E-LEARNING IN THE CLASSROOM: A TEACHER'S PERSPECTIVE ON E-LEARNING READINESS AND ADOPTION

NEHA SAXENA, Ph.D.
Scholar (Education), Department of Education and Humanities, Manav Rachna University, Faridabad, India
Email: neha.12jan@gmail.com
ORCID iD: https://orcid.org/0000-0002-1863-2589

DR. KIRAN GUPTA, Associate Professor,
Department of Education and Humanities, Manav Rachna University, Faridabad, India
Email: guptakiran4121@gmail.com
ORCID iD: https://orcid.org/0000-0002-6301-8107

DR. BISHAN SINGH NAGI,
Retired Director, Research Council for Social Development
Co-Supervisor, Visiting Faculty for Ph.D. Scholars, Manav Rachna University, Faridabad, India
Email: bishansn@gmail.com

ABSTRACT
This study aimed to ascertain teachers' readiness to embrace the opportunity of E-learning. The researchers utilized the approach of descriptive research. The study gathered data from school teachers, who completed a questionnaire as part of the data collection process. A questionnaire was developed to collect data qualitatively and quantitatively. The key factors were derived from (Akaslan & Law, 2011; Aydin & Tasci, 2005) models of E-learning readiness. Along with demographic data, the questionnaire focused on four key factors: technology, innovation, personnel, and E-learning training. The teachers graded their available resources, skills, and attitude on a 5-point Likert scale, and qualitative data were also gathered. Teachers appear to have embraced the integration of E-learning in their pedagogy. However, some raised concerns regarding institutional support and technological use. Additionally, they believe their school is prepared to undertake E-learning but requires minor improvements in the matters of technology and personnel. This study will have an impact on teachers, students, and the institution as a whole. The study's findings may serve as a reflection for the institution in terms of considering how to sustainably incorporate E-learning into schools and in terms of understanding teacher requirements.
Keywords Online learning, Educators, measuring readiness, innovative teaching, E-learning Training

INTRODUCTION

Education around the world has seen several rapid changes. The greatest dramatic change has occurred in the way technology is used. Society has become more globalized, and digital technology has permeated the educational system (Mynbayeva *et al*., 2018). Students now stay connected internationally and have access to information in the palm of their hands thanks to the Internet and technological advancements (Cardoza & Tunks, 2014).

Since the pandemic, learners worldwide have been impacted by school closures and other educational institutions. We have been repeatedly reminded of the critical role of world teachers throughout this historic period. Without them, it would have been difficult to envision the world's education. However, some studies assert that teachers were unprepared for the new mode of instruction delivery, as the majority of teachers were unaccustomed to these unexpected situations. Teachers would have struggled, but they would never have jeopardized education. We should recognize and celebrate their achievements. While school closures were undoubtedly detrimental to society, teachers learned, experimented, improvised, and discovered several methods to increase their students' educational reach. Due to the terrible pandemic condition, the reliance on technology has expanded dramatically. The pandemic has compelled educational institutions to re-examine the necessity of E-learning or hybrid-blended teaching as the only viable option for conventional face-to-face instruction. A lot of nations have created ways of using E-learning in education. According to the Global Learner's Survey (2020), E-learning played a significant role in the experiences of learners of all ages as a result of the pandemic. In light of this fact, it is clear that there is a pressing need for increased investment and enhanced use of educational technology; i.e., if online education is here to stay, students deserve a better experience (Pearson, 2020), which indicates the concern for quality. The pandemic has forced the majority of schools worldwide to transit to E-learning, while some have opted for a hybrid/ blended model. Concerns about quality are a significant factor in this respect. The teacher's readiness is a critical component to consider while determining the education quality.

Considerable research has examined and quantified the readiness aspects that impact online learning efficacy in education. According to Dogbey et al, E-learning education is a collaborative effort aimed at facilitating and enhancing meaningful engagement among students, teachers, and resources (Dogbey et al., 2017; Siemens &

Irvine, 2013). The knowledge and skills acquired via face-to-face teaching are inadequate for E-learning. Additionally, Gray and Tobin demonstrate that online learning promotes teaching approaches that do not require textbooks and may reach a large number of students, thus overcoming space and time constraints without requiring additional resources except technological resources (Gray & Tobin, 2010). These conditions have not only compelled teachers to experiment with several innovative approaches, but it has also presented them with an opportunity to develop their competencies on an E-platform. Teachers play an important role in the educational process, so this study investigates their perspectives and perceptions of their readiness for E-learning educational opportunities.The goal of this study is to show how teachers are adopting digital trends and what they think about the future of education.

Innovative teaching Methodologies

Teachers' active utilization of innovative teaching methodologies is a must in the modern day (Mynbayeva et al., 2018). It is critical for instructors to strengthen their digital abilities and receive enough training in pedagogical techniques appropriate to E-learning. The use or non-use of innovative methods is contingent upon the teacher's personality, methodological competency, and pedagogical skills. Teachers who don't know how to use the most up-to-date technology or software often don't have the confidence to use technology in the classroom, which can lead to them not wanting to use technology in the classroom. Teachers say they have high technical skills for the personal use of technology but lack the skills and knowledge to integrate technology into teaching and learning (Al-Awidi, H.; Aldhafeeri, 2017). Teachers are capable of in-depth reflection on their experiences. Thus, the current assessment of readiness was conducted from the perspective of a worldwide teacher's experience.

Teacher's Readiness

Readiness is a difficult concept to grasp, thus it should be given the utmost consideration. For someone to be considered "ready," several factors must be taken into account. The teacher plays a critical part in the proper implementation of any learning strategy, and its success is strongly dependent on the ability of teachers to seamlessly shift from their traditional classroom duties to the broader, more complex position of E-learning facilitators (Comas-Quinn, 2011).

Research on their readiness for change can help explain teachers' attitudes and behaviors in this particular context. "The cognitive precursor to the actions of either opposition to, or support for, a change endeavor" might be defined as "readiness" (Mansor et al., 2021). Having the knowledge, talent, or capacity to perform a certain skilled task swiftly and as per industry standards constitutes one's level of competence (Richey et al., 2001). Education providers are ready when they have the necessary skills and mindset to succeed in their goal of providing quality education to students. The learning experience of students depends heavily on the teacher's readiness, which includes their attitude, training, and behavior (Zimmerman et al., 2020).

