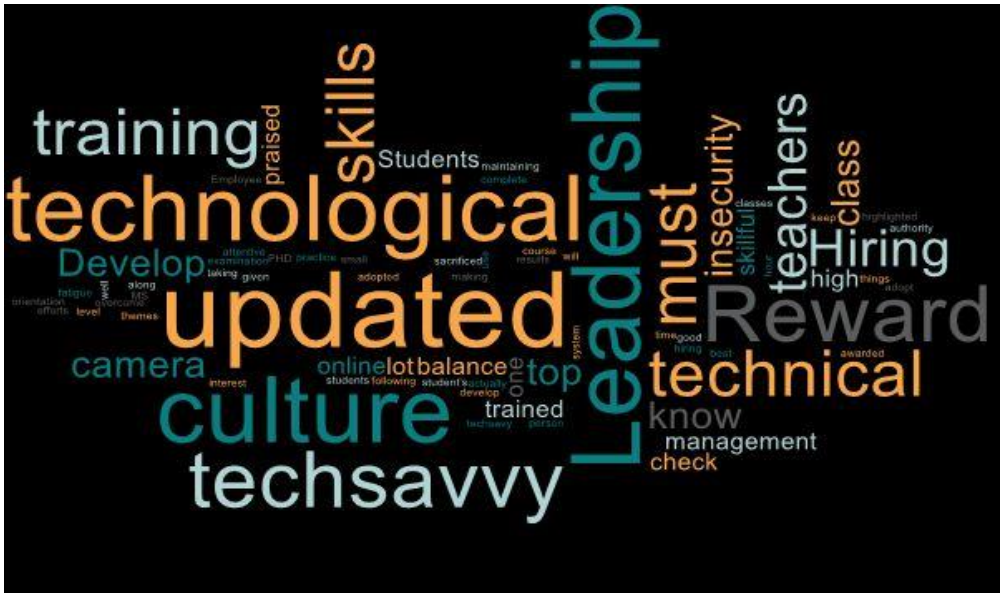

Figure 19: Word Cloud for encouraging factors of readiness

1. Leadership tech-savvy

The notion of tech-savvy leadership has emerged as a predominant theme among the respondents, with employees expressing the view that a university-level leadership team equipped with technological proficiency can effectively instill a culture of technological adoption. Furthermore, it has been posited that tech-savvy leaders demonstrate an inclination towards procuring new technologies and steering projects towards technology-oriented outcomes, thereby facilitating access to online resources and a skilled workforce. Such leaders also tend to establish reward systems that incentivize superior performance in technology-driven initiatives. In summary, the data suggest that tech-savvy leadership is a crucial factor in promoting a technology-driven culture within academic institutions.

2. Training

The second most common theme mentioned in the word cloud is training for students and teachers. This theme highlights the importance of preparing students and teachers before starting an online session. Training is necessary for a successful implementation of the online session and to achieve desirable results.

When it comes to online learning, students and teachers both need to be trained to use the technology and tools that will be used during the session. For students, training can help them become more familiar with the online learning platform, understand how to participate in online discussions and activities, and know how to access and submit assignments.

For teachers, training can help them understand how to effectively use the technology and tools available to them to deliver lessons, assess student progress, and communicate with students. It can also help them become more familiar with online

teaching practices, such as how to engage students in online discussions, provide feedback on assignments, and create a positive online learning environment.

Overall, providing training for both students and teachers is essential for the success of online learning. By investing time and resources in training, schools and educators can ensure that students have a positive and productive online learning experience and can achieve their educational goals.

3. Provide institutional support

The third most common theme mentioned in the word cloud is institutional support. According to the majority of respondents, institutional support is seen as a critical factor for success in online learning. It was mentioned 13 times by 12 different respondents.

Institutional support refers to the resources and support provided by the educational institution to ensure the success of online learning. This can include providing technology and infrastructure, offering training for students and teachers, and providing ongoing technical and instructional support.

Respondents believe that institutional support is crucial because it can help address any issues or problems that arise during or after an online session. For example, if a student is having trouble accessing the online learning platform or submitting an assignment, institutional support can help resolve the issue. Similarly, if a teacher is having trouble delivering a lesson or assessing student progress, institutional support can provide guidance and assistance.

4. Priority Technical skills

Some of the respondents who were surveyed also expressed their opinion that hiring priorities should shift to include a stronger emphasis on technology skills. They

believe that teachers should be hired based on their ability to effectively use technology in the classroom and to keep up with the latest technological advancements.

Additionally, these respondents also stressed the importance of improving the technical skills of teachers who are already employed. They believe that this is crucial in order to stay ahead of the curve and to ensure that teachers are equipped to effectively integrate technology into their teaching practices.

In simpler terms, these respondents believe that the focus of hiring should be on finding teachers who are not only knowledgeable and skilled in their subject area, but also knowledgeable and skilled in using technology. They also believe that it is important to provide ongoing training and support to existing teachers in order to help them improve their technology skills.

Overall, these respondents believe that a combination of technology-savvy leadership, an emphasis on hiring based on technology skills, and ongoing professional development for teachers is crucial for promoting a technology-oriented culture in the education field.

5. Well-organized Reward system.

Rewards and recognition can indeed be powerful motivators for teachers, and many teachers appreciate being acknowledged for their hard work and achievements. A reward system based on performance can encourage teachers to strive for excellence and improve their skills, which can have a positive impact on student outcomes.

However, it's important to consider that not all teachers may respond to rewards in the same way, and some may find them demotivating. Additionally, it's

important to ensure that any reward system is fair, transparent, and based on objective criteria, such as student achievement or classroom observations.

Ultimately, a well-designed reward system can be an effective way to support and motivate teachers, but it's just one component of a comprehensive approach to teacher support and development. Other important elements include ongoing professional development opportunities, mentorship and coaching, and a supportive work environment.

Research Question7

What are the reasons/discouraging factors toward readiness for online teaching?

Figure 20: *Word Cloud for discouraging factors of readiness*

1. Lack of physical support and motivational training

Mental and physical readiness are indeed two important factors that influence behaviors and contribute to the successful adoption of new technologies. Motivational training and institutional support play a crucial role in building mental readiness by improving the teachers' confidence, knowledge, and skills, and creating a positive attitude toward technology adoption. On the other hand, institutional support ensures

that the necessary physical resources are in place, such as adequate technology infrastructure and access to training materials, to make the adoption process smoother.

It is important to note that while motivational training and institutional support are two separate factors, they are interlinked and interdependent. Motivational training can lead to increased mental readiness, but it may not be enough without proper institutional support to help the teachers put their new skills and knowledge into practice. Similarly, having the necessary physical resources does not guarantee success if teachers are not mentally ready and motivated to adopt new technologies.

Overall, both motivational training and institutional support are crucial in ensuring the successful adoption of new technologies in education and it is important for educational institutions to focus on both to achieve optimal outcomes.

2. Teachers' technology efficacy skills.

Technical skills are indeed a commonly highlighted theme in discussions about technology adoption in education. The lack of technical skills can lead to a lack of confidence among teachers in using new technologies, making it difficult for them to fully transition to the new system. This is why providing training on technical skills is essential in ensuring the successful adoption of new technologies in education.

It is important to note that while training in technical skills is crucial, it is not enough on its own. Teachers need to have a positive attitude and be motivated to adopt the new technology, and the necessary physical and institutional support must also be in place. This includes having access to the right resources, such as adequate technology infrastructure, and a supportive work environment that encourages the use of new technologies.

Moreover, it is also important to recognize that technology is constantly

evolving, and teachers need to continue their training and development to keep their skills up-to-date. This can be done through ongoing professional development opportunities and regular in-service training programs.

3. Technology fears or Technophobia.

Several respondents suggested this theme that technology fear, also known as technophobia, can be a barrier to the adoption of new technology. This fear can stem from a lack of understanding or experience with technology, a perception of technology as intimidating or confusing, or a concern about being replaced by technology in the workplace.

To overcome this fear, it's important to provide training and support to help individuals become more familiar and comfortable with technology. This can include hands-on training sessions, online tutorials, and opportunities to practice using technology in a safe and supportive environment.

In addition, they have suggested that it's important to emphasize the benefits of technology, such as increased efficiency and productivity, improved communication and collaboration, and access to a wider range of information and resources. By highlighting the positive aspects of technology and helping individuals see how it can support their work and personal lives, it may be possible to reduce technophobia and increase adoption.

4. Change urgency.

Few respondents highlight the theme that creating a sense of urgency is an important factor in driving the adoption of new technology within an organization. When employees see the immediate need for change and understand the benefits that technology can bring, they are more likely to be motivated to learn and use the new systems and tools.

Organizations can create urgency by clearly communicating the reasons for adopting the technology, such as increased efficiency, improved customer service, or competitive advantage. It's also helpful to set specific goals and deadlines for the adoption of technology and to involve employees in the decision-making process so that they feel invested in the change.

In addition, providing regular updates and progress reports on the implementation of technology can help maintain momentum and a sense of urgency, and give employees a clear understanding of the benefits they can expect. With the right approach and support, organizations can successfully overcome resistance to change and drive the adoption of new technology.

Common Factors highlighted by positive Extreme Responses and Negative Extreme responses.

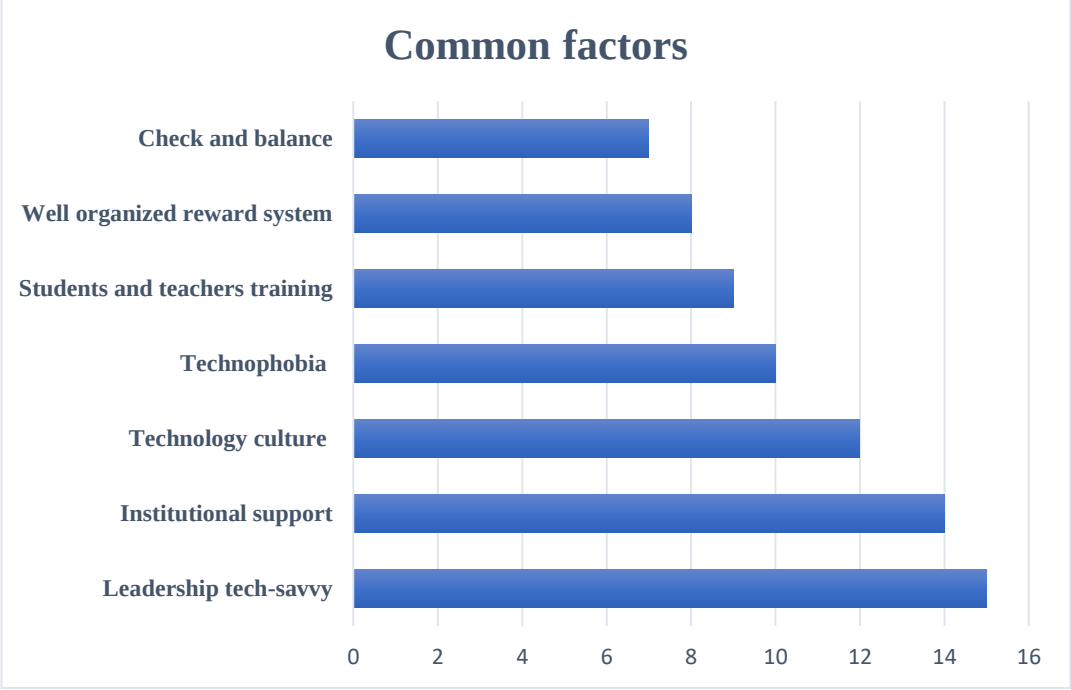

Figure 21: Common Factors highlighted by positive Extreme Responses and Negative Extreme responses.

Detail Responses about Demographic Factors

Table 4.30

Employee responses based on demographic factors (Age) influence.

RQ	MT	ST/Codes	Description	Frequency
How do you perceive about demographic factors contribute to employee readiness	Demographic factors Influential	Technology is brought up & trustworthy	The generation brought up with technology was more likely to adopt technological innovation of methods.	12
		Daily Technology usage	Daily practice and usage of new technologies make it easier.	8
		Tolerance	Senior people cannot be tolerated as they have never seen such a learning attitude of students in their life.	5
		More conscious	Less people say that older teachers are more conscious about technology.	4

1. Technology brought up and trustworthy.

Most of the respondents feel that age plays a significant role in the adoption of technology, specifically in the case of online teaching. They believe that older teachers, who are used to traditional teaching methods, are resistant to change and prefer a more comfortable and less technologically interfered environment. However, some of the respondents reported that they have met older teachers who hire technical assistance to resolve issues faced during online teaching.

One respondent who is 64 years old stated that they dislike using mobile devices and do not trust technology, including digital apps for financial transactions. On the other hand, respondents also reported that individuals who have grown up with technology are more likely to adopt and adapt to new technological advancements.

2. Tolerance & students' learning behavior.

The respondents emphasized that senior instructors often find it challenging to

tolerate poor learning behavior from students. This highlights the need for additional support and training for senior instructors to effectively deal with these situations in online teaching environments.

3. Conscious & Repeated Practice.

A few of the respondents reported that senior teachers are more concerned about technology adoption, as they understand its importance in the current education landscape. Repeated practice is crucial factor for all of the users. The respondents stated that the key to successful technology adoption lies in consistent and daily practice. This reinforces the idea that with time and effort, even senior teachers can become comfortable and proficient in using technology in the classroom. The repeated practice helps build confidence and mastery, enabling them to effectively integrate technology in their teaching practices. The respondents emphasized that the more they use technology, the easier it becomes, and the more they can benefit from its various educational benefits.

Table 4.31

Employee responses based on the demographic factor(prior online teaching Experience)

RQ	MT	ST/Codes	Description	Frequency
Perceive about demographic factors .contribute to employee readiness	Demographic factors Influential	Efficiency	Prior experience provides online teaching efficiency.	12
		Positive Attitude & confident	Teachers who have proper experience	8
		Less technology fear	We don't feel fear to use any instructional software Using online teaching.	5
		Motivated	Teachers are more motivated if they already know the technology usage.	7

1. More Efficiency

The majority of the respondents in a recent survey emphasized the importance of having prior experience in online teaching. They stated that having this experience has given them greater clarity and understanding about the process and techniques of delivering quality education through digital platforms.

According to the respondents, teachers who have prior experience in online teaching are more efficient and effective in their methods. They have developed a better understanding of the tools and technology required for online teaching and have found ways to create engaging and interactive lessons that keep students interested and focused.

Moreover, experienced online teachers are able to overcome the challenges of online teachings, such as a lack of face-to-face interaction and difficulties in keeping students motivated and engaged. They have found creative solutions to these challenges and have been able to create a more effective and efficient learning environment for their students.

The respondents stressed the importance of prior experience in online teaching and how it has helped them to be more effective and efficient educators. They believe that this experience is crucial in delivering high-quality education through digital platforms and in meeting the needs of students in the digital age.

