Transition to Online Teaching during the COVID-19 Pandemic in the Eastern Province of Saudi Arabia — A Study

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***Abstract*—This paper aims to understand the transition from purely classroom teaching to online teaching method during the COVID-19 pandemic at the International Indian School Jubail in Saudi Arabia. As the teachers were familiar only with the traditional face-to-face classroom teaching style since 1987, the study addresses this transition, the benefits and disadvantages of online instruction, their suggestions, opinions, and their level of preparedness for an alternate teaching method in the future when the pandemic ends. The survey instrument, a self-designed Google Forms questionnaire, was administered online due to the pandemic restrictions from 23 July to 30 July 2020 and data consisting of 299 participants was gathered. The study was descriptive in nature and qualitative data analysis revealed that while teachers trust the traditional classroom teaching method, they began to perceive the distinct benefits of online teaching. Majority of the respondents showed a high level of comfort after four months of online teaching. One fascinating finding of this study was that the respondents having more years of teaching experience needed lesser effort though they found themselves less comfortable with online teaching, probably because they were more satisfied with their prior experience of classroom teaching. Nonetheless, an interesting finding showed that most respondents demonstrated a positive and favourable attitude towards blended teaching and supported technology-enhanced teaching practices. A good proportion of these respondents recommend blended teaching as a future teaching method and are ready to adopt it after the new normal is resumed. The experience of online teaching has given clarity to teachers about usage of a variety of effective online teaching tools to support their new teaching environments and an insight into the future possibilities of adopting online education.**

***Index Terms*—Blended teaching, COVID-19 pandemic, online teaching, Saudi Arabia, school education.**

I. Introduction

The global outbreak of the new coronavirus disease COVID-19 [1] caused unimaginable challenges and forced people to navigate through multiple stages of coping with testing circumstances on a day-to-day basis. Emergency lockdown regulations were implemented across the world to curb the spread of the pandemic. COVID-19 shook the entire operating or governing systems that run the nations. The educational system was one such sphere that witnessed this change. On 9 March 2020, the Saudi Ministry of Education (MOE) formally announced the closure of schools and universities in the kingdom due to the outbreak of the COVID -19 pandemic. This led to the suspension of classes in all private and public schools including technical and vocational training institutions [2]. The Minister of Education directed that virtual schools and distance or online learning be activated during the suspension period [3]. With the suspension of traditional face-to-face classes, educational institutions in the kingdom swiftly transferred to online teaching-learning modality. The change was a challenge for both teachers and students.

International Indian School, Jubail (also referred to as IIS Jubail) is a community school located in Al Jubail, in the Eastern Province of Saudi Arabia. The school is affiliated to the Central Board of Secondary Education (C.B.S.E.) [4], New Delhi, India and is also licensed under the Saudi Ministry of Education. IIS Jubail offers education to the children of the expatriate Indian community from kindergarten to grade 12 (aged 5 to 18 years), with co-education till grade 1 (children up to 6 years) and segregated into Boys and Girls sections from grade 2 (children aged 7 years and older). The educational staff at IIS Jubail, who were prepared to start the new academic year (2020-2021) with traditional classroom teaching had to immediately switch to online teaching mode, which they had never explored or tried earlier, except for occasional usage of online resources. While some teachers were prepared for transfer to an online mode of instruction, some were skeptical. This forms the basis of the present study which aims at highlighting the initial reaction of teachers on switching to online teaching method, the benefits and disadvantages of online teaching, teachers' suggestions to improve online teaching, the measures taken by them to develop their online teaching skills during the current COVID-19 pandemic period and their preparedness to take classes after the pandemic is over.

II. Literature Review

Globally, the COVID-19 pandemic made teachers and students take a detour in their teaching-learning processes. Organizations and institutions of learning all over the world faced challenges based on their pace to acclimatize to the sudden modifications (in a brief period of time) and also the ability to maintain their quality, since their reputation during this pandemic crisis was at stake and under scrutiny [5]. Additionally, the effective functioning of the school systems

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or organizations relies heavily on supervision and administration, where the school managers play a vital role in contributing towards quality teaching and learning process. Reference [6] states that the school managers responsible for smooth functioning of the administrative activities of the school execute a profound impact for the realization of the school's goals. School management, supervision or administrative leadership are instrumental in building improved educational systems, accelerated student learning as well as facilitating the achievement of educational objectives [6]-[9]. Keeping in mind the educational goals, school administrators became actively involved in delivering effective services to help resolve the disruptions caused in education, for supply of technological devices, tools, resources, and infrastructure posed as one of the major challenges amongst others during the current pandemic.

The educational world faced unexpected disruptions in the traditional teaching and learning methods and the sudden shift to online mode of teaching was the only option available. But online teaching and learning are not a new phenomenon and has been in practice before the emergence of the pandemic. Most importantly, during this global pandemic, it has occupied centre-stage in the form of emergency remote teaching [10]-[12]. In fact, online learning has been regarded as a good-to-have alternative but was not considered seriously as a mission model for steadfastness in education [13]. With the forced closure of schools, transition to remote teaching-learning platforms led to many modifications, and the most prominent one, was mandatory change in the attitudes of faculty members, educational managers, and learners about the importance of online learning [13]. In a way, the pandemic crisis channeled the path forward for recognizing the value of e-learning. In this regard, one of the earliest research to focus on schools when the global pandemic hit the world hailed from the Unites States evaluating the state educational policy guidance pertaining to remote learning [14]. Recent studies carried out on technology-enhanced education during the pandemic explored varied perspectives. One notable study from India investigated the weaknesses, strengths, opportunities, and challenges of online education in the midst of the pandemic [5]. This study also sheds light on the increase of Ed Tech Start-ups in the time of the pandemic crisis and natural disasters. A study from Indonesia on secondary school mathematics teachers' views on E-learning implementation barriers during the COVID-19 pandemic assessed the student level barrier as having the highest impact on the usage of e-learning [15]. While researchers have explored the benefits of online education, they have also contested the challenges or barriers and suggested strategies to overcome them.

At this juncture, it is imperative to address the importance of technology readiness and knowledge about usage of technology in education. To suit the urgent needs during this pandemic, online training sessions, orientation programs and webinars to a larger degree helped teachers overcome problems and challenges, especially