Technology as E-learning Competency

Technology is the key component in E-learning. Apart from other key factors such as computers and the internet, technological readiness is defined by two components: hardware and software (Akaslan & Law, 2011). Efficient technological abilities, when combined with unique pedagogical skills, not only enhance the competency of the teacher but also create an interactive teaching-learning environment. Teachers' willingness to use technology in their classrooms is a critical influencing element that has a significant positive impact on the integration of technology into education (Inan & Lowther, 2010). Teachers' readiness to adapt and their attitude toward technology are two of the most important factors in the successful integration of technology and its effective usage in education (Cavas et al., 2009).

Innovation as E-learning Competency

As a component, innovation entails a thorough evaluation of prior experiences. Rogers asserts that prior experiences with innovation in a system may potentially influence the acceptance of a new one (Rogers, 2003). Whether or not a teacher is open to E-learning can be inferred from their attitude toward innovation. Thus, the readiness questionnaire includes multiple questions concerning the acceptability of innovative technologies. Having a solid foundation in digital media and learning new skills, responsibilities, professional development, and attitudes regarding technology integration are essential for teachers who plan to teach online (Ruggiero & Mong, 2015).

Personnel as E-learning Competency

While learning during the pandemic era has been difficult for both students and potential teachers, this period of upheaval has provided a chance to rethink and reimagine preparation as well as education itself (Darling-Hammond & Hyler, 2020). The school is responsible for providing a support structure for teachers. Support from both within and beyond the school is critical. Barnett Berry (2020) stated that the pandemic would demonstrate that if teachers

are to give such support, they must have additional time to collaborate with other professional experts (Berry, 2020). The personnel factor is concerned with the characteristics of the institution's total human resources. Additionally, Rogers (2003) notes that those with a greater degree of education are more likely to accept an invention than those with a lower level of knowledge (Rogers, 2003). Thus, teacher education levels can be utilized as a predictor of e-learning readiness.

Training as E-learning Competency

Additionally, as part of the process of determining how individuals in schools help teachers, it is thought necessary to determine if individuals in schools require E-learning training. Providing training is another pursuit of the school. E-learning training is important for E-learning readiness and should be part of the process of deploying E-learning (Akaslan & Law, 2011).

Strong teacher training that improves teacher efficacy and retention is more critical today than ever (Podolsky et al., 2016). A consistent vision, well-defined criteria, and the modeling of research-based, successful practices are required for high-quality teacher training programs (Darling-Hammond & Hyler, 2020). It should also reflect contemporary educational goals. Teachers' perceptions of online teaching competence improved with professional development programs (Northcote et al., 2015).

Resources, Skills, and Attitudes

Teaching competencies are evaluated in terms of resources, skills, and attitude. Knowledge is classified as a skill, whereas habits are classified as an attitude. When combined with resources, they constitute a construct.

Resource construction is critical in terms of instructional materials, core technical frameworks, and the provision of information technology services. An E-learning school must have an acceptable modern essential infrastructure in order to provide its services. When teachers and students have access to appropriate and updated innovative resources, communication, assistance, information technology, and others, support becomes simpler. As a result, resources, technology, and information technology may all contribute to the success of E-learning. It must also include a resource center for supporting effective E-learning teaching and learning. E-learning education requires teachers, managers, and support staff to be well-qualified, well-trained, and well-equipped to help students accomplish their learning goals.

Attitudes are the viewpoints that individuals might take in response to a transformation process (Van den Berg, 2002). Attitude refers to a person's perspective on something and its personal significance to them (Krosnick & Petty, 2016). It is critical to assess teachers' views on the significance of various E-learning abilities. Teachers who are supportive of online course delivery are more capable of attaining excellent student results (Volery & Lord, 2000).

In summary, readiness for e-learning may be assessed by looking at its resources and teachers' and leaders' skills and attitudes. These variables encompass technology, innovation, personnel, and e-learning training.

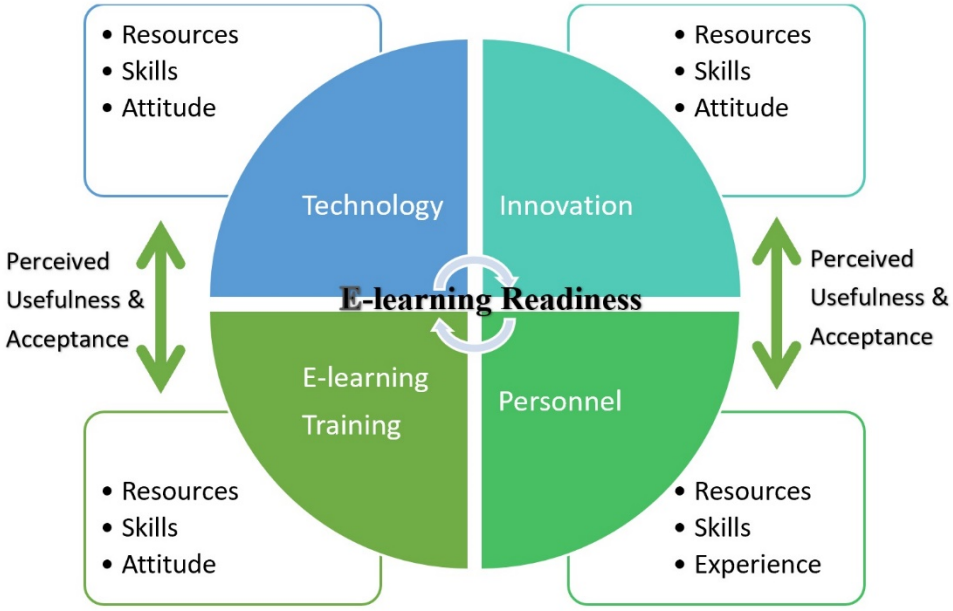
RATIONALE

Despite the abundance of literature on E-learning education, many aspects of it still remain understudied (Bocchi et al., 2004; Zhou et al., 2020). According to Academic Exchange Quarterly (Wray, M., Lowenthal, P. R., Bates, B., & Stevens, 2008), there is a lack of studies on teachers' readiness and attitudes toward online instruction. For the connection of teachers and students across the world, providing a worldwide online education vision is crucial. Even if the infrastructure and other resources were limited during the pandemic, the teachers' function in E-learning education was notable. The teachers' ability to adapt their teaching methodologies and take on new tasks is critical to their E-learning readiness. Here, the presented study seeks to reveal important online teaching skills and technical training needs.