2. Positive Attitude & confidence,

The majority of the respondents in a recent survey have noted the importance of having prior experience in online teaching, particularly in terms of having a more positive attitude and greater confidence.

According to the respondents, people who have prior experience in online

teaching understand the significance of this mode of education and have a more positive outlook toward it. They are more confident in their abilities to effectively deliver quality education through digital platforms and have developed a deeper appreciation for the unique challenges and opportunities that come with online teaching.

Having prior experience in online teaching also allows individuals to approach their lessons with greater self-assurance. They have a better understanding of the tools and technology required and have had the opportunity to test and refine their methods, which leads to increased confidence in their abilities to deliver effective lessons.

Additionally, experienced online teachers are able to provide students with a more engaging and interactive learning experience. They have a better understanding of how to keep students motivated and focused and are better equipped to overcome the challenges that come with online teaching.

3. Less technology fear

The majority of respondents in a recent survey have stated that people who have prior experience in online teaching have less fear and anxiety when it comes to technology.

According to the respondents, those who have prior experience with online teaching are more familiar with the various tools and technology required for this mode of education. They have had the opportunity to test and refine their skills, which has helped to reduce their anxiety and fear of technology.

In addition, experienced online teachers are better equipped to overcome any technical difficulties that may arise during their lessons. They have a better understanding of how to troubleshoot and resolve any issues, which helps to reduce

their stress and anxiety when it comes to technology.

Furthermore, having prior experience in online teaching also helps individuals to develop a more positive and confident attitude toward technology. They understand its importance in delivering quality education and are able to use it to their advantage, which leads to a reduction in their fear and anxiety towards technology.

Table 4.32

How do you perceive about demographic factors (Gender) contribute to employee readiness

RQ	MT	ST/Codes	Description	Frequency
How do you perceive about demographic factors (Gender) contribute to employee readiness	Demographic factors Influential	No effect	There is no difference	12
		Males dominant in technology skills	In some ways males are more dominant in technology	8
		Females are dominant.	Females are more concerned about technology.	4
		Time constraints and workload	Female have multiple responsibilities at workplace and domestically.	7
		More opportunity to learn,	Male have more opportunity as compare to female.	3
		Emotionally stable,	Males are more emotionally stable.	2
		Females are dominant.	Females are more concerned about technology.	4

1. No effect

According to various respondents in a recent survey, there is no significant difference between males and females in terms of their adoption and acceptance of online teaching.

The respondents stated that both males and females have equally embraced the use of technology for education and have adapted well to the online learning environment. They have found online teaching to be an effective and convenient way to acquire knowledge and skills, regardless of their gender.

Moreover, the respondents noted that both males and females have shown equal aptitude for using technology for educational purposes and have been able to effectively participate in online lessons and discussions. They have also been able to take advantage of the various resources and materials available through digital platforms, regardless of their gender.

The respondents believe that there is no significant difference between males and females in terms of their adoption and acceptance of online teaching. Both genders have shown equal aptitude and enthusiasm for using technology for educational purposes, which suggests that online teaching is a gender-neutral and inclusive mode of education.

2. Males dominant in technology skills

According to the majority of respondents in a recent survey, male teachers tend to be more early adopters of technology and have slightly better technology skills as compared to female teachers.

The respondents noted that male teachers are generally more comfortable and confident with using technology for educational purposes and are quick to adopt new tools and techniques. This has led to an advantage in their technology skills and has allowed them to be more efficient and effective in their online teaching methods.

However, it is important to note that this does not mean that female teachers are not skilled or capable in using technology. Many female teachers have shown

great aptitude for using technology for educational purposes and have been able to effectively participate in online lessons and discussions.

while the majority of respondents believe that male teachers tend to have slightly better technology skills and are more likely to be early adopters of technology, this does not mean that female teachers are not equally skilled or capable in using technology for educational purposes. Both genders have the potential to excel in online teaching, and it is important to provide equal opportunities and support for all educators, regardless of their gender.

3. Time Constraints and Workload

Faculty highlighted that male faculty are generally more emotionally stable and adaptable to changes, while female faculty face heavier workloads both at work and at home, creating time constraints. This difference affects their ability to fully engage in new learning opportunities.

4. More Opportunity to Learn

Faculty highlighted that male faculty have more opportunities to learn, especially in gatherings at the office or home, where they can engage in discussions. Female faculty, however, often have less time due to additional household responsibilities.

5. Emotionally Stable

Faculty pointed out that male faculty tend to be more emotionally stable and open to change, while female faculty often experience more emotional strain due to balancing work and home life.

6. Open to Experience

Faculty noted that male faculty are generally more open to new experiences, actively seeking opportunities for growth, while female faculty have fewer chances to explore new

experiences due to time constraints and additional responsibilities.

7. Females Detail Oriented

According to a few respondents in, female teachers are more efficient in online teaching as compared to male teachers.

The respondents noted that female teachers tend to be more organized and detail-oriented, which helps them to effectively plan and deliver their online lessons. They have a better understanding of the needs of their students and are able to create a more engaging and interactive learning environment, which leads to better learning outcomes for their students.

Furthermore, female teachers are often seen as being more approachable and nurturing, which helps to create a positive and supportive learning environment for their students. This fosters a sense of community and encourages students to participate more actively in their lessons.

In conclusion, while the majority of respondents believe that male teachers tend to have slightly better technology skills, a few respondents believe that female teachers are more efficient in online teaching. Both genders have the potential to excel in this mode of education, and it is important to provide equal opportunities and support for all educators, regardless of their gender.

4. Job status.

RQ	MT	ST	Description	Frequency
How do you perceive about demographic factors (Job status) contribute to employee readiness.	Demographic factors Influential	promotion	We need to be updated and smart due to job promotion.	12
		Manage multiple work	With online teaching we can manage multiple task in limited time.	8
		job Insecurity	Our job isn't permanent, so due to job insecurity, we need to stay prepared and technology is currently a hot topic.	4
		Already Experienced	We have already online working from last 6 years	4
		Grown up with technology	We don't have any problems using technology because we've been connected to it since we grew up.	5
		Cost-effective.	A lot of time and money is wasted commuting to the university, so this is very budget-friendly.	5

1. Job Promotion

A major theme highlighted by faculty members was the potential for promotion. Many feel that embracing technology in teaching could enhance their chances of career advancement, as institutions are increasingly valuing digital competence. Being permanent faculty members, they see this adaptation as a pathway to secure promotions. They view readiness for online teaching as an investment in their professional growth.

2. Manage Multiple Work

Faculty members noted that managing multiple responsibilities becomes easier with technology. Online tools help them balance teaching, administrative tasks, and research more effectively. Digital platforms streamline work, allowing them to

maintain productivity across various roles. This adaptability to manage diverse tasks with technology enhances their overall work efficiency.

3. Job Insecurity

Some faculty expressed that job insecurity drives their readiness to use technology. With the increasing demand for tech-savvy educators, they feel adopting digital methods may offer job security. Non-permanent staff, in particular, believe that showing adaptability to online teaching can improve their employment prospects. Technology proficiency becomes a necessity to stay competitive in the job market.

4. Already Experienced

several faculty members mentioned they already have extensive experience with online tools, which boosts their confidence in using technology for teaching. Those who have been teaching for years feel comfortable adapting to new tech due to prior experience. Their familiarity with technology reduces hesitation and facilitates smoother integration of digital teaching methods.

5. Grown Up with Technology

many noted they have grown up with technology, making it easy to adopt new tools without difficulty. They have used technology in their personal and academic lives since their youth, so digital teaching feels natural. This familiarity minimizes learning curves, allowing them to focus more on teaching rather than tech challenges.

6. Cost-effective

some faculty pointed out the cost-effectiveness of online teaching, as it reduces travel and other expenses associated with on-campus work. They find it budget-friendly

because it minimizes commuting costs and time. This aspect of digital teaching is particularly appealing for those seeking efficient, economical solutions.

Table 4.33

Alignments of Qualitative and Quantitative Study.

Study detail	**Quantitative (objectives & outcome)**	**Qualitative (Questions & Response (Thematic analysis)**
Nature Objective	**Assessing & Analyzing (What)** (Assessment & examine) Examine the level of readiness?	**Explaining, How & why** (Explain) "Why and How Low" and high Readiness?
Variables **Performance Expectancy**	To Analyze the level of employee Readiness based on performance Expectancy. High level. (M: 3.28) Table= 4.9	How do you perceive the usefulness of online teaching? **Positive response by respondents.** • Increase literacy rate • Global teaching learning • Easy to access • Learned presentation skills **Negative responses by respondents** • Less expression • less effective)
Effort Expectancy	To Analyze the level of Employee Readiness based on Effort expectancy? High Readiness (M.3.48) Table=4.9	How do you perceive the abilities used for online teaching? **Positive response by respondents** • Easy to assess, • Easy Course design, • Self-directed • Easy Online Teaching Strategies **Negative response by respondents** • High Workload, • Lack of Solving technical problems • Poor Course

		Evaluation
Social influence	Level of readiness Medium (M: 2.95) Table=4.9m	How do you perceive the role of social influence in technology adoption? **(Extreme Positive response)** • Positive influence **(Extreme Negative response)** • Bound to institution Societal need
Facilitating conditions	Level of Readiness Low (2.49) Table=4.9m	**(Negative response)** • Less provided accessories • Non-availability of technical support: • Non-availability of ICT assistance • Self-Assistance • Poor Quality Training. • Bad quality software and internet **(Positive response)** Already provided accessories in 2013 • Self-Assistance
Hedonic motivation	Low Readiness M: 2.56 Table=4.9	How do you feel while using the online teaching method? **(Extreme Positive response)** • Fatigue • Fear & Anxiety • Less practice • Exited
Demographic Factor Gender	**Gender comparison toward Readiness.** No significance difference Exists. (P: 0.414) Table=4.15	**To what extent Demographic factors are influential? (Gender)** (Supported Quantitative Results) **Responses by the respondents** • No difference • Males are dominant. • Females are detail oriented. • Depend on practice.

AGE	**Age Comparison toward Readiness.** (Significance Difference Exist in every group) Above 55 are less Ready than others. (F=19.110, p.05) Table=4.18	**Age (Supported Quantitative result)** • Technology brought up & trustworthy. • Daily Technology usage • Tolerance • More conscious
Experience	**Comparison (Online teaching experience)** 5-10 year (High Readiness Table=4.19	**(Supported Quantitative data** • Efficiency • Positive Attitude & confident • Less technology fear Motivated
Job status	**Comparison(Contract & Permanent)** Significance Difference Exist(.000) Contractual are more ready. Table=4.21	• Job promotion. • Insecurity • Already experiences, • Brought up

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Summary

This chapter unveils the results and analysis of the study's data, offering a synopsis of its key findings and insights into the readiness for change amid the COVID-19 pandemic. The conclusions carefully scrutinize the study's ideas and recommendations based on its findings. The primary goal was to assess the adaptability of higher education employees to the COVID-19 epidemic, evaluating their readiness for change, comparing technological readiness based on gender and experience, and identifying additional factors influencing faculty readiness to change.

The study gauged employee readiness for online teaching through various variables, employing the explanatory sequential design guided by the pragmatism philosophy of education. The data collection occurred in two phases: initial quantitative data collection and utilizing the results to steer the qualitative data collection in the subsequent phase. The overarching objective was to comprehensively understand employee readiness for change during the COVID-19 pandemic, especially concerning the shift to online teaching. The findings aspire to be instrumental for higher education institutions and policymakers, offering insights into the challenges and opportunities associated with the adoption of online teaching, along with strategies to support and facilitate the transition.

The initial phase of data collection utilized an adapted tool selected for its reliability and validity. Seven questions were omitted during reliability and validity testing due to poor language and contextual incongruity. The study aimed to assess

the adaptability of higher education personnel to the COVID-19 outbreak, utilizing five primary characteristics derived from Venkatesh and Davis (2012) within the technology adoption model developed by Morris, Davis, and Venkatesh (2003). This model, grounded in five key factors of readiness, namely "Performance Expectancy" (PE), "Effort Expectancy" (EE), "Social Influence" (SI), "Facilitating Conditions" (FC), and "Hedonic Motivation" (HM), served as the foundation.

Performance Expectancy, perceived as the most crucial construct, determined individuals' psychological readiness towards accepting and using technology. It gauged the level to which individuals perceived that utilizing an information technology system would enhance their job performance. Faculty teachers responded to nine questions, showcasing robust reliability coefficient: (.915). Effort Expectancy, crucial for the ease of using technology, exhibited high reliability (.923) through the analysis of 13 statements, fortifying the credibility of the study's findings.

The third construct, Facilitating Conditions, pertained to the perception that the organization would provide necessary support and resources for effective technology use. This included technical assistance and ensuring the availability of required equipment. The construct demonstrated robust reliability with a coefficient of .948, as Crohn's Batch Alfa assessed, instilling confidence in measurement precision and reinforcing the study's credibility.

Social Influence, the fourth construct, measured the pressure to use technology, exhibiting high reliability (.911) through seven questions. This strong internal consistency underscored the construct's reliability and stability, enhancing confidence in its validity for further analysis and interpretation. The fifth construct, Hedonic Motivation, added to the UTAUT model in 2012, gauged enjoyment and pleasure derived from using technology. In this study, eight statements assessed

faculty teachers' hedonic motivation for technology use in online teaching, revealing a high reliability of .917 through seven questions.

The research also delved into the role of demographic factors in shaping readiness for change. The study identified four specific demographic factors as significant influencers of change readiness. Analyzing preparedness based on employee age groups, categorized as 25–34, 35–44, 45–55, and over 55, revealed varied levels of readiness. The study underscored the importance of considering online teaching experience in technology acceptance and usage studies. The third demographic factor, gender, highlighted its impact on technology acceptance, with 57.1% male and 42.9% female participants.

In the second phase of the research study, 16 employees were purposively sampled based on their availability, involving a quantitative analysis of extreme values. The purposive sampling technique justified the selection of positive and negative extreme responses.

In the research paradigm, the study population comprised 350 teachers, with 30% working in government universities in the Rawalpindi and Islamabad territories. A 92% response rate was achieved, with 183 male and 158 female teachers participating in the study.

To draw conclusions, a variety of statistical analysis techniques were employed, including reliability tests like Cronbach's alpha, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), intercorrelation, descriptive analysis, mean, standard deviation, skewness, kurtosis, and inferential statistics like t-tests and analysis of variance (ANOVA). These statistical analyses upheld the study's findings, establishing the validity and dependability of the results.

Thematic analysis was applied to the qualitative data to elucidate the quantitative data. Thematic analysis, a widely used method in social sciences and education research, involves identifying patterns or themes in the data and categorizing them meaningfully. This approach provided a deeper understanding of participants' experiences, perspectives, and opinions, comprehensively connecting qualitative and quantitative data to present a holistic picture of the research findings.