E-learning in schools demands specific skills. To measure teacher training and development requirements, the research will produce a rapid reckoner for E-learning abilities. The study aims to improve teacher competencies and their usage in E-learning education.

OBJECTIVE

This study's primary goal is to establish whether or not schools throughout the world are adequately equipped for E-learning in the view of assessing teacher’s readiness. As a result, the study question was constructed as follows: How do teachers view their readiness to integrate E-learning into their classrooms?



METHODOLOGY

Research Design

The survey-based research was performed using an electronic questionnaire. In descriptive research, the survey approach is frequently used to obtain data on an individual (Johnson, Burke & Christensen, 2014).

Respondents

The survey was distributed online using Google Forms to 50 randomly selected school teachers worldwide, with 33 responding to the questionnaire, 29 (87.9%) of whom were female and 4 (12.1%) of whom were male. The questionnaire received a response rate of 66%. Respondents were from India, the United States of America (US), the United Arab Emirates (UAE), Finland, and Pakistan, with India accounting for the biggest share, i.e., 69.7% *(Refer Table 1).*

	Frequency	**Percentage (%)**
Gender		
Female	29	87.9
Male	4	12.1
Total	**33**	**100**
Country		
India	23	69.7
US	3	9.1
UAE	3	9.1
Finland	2	6.1
Pakistan	2	6.1
Total	**33**	**100**

Table 1: Distribution of Respondents by Gender and Geographical Location

Data tool and procedure

The researchers constructed a teacher readiness questionnaire by conducting an extensive literature review and customizing and classifying items according to the Aydin and Tasci model of e-learning readiness (2005) and Akasalan & Law (2011) *(Refer Figure 1).*

Figure 1: E-learning Readiness Model (adapted from Aydin & Tasci (2005) & Akasalan & Law (2011)

The questionnaire includes both open-ended and closed-ended questions, with an emphasis on maintaining respondents' anonymity. The survey asked about respondents' readiness in four areas: technology, innovation, personnel, and e-learning training. Quantitative data was collected on a total of 37 items representing technology, innovation, and personnel. Additionally, the questionnaire included five open-ended questions to assess E-learning training and three open-ended questions, one for each of the following areas: technology, innovation, and personnel. The open-ended questions elicited qualitative data on their perceptions, practices, and future visions.

Knowledge (specific to the subject) was not examined because the researcher's objective was to measure just readiness for E-learning. In the following step, the questionnaire was uploaded to a Google form and sent to instructors via email and social media sites such as WhatsApp and LinkedIn to collect data.

The majority of the questionnaire's items were rated on a five-point Likert scale, with "Strongly Disagree" and "Strongly Agree" serving as the extremes. Certain things received alternate descriptions such as: never, rarely, not sure, occasionally, and always. These options were arranged in a way that makes it easy to group responses into five-point Likert categories. According to Aydin and Tasci (2005), a projected level of readiness for E-learning may be determined by a mean score of 3.40, with the items revealing greater and lower levels of readiness. The Likert scale includes 4 intervals and 5 categories, and the ratio of 4 intervals to 5 categories is 0.8, thus the predicted degree of readiness is 3.40 *(Refer Figure 2).* The Aydin & Tasci readiness measurement scale (2005) was followed throughout.

Data Analysis

Demographic and item-level descriptive data (means and standard deviations) were presented. Open-ended questions were part of E-learning training that was qualitatively examined. Cronbach's alpha was used to check the internal consistencies of the three items, viz., technology, innovation, and personnel.

The data was interpreted and analyzed using the following statistical tools:

1. The frequency count and percentage are used to ascertain the total number of respondents according to their

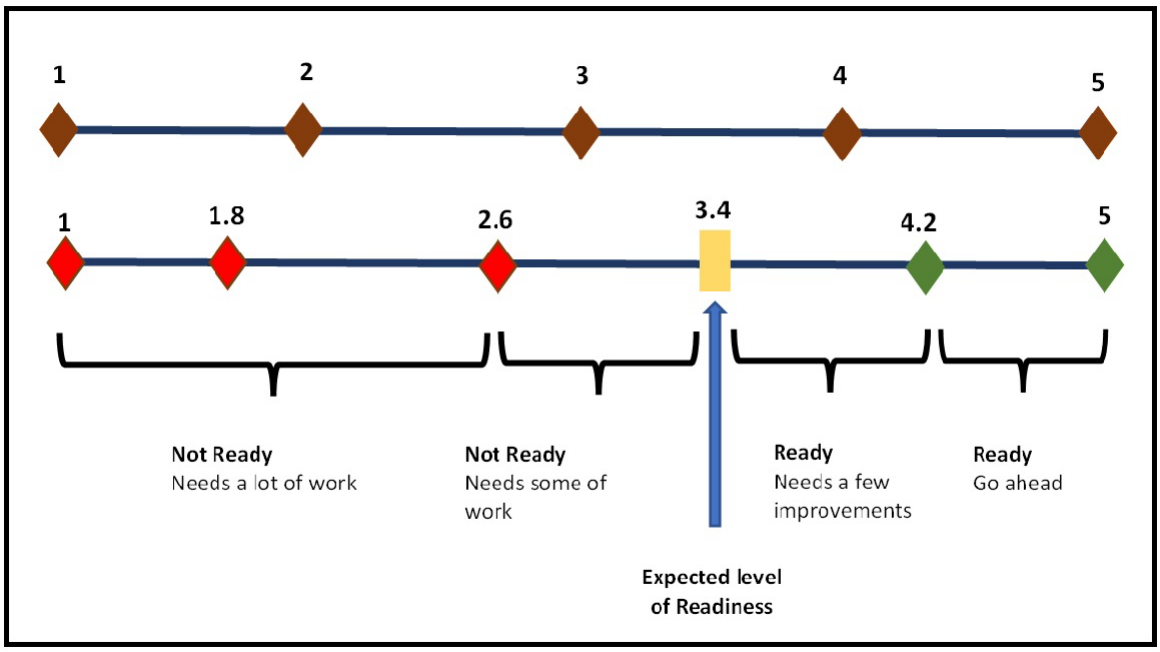


Figure 2: Aydin and Tasci measurement scale

2. The teacher's readiness for e-learning was determined by the mean.
3. The Aydin and Tasci Measurement Scale (2005) was used to determine the level of readiness.

RESULTS & DISCUSSION

Reliability of the Survey Questionnaire

Cronbach's alpha was used to measure the internal consistency (reliability) of the respondent's responses to the survey, the value of which should be 0.70 or greater for all constructs. Cronbach's alpha values for technology, innovation, and personnel were 0.70, 0.82, and 0.86, respectively.

Demographic Profile of the Participants

	Frequency	Percentage (%)
Age (in years)		
18-24	0	0
25-34	4	12.1
35-44	18	54.5
45-54	10	30.3
55-64	1	3.0
65 and above	0	0
Total	**33**	**100**
Educational Level		
Undergraduate	0	0
Graduate	5	15.2
Postgraduate	23	69.7
M Phil/ PhD	5	15.2
Others	0	0
Total	**33**	**100**
Experience (in Years)		
1-5	5	15.2
6-10	11	33.3
11-15	10	30.3
16-20	4	12.1
21-25	1	3.0
26-30	0	0.0
31 years and above	2	6.1
Total	**33**	**100**
Additional Teachers Training (NTT, PTT, B. Ed, M.Ed, etc)		
Yes	27	81.8
No	6	18.2
Total	**33**	**100**
Grade Level		
Preschool	4	12.1
I-III	3	9.1
IV-V	9	27.3
VI-VIII	7	21.2
IX-XII	10	30.3
Total	**33**	**100**

Table 2: Respondents' Demographics

Table 2 shows the teachers' profiles. The majority of teachers (54.5%) were between the ages of 35 and 44; 69.7% were postgraduates, 15.2% were graduates, and the same number of teachers had MPhils or PhDs. M.Ed., NTT PTT is held by 81.8% of them. In terms of teaching experience, 33.3% have 6–10 years of experience, while 30.3% have 11–15 years. They all taught online for at least a year; 22 of them taught exclusively during the pandemic; 11 of them later transitioned to blended and face-to-face teaching. 30.3% of teachers teach grades IX-XII, while 27.3% teach grades IV-V.

With regards to the preferred form of instruction, 81.8% of teachers chose face-to-face teaching as their first preference, whilst E-learning was regarded as the last choice by 57.5% *(Refer Figure 3).*

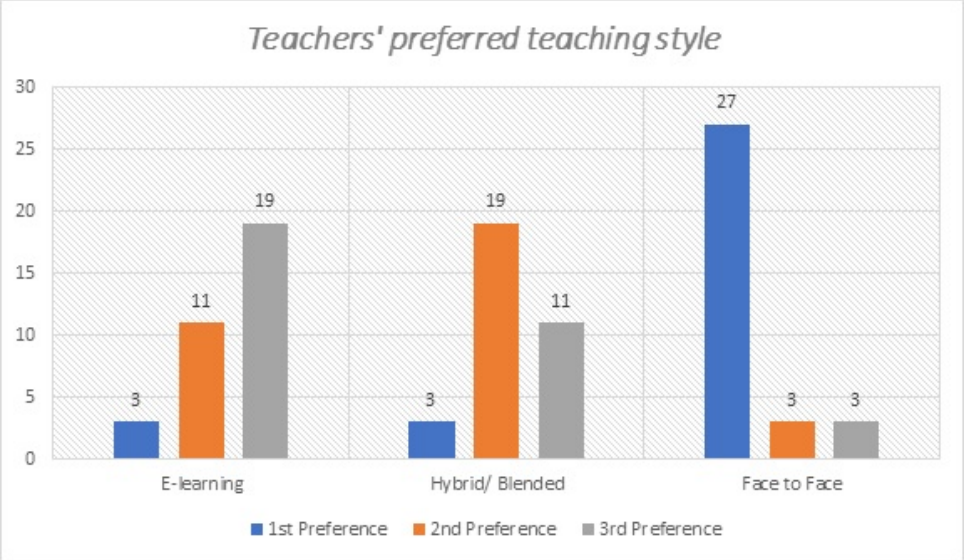


Figure 3: Teachers' preferred teaching style

Teachers' perception of their E-learning Readiness

Factors	**N**	**Mean**	**St. Deviation**
Technology	33	3.72	1.69
Innovation	33	4.42	1.09
Personnel	33	3.58	1.37
Overall		**3.96**	**1.41**

Table 3: Teachers' Perception of E-learning Readiness

To summarize, Table 3 displays the mean teacher response and the mean score for items associated with each component. As can be seen in the table, the overall mean score is higher than the degree of readiness that was predicted.

M_o=**3.96** > M_E= 3.41

By examining the aggregate mean score of teachers' responses, we may deduce that teachers are prepared for E-learning. However, they might need some improvement. The mean score for each factor might help identify gaps and highlight areas for improvement. Each factor has a mean score that is greater than the expected degree of readiness. In terms of human resources (personnel) and technology, teachers perceive themselves to be prepared for E-learning but could use some improvement. However, in terms of innovation, mean scores are quite high, indicating that teachers perceive their level of adapting to innovation to be quite strong and are prepared to move forward.

M_{Tech}=**3.72** > M_E= 3.41

M_{Inno}=**4.42** > M_E= 3.41

$M_{Personnel}$=**3.58** > M_E= 3.41

1. Readiness in E-learning- Technology

Indicators	**Mean**	**Standard Deviation**	**Interpretation**
Resources			
Schools provide access to the Internet at school	4.39	1.46	**Ready Go Ahead**
Schools provide access to the Internet at Home	1.61	1.46	Not ready Needs a lot of work
Schools provide access to the Computer for Teachers at School	4.15	1.66	Ready Needs few improvements
Schools provide access to the Computer for Teachers at Home	2.58	1.98	Not ready Needs a lot of work