5.2 Findings

After conducting the statistical analysis, the major findings were drawn from the data. These findings assisted in reaching the final conclusion and provided suggestions for future studies. The conclusions were obtained by aligning the study's objectives and hypotheses with the observed results. A total of 322 faculty teachers participated in the study, representing a diverse range of ages and experiences for both male and female teachers.

An important phase in the research process is the presentation of the study's findings because it aids in the target audience's understanding of the findings. The results of this study were given in two sections, which allowed for a thorough analysis of the data and highlighted the most important findings. The primary properties of a dataset are outlined and summarized in the first section, descriptive statistics. This kind of statistic gives a broad perspective of the data, highlighting its central tendency (represented by the mean, median, and mode), its dispersion (represented by the standard deviation, range, and variance), and its shape (represented by skewness and kurtosis). Descriptive statistics can be used to identify trends and patterns in the data and provide a quick snapshot of the data.

The second section, inferential statistics, goes a step further by using a sample

of the data to make inferences about a larger population. The goal of inferential statistics is to determine whether the results of a study are statistically significant and to estimate the size of the effect and the level of confidence that can be placed in the results. This type of statistic allows researchers to test their hypotheses and make predictions about future events based on the data.

Objective 1. To analyze the level of employee (faculty) readiness to adopt change (online teaching) with respect to Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Hedonic Motivation At higher institutions.

Based on the 1st objective, the level of faculty readiness toward online teaching is measured by the mean score and standard deviation.

The study's main goal was to determine the degree of employee readiness based on five factors: performance expectancy (PE), effort (EE), societal influence (SI), financial constraints (FC), and hedonic motivation (HM). The study's results showed that the mean readiness score was 3.06, indicating a moderate degree of employee readiness across all of the aforementioned factors.

1a. The study's primary goal was to gauge the degree of preparedness among faculty members working at institutions in Rawalpindi and Islamabad. To accomplish this, performance expectancy was measured. The results of this measurement showed that the faculty teachers in this region possess a *"high level"* of readiness with regard to performance expectancy. This is evidenced by the mean score, which was found to be (M= 3.28), indicating a high level of performance expectancy among these teachers.

1b. Under the primary objective of the study was to examine the level of readiness among faculty teachers with regard to effort expectancy. To achieve this,

effort expectancy was measured among the teachers working in universities located in Rawalpindi and Islamabad. The results of this measurement indicated that the faculty teachers in this region possess a *"high level of readiness"* with regard to effort expectancy. This conclusion is supported by the mean score, which was found to be (M=3.46) demonstrating a high level of effort expectancy among these teachers.

1c. In pursuit of the study's first goal, the faculty teachers' level of preparation with regard to social influence was assessed. The results of this measurement showed that the faculty teachers possess a "*medium level of readiness* "toward online teaching. This conclusion is supported by the mean score, which was found to be M=2.95, indicating a moderate level of readiness with regard to social influence.

1d. As part of the study's first objective, the level of readiness among faculty teachers towards online teaching was evaluated by measuring facilitating conditions. The results of this measurement showed that the faculty teachers have a "low level" of readiness with regard to facilitating conditions. This is indicated by the mean score, which was found to be 2.49 indicating a limited level of readiness towards online teaching based on the facilitating conditions.

1e. The first goal of the study's initial objective involved measuring hedonic motivation in order to gauge how prepared faculty teachers were. The results of this measurement showed that the faculty teachers have a "low level" of readiness with regard to hedonic motivation. This is evidenced by the mean score, which was found to be 2.56, indicating a limited level of hedonic motivation among these teachers and a correspondingly low level of readiness toward online teaching.

1e. The overall level of readiness among the faculty teachers was determined through the examination of all the measurements conducted as part of the study. The

results of this analysis showed that the overall level of readiness was “medium.” This conclusion is supported by the mean score, which was found to be 3.08, indicating a moderate level of readiness towards online teaching among the faculty teachers in this region.

Objective 2. To compare the employee (faculty) readiness to adopt change (online teaching) based on their gender.

1. 1. To determine whether there was a significant difference in employee readiness between males and females, the study used a t-test. With a t-value of less than 1.96 and a p-value greater than 0.05, the t-test findings showed no statistically significant difference in employee readiness between males (M=3.10) and females (M=3.06). The confidence interval also suggested a smaller effect size, which further supported the insignificant mean difference in employee readiness based on gender. Overall, these findings suggest that gender does not significantly influence the level of readiness among employees, as there was no statistically significant difference between male and female respondents in terms of their readiness scores.

2a. The second objective of the study aimed to determine any differences in the level of readiness between male and female faculty teachers. The results of this analysis showed no significant difference between the mean score of male teachers (M=3.28) and female teachers (M=3.30) concerning performance expectancy. This conclusion is supported by the t-value, which was found to be -0.20, and a p-value greater than .05, indicating no statistically significant difference between male and female faculty teachers regarding performance expectancy.

2b. The mean values presented in the table indicate a statistically significant difference between the effort expectations of male (M=3.57) and female teachers

(M=3.40) (t=2.080, $p < 0.05$). Despite both genders having high ability to use technology for online teaching .the findings suggest that gender influences the readiness. Specifically, female teachers tend to score relatively lower on the effort expectancy scale compared to their male counterparts. This implies that there may be variations in how male and female instructors perceive the effort expectancy in technology adoption.

2c. The second objective of the study was to compare the level of readiness based on gender with reference to social influence. The mean value for male teachers was 3.03 and the mean value for female teachers was 2.86. The calculated t-value of 1.340 was not significant at a p-value greater than 0.05. This suggests that there is no statistically significant difference between male and female teachers in regard to their level of readiness based on social influence.

2d. This study's second goal was to investigate gender variations in the degree of employee preparation for facilitating situations. The mean scores for male and female teachers were calculated and compared to assess any potential gender differences. According to the data, men instructors had a mean score of 2.52 while female teachers had a mean score of 2.47. At a p-value higher than 0.05, the computed t-value of 0.340 was not significant, nonetheless. This suggests that there is no statistically significant difference in the level of preparation between male and female teachers based on the supporting conditions. These results imply that when establishing a person's level of employee readiness with respect to facilitating conditions, gender may not be the most important factor.

2e. The study's second goal was to investigate the differences between genders in the degree of employee readiness in relation to hedonic motivation. To identify any potential gender disparities, the mean scores of male and female teachers were

computed and compared. According to the data, male instructors had a mean score of 2.63 (M=2.63) while female teachers had a mean score of 2.48 (M=2.48). But at a p-value higher than 0.05, the estimated t-value of 0.874 was not considered significant. This shows that there is no statistically significant difference in the degree of preparation for hedonic motivation between male and female professors. These results suggest that gender has no bearing on an individual's level of workforce preparedness with regard to hedonic motivation

Combine Gender findings

The objective of this study was to compare the employee readiness to adopt change (online teaching) based on their gender (male, female). The results of the study were based on five factors, including respondent readiness. The mean score for male employees was 3.10 and for female employees was 3.06. The t-test value was calculated and found to be less than 1.96. Additionally, the p-value was greater than 0.05, This indicates that there is no statistically significant difference between the male and female groups in terms of their respondent readiness. These results suggest that gender does not play a significant role in determining an individual's level of readiness to adopt online teaching as a change.

In the second phase of the study, the analysis of extreme and deviant cases towards employee readiness for technology adoption was conducted by asking the respondents about the extent to which demographic factors influence employee readiness. The results showed that the respondents believed there is no significant difference between males and females in terms of their readiness to adopt technology, as it depends more on their experience and exposure to technology.

Objective 3

"To compare the employee (faculty) readiness to adopt change on the basis of their age"

1. 3. The study's third objective was to determine whether there were any notable differences in employee readiness between age groups. The analysis's findings demonstrated a significant difference in employee readiness across age groups, as shown by a significant F-value of 0.000. According to this finding, there are significant differences in employee readiness among various age groups.
2. 3a. The results of the study indicated that the respondent readiness of employees between the ages of 25-34 was not significantly different from those between the ages of 35 - 44. The mean difference was M=.1841 and the significance value was F=.286.
3. 3b. According to the findings of the Tukey post hoc analysis, the mean difference between the age groups of 25 - 34 and 44 - 55 years was marginally greater. The significant value was F=.000, and the mean difference was M=.514, with a p-value of.05. This shows that the level of faculty readiness between the mentioned groups have significant difference. These findings emphasize the significance of taking faculty age into account when examining employee readiness in the context of online teaching adoption..
4. 3c. The results of the Tucky post hoc analysis showed that there was a greater mean difference between the age group of 25-34 years and the age group over 55 years under the third objective of the study, which was to examine the level of employee readiness depending on the age of the faculty members. Between these two age groups, there was a statistically significant difference in the

degree of employee readiness, as indicated by the mean difference of M=.799 and the significant value of F=.000 with p.05.

These findings highlight that the age of the faculty members plays an important role in determining their level of employee readiness to adopt change, especially in the context of online teaching. The results suggest that faculty members in the age group of 25-34 years are more likely to have a higher level of employee readiness compared to those in the age group above 55 years.

The study conducted during the second phase of the research investigated the perception of the impact of demographic factors on online teaching. The results showed that the majority of respondents agreed that individuals over 55 years old are less likely to be ready for online teaching. These findings were supported by the qualitative phase of the explanatory sequential design, which further supports the conclusions drawn from the quantitative data.

Objective 4

The study's fourth objective was to compare staff preparation levels according to prior online teaching experience. To achieve this objective, three groups were selected for comparative analysis: low experience, medium experience, and high experience. The outcomes of the ANOVA analysis revealed a significant difference in the groups' prior experience to online instruction. There is a statistically significant difference in the level of employee readiness between the groups with (0-1), (1-5), and (5-10) low, medium, and high experience with online instruction, according to the significant value of F=.010 with p.05. These results highlight the importance of considering the experience of faculty members in online teaching when

studying their readiness to adopt change, particularly in the context of adopting new technologies and teaching methods in the technological era.

5. 4a. The study's findings revealed a significant difference between two groups of educators with varying levels of experience (0-1 year vs. 1-5 years) in terms of their level of preparation for online teaching. The two groups had a mean difference of.231 and a statistical analysis (F=.044, p.05) showed that the difference was statistically significant.

   The Qualitative results findings supported by the quantitative findings. This finding suggests that those with more experience in teaching online have a higher level of readiness compared to those with less experience. Few themes were generated in the qualitative phase to highlight the importance of online teaching experience which includes, Efficiency, Positive Attitude & confident, Less technology fear, Motivated. This result highlights the importance of providing continuous professional development opportunities for educators to develop their skills in online teaching and increase their readiness for delivering effective online instruction.

   Objective 5. To compare the level of readiness concerning employees .

6. The fifth objective was to compare the level of readiness between permanent and contract employees. The mean value of job status with reference to the contractual job status (M=3.44) and mean value of permanent (M=2.95) shows statistically significant difference between job status comparisons. Furthermore, t value elaborates the results (t=-5.670, p>.05). These findings indicate the significance difference between contractual employee’s readiness and permanent employee’s readiness. Contractual employees are more ready

as compared to a permanent employee.

The qualitative results supported these findings as respondents highlighted a few themes, job insecurity, and promotion.

Qualitative Findings.

What is the level of Readiness based on performance expectancy?

The purpose of research question one is to explain the level of readiness with regard to performance expectancy. To answer this question, qualitative data was collected from 16 teachers. The findings extracted from this data suggest that the level of readiness with regard to performance expectancy.

What is the level of Readiness among Employees with reference to performance expectancy?

The qualitative study aimed to understand the reasons behind the high levels of readiness and low levels of readiness toward the performance expectancy of online teaching. The results of the study showed that the majority of participants had a positive attitude toward online learning. This was due to various factors such as increased literacy rates, global education opportunities, ease of attending global workshops and conferences, and ease of access to information. multiple tasks, and students' technical skills.

These benefits of online learning contributed to the high levels of readiness among the participants.

On the other hand, a small group of participants held negative views towards online learning. They believed that online teaching is less effective and less expressive compared to traditional face-to-face teaching due to the lack of facial expressions involved in the teaching process. This lack of expressiveness was seen as

a major factor contributing to the low levels of readiness among this group of participants.

Under the second research question, the level of readiness concerning effort expectancy was investigated through the interview question, "How do you perceive the level of readiness concerning effort expectancy?" The sequential explanatory design found that there were both high and low values of responses.

High levels of responses highlighted the themes such as ease of use, easy course design, ease of application use, self-directed learning, and knowledge about online teaching strategies. These factors contributed to the high level of readiness among participants toward effort expectancy.

However, some participants had negative extreme responses towards effort expectancy. The themes that they highlighted included high workload, poor course evaluation, and lack of support in solving technical issues. These challenges contributed to their low level of readiness toward effort expectancy.

Under the third research question, the level of readiness with regard to social influence was investigated through the interview question, "How do you perceive the level of readiness with regard to social influence?" The sequential explanatory design found that there were both high and low values of responses. High levels of responses highlighted the themes such as positive influence, like family, colleagues, and top management authority, these factors contributed to the high level of readiness among participants towards social influence. However, some participants had negative extreme responses towards effort expectancy. The themes that they highlighted included no influence, adoption by the covid, and bound to the institutions. And societal needs,. In this factor, people have mixed feelings which supported the

Quantitative findings concerning social influence.

The fourth research question aimed to determine the level of employee readiness with regard to the facilitating conditions through the interview question, "How do you perceive the level of readiness with regard to the facilitating conditions?" The study revealed that there were both positive and negative responses regarding the facilitating conditions.

Positive extreme responses emphasized the presence of facilities such as provided associations in 2013 and self-facilitation. However, negative extreme responses highlighted the lack of technical support, non-availability of ICT assistance, poor quality training, and issues with the quality of software and the internet. These findings supported the quantitative findings.

The fifth research question aimed to assess the level of employee preparedness toward hedonic motivation. This was done through the use of interview questions such as "How do you perceive the level of readiness with regards to the hedonic motivation?" The results of the study showed a mix of positive and negative responses regarding hedonic motivation. Some participants expressed excitement and enjoyment, while others expressed feelings of fatigue, fear, anxiety, and lack of practice. These findings support quantitative data and show a common theme among both positive and negative responses.

Objective 6

The sixth research question aimed to explore the encouraging factors concerning employee readiness to adopt change. Both positive and negative responses highlight the themes including, leadership tech-savvy, institutional support, students, teacher's training, well organize reward system, and priority hiring technical skills,

technological culture. These factors contributed to employee readiness to adopt change.

Objective 7

The seventh objective of the study was to explore the possible reasons for low readiness levels among employees.

Highlighted themes from the respondents were including technophobia, technological skills, student behavior, and lack of resources.

5.3 Scope of Generalizability of Research Findings

Based on the information provided, it can be inferred that the sample size of the study is representative of the entire population of public sector university teachers in university culture. This is because these two cities are among the most developed areas in Pakistan, where teachers and students have access to high-speed internet and are likely to use personal devices for their work and studies. As such, the study's findings can be seen as reflecting the experiences and opinions of public-sector university teachers in similar contexts.

Furthermore, the positive constructs being studied in the research are said to be universal in nature, meaning that they can be applied to any field, including education. This suggests that the findings are not limited to the particular population being studied but have broader applicability to other contexts as well.

5.4 Discussion

This research was based on the readiness for technological change theory as developed by multiple research Davis and Venkatesh (2002, 2012, which was based on eight technology acceptance models. The study's objective was to ascertain how prepared university professors were for online instruction during the COVID-19

epidemic. The results showed a medium degree of preparation for online instruction when the levels of performance expectancy, effort expectancy, social influence, enabling conditions, and hedonic motivation were examined using mean scores. The study was conducted with a sample of 350 faculty members from public sector universities in the twin cities of Rawalpindi and Islamabad, out of a total population of 1145 teachers in social and management sciences. Of the 350 teachers sampled, 322 returned complete questionnaire answers. The present study aimed to gain a deeper understanding of faculty members' level of readiness toward online teaching based on a comprehensive model. For the quantitative investigation, statistical operations including mean score, standard deviation (SD), t-test, and analysis of variance (ANOVA) were required by the research aims and hypotheses. On the other hand, a theme analysis was used to analyses and explain the qualitative data in the explanatory sequential design. The level of faculty members' preparation for online teaching during the COVID-19 epidemic was thoroughly examined thanks to the combination of quantitative and qualitative research approaches.

Objective 1

The primary objective of this study was to assess the level of readiness towards online teaching among faculty members in universities during the COVID-19 pandemic, taking into account gender differences, age group differences, and prior online experience. The analysis's findings indicated a moderate level of preparation. This study aimed to provide a comprehensive understanding of faculty members' readiness towards online teaching during the pandemic, with a focus on multiple factors that might affect their level of readiness. The results of this study can help universities as they continue to adjust to the challenges brought on by the epidemic by offering insightful information and guiding decision-making.

Objective 2

The second objective of the study was to compare the level of readiness to adopt change based on gender. The null hypothesis for this study was that there is no significant difference between males and females in their readiness to adopt change. The results of the study showed that there was no significant difference between male and female participants in terms of their readiness to adopt change, indicating that the null hypothesis was not rejected.

This shows that the amount of change readiness was similar for both the male and female participants and that the gender did not significantly influence the level of readiness. The results of this study add to the body of knowledge about the variables that affect a person's openness to change and offer vital information for groups and people trying to successfully and positively impact change.

According to the facts given, it appears that the second null hypothesis was accepted, indicating that there are significant differences in employee preparation for online teaching among different age groups. According to the analysis, it was found that the age group above 55 is less likely to adopt readiness towards online teaching compared to other age groups (25-34, 35-45, and 45-55, above 55). This suggests that older faculty members may have less experience with technology and may need more support and training to effectively adopt online teaching methods.

Objective 3

Comparing the degree of employee willingness to adopt change was the study's third goal. Based on their prior experience teaching online, the null hypothesis claimed that there was no discernible difference in the employees' readiness to adapt. The four groups included in the objective were based on the range of experience (0-1, 1-5, 5-10). The hypothesis assumed that those with more experience in online

teaching were more likely to adopt change.

The study's findings revealed a significant difference between the groups in terms of past familiarity with online teaching. As a result, the null hypothesis was disproved, and it was determined that, depending on prior experience with online education, there was a considerable variation in the level of readiness among employees to adapt change. The online experience of the group (5–10) was probably more prepared than that of the other groups.

Based on the 6th research questions results of the study, a number of influential factors were identified in response to the sixth research question. These factors were generated from qualitative data and included elements such as strong leadership, technical savvy, and access to training and development opportunities. These factors were seen to positively impact employee's readiness to adopt change, as they provided employees with the necessary skills and support to successfully integrate new technology into their work practices.

In addition to the influential factors, the study also identified a number of factors that discouraged employee readiness to adopt change. These discouraging factors included a lack of resources, insufficient opportunities for practical application, low motivation, and technology anxiety. These factors were seen to negatively impact employee readiness, as they created barriers to successful technology adoption and integration.

Objective 1. The first objective of this study was to Examine the level of readiness among employees at the university level during COVID-19.

In the present study, the results showed that teachers were somewhat prepared to implement technological changes for online instruction amid a crisis. This was

shown by the low level of hedonistic motivation and facilitating conditions, low level of hedonic motivation, high level of performance and effort anticipation, medium level of social influence, and moderate degree of readiness.

In contrast, a study conducted by Mansor (2021) in Malaysia showed that all of the findings indicated a high level of readiness among teachers, indicating strong readiness for change implementation. These findings differ from those of Rafferty and Simon (2006), who discovered that the implementation of large-scale technological innovations was likely to encounter significant resistance and low readiness.

In his doctorate dissertation, William D. Hooper (2021) conducted an American study on faculty readiness and measured it using a survey technique. The results showed that the faculty readiness level was very low, and there was a high level of resistance. The respondents expressed deep concerns about the various challenges involved in online learning and teaching. These findings further highlight the complexities and challenges associated with implementing technological changes in education and the need for addressing the various factors that influence faculty readiness.

In contrast, Zeidan (2016) conducted a qualitative research study in America for her doctorate and found a high level of readiness among college-level faculty members prior to the COVID-19 pandemic. However, her study recommended that training should be provided to faculty members before they begin teaching online, regardless of whether they have prior experience with online teaching or not. This highlights the importance of providing adequate support and training to faculty members to enhance their readiness and ability to effectively implement technological changes in education.

In support, Chisango (2019) conducted a study in South African schools and found that teachers had a high level of a positive attitude toward the usefulness of readiness. like the findings of performance expectancy in the current study, similar to the findings of the current research, which also showed a high level of readiness toward performance expectancy. In addition, Chisango's study revealed that teachers had a lack of ICT skills, which was also identified as an issue affecting effort expectancy in the current study. Both studies recommended providing training prior to implementing the change, highlighting the importance of preparing teachers to effectively integrate technology into their teaching practices. This is consistent with the results of another study by Msila (2015) in the same cultural context.

Awidi and Aldhaferi (2017) conducted a study in Kuwait, an Arabic country, to analyze the level of readiness among teachers based on their pedagogical and technical skills. They found that the level of readiness was moderate, similar to the results of the current research, which also showed a moderate level of readiness across both technical and pedagogical factors. The study by Awidi and Aldhaferi also explored factors such as time constraints, ICT knowledge, and the facilitating environment, which are anxiously highlighted in the current research. The same themes were highlighted in the current research. These findings are consistent with the results of a study by Ismail, Mohd (2012), which also found moderate levels of readiness among teachers in implementing technological changes in education.

In line with the consistent findings, Khalid & Zainuddin (2020), a Pakistani researcher, conducted a study on teacher and student readiness for online learning during the COVID-19 pandemic. The study found that at the onset of the outbreak, both teachers and students were happy for the break, but gradually, stress and anxiety set in. The teachers faced a lack of ideas on how to engage students, issues with

technology such as laptops, internet, and electricity, and a lack of support from the university. These findings highlight the need for proper training and support to effectively implement technology-based education.

In contrast, Copriady (2015), an Indonesian researcher, found inadequate results regarding teacher readiness in technological contexts. The study emphasized the impact of motivation and prior online experience on the successful implementation of technology-based education. These findings are consistent with qualitative results and suggestions, highlighting the importance of both motivation and prior experience in ensuring a smooth transition to technology-based education.

The data collected in the early stages of the COVID-19 pandemic regarding teacher readiness was found to have a moderate to low level of readiness. In the contrast, the study's data were conducted after a period of six months and was later found to have a higher level of readiness. This difference in data could be due to the fact that at the time of collection, teachers were still getting used to the new way of teaching and the challenges that came with it.

The second reason for the contrast data is the lack of online teaching culture or value in studies conducted before 2017. Prior to the outbreak of COVID-19, there was less need for online teaching worldwide. However, with the pandemic, the need for online teaching has skyrocketed, causing a shift in the way teachers view and approach online teaching. With this shift in mindset, it is likely that teacher readiness and competence in online teaching have also improved.

Objective 2

To compare the level of employee readiness based on gender?

The purpose of this study was to compare the gender differences in transition

readiness. The findings demonstrated that there was no discernible difference in the willingness to change between males and females. However, there was a difference in the level of effort expectancy, with male teachers having a more positive view compared to female teachers.

Regarding the association between gender and employee transition preparedness, earlier studies have produced mixed findings. For instance, Vakola et al. (2003) showed that there was a significant difference between the two genders in terms of technology adoption, although Wittenstein (2008) found no significant difference between males and females. Min-ling (2015) also found a significant difference between males and females in terms of readiness to change, but this result contradicts other studies that found no significant difference.

Contrary to the present study findings, Watkins (2021) a doctorate study on employee attitude adopt change found that teachers have a high positive attitude towards online teaching and that females are more concerned about it compared to males. This suggests that the level of readiness and the level of concern for online teaching can vary across different studies and may be influenced by different factors. Nevertheless, it highlights the importance of understanding the attitudes and perceptions of teachers towards online teaching in order to support their professional development and ensure a positive learning experience for students.

The contrasting findings in the studies may be due to a number of factors.

Based on four criteria, Hung (2015) study evaluated the level of preparation for online teaching. Only one factor—self-efficacy, also known as effort expectancy in the study—was shown to significantly differ between male and female teachers, according to the findings. The other three criteria, on the other hand, showed no real

differences.

In contrast, a study by Perugine and Vladisavljević (2019) concluded that female respondents had more positive perceptions of online teaching compared to males. This finding highlights the importance of considering the attitudes and perceptions of teachers towards online teaching, as it can have a significant impact on their level of readiness and competence in this area.

One possible explanation is that a significant number of teachers are married and managing both their domestic and professional lives. For these teachers, online teaching offers the advantage of not having to bear the cost of travel and allows them to balance their personal and professional responsibilities more effectively.

Another possible explanation is that female teachers may be more concerned about online teaching and have a more positive attitude toward it. However, it is important to note that having a positive attitude is not the only factor that determines teacher readiness for online teaching. Technical skills and competence in using technology are also crucial components of teacher readiness.

Other research carried out in a comparable setting have discovered a significant difference in the degree of change preparedness between male and female employees. These results, however, are at odds with those of Wittenstein (2008), who discovered that there was no discernible difference in employee preparedness to change across the sexes.

According to the current study, men employees are more open to change than female employees. The distinctions between male and female personality dispositions are one explanation for this discrepancy. Male employees are typically more emotionally stable and open to experience than female employees (Vakola et al.

2003), making them better able to adjust to organisational change. The cross-tabulation analysis validated this conclusion.

These conflicting findings highlight the complexity of the issue and the need for further research to better understand the factors that influence employee readiness to change. It is important to consider the unique characteristics and experiences of different individuals and groups when evaluating their readiness to change, as this can have a significant impact on their ability to adapt to new circumstances and situations.

Objective 3 Employee readiness based on age groups.

A contrast study conducted by Shah & Shah (2010) found a significant difference across different ages in terms of employee readiness to change. According to the survey, older workers were more open to change than younger workers. This might be as a result of older workers having more dependents than younger workers.

On the other hand, wang et al. (2009) found significant differences between genders and ages in terms of technology acceptance and behavioral intentions. The study found that effort expectancy and social influence were affected by age groups. These results partially supported another study by Venkatesh et al (2003), which found that older people were stronger predictors of information technology adoption compared to younger people.

These findings however were at odds with the UTAUT model because both impacts were only appreciable for more senior users while being inconsequential for younger users. This might be because younger users frequently have better levels of self-efficacy while utilising new technologies. Moreover, younger users have a higher level of self-worth compared to older people. The study suggests that older users should be trained and that developers should improve the user-friendliness of apps.

Teddy & Swatman's (2010) study found that there is a significant difference in the level of e-learning adoption based on the age groups. Younger people, aged less than 30, showed a higher level of e-learning adoption compared to older people. The study found that younger people had a positive attitude towards technology and believed that learning materials, training opportunities, and peer support were important factors in their e-learning experience. This study lends credence to the notion that younger individuals are more open to embracing technology in their learning process and more technologically focused. However, older people may also benefit from technology-enhanced learning, especially with proper training and user-friendly technology.

According to Weinberg, (2004) vintage human capital models, it was believed that young workers would be the main individuals to embrace and reap the benefits of new technologies. However, this may not always be the case. As technology advancements, particularly in computing, tend to require specific skills, older and more experienced workers may have an advantage. This is due to the fact that human capital, or the knowledge and skills acquired through experience and education, tends to increase over a person's lifetime. Therefore, technological change may end up favoring experienced workers rather than the younger generation. This study supports prior online experience more than age.

Objective 4. To compare employee readiness based on online teaching experience?

The second objective of the study was to compare the level of preparedness for online teaching based on teaching experience, with a focus on differences among different age groups. The study found a significant difference in readiness levels among various age groups. A similar study conducted by Abid and Zahid in 2021

came to the same conclusion and identified several themes related to online teaching experiences, including cultural and gender-related issues, teaching effectiveness, challenges in online teaching, and faculty perceptions. The study found that younger faculty members (ages 25-35 and 35-45) struggled more with finding a balance between pedagogy and technology, while older and more experienced teachers had trained themselves to adapt to blended and global teaching practices. Another supportive study by Rafique and Mahmood in 2020, conducted in the Pakistani culture, found that age plays a significant role in determining technology readiness in the context of online teaching.

Kennedy (2015) supports the current view in his doctoral research, which found a positive correlation between years of online teaching experience and instructor readiness and satisfaction. Teachers who have prior experience with online teaching are more comfortable using technology, interacting with students, and display a greater sense of confidence and less anxiety when using technology. Additionally, a study by Hui-Lien Chou (2021) concluded that teachers who have previous experience with online teaching are more likely to continue using it in the future. This suggests that having prior experience with online teaching can lead to greater readiness and satisfaction, which in turn leads to a greater willingness to continue utilizing technology in the classroom. These findings highlight the importance of providing teachers with opportunities to gain experience and training in online teaching, as it can lead to better outcomes and a more positive experience for both teachers and students.

A supportive study conducted by Allen and Seamon (2012) found that 58% of faculty members reported feeling more fear about it, compared to only 42% who said they felt more excitement. Interestingly, among those who had already taught online

or blended courses, the ratio shifted, with two-thirds reporting feeling more excitement and one-third still feeling more fear.

This suggests that experience with online teaching can have a positive impact on one's attitude towards it. However, it's important to note that this correlation could have multiple explanations. It's possible that once faculty members start teaching online, they become more familiar with it and start to feel more excitement about it. Alternatively, it's also possible that faculty members who are already open to the idea of online teaching are more likely to choose to teach in this format. Regardless, these findings highlight the importance of providing support and resources to help faculty members feel confident and excited about teaching online.