Have an uninterrupted Internet connection at your school	3.61	1.46	Ready Needs few improvements
Availability of Software (Microsoft Teams, Skype, Google Meet, etc)	4.94	0.35	**Ready** **Go Ahead**
Skills			
Used Computer/ Laptop teaching before?	4.39	1.46	**Ready** **Go Ahead**
Able to use mobile technologies to connect to the Internet	4.88	0.70	**Ready** **Go Ahead**
Can create instructional videos, quizzes, online assignments, tests, etc	4.06	1.32	Ready Needs few improvements
Use communications tools like Zoom, Microsoft teams, and Google Meet to take the classes	4.94	0.35	**Ready** **Go Ahead**
Use Microsoft tools like Word & PowerPoint to create study material	4.94	0.35	**Ready** **Go Ahead**
Can easily access & manage the assignment, discussion forum, assessment, etc online	4.64	0.93	**Ready** **Go Ahead**
Attitude			
E-learning enhances the quality, effectiveness, and productivity of Learning and Teaching	3.21	1.32	Not Ready Needs some work
Hybrid-blended model of education can be effectively implemented at your school	4.21	1.32	**Ready** **Go Ahead**
Total	**4.04**	**1.56**	

Table 4: Readiness in E-learning- Technology

Technological advancements ensure that e-learning stays relevant and valuable, say Bates and Sangra (2011). It is possible to deliver adaptive, learner-centered education with the use of technology in pedagogy today. For this, teachers must possess the prerequisite skills for integrating technology into their instruction.

Teachers' perceptions of their technological readiness indicate that they are highly prepared, with hardware, software, and an active Internet connection available at the school. However, because many teachers were taking online sessions from their homes, it was critical to check their home accessibility. Teachers reported that there was no hardware, software, or Internet access at the house provided by the school. Teachers believe they are prepared and equipped with all digital abilities except for making instructional videos, quizzes, and online assignments, which require some practice and guidance. Their attitude toward adopting E-learning in their schools is positive, but they are concerned about the quality and efficacy of E-learning in the classroom *(Refer Table 4)*.

Additionally, teachers gave the following arguments in favor of the assumption that E-learning or a hybrid/blended model may be implemented effectively in their school:

- The school is equipped with the necessary resources to adopt the E-learning or hybrid/blended model.
- The E-learning and hybrid approaches adopted during the COVID-19 epidemic instilled confidence that they can be replicated in the future with appropriate leadership.
- They now have around 1.5 years of practical experience.
- Schools have adequate infrastructure and a smart classroom setup to enable optimal implementation.

Some teachers expressed uncertainty regarding its implementation and cited barriers to E-learning or blended learning, such as

- Lack of time for developing e-learning content;

- Heavy workload;
- Lack of proper training;
- Inadequate resources (hardware and software); and
- Limited technical support

It is not explicitly stated, but rather implicitly expressed as part of curriculum changes when demands are made for teachers to improve their performance when using technology in the classroom. This shift manifests as a desire to master new abilities, which teachers frequently perceive as an additional responsibility (Alvarez *et al*., 2009).

Moreover, they mentioned the following reasons for their concern:

- Traditional face-to-face teaching is more effective.
- Disrupted internet accessibility at schools.
- Anything new takes time to grasp.
- The E-learning/ Hybrid approach may not be the ideal option for young children.
- It's difficult to determine which students are struggling to understand during online sessions, and students are sometimes hesitant to ask.
-

2. Readiness in E-learning- Innovation

Indicators	**Mean**	**Standard Deviation**	**Interpretation**
Resources			
Schools provide the Guideline to follow for E-learning teaching	4.39	1.46	**Ready Go ahead**
Schools provide the Guideline to follow for Hybrid/ Blended teaching	3.91	1.81	Ready But needs a few improvements
Schools provide the Guideline to follow for Face to face teaching	4.64	1.17	**Ready Go ahead**
People avoid utilizing technology because they are afraid of making a mistake.	1.91	0.98	Not Ready Needs a lot of work
Skills			
Guide and maintain online interactive discussions with students and fellow teachers	4.64	0.93	**Ready Go ahead**
Design and organize online content and activities for the students	4.64	0.78	**Ready Go ahead**
Use Peer assessment, and virtual field trips as a technique	4.39	0.93	**Ready Go ahead**
Have used technology (like quizzes, Kahoot, Quizlet, jamboards, etc) to support learning	4.09	1.33	Ready But needs a few Improvement
Integrate a variety of web-based tools and resources to support learning	4.21	0.99	**Ready Go ahead**
Attitude			
Teachers need to be flexible in dealing with student's needs (e.g. absence from class, re-exams, etc)	3.48	1.23	Ready But needs a few Improvement
Feel the need to change your Teaching strategies. (e.g. collaborative teaching style, flip classes, storifying and gamifying it, etc)	3.52	1.23	Ready But needs a few Improvement
Teachers need to rethink and redesign teaching materials to fit the needs of the E-learning/ blended learning	3.82	1.31	Ready But needs a few Improvement
Computers, laptops, and mobiles are easy to use for teaching and Learning	3.70	1.33	Ready But needs a few Improvement
Monitors student's adherence to Plagiarism (stealing, copying work) policy	4.15	1.33	**Ready Go Ahead**

An interactive learning environment is crucial for students (e.g. relating with real-life examples, group work, peer assessments, etc)	3.67	1.36	Ready But needs a few Improvement
Social Media Platforms like Facebook, Instagram, and Twitter can be used as a medium for teaching & learning	2.48	1.20	Not Ready Needs a lot of work
Total	**3.85**	**1.42**	

Table 5: Readiness in E-learning- Innovation

According to the resources under Innovation in E-Learning, schools have provided teachers with guidelines for implementing e-learning and face-to-face learning, but have not included guidelines for implementing hybrid/blended learning or clear guidelines for transitioning between different modes of teaching. Additionally, it is stated that teachers need to adapt their teaching methods to incorporate technology, but many are unwilling to do so out of fear of making a mistake. They were generally prepared to advance with their innovative abilities, but they needed to improve their integration of technology into education. Teachers say they must have a more positive attitude toward innovation. Several innovative methods may be utilized to make teaching more engaging, entertaining, and pleasurable *(Refer Table 5)*. Children spend the majority of their time on social media, yet there are few examples of using social media to teach in schools.