A supportive study conducted by Tolba et al., (2022) in China found that teachers with prior experience in e-teaching, blended teaching, or virtual teaching are more likely to embrace technology and exhibit more consistency and innovation in their teaching. Another study by Liu (2013) found that science teachers with more than ten years of experience and those with less than five years exhibit significantly different technology adoption behaviors. The study discovered that the most crucial variable influencing instructors' propensity to accept technology was effort expectancy, while other research (Agarwal & Prasad, 1997) suggested that the presence of facilitating conditions is a more influential factor in determining teachers' readiness. These findings suggest that both individual factors, such as a teacher's experience and attitude towards technology, as well as environmental factors, such as the availability of resources and support, play important roles in shaping teachers' adoption of technology.

Objective.5 To identify the level of employee readiness based on job status (permanent, contract)

According to a survey, there is no discernible difference between full-time and part-time teachers' opinions of the degree of readiness for technological transformation in the educational sector. This conclusion was confirmed by Kennedy (2015) in his doctoral dissertation, which showed consistent results for online teaching regardless of the teacher's employment status being full-time or part-time.

Objective 6. To identify Encouraging and Discouraging/Reasons factors effect Employee Readiness.

Examining the elements that encourage and discourage employee willingness to change was the current study's sixth objective. A thematic analysis was conducted to identify and explain these factors.

The analysis revealed that individuals had extreme positive and negative responses to the change. The influential factors included institutional support, leadership that is tech-savvy, training for both students and teachers, concerns about academic dishonesty, technological skills, technophobia, a technological culture, and a well-organized reward system. Students' behaviour. These factors were found to have a significant impact on employee readiness to embrace technological change.

Khalid et al found similar results in the Pakistani context, where they explored the challenges faced by teachers and students during online sessions, particularly due to the impact of COVID-19. The shift to online education posed significant challenges in traditional cultures, especially in the absence of proper training. This lack of training caused panic among students, teachers, administrators, and other relevant personnel. One of the biggest challenges was the non-cooperation of students. The individual educational institutions were only provided with a few guidelines to follow, which further added to the confusion and difficulties.

The study conducted by Farooq et al (2020) during the COVID-19 pandemic highlights the challenges faced by students and teachers in adapting to virtual lectures. The shift to online education has caused anxiety, depression, and an excessive workload for many individuals. This has had a negative impact on their mental and emotional well-being.

These findings are consistent with Salman et al. (2021), who found that the evaluation system, such as online exams, assignments, and project submissions, posed significant challenges during the transition to online education. The fear and stress experienced by students during the pandemic, along with the lack of proper training for the chosen online system, only added to the challenges.

The findings of Aslam and Khan (2020) are also relevant to this study as they emphasize the importance of support for both teachers and students during the transition to online education. Maintaining their mental, social, and physical well-being is crucial for success in this new learning environment. Motivation and proper training can help control instability and ensure a smoother transition.

The studies discussed by Barry (2020) and Perera-Diltz and Moe (2014) highlight several challenges faced by individuals during the transition to online education. Lack of training, lack of technological and pedagogical skills, control anxiety, and lack of support are some of the key challenges identified in these studies. These challenges can significantly affect the success and well-being of individuals in the online learning environment.

In light of these challenges, it is crucial for educators, institutions, and policymakers to provide proper training and support to ensure the success and well-being of individuals in online education. According to Barry (2020), pedagogical

training, including course design and teaching strategies, is essential to help educators effectively deliver online courses. Additionally, assessment is a crucial part of the education system and requires particular attention in online teaching and learning (Perera-Diltz & Moe, 2014).

To address the challenges of lack of technological and pedagogical skills, proper training on the use of technology to support online learning should also be provided. This will help individuals feel more confident and comfortable in this new educational environment. Furthermore, providing support to help individuals manage and control anxiety and overcome any technological difficulties can also help them succeed and thrive in this new learning environment.

5.5 Conclusion

The study's findings led to the conclusion that public sector universities had a modest level of readiness for change. However, teachers had high expectations for their online students because they thought it would be beneficial to their professional lives.

Result found in the qualitative research about the performance expectancy, respondents highlighted the benefits of online teachings, such as increasing the literacy rate, reaching a global audience, and developing presentation skills. Some respondents had negative feedback, stating that online teaching was less expressive and less effective. Overall, most of the respondents had a positive attitude towards the usefulness of change readiness, especially in the face of the COVID-19 pandemic, to meet the Higher Education Commission's vision for smart universities and smart campuses.

Based on the findings of effort expectancy, the study found that teachers in

public sector universities were high level of readiness for online teaching. They had developed skills related to online teaching, such as using software, uploading files, engaging students, and effective communication etc.

There is a need for additional support to address internal issues and to increase the level of readiness for change, and psychological handling training may be a viable solution.

in the qualitative phase teachers have positive believes and highlighted few positive themes like, easy to use, easy access, easy course design, self-directed, and having knowledge about online teaching strategies. However, there were a few negative cases where teachers highlighted some themes, such as high workload, lack of ability to solve technical problems, and poor evaluation systems and difficulty handling academic dishonesty. These issues are essential to address because they can have a significant impact on teacher readiness and online teaching performance. Therefore, the study suggests that addressing these issues is crucial in ensuring a successful transition to online teaching in the future.

While physical training may be beneficial for some aspects of online teaching readiness, such as providing technical training to teachers, addressing the challenges highlighted by teachers may require a more comprehensive approach. For instance, addressing high workloads may involve re-organizing teacher schedules or providing support from teaching assistants. Providing a reliable technical support system can also address the issue of technical problems. Additionally, revising evaluation systems and providing feedback to teachers can improve online teaching effectiveness. Therefore, a multi-faceted approach may be necessary to address the challenges highlighted by teachers and enhance their readiness for online teaching.

Results concluded based on the facilitating condition, and feedback from the teachers, the organizational support for implementing successful change was not satisfactory. Several common factors were highlighted, including a lack of resources and insufficient accessories. Respondents also pointed out the non-availability of ICT assistance, as well as poor quality training and software, and issues with internet connectivity.

Some of the respondents expressed some level of satisfaction, noting that two universities provided full resources to their teachers. However, the overall feedback suggests that more needs to be done in terms of providing the necessary resources and support to teachers to facilitate successful change. This may include providing additional training, upgrading software and technology, and ensuring that teachers have access to the tools they need to effectively implement change in their classrooms. By addressing these issues, organizations can help to create a more supportive and conducive environment for teachers, enabling them to effectively implement change and drive meaningful improvements in the education system.

The study found that a low level of hedonic motivation was observed among teachers in their readiness for online teaching. The participants expressed feelings of fatigue, boredom, fear, and anxiety. The study suggested that the lack of practice and interest in technology contributed to these emotions. The organizational approach to alleviate the challenges of transitioning to online teaching involves identifying and addressing the underlying factors that affect the motivation levels of the teachers. This can be done through providing training and support to increase interest and excitement and reduce anxiety and fear in online teaching. The study highlights that a small number of participants showed enthusiasm and excitement towards updating their skills and embracing new technology. Such participants can serve as role models

and resources for other teachers who struggle with the online teaching transition.

Moreover, to cater to the research hypothesis to compare the level of readiness between males and females the null hypothesis was partially rejected and partially fail to reject. Specifically, the study concluded that, there was no difference between male and female perceptions in four factors, including performance expediency, social influence, facilitating conditions, and hedonic motivation. However, there was a significant difference in effort expectancy.

To address this issue, qualitative study concluded that organizations may conduct capacity-building training based on gender. This training can focus on providing individuals with the knowledge and skills they need to overcome barriers and achieve success in their respective fields. By tailoring this training to the unique needs and experiences of different genders, organizations can help ensure that all individuals have access to the resources they need to thrive.

To resolve this issue capacity-building training can provide women with the tools they need to overcome gender-based discrimination and biases that may limit their opportunities for career advancement. Similarly, training for men can help to address issues related to toxic masculinity and gender-based violence, while also providing them with the tools they need to support gender equality in the workplace and beyond.

Based on objective on comparing the level of readiness among different online teaching experience. The group of teacher having prior teaching experience of online teaching are more enthusiastic as compare to teachers with no prior experience. However, the hypothesis was rejected as the study found a significant difference among the three groups of online teaching. Furthermore, the study found a high level

of readiness among teachers who had 5-10 years of experience in online teaching.

The other demographic hypothesis compared the level of readiness among different age groups. The study found that people who were above 55 years of age had a low level of readiness compared to the other three age groups, which had minor differences in their level of readiness.

Based on these findings, the study suggested that training should be provided based on individual capacity, as already discussed. The study noted that older people may not have grown up with technology and may face challenges due to their physical abilities. Therefore, they require more attention and skills to overcome these challenges and increase their level of readiness

Based on the job status, a null hypothesis was developed and subsequently rejected, indicating that there is a difference in job readiness between contractual employees and permanent job holders in the face of job insecurity. The study concluded that contractual employees exhibit a higher level of readiness compared to permanent job holders. The qualitative study also concluded that, it is suggested that this may be due to the job insecurity that contractual employees face, causing them to be more proactive in dealing with the situation. On the other hand, permanent job holders may be more relaxed in their position, given their job security. To address this, it is recommended that pressure be imposed on permanent job holders to discourage complacency and encourage a more immediate response to changes in the job environment.

5.6 Recommendation based on Qualitative/Quantitative findings.

Quantitative recommendation

1. To enhance university teachers' medium level of readiness for online teaching, establishing Teacher Innovation Labs can be a transformative recommendation. These labs can serve as dynamic spaces where educators experiment with online tools, collaborate on innovative teaching strategies, and receive hands-on training in technology integration. Regular workshops, peer-learning sessions, and access to cutting-edge resources within these labs can foster creativity and build confidence. Additionally, offering incentives for innovative practices and encouraging collaborative problem-solving can motivate teachers to improve their readiness and adapt more effectively to online teaching environments.

1a. The research suggested, to HEC as policy maker, that it would be advantageous to formulate and implement policies or guidelines aimed at raising awareness about the benefits of online teaching through various channels such as social media and print media. Additionally, it suggests encouraging teachers to utilize educational apps for both the immediate challenges posed by COVID-19 and for future benefits.

1b. To enhance the effort expectancy of university teachers for effective online teaching, it is recommended to provide them with skillful training in areas such as student engagement during lectures, running software, uploading assignments, and evaluating the course, solving technical problems, online teaching strategies, handling student’s behavior. This can be achieved through online training sessions and workshops that focus on developing the necessary skills and competencies for effective online teaching. Additionally, the university should provide ongoing

technical support to ensure that teachers can effectively use the online teaching tools and resources. By doing so, teachers can increase their confidence in their ability to effectively deliver online classes, leading to improved student learning outcomes and job satisfaction.

1c. Heads of departments may designate tech-savvy teachers as mentors to support peers in integrating technology. By fostering a supportive culture and highlighting successful examples through peer-led workshops, universities can motivate faculty to adopt new skills, boosting overall readiness for online teaching.

. 1d. Under facilitating conditions Universities may implement a support system that includes training on student engagement, easy access to IT support, incentives for high performance, continuous development in digital skills, provision of essential tools like laptops and internet, investment in user-friendly software, and backup power. This approach will empower educators to deliver effective and uninterrupted online education, creating a strong digital learning environment.

1e. Under the hedonic motivation to improve teachers' enjoyment and satisfaction in technology adoption, it is recommended to provide motivational training through online sessions and workshops. These training sessions may focus on reducing anxiety, fear, and enhancing readiness for technology adoption. Furthermore, teachers my practice multiple apps, software, to enhance the quality of teaching and learning.

2. This study recommends targeted training programs to address gender differences in effort expectancy, where male faculty members demonstrated higher levels than females. To bridge this gap, customized workshops can enhance digital fluency among female faculty, focusing on user-friendly tools and step-by-step

guidance to build confidence. Mentorship programs involving tech-savvy male faculty members can foster peer learning, while hands-on practice sessions with real-life scenarios can help all faculty integrate technology into their teaching effectively. Additionally, ongoing tech support and resource accessibility can reduce perceived barriers, ensuring equitable readiness for online teaching across genders.

. 3. To improve senior instructors' readiness for online teaching, tailored training should include blended learning, user-friendly tools, and scenario-based sessions tied to their teaching needs. Interactive modules and regular feedback ensure alignment with their progress, while recognition for achievements boosts motivation. Post-training support, like help desks and peer assistance, ensures continuous guidance, helping them transition confidently to online teaching.

4. Instructors with low teaching experience often exhibit lower readiness for online teaching compared to their more experienced counterparts. To address this, institutions can offer opportunities for these instructors to engage in online teaching through structured orientation programs, team-teaching with experienced faculty, and microteaching sessions where they can practice in a supportive environment. Continuous professional development workshops and access to comprehensive resources, such as guides and pre-recorded lessons, can further enhance their skills. These initiatives not only build confidence but also provide the practical experience necessary to improve their readiness for online teaching.

5. This study recommendation that teachers could benefit from targeted training based on their job status, particularly considering the identified low levels of readiness in permanent faculty members. To enhance the effectiveness of such training, there is a recommendation to Administration focus on fostering long-term motivation among teachers towards online teaching. This approach aims to not only

address immediate readiness concerns but also to cultivate sustained enthusiasm and commitment, contributing to a more successful and enduring integration of online teaching practices.

Qualitative recommendations

This study recommends a series of interconnected strategies to enhance readiness for online teaching. Each step is designed to build upon the previous one, creating a cohesive and effective approach for success:

Tech-Savvy Leadership: The first step is to appoint leaders with technological expertise who can guide faculty in integrating technology into their teaching. These leaders will be crucial in aligning the institution's strategies for digital learning and will play a vital role in promoting technological advancements across the organization.

Promoting a Technological Culture: Once tech-savvy leaders are in place, the next step is to foster a culture that embraces technology. These leaders will model digital fluency and encourage faculty to adopt technology, making the entire institution more receptive to digital tools and online learning. A culture of innovation and adaptability will help reduce resistance and build readiness for change.

Comprehensive Training for Teachers and Students: With the leadership and culture in place, the third step is to offer tailored, ongoing training programs for both faculty and students. These programs will equip them with the necessary skills to use online platforms effectively, ensuring that everyone is prepared for digital education. Training will focus on key technological tools, pedagogical strategies, and best practices for online learning.

Addressing Technophobia: To ensure full participation, it's crucial to address any fear or anxiety around technology. Specialized support will be provided to those struggling with technology, creating a safe and encouraging environment where individuals can experiment and build their digital skills without fear of failure. This initiative will help reduce resistance to technology and enhance confidence among both faculty and students.

Institutional Support: As training and culture-building are underway, robust technical support must be put in place to assist faculty and students. Providing access to necessary resources, technical assistance, and troubleshooting support ensures that online teaching runs smoothly and effectively, with minimal disruption.

Continuous Check and Balance: Regular assessments will be conducted to monitor the needs of the institution, faculty, and students. This step will ensure that any gaps between existing policies and practical implementation are identified and addressed. Feedback loops will be established to continuously evaluate and adjust the online teaching environment to meet the evolving needs of all stakeholders.