Openness to Innovation:

While sharing unique strategies used by themselves or their school that they believe have had a positive impact, teachers mentioned the following strategies:

- Using Nearpod in classes
- Making creative and interesting content with the help of videos
- Involving Parents - after-school Parents-students activities
- Use of apps like Kahoot, quizzes, and Microsoft whiteboard
- Online summer camps
- Short-duration classes with activity-based content
- A live worksheet, auto-check grand test, pre-recorded video and audio lessons, online workshop, and a virtual teams meet-up session
- Gamified learning

3. Readiness in E-learning- Personnel

Indicators	**Mean**	**Standard Deviation**	**Interpretation**
Resources			
School provides access to the Online helpdesk support in resolving and assisting you if you come across a difficulty during online teaching	4.27	1.57	**Ready** **Go ahead**
An online helpdesk is available at school to support interruption-free teaching	3.73	1.15	Ready But needs a few Improvement
Standard guidelines across schools for implementing Hybrid- Blended Education	3.91	1.28	Ready But needs a few Improvement
Standard Guidelines from experts help in maintaining the quality of education	4.00	1.25	Ready But needs a few Improvement
Skills			
Are adequately prepared to teach online	3.45	1.25	Ready But needs a few Improvement
Teachers need to participate in professional development programs in learning new teaching or technical skills to keep them updated.	3.88	1.32	Ready But needs a few Improvement
Provide prompt, helpful constructive online feedback to the students on their assignments & exams	4.70	0.73	**Ready** **Go Ahead**
Total	**3.99**	**1.28**	

Table 6: Readiness in E-learning- Personnel

The majority of respondents in the survey are highly educated; they are postgraduates who have also completed teacher training courses. Additionally, the school has provided them with an online helpdesk to assist them if they encounter difficulties, but it still requires a few improvements. They also require some improvement in terms of skills, training, short courses, etc., that may be beneficial in enhancing their abilities *(Refer Table 6).*

Ability to learn with Technology:

When asked about rating their experience with technology (i.e. animation, podcasts, discussion forums, and streaming videos), 84.8 % (28) stated that they have significant experience with presentation and email, 72.7 % (24) stated that they have high experience with streaming videos, and 45.5 % (15) stated that they have high experience with discussion forums, whereas 57.6 % (19) state that they have no experience with podcasts and 36.4 % (12) state that they have no experience with blogs *(Refer Table 7).* According to Redmond *et al*. (2018), an essential skill of online education is facilitating student communication via discussion forums, emails, and chat rooms (Redmond *et al*., 2018). Freedman (2003) has devised strategies for teachers to utilize in online classrooms to improve student-teacher communication (Freedman, 2003). So it's vital to understand how teachers communicate with technology.

	No Experience	**Average Experience**	**High Experience**	**Total**
Animation	7 (21.2%)	18 (54.5%)	8 (24.2%)	33
Podcast	19 (57.6%)	11 (33.3%)	3 (9.1%)	33
Blog	12 (36.4 %)	19 (57.6 %)	2 (6.1%)	33
Email	1 (3%)	4 (12.1%)	28 (84.8%)	33
Discussion Forum	4 (12.1 %)	14 (42.4%)	15 (45.5%)	33
Streaming Videos	0	9 (27.3 %)	24 (72.7 %)	33
Presentation	1 (3%)	4 (12.1%)	28 (84.8%)	33
Calendar	1 **(3%)**	18 **(54.5%)**	14 **(42.4 %)**	**33**

Table 7: Experience with technology

4. E-learning Training

In the previous two years, 22 instructors out of 33 had attended E-learning workshops, and 21 of them considered it quite valuable *(Refer Table 8).*

Training/workshops attended in 2 years (2020-2022)	**Counts**
1-2	8
3-5	5
6-9	4
10 and more	5
Total	**22**

Table 8: Number of Training attended by teachers in 2 years

Teachers who have not received training in the past feel the need to attend such training in the future. They cited the following reasons for their absence:

- *It was never arranged by the school.*
- *I applied for the training but was not selected to attend.*
- *The training was paid and expensive.*

Additionally, teachers claimed that E-learning is just as rigorous as classroom teaching and that time management is critical for a teacher. When asked whether they can post online content or material on time, 28 said that they usually do, while 5 answered that they occasionally miss deadlines but make an effort to stay on time. Online instructors' experiences indicate that, compared to regular classroom instruction, online instruction requires more time (Martin *et al*., 2019). A lack of time for preparation and delivery has been identified as a major obstacle to online teaching, indicating that more time and better scheduling are necessary for E-learning instruction (Baran *et al*., 2013). Teachers are required to create better time-management skills as they adapt to E-learning (Min Shi, Curtis J. Bonk, 2006).

Construct	N	Mean	Standard Deviation	Interpretation
Resource	33	3.72	1.69	Ready but needs a few improvements
Skills	33	4.42	1.09	**Ready Go Ahead**
Attitude	33	3.58	1.37	Ready but needs a few improvements

Table 9: Statistics for resources, skills, and attitudes

The mean score for teachers' responses to the resources, abilities, and attitude items is shown in *Table 9*. In other words, teachers think they are ready for E-learning in terms of skills, but need to improve resources and attitudes. Apart from this, two additional questions were posed to teachers on their experience and views of educational opportunities. The following were the most significant responses:

What was your initial response upon learning that you will be required to teach classes online?

Many teachers were apprehensive and perplexed by its implementation since they never imagined online classrooms would be viable, yet a few were excited and surprised. They stated the following:

- *I was not happy when I came to know that I had to take online classes. There is no way that online learning can ever fully replace the impact and promise of face-to-face interactions between students and teachers. I feel like I've lost the ability to connect with my students because of my new role.*
- *Initially, I was a little nervous but gradually adapted to the change.*
- *Surprised but the transition to online had already begun with many online webinars taking place every month in school for students and teachers.*
- *As I was dealing with tender age children there were a lot of apprehensions and uncertainties.*
- *I was kind of mentally prepared for this to happen.*
- *Apprehensive, Worried that it would not be as beneficial*

What do you think the future of school education in your country will be like?