Reward Systems Based on Performance: Finally, a reward system will be implemented to recognize and incentivize both faculty and students based on their performance in online teaching and learning. This system will acknowledge achievements and motivate continued efforts, ensuring that everyone remains committed to improving their skills and contributions to the digital learning environment. **Recommendations for future researcher**

For future research, the study recommends expanding the scope to include multiple stakeholders. Although the current study offers valuable insights by examining teachers' perceptions, future research could explore the perceptions of

other stakeholders such as students, administrators, support staff, and families. As all these stakeholders are invested in ensuring successful student outcomes, gaining their diverse perspectives could provide essential information for improving academic and behavioral outcomes.

Future researchers should consider using longitudinal data to investigate the relationships between variables and explore how they change over time. In addition, to build more comprehensive models, researchers should consider adding more factors to their analyses based on the study's recommendations. These factors could include additional demographic, social, and environmental variables that may impact the outcome of interest. By using longitudinal data and incorporating additional factors into their models, researchers can gain a deeper understanding of the mechanisms underlying complex phenomena and develop more effective strategies for addressing them.

5.7 Practical implications

The current research work has made a significant contribution to literature by exploring the level of readiness in multiple factors, particularly in relation to online teaching implementation. The findings of this study can greatly benefit university teachers by increasing their awareness about the importance of teacher readiness for successfully implementing massive changes.

This study may help organizations faculty members professional development and learning opportunities aimed at enriching their understanding of Learning Management Systems (LMSs). The training for faculty can be conducted through various formats, including face-to-face sessions, online modules, or a combination of both. Faculty members may engage in technical and pedagogical workshops, utilize

audio and video tutorials, and access up-to-date information on dedicated websites and "just-in-time" learning modules.

The study may help teachers practice using technology on a daily basis to help reduce the fear and anxiety associated with its usage. Through regular and consistent practice, teachers can become more familiar and comfortable with various technological tools, leading to increased pleasure and satisfaction in incorporating technology into their teaching methods. This positive experience with technology is anticipated to contribute to improved student learning outcomes and enhanced job satisfaction among teachers.

Teachers can increase their level of readiness by attending online courses, workshops, and training programs at national and international levels. Organizational resources can also be provided to support their development. By doing so, teachers will be better equipped to meet the vision of the Higher Education Commission for 2025.

Administrators can benefit by recognizing the crucial role Learning Management Systems (LMSs) play in institutions offering online courses. It is essential to allocate resources for the administration and support of LMSs. This study may provide assistance in understanding the importance of developing technical infrastructure and dedicating necessary resources, including hardware, software, and personnel, to effectively manage LMSs and associated technologies.

Leaders can utilize the insights from this research to tackle issues identified in the study, such as gender, age, online experience, and teachers' varying attitudes toward online teaching. The study emphasizes the specific practices teachers require and the challenges they encounter. Addressing these themes and addressing negative

responses can enhance overall teacher readiness. For instance, considering the differences found in age groups, recognizing that each age has distinct learning styles, with females being detail-oriented and males showing efficiency in technology adoption, suggests tailoring training based on demographic variables for more effective outcomes.

High authority (hod/dean) may Assign experienced teachers who are good at online teaching as mentors to new or unexperienced instructors can change their views about the importance of professional development. It's important to create and follow rules or guidelines that encourage the best ways to teach online both in terms of teaching methods and technology use. Building a network of teachers and instructional designers who share similar values and skills is helpful. Even if a teacher doesn't have experience teaching online, they can connect with others in the same group for support and learning.

The HEC can play a key role in funding projects for the successful implementation of online teaching and technology adoption. Administrators can also provide students with ethical and skills training to prepare them for sudden or abrupt changes in the learning environment. Through this study, teachers can become aware of the significant issue of student behavior and can address it using multiple strategies.

Organizations can make informed decisions to address the issues identified in the study. These include challenges such as faculty encountering technical difficulties, students engaging in unethical behaviors, internet-related issues, feelings of fear and anxiety, insufficient quality training, subpar course evaluations, inadequate resources, fatigue, and a lack of motivation. Utilizing the findings from the study, organizations can strategize and implement targeted interventions to mitigate these challenges and

create a more conducive environment for effective online teaching and learning.

This study is beneficial for students, teachers, administrators, and policymakers, even beyond the COVID-19 pandemic, as hybrid learning models become the new normal. It highlights the importance of enhancing teacher readiness for online teaching, directly impacting student outcomes, especially for marginalized communities who can access quality education from home. By equipping teachers with the necessary skills and addressing challenges like technophobia, the study promotes effective online learning environments. For administrators, it offers strategies for improving technical infrastructure and resource allocation, ensuring continued access to education. In the Pakistani context, this research helps bridge gaps in access to education, making it relevant in times of crisis, such as environmental issues (e.g., smog), political disruptions, road blockages, and other local challenges, aiding in the successful transition to hybrid learning.

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Appendix A

Topic Approval letter

NATIONAL UNIVERSITY OF MODERN LANGUAGES
FACULTY OF SOCIAL SCIENCES
DEPARTMENT OF EDUCATION

ML.1-4/2017/Edu Dated: 09-02-2021

To: **Samia Zaheer,**
782-Ph.D/Edu/F18

Subject: **APPROVAL OF Ph.D THESIS TOPIC AND SUPERVISOR**

1. Reference to Letter No, ML.1/2/2020-Edu, dated 25-01-2020, the Higher Authority has approved the topic and supervisor on the recommendation of Faculty Board of Studies vide its meeting held on 16th Oct 2020.

a. **Supervisor & CO-Supervisor's Name & Designation**
Dr. Saira Nudrat,
Assistant Professor,
Department of Education NUML, Islamabad.

b. Dr. Farkhanda Tabassum
Assistant Professor (Coordinator)

c. **Topic of Thesis**
"Employee Readiness to change at Higher Education Level During COVID-19 Pandemic."

2. You may carry out research on the given topic under the guidance of your Supervisor and submit the thesis for further evaluation within the stipulated time. It is inform you that your thesis should be submit within described period by **31 July 2023** positively for further necessary action please.

3. As per policy of NUML, all MPhil/PhD thesis are to be run on turnitin by QEC of NUML before being sent for evaluation. The university shall not take any responsibility for high similarity resulting due to thesis run from own sources.

4. Thesis are to be prepared strictly on NUML's format that can be had from (Coordinator, Department of Education)

Telephone No: 051-9265100-110 Ext: 2094
E-mail: ftabassum@numl.edu.pk

Dr. Marium Din
A/Head,
Department of Education

Distribution: Ms. Samia Zaheer (Ph.D Scholar)

Dr. Saira Nudrat (Thesis Supervisor)

Dr. Farkhanda Tabassum (Thesis Co-Supervisor)

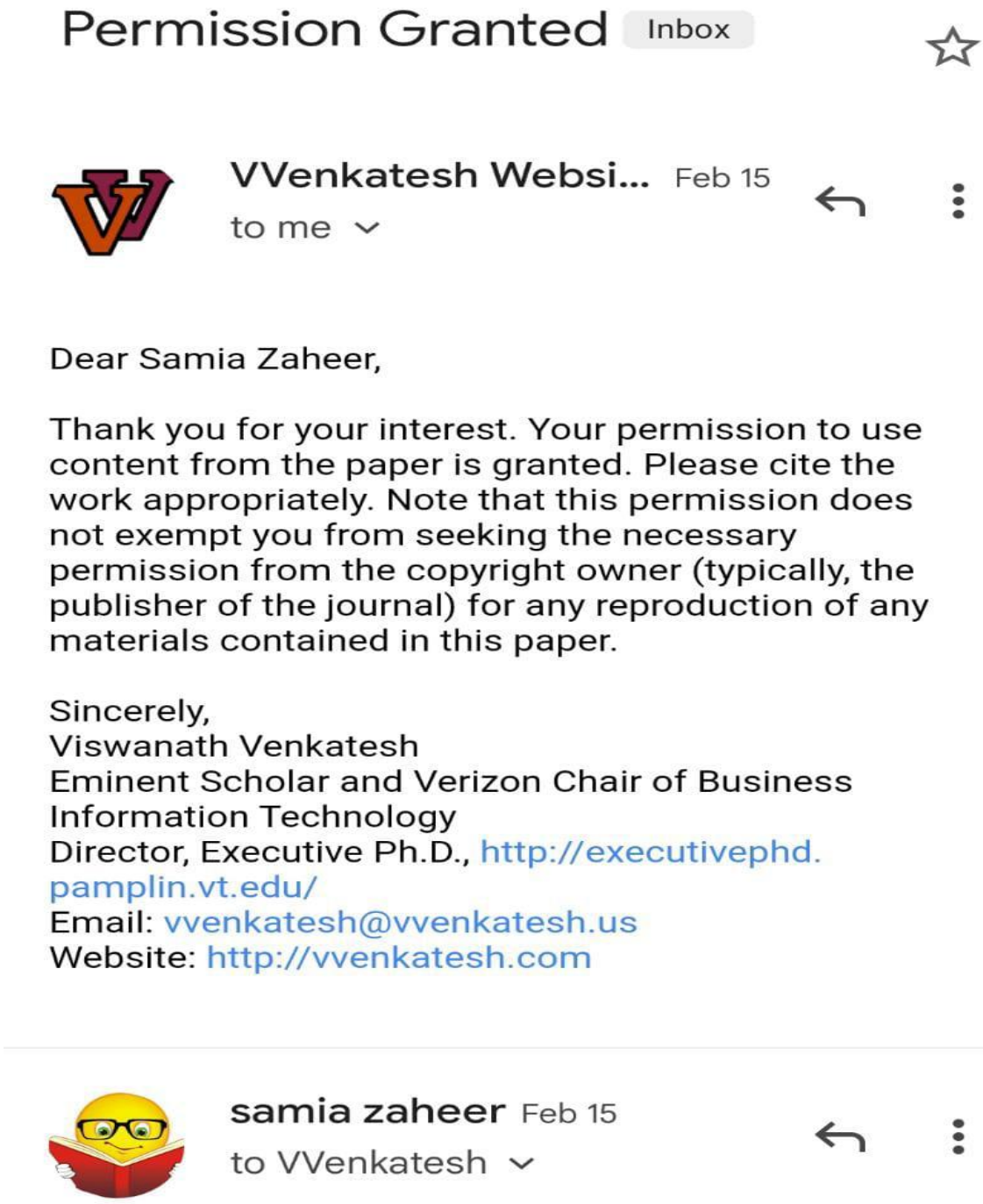
Appendix B

Public Universities list

SN	Public Sectors University	Social Sciences	Management Sciences
1	Quaid-i-Azam University, Islamabad	✔	✔
2	PMAS: Arid Agriculture, University Rawalpindi	✔	✔
3	National University of Modern Languages, Islamabad (NUML)	✔	✔
4	International Islamic University,Islamabad	✔	✔
5	Fatima Jinnah Women's University (FJWU)	✔	✔
6	Federal Urdu University Islamabad	✔	✔
7	Allama Iqbal Open University (AIOU) Islamabad)	✔	✔
8	Air University	✔	✔
9	Bahria University	✔	✔
10	PMAS(Arid Agriculture University Rawalpindi)	✔	✔
11	Comsats University Islamabad	✔	✔

Appendix C

Questionnaire Permission



Permission Granted Inbox

VVenkatesh Websi... Feb 15
to me

Dear Samia Zaheer,

Thank you for your interest. Your permission to use content from the paper is granted. Please cite the work appropriately. Note that this permission does not exempt you from seeking the necessary permission from the copyright owner (typically, the publisher of the journal) for any reproduction of any materials contained in this paper.

Sincerely,
Viswanath Venkatesh
Eminent Scholar and Verizon Chair of Business Information Technology
Director, Executive Ph.D., http://executivephd.pamplin.vt.edu/
Email: vvenkatesh@vvenkatesh.us
Website: http://vvenkatesh.com

samia zaheer Feb 15
to VVenkatesh

Appendix D

Semi Structured Interviews	
Question1	How do you perceive about Usefulness of online teaching?
Question 2	How you perceive about your skills using in online teaching.
Question 3	How do you perceived about the Influential Behavior to adopt online teaching?
Question 4	How do you perceived about the resources provide by university during the online teaching.
Question 5	How do you feel about online teaching?
Question 6	To what extent demographic factors influence upon readiness to adopt change?
Question 7	Explain the Encouraging factors toward the high readiness to adopt change? Explain the Reasons of employee low readiness to adopt change?

Appendix E
Cover Letter of Questionnaire

Dear Participants

I am writing to request your valuable participation in my research study, which aims to investigate employee readiness to change in higher education during the COVID-19 pandemic. As a PhD scholar at the National University of Modern Languages (Islamabad), I am conducting this research to contribute to the existing literature on the impact of pandemic on the higher education sector.

Your contribution to this study is highly valued, and your participation will greatly enhance the quality of my research. The questionnaire will take approximately 5 to 7 minutes to complete, and it comprises two main parts. The first part deals with your demographic information, while the second part explores your readiness to accept technological change during the pandemic. Your responses will be measured on a scale of 1 to 5, with 1 representing 'Strongly Disagree' and 5 representing 'Strongly Agree.'

To ensure the accuracy of my research, it is important that you provide honest and valuable answers to each question. Your participation in this study is entirely voluntary, and all information provided will be kept confidential.

Thank you in advance for your kind assistance, and your cooperation is highly appreciated. If you have any questions or concerns about the research study, please do not hesitate to contact me.

Samia Zaheer
PhD. Scholar
National University of
Modern Languages, Islamabad
Samiazaheer2233@gmail.com

Appendix F

Questionnaire

Would you please provide your Demographic Information by putting the tick mark?

Sr.	Demographic Variable	Responses	
1	Name (Optional)		
2	Name of institution		
3	Email address		
4	Contact		
5	Gender	☐ Male	☐ Female
6	Age	☐ 25-35 ☐ 46-55	☐ 36-45 ☐ above 55
7	Online Teaching Experience	☐ Less than 1 year ☐5 to 10 years	☐ 1 to 5 year
8	Faculty	☐Social sciences Sciences	☐ Management
9	Job-status (Permanent, Contract)		
9	Department Name		
10	Teaching Level	☐ Bachelor ☐ M.Phil.	☐ Master ☐ Ph.D.
11	Shift	☐Evening	☐ Morning

"Please indicate your level of agreement or disagreement with the statements below by selecting the appropriate tick (✓) mark on a scale of 1 to 5. The scale is as follows:

Strongly Disagree=1 Disagree=2 Neutral=3 Agree=4 Strongly Agree (SA)=5

Sr.	Statements	Responses				
Performance expectancy						
1	Online teaching is valuable for my professional carrier.					
2	Online teaching increases chances to achieve educational goals					
3	Online teaching can help me to accomplish things quickly					
4	Online teaching increases my presentation skills for effective communication					
5	Online teaching enables me to collect student's information quickly					
6	Online teaching provides an opportunity to validate information during lecture					
7	Online teaching enhances my performance to use technology in education.					
8	Online teaching increases knowledge about new educational technological innovations					
9	It is more convenient for me to teach internationally due to online teaching					
Effort Expectancy						
1	I can communicate with online audio and video conferencing easily.					
2	I can deploy various teaching and learning strategies when using ICT.					
3	I can use different kinds of applications to share teaching and learning content.					

4	I am able to manage the time efficiently.					
5	I can solve technical problems myself during online teaching.					
6	I can use office applications, such as Open Office, Microsoft Word, and Microsoft PowerPoint, easily					
7	I can easily upload and download learning content in various forms from different sources (such as video, audio, slides, notes, and exercises					
8	I can use a learning management system (LMS) and Google Meet for online teaching.					
9	I frequently use the internet to search for solutions to my problems, often relying on resources such as YouTube etc.					
10	I am able to make my lectures interesting to engage the students.					
11	I am able to evaluate students easily.					
12	I can manage multiple tasks due to online teaching					
13	I am able to handle academic dishonesty from students.					
Social influence						
1	People who are important to me think that I should deliver the online lecture					
2	Individuals with influential behaviors have expressed interest in me teaching online.					
3	Society invokes me to deliver online lectures during COVID 19 pandemic					
4	Students expect me to deliver lectures online during COVID 19 pandemic					
5	It is need of time to deliver online lectures during covid-19					
6	I am required by the administration to adopt online teaching due to COVID-19 pandemic					
7	Government of Pakistan's policy and HEC instructions forced us to take online classes during COVID-19					
Facilitating condition						
1	Organization provides enough knowledge necessary to teach online					
2	Educators are trained to engage students through effective communication techniques.					
3	IT experts facilitate teachers to fix problems during online teaching sessions					
4	University provides incentives for best performance					
5	Technology skills are provide through training for online teaching					
6	University provide us internet/laptop for home base teaching.					
7	Organizations purchase software based on the specific needs and requirements of their employees					
8	Organizations provide backup power to ensure uninterrupted online teaching when there is no electricity.					
Hedonic motivation						
1	I like online teaching to teach my students.					
2	I enjoy while using Learning Management System/zoom/Google Meet to teach online					
3	The actual process of using the system is more pleasant to teach online					
4	Online teaching is interesting to teach online					
5	I feel excited to deliver online lecture					
6	I feel happy to see people doing online teaching					
7	It is my pleasure to be a part of the online teaching community					

Appendix G

Tool Validity Certificate

TOOL VALIDITY CERTIFICATE

EMPLOYEE READINESS TO CHANGE AT HIGHER EDUCATION LEVEL DURING COVID-19 PANDEMIC

It is certified that the instrument measuring readiness to change, specifically assessing the constructs of performance expectancy, effort expectancy, social influence, facilitating condition, and hedonic motivation, has been assessed by me. Through a thorough validation study, I have found this instrument to be culturally adequate and accurately measuring the intended constructs.

I hereby grant permission to Miss Samia Zaheer, a PhD scholar from the National University of Modern Languages (NUML), bearing student ID NUML-F18-15875, to collect data using this survey questionnaire. I am confident that the data collected using this instrument is valid and will provide valuable insights into the construct of readiness to change.

Signature: _____

Name: Dr. Zafar Mir

Institution: AIOU

Appendix H

TOOL VALIDITY CERTIFICATE

EMPLOYEE READINESS TO CHANGE AT HIGHER EDUCATION LEVEL DURING COVID-19 PANDAMIC

It is certified that the instrument measuring readiness to change, specifically assessing the constructs of performance expectancy, effort expectancy, social influence, facilitating condition, and hedonic motivation, has been assessed by me. Through a thorough validation study, I have found this instrument to be culturally adequate and accurately measuring the intended constructs.

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Signature. _____

Name _____

Institution _____

Appendix I

Turnitin Report:

National University of Modern Languages
Quality Enhancement Cell
Sector H-9, P.O. Shaigan, Islamabad, Pakistan
Tel: +92-51-9265100 Ext 2246/2247
Web: www.numl.edu.pk

Dated: August 04, 2023

Faculty of Social Sciences

Subject: Turnitin Similarity Index Report of PhD Thesis of Ms Samia Zaheer (Educational Sciences) 1st Attempt

This is to state that **PhD** thesis of **Ms Samia Zaheer** has been run through **Turnitin Software on August 04, 2023**. Paper ID is 2141183510 and similarity index is **18%**. This is within the limit prescribed by the Higher Education Commission.

The subject similarity index report is attached for further processing, please.

National University of Modern Languages Quality Enhancement Cell H-9 Islamabad

(Dr. Khushbakht Hina)
Director
Quality Enhancement Cell

Dean/FSS

08/08/2023.

HoD - Edu. Sciences

APENDIX. J

TOOL VALIDITY CERTIFICATE

EMPLOYEE READINESS TO CHANGE AT HIGHER EDUCATION LEVEL DURING COVID-19 PANDAMIC

It is certified that the instrument measuring readiness to change, specifically assessing the constructs of performance expectancy, effort expectancy, social influence, facilitating condition, and hedonic motivation, has been assessed by me. Through a thorough validation study, I have found this instrument to be culturally adequate and accurately measuring the intended constructs.

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Signature. _____

Name **Dr Sajid Ali Yousuf Zai**

Institution TREAD Excellence

APPENDIX.K

TOOL VALIDITY CERTIFICATE

EMPLOYEE READINESS TO CHANGE AT HIGHER EDUCATION LEVEL DURING COVID-19 PANDAMIC

It is certified that the instrument measuring readiness to change, specifically assessing the constructs of performance expectancy, effort expectancy, social influence, facilitating condition, and hedonic motivation, has been assessed by me. Through a thorough validation study, I have found this instrument to be culturally adequate and accurately measuring the intended constructs.

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Signature. _____

Name Dr. Ayaz ul Haq

Institution FMS, UCP, Awp.

Appendix L

Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis (EFA)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	13895.666
	Df	946
	Sig.	.000

In the above table the Kaiser-Meyer-Olkin measure of .873 which is above the standard value of 0.70 show that the sample from which data was drawn was adequate. A p value equal to .000 shows significance level in Bartlett's test of sphericity.

Table: **Total Variance Explained**

Component	Communalities	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Extraction	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	.593	11.208	25.473	25.473	10.863	24.688	24.688
2	.711	7.225	16.420	41.893	5.532	12.573	37.261
3	.717	5.380	12.226	54.120	5.458	12.405	49.666
4	.754	4.020	9.136	63.255	4.643	10.553	60.219
5	.712	2.271	5.161	68.416	3.607	8.197	68.416
6	.651	1.283	2.916	71.331			
7	.497	1.120	2.546	73.877			
8	.442	.995	2.261	76.139			
9	.398	.809	1.839	77.978			
10	.841	.729	1.657	79.635			
11	.828	.687	1.561	81.195			
12	.652	.586	1.332	82.527			
13	.671	.531	1.207	83.734			
14	.853	.487	1.106	84.840			
15	.852	.482	1.096	85.937			
16	.693	.436	.990	86.927			
17	.671	.405	.921	87.848			
18	.616	.389	.885	88.733			
19	.620	.382	.868	89.601			
20	.618	.364	.827	90.428			

21	.616	.339	.771	91.199
22	.522	.313	.712	91.911
23	.468	.300	.682	92.593
24	.605	.278	.633	93.226
25	.645	.272	.618	93.844
26	.793	.248	.563	94.407
27	.718	.226	.514	94.921
28	.691	.218	.495	95.416
29	.713	.215	.489	95.905
30	.655	.203	.462	96.367
31	.739	.187	.425	96.792
32	.590	.181	.412	97.204
33	.671	.172	.391	97.595
34	.698	.150	.342	97.937
35	.633	.145	.330	98.267
36	.714	.131	.298	98.565
37	.703	.123	.278	98.844
38	.805	.113	.256	99.100
39	.805	.103	.235	99.334
40	.811	.099	.226	99.560
41	.779	.082	.186	99.746
42	.718	.048	.109	99.855
43	.825	.042	.096	99.951
44	.798	.022	.049	100.000

Extraction Method: Principal Component Analysis.

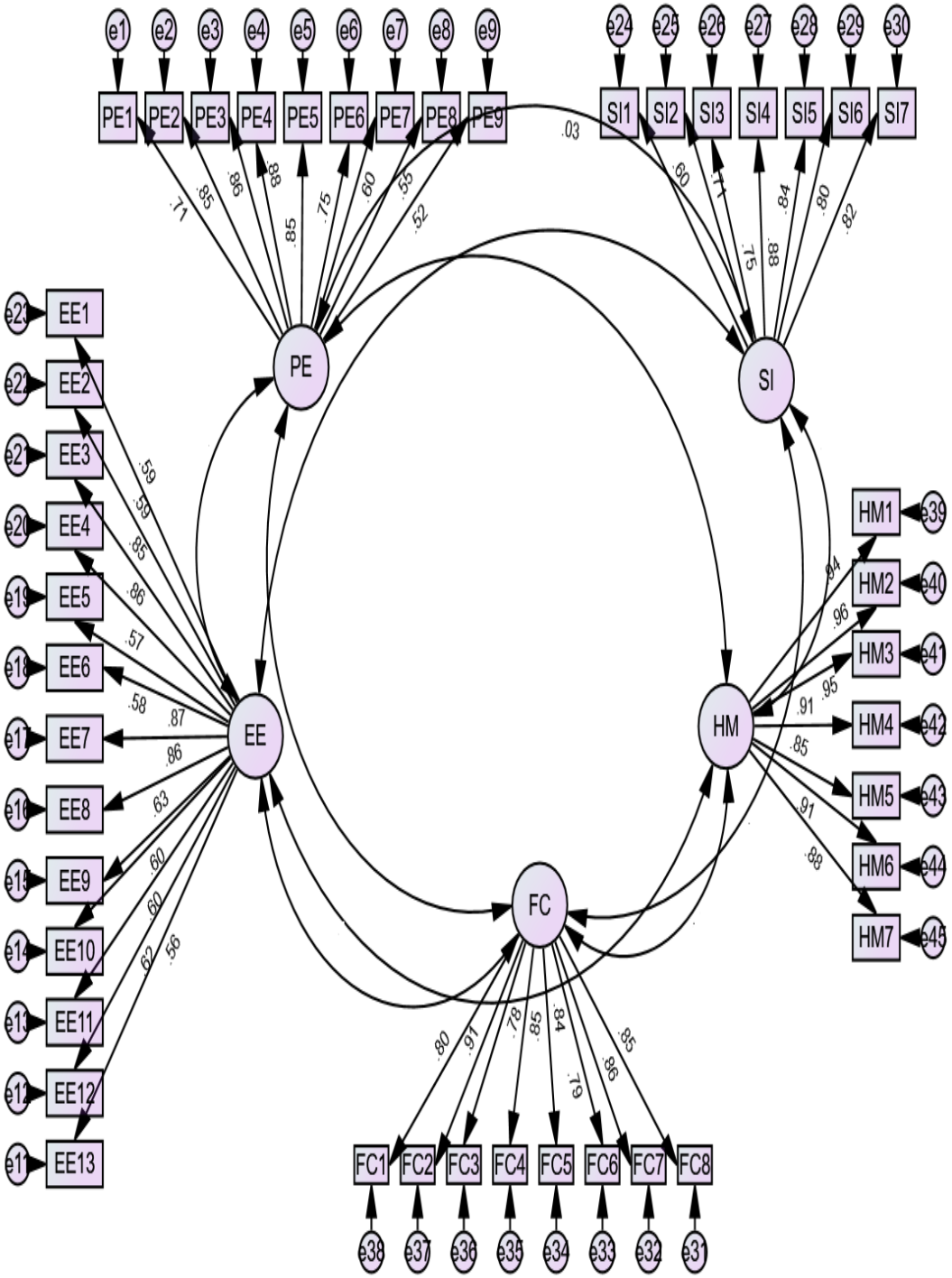
Table: Rotated Component Matrix

	Component				
	Facilitating Condition	Effort Expectancy	Performance Expectancy	Social Influence	Hedonic Motivation
PE1			.764		
PE2			.840		
PE3			.841		
PE4			.863		
PE5			.835		
PE6			.804		
PE7			.695		
PE8			.645		
PE9			.616		
EE1		.869			
EE2		.861			
EE3		.735			
EE4		.725			
EE5		.889			
EE6		.886			
EE7		.763			
EE8		.728			
EE9		.779			
EE10		.785			
EE11		.771			
EE12		.769			
EE13		.715			
SI1				.662	
SI2				.769	
SI3				.798	
SI4				.885	
SI5				.836	
SI6				.819	
SI7				.825	
FC1	.801				
FC2	.849				
FC3	.767				
FC4	.816				
FC5	.824				
FC6	.781				
FC7	.837				
FC8	.827				
HM1					.890
HM2					.894

HM3	.899
HM4	.880
HM5	.845
HM6	.895
HM7	.889

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Appendix M
Confirmatory Factor Analysis



Appendix N

Convergent Validity: Factor Loadings, Average Variance Extracted (AVE), and Construct Reliability

Name of Variable/Construct	Items	Factor Loading	AVE Score	CR Values
Performance Expectancy			.55	.91
	PE1	.714		
	PE2	.850		
	PE3	.856		
	PE4	.883		
	PE5	.847		
	PE6	.746		
	PE7	.596		
	PE8	.548		
	PE9	.516		
Effort Expectancy			.51	.92
	EE1	0.586		
	EE2	0.593		
	EE3	0.851		
	EE4	0.858		
	EE5	0.574		
	EE6	0.577		
	EE7	0.871		
	EE8	0.857		
	EE9	0.630		
	EE10	0.601		
	EE11	0.596		
	EE12	0.621		
	EE13	0.560		
Social Influence			.60	.91
	SI1	.600		
	SI2	.711		
	SI3	.749		
	SI4	.875		
	SI5	.843		
	SI6	.796		
	SI7	.821		
Facilitating Condition			.70	.95
	FC1	0.799		
	FC2	0.909		
	FC3	0.784		
	FC4	0.85		
	FC5	0.844		
	FC6	0.794		
	FC7	0.855		
	FC8	0.848		
Hedonic Motivation			.84	.91
	HM1	.937		
	HM2	.955		
	HM3	.953		
	HM4	.915		