- *School education needs to be in person, as you can build connections more easily with the kids. But we can keep integrating online components that we have learned during the pandemic.*
- *Growing tremendously with new experimental techniques and methods to teach. Teachers and students both have creative freedom, especially in the private sector, but you can't say the same for the government schools. There's a long way to go until we reach the point of providing education for all in an online format.*
- *As of now, I feel that right across the world, students have gotten used to this system and will be looking forward to blended mode, even though face-to-face is the ideal way to create a good relationship between an educator and a student. Nevertheless just within a week whole mode/system of education could be changed, therefore is possible that the new generation would get used to this system and things would all seem as easy as lemon squeezy for them.*
- *With online teaching, I think we have added one more innovative way to the learning process, and the blend of all will definitely make the education system flexible and impactful.*
- *I see that we have an important role to play in society, even though a lot of material is available on the internet, but without a trainer, it is very hard to understand, and a teacher, a school, classrooms, and a whole setup do not*

only provide students with education related to various subjects but also give us the environment, which is very important for our well-being as well. I believe a blended way of learning and teaching is an addition but would never replace face-to-face teaching. It is definitely an asset and very useful for working people of different age groups, for someone who wants to change careers, etc. We as teachers need to learn and set the right balance, or the right percentage amount of content, in our teachings. The future of teachers will change more toward a trainer or a facilitator who will be guiding students' content created by giant educational material creators.

- *Hybrid learning has a constructive future ahead.*
- *Teachers and students learned new techniques, so the standard of education will improve in the future.*
- *Technology is becoming a major part of education. I can see it as very challenging for both teachers and students.*
- *A more collaborative, innovative, and engaging environment that will be able to connect to students in or out of the classroom.*
-

CONCLUSION & RECOMMENDATION

The pandemic forces a reshaping of the Indian educational system. Within a few months of the pandemic, the whole educational system was prepared to transit from the classroom to E-learning. This pandemic has provided teachers with an opportunity to use technology in their classroom instruction. While implementing a new technique for teaching and learning, teachers must overcome several obstacles. For some teachers, providing online classes was a major challenge, as they have been accustomed to delivering classroom instruction for many years. The crisis was having a direct effect on our educational system. Teachers assist their students with academic pursuits by utilizing technology-based teaching. As a result, a slew of complications arose. It was critical to identify those obstacles and make practical efforts to overcome them in order to attain the educational process's objectives.

Each stakeholder in the educational process must collaborate to accomplish their objectives. Thus, we would be able to ensure a better future for succeeding generations. Teachers' attitudes towards the value of innovative online teaching skills and their ability to implement them have a significant impact on the achievement of effective teaching goals. The findings of this study will have an effect on teachers, students, and the entire institution.

The study's findings may serve as a reflection for the institution in terms of considering how to sustainably integrate E-learning into schools and understanding the needs of teachers. However, E-learning should complement rather than replace conventional education. This is because human civilization is fundamentally social, and thus face-to-face interactions will be critical and essential.

The educational institution's administration should compel teachers to receive proper training on learning software that enables them to educate and assist students effectively and efficiently. A quality assurance board can be created to oversee E-learning constantly, and it is advised that schools develop explicit rules (Marshall et al., 2020).

LIMITATIONS AND FUTURE RESEARCH

There are certain limitations to consider when interpreting the findings of this study. Although the study began with a comprehensive review of the available literature on the subject, the researchers do not claim that it is comprehensive, as further research in this field is possible. Additionally, this study is confined to assessing teachers' readiness for online teaching by self-evaluation, which may not adequately reflect the teachers' genuine capability level. Therefore, this may be evaluated further from the students', parents', and leadership's viewpoints.

The sample for this study was comprised of teachers who worked in private schools. The findings of this study may not be generalizable outside of this group. Since this study was a pilot to assess the need for doctoral research on this topic, the sample size was delimited. Future research might incorporate other parameters pertaining to online teaching and learning. These results, despite their flaws, demonstrate how critical it is to assist teachers in the increasingly common practice of E-learning. This study highlights teachers' perceptions of their skills and capabilities in E-learning and gives guidance to improve their capacity to establish long-term education system resilience.

REFERENCES

Akaslan, D., & Law, E. L. C. (2011). Measuring teachers' readiness for E-learning in higher education institutions associated with the subject of electricity in Turkey. *2011 IEEE Global Engineering Education Conference, EDUCON 2011*, 481–490. https://doi.org/10.1109/EDUCON.2011.5773180

Al-Awidi, H; Aldhafeeri, F. (2017). Teachers' readiness to implement digital. *Journal of Information Technology Education:Research*, *16*, 105–126.

Alvarez, I., Guasch, T., & Espasa, A. (2009). University teacher roles and competencies in online learning environments: A theoretical analysis of teaching and learning practices. *European Journal of Teacher*