	HM5	.849
	HM6	.907
	HM7	.880

Appendix N
Department checklist

SR	**Public sector Universities of Rawalpindi and Islamabad**	International relation	Anthropology/ Sociology	Business Administration	Commerce and finance	Economics	Mass media communication.	Languages (English, Urdu)	Education	psychology
1	Arid agriculture University Rawalpindi		✔	✔	✔	✔	✔		✔	
2	National University of modern languages	✔		✔	✔	✔	✔	✔	✔	✔
3	National University of Science and technology	✔		✔	✔	✔	✔	✔		✔
4	Comsats University Islamabad	✔		✔	✔	✔	✔	✔		✔
5	Fatima Jinah Women University Rawalpindi	✔	✔	✔	✔	✔	✔	✔	✔	✔
6	Air University Islamabad			✔	✔	✔	✔	✔	✔	✔
7	Federal Urdu University Islamabad	✔		✔	✔	✔	✔	✔	✔	✔
8	Quaide Azam University	✔	✔	✔	✔	✔	✔	✔		✔
9	Bahria University	✔	✔	✔	✔	✔	✔	✔		✔
10	International Islamic University Islamabad	✔	✔	✔	✔	✔	✔	✔	✔	✔
11	Allama Iqbal Open University	✔	✔	✔	✔	✔	✔	✔	✔	✔

Appendix O

Details of Faculties & Sample in Universities

Details of Faculties & Sample in Universities

		Social Sciences									
		Management Sciences									
SR	Public sector Universities of Rawalpindi and Islamabad	International relation	Anthropology/ sociology	Business Administration	Commerce and finance	Economics	Mass media communication.	Languages (English, Urdu)	Education	psychology	Total
1	Arid agriculture University Rawalpindi	0	3	3	3	3	3	3	5	0	23
2	National University of modern languages	3	5	4	4	4	3	6	5	3	37
3	National University of Science and technology	2	0	5	4	6	6	5	0	3	31
4	Comsats University Islamabad	4	0	4	4	4	5	6	0	4	31
5	Fatima Jinah Women University Rawalpindi	3	5	6	3	4	5	4	5	4	39
6	Air University Islamabad	0	0	4	4	6	4	4	4	3	29
7	Federal Urdu University Islamabad	4	0	2	2	4	3	2	2	2	21
8	Quaide Azam University	3	4	4	4	3	3	3	0	3	27
9	Bahria University	4	5	4	3	2	3	4	0	3	28
10	International Islamic University Islamabad	3	2	4	3	3	2	2	2	3	24
11	Allama Iqbal Open University	2	2	2	2	1	6	6	6	5	32
	Total	**28**	**26**	**42**	**36**	**40**	**43**	**45**	**29**	**33**	**322**

Appendix P
Detail of Sample size

SR	**Departments of social sciences and Management sciences**	**Sample**
1.	Department of Anthropology & sociology	26
2.	Department of Business administration	42
3.	Department Commerce and finance	36
4.	Department of Mass media communication.	43
5.	Department International relation	28
6.	Department of Economics	40
7.	Department of Education	29
8.	Department of English	45
9.	Department of Psychology	33

Total= 322

Appendix Q

Methodological Triangulation

Quantitative	Qualitative	Triangulation
Factor 1(PE) = Professional carrier. Achieve educational goals. collect student's information quickly Effective communication. Accomplish things quickly. Validate information during lecture. enhances my performance to use technology Knowledge about new educational technological innovations. Teach internationally due to online teaching**.(HIGH)**	Increase literacy rate Global teaching. Effective communication skills Learning opportunity Easy to access Learned presentation technique. Less Facial expression Less effective.	Performance expectancy was high in the quantitative data, with most participants agreeing on key aspects in Qualitative data **However**, Some highlighted that online teaching is **less effective** due to the **lack of face-to-face interaction,** which can hinder engagement and personalized feedback. Additionally, the absence of immersive experiences, such as lab work or group discussions, can affect learning outcomes. ..

Key findings Quantitative	Key findings Qualitative(Positive)	Triangulation
Factor 2 (EE)= (High) High level of performance expectancy in Communicate with online audio and video conferencing easily, deploy various teaching and learning strategies, use office applications, such as Open Office, Manage my time efficiently, Solve technical problems, Easily upload and download learning content, Learning management system (LMS) TEAM, ZOOM. Use the internet to search for	High Workload Enough knowledge 0T Strategies Lack of solving technicalities Easy Application Enough OT Strategies Self-directed learning Easy course design. Students involvement Course Evaluation Lack of Handle academic dishonesty	Effort expectancy is high in Quantitative data with most of faculty agreeing on key aspects like they have ability to to use the online teaching apps, course design, manage time efficiently, uploading learning content, engaging students, self-directed learning, **However** They felt difficulty on handling academic dishonesty from student's, student's involvement, solving technical issues, Effective

solutions to my problems on NET. make my lectures interesting to engage Evaluate students easily. manage multiple tasks handle academic dishonesty manage multiple tasks		evaluations.

Key findings Quantitative **Factor 3(SI) (Medium)**	**Key findings Qualitative** **Key findings Qualitative(Mixed)**	**Triangulation** **Triangulation (Supporting)**
Faculty adopt online teaching(technology) due to influential people surrounding them.(**Medium)**	Influential behavior push me to go to use technology, Adopting by the societal needs, Administration forced to use for compete. Few of them were tech savvy as they updated all time.	Faculty are mixed feelings agreeing to adopt online teaching by societal pressure, and administrative pressure. Self-updated (Tec savvy) **However** Few faculty mentioned that it's only due to COVID-19.
Key findings Quantitative Factor 4 (FC)(LOW)	**Key findings Qualitative(Negative)**	**Triangulation(Supporting)**
provides enough knowledge Educators are trained to engage IT experts facilitate us to fix problems provides incentives for best performance Technology skills are provided University provides us with internet/laptop purchase software based on the specific needs and employee requirements provide backup power	Poor technical Assistance Bad quality software and internet already provided accessories in 2013 Non-availability of ICT assistance Slow speed internet Self-Assistance Poor quality training provided	Facilitating conditions was low with agreeing faculty members in both data resources. **However** Few faculty highlighted that they provided basic training instead of advance.

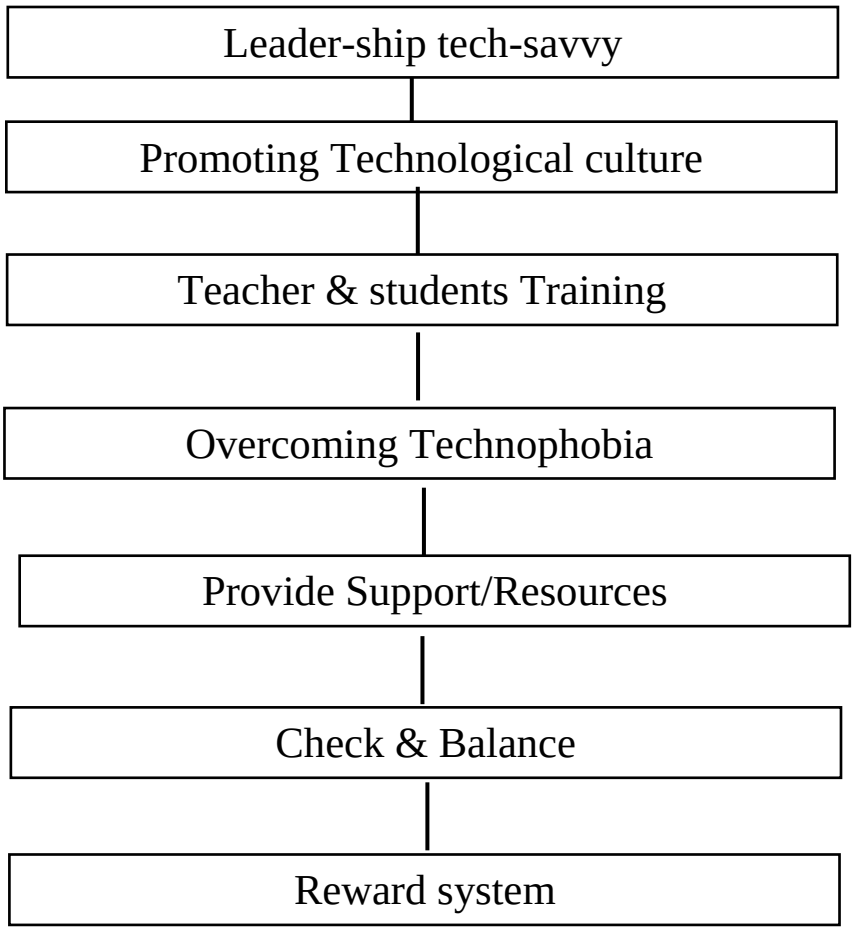
Key findings Quantitative Factor 4 (HM,LOW)	Key findings Qualitative(Low)	Triangulation(Supporting)
like online teaching enjoy using apps interesting to teach Happy to see people doing work Pleasure to be part of it Excited to deliver an	Fatigue, Fear & Anxiety, Less practice,Exited	Hedonic motivation is low in both data**.** **However** Few participants mentioned being excited and tech-savvy, investing in the latest cameras, speakers, and software for effective online teaching.

Key findings Quantitative Factor 4 (HM,LOW)	Key findings Qualitative(Low)	Triangulation(Supporting)
Gender comparison toward Readiness. No significance difference Exists. (P: 0.414) Table=4.15	**To what extent Demographic factors are influential? (Gender)** (Supported Quantitative Results) No difference, Males are dominant, Females are detail oriented, Depend on practice. Mentally stable.	Faculty mentioned that No difference in gender, few of them have highlighted that Males are dominant, Females are detail oriented, Depend on practice, **However** Male are more Mentally stable, open to new experience a more opportunity to learn and practice.
Age Comparison toward Readiness. (Significance Difference Exist in every group) Above 55 are less Ready than others. (F=19.110, p.05) Table=4.18	**(Supporting)** Technology brought up & trustworthy, Daily Technology usage, Tolerance More conscious	Faculty mentioned that they have grown up with technology and use it daily. However, a few faculty members above 55 expressed concerns that technology is not trustworthy and that they struggle to tolerate students' behaviour in online settings. **However** Less people mentioned that above 55 are more conscious.

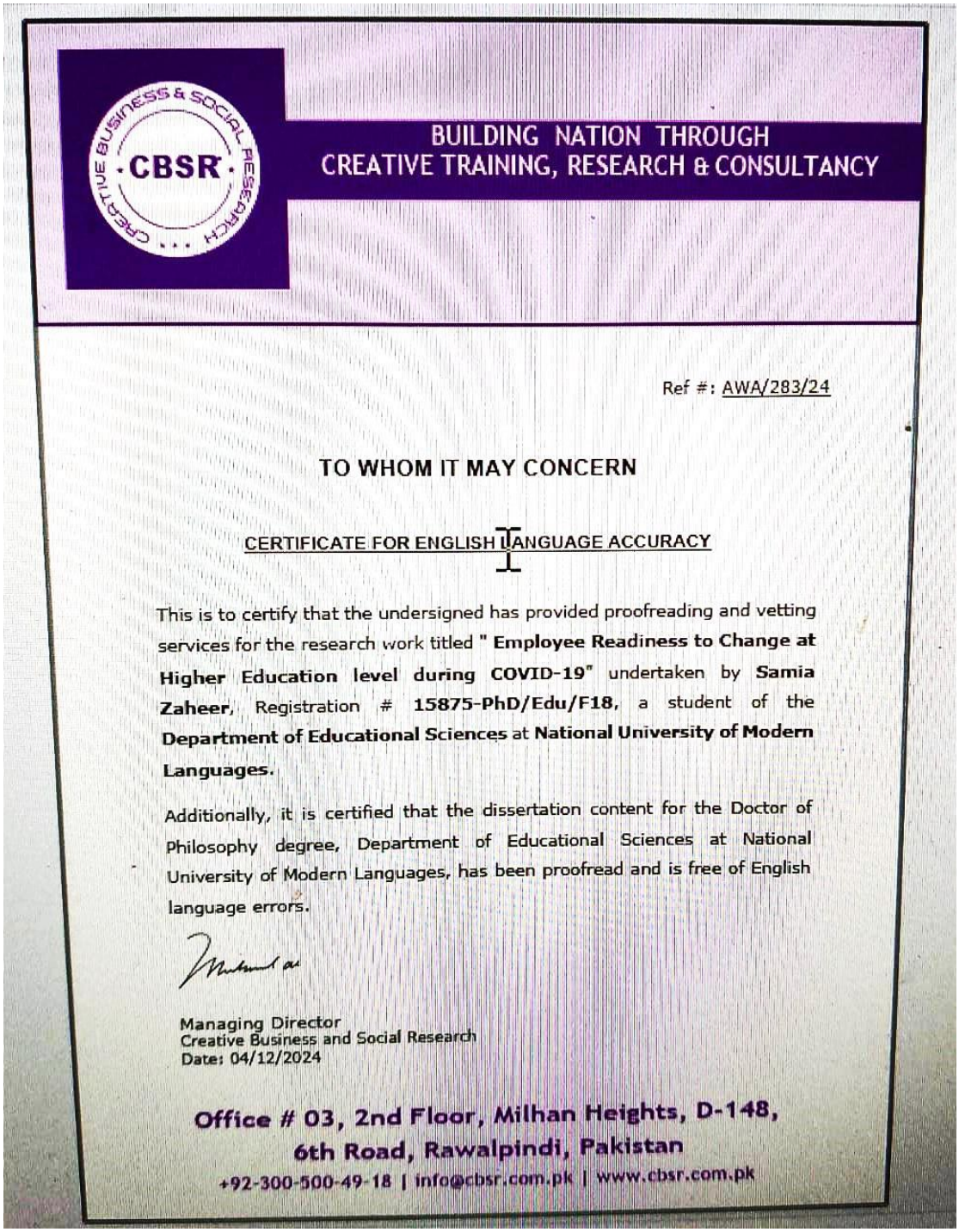
Experience Comparison (Online teaching experience) 5-10 year (High Readiness Table=4.19	**(Supporting)** Efficiency Positive Attitude & confident Less technology fear Motivated	Faculty mentioned that high experience are more efficient, positive, less technological fear, motivated, confident.
Job status Comparison(Contract & Permanent) Significance Difference Exist(.000) Contractual are more ready. Table=4.21	**(Supporting)** Job promotion. Insecurity Already experiences, Brought up	Faculty highlighted the need to be more vigilant about job promotions, as they are already working with different firms and using technology daily. They emphasized that they have grown up with technology and practice it regularly.

Appendix R

Mechanism to solve the highlighted problems.



Appendix S
Certificate of proof reading



BUILDING NATION THROUGH
CREATIVE TRAINING, RESEARCH & CONSULTANCY

Ref #: AWA/283/24

TO WHOM IT MAY CONCERN

CERTIFICATE FOR ENGLISH LANGUAGE ACCURACY

This is to certify that the undersigned has provided proofreading and vetting services for the research work titled " **Employee Readiness to Change at Higher Education level during COVID-19**" undertaken by **Samia Zaheer**, Registration # **15875-PhD/Edu/F18**, a student of the **Department of Educational Sciences** at **National University of Modern Languages**.

Additionally, it is certified that the dissertation content for the Doctor of Philosophy degree, Department of Educational Sciences at National University of Modern Languages, has been proofread and is free of English language errors.

Managing Director
Creative Business and Social Research
Date: 04/12/2024

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