Education, *32*(3), 321–336. https://doi.org/10.1080/02619760802624104
Djamaris, A., Budi Priyanto, A., & Jie, F. (2012). Implementation of e-learning system readiness: Indonesia context. *2012 IEEE 6th International Conference on Management of Innovation and Technology, ICMIT 2012*, *January 2017*, 314–319. https://doi.org/10.1109/ICMIT.2012.6225824
Aydin, C. H., & Tasci, D. (2005). Measuring readiness for e-learning: Reflections from an emerging country. *Educational Technology and Society*, *8*(4), 244–257.
Baran, E., Correia, A. P., & Thompson, A. D. (2013). "Tracing successful online teaching in higher education: voices of exemplary online teachers." *Teachers College Record*, *115*(3), 1–41.
Bates, T. and Sangrà, A. (2011), "Managing technology in higher education: strategies for transforming teaching and learning", p. 262.
Berry, B. (2020). Teaching, learning, and caring in the post-COVID era. *Phi Delta Kappan*, *102*(1), 14–17. https://doi.org/10.1177/0031721720956840
Bocchi, J., Eastman, J. K., & Swift, C. O. (2004). Retaining the Online Learner: Profile of Students in an Online MBA Program and Implications for Teaching Them. *Journal of Education for Business*, *79*(4), 245–253. https://doi.org/10.3200/JOEB.79.4.245-253
Cardoza, Y., & Tunks, J. (2014). The Bring Your Own Technology Initiative: An Examination of Teachers' Adoption. *Computers in the Schools*, *31*(4), 293–315. https://doi.org/10.1080/07380569.2014.967626
Cavas, B., Cavas, P., Karaoglan, B., & Kisla, T. (2009). A study on science teachers' attitudes toward information and communication technologies in education. *Turkish Online Journal of Educational Technology*, *8*(2), 20–32.
Comas-Quinn, A. (2011). Learning to teach online or learning to become an online teacher: An exploration of teachers' experiences in a blended learning course. *ReCALL*, *23*(3), 218–232. https://doi.org/10.1017/S0958344011000152
Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID … and beyond. *European Journal of Teacher Education*, *43*(4), 457–465. https://doi.org/10.1080/02619768.2020.1816961
Dogbey, J., Kumi-Yeboah, A., & Dogbey, J. (2017). Dialogue pedagogical strategies perceived to enhance online interaction: Instructors⇔ perspective. *International Journal of Online Pedagogy and Course Design*, *7*(3), 70–85. https://doi.org/10.4018/IJOPCD.2017070105
Freedman, K. (2003). *Teaching Visual Culture: Curriculum, Aesthetics, and the Social Life of Art*.
Gray, K., & Tobin, J. (2010). Introducing an online community into a clinical education setting: A pilot study of student and staff engagement and outcomes using blended learning. *BMC Medical Education*, *10*(1). https://doi.org/10.1186/1472-6920-10-6
Inan, F. A., & Lowther, D. L. (2010). Factors affecting technology integration in K-12 classrooms: A path model. *Educational Technology Research and Development*, *58*(2), 137–154. https://doi.org/10.1007/s11423-009-9132-y
JOHNSON, BURKE, R., & CHRISTENSEN, L. (2014). *Educational Research Quantitative, Qualitative, and Mixed Approaches*.
Krosnick, J., & Petty, R. E. (2016). *Attitude strength : An overview . Reprinted from : Petty , R . E ., & Krosnick , J . A . (Eds .). Attitude Strength : Antecedents and Consequences* . Mahwah , NJ : Erlbaum. May.
Leal Filho, W., Azul, A. M., Brandli, L., Özuyar, P. G., & Wall, T. (Eds.). (2020). E-learning. In Quality Education (pp. 294–294). Springer International Publishing. https://doi.org/10.1007/978-3-319-95870-5_300080
Mansor, A. N., Zabarani, N. H., Jamaludin, K. A., Nor, M. Y. M., Alias, B. S., & Mansor, A. Z. (2021). Home-based learning (Hbl) teacher readiness scale: Instrument development and demographic analysis. Sustainability (Switzerland), 13(4), 1–15. https://doi.org/10.3390/su13042228
Marshall, D. T., Shannon, D. M., & Love, S. M. (2020). How teachers experienced the COVID-19 transition to remote instruction. Phi Delta Kappan, 102(3), 46–50. https://doi.org/10.1177/0031721720970702
Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. Online Learning Journal, 23(3), 97–119. https://doi.org/10.24059/olj.v23i3.1555
Min Shi, Curtis J. Bonk, R. J. M. (2006). Time Management Strategies for Online Teaching. International Journal of Instructional Technology and Distance Learning, 3(2), 3–10. http://itdl.org/Journal/Feb_06/Feb_06.pdf#page=7
Mynbayeva, A., Sadvakassova, Z., & Akshalova, B. (2018). Pedagogy of the Twenty-First Century: Innovative Teaching Methods. New Pedagogical Challenges in the 21st Century - Contributions of Research in Education, 3–20. https://doi.org/10.5772/intechopen.72341
Northcote, M., Gosselin, K. P., Reynaud, D., Kilgour, P., & Anderson, M. (2015). Navigating learning journeys of online teachers: Threshold concepts and self-efficacy. Issues in Educational Research, 25(3), 319–344.
Pearson. (2020). Global Learner Survey. August, 1–49. https://www.pearson.com/content/dam/one-dot-com/one-dot-com/global/Files/news/gls/Pearson_Global-Learners-Survey_2020_FINAL.pdf
Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). Solving the teacher shortage retain excellent educators solving the teacher shortage. Learning Policy Institute, September, 1–73.

https://learningpolicyinstitute.org/product/solving-teacher-%0Ahttps://learningpolicyinstitute.org/sites/default/files/product-files/Solving_Teacher_Shortage_Attract_Retain_Educators_REPORT.pdf

Redmond, P., Abawi, L. A., Brown, A., Henderson, R., & Heffernan, A. (2018). An online engagement framework for higher education. Online Learning Journal, 22(1), 183–204. https://doi.org/10.24059/olj.v22i1.1175

Richey, C, R., Fields, & C, D. (2001). Instructional design competencies The Standards. In ERIC Clearinghouse on Information & Technology, Syracuse University, (Vol. 49, Issue 4). https://eric.ed.gov/?id=ED453803

Rogers, E. M. (2003). Diffusion of innovations. In An Integrated Approach to Communication Theory and Research, Third Edition. https://doi.org/10.4324/9780203710753-35

Ruggiero, D., & Mong, C. J. (2015). The teacher technology integration experience: Practice and reflection in the classroom. Journal of Information Technology Education: Research, 14(2015), 161–178. https://doi.org/10.28945/2227

Siemens, G., & Irvine, V. (2013). An Academic Perspective on an Emerging Technological and Social Trend. MERLOT Journal of Online Learning and Teaching, 9(2), iii–vi.

Van den Berg, R. (2002). Teachers' meanings regarding educational practice. Review of Educational Research, 72(4), 577–625. https://doi.org/10.3102/00346543072004577

Volery, T., & Lord, D. (2000). Critical success factors in online education. International Journal of Educational Management, 14(5), 216–223. https://doi.org/10.1108/09513540010344731

Wray, M., Lowenthal, P. R., Bates, B., & Stevens, E. (2008). Investigating perceptions of teaching online & f2f. Academic Exchange Quarterly, 12.

Zhou, C., Su, F., Pei, T., Zhang, A., Du, Y., Luo, B., Cao, Z., Wang, J., Yuan, W., Zhu, Y., Song, C., Chen, J., Xu, J., Li, F., Ma, T., Jiang, L., Yan, F., Yi, J., Hu, Y., … Xiao, H. (2020). COVID-19: Challenges to GIS with Big Data. Geography and Sustainability, 1(1), 77–87. https://doi.org/10.1016/j.geosus.2020.03.005

Zimmerman, W., Altman, B., Simunich, B., Shattuck, K., & Burch, B. (2020). Evaluating online course quality: A study on implementation of course quality standards. Online Learning Journal, 24(4), 147–163. https://doi.org/10.24059/olj.v24i4.2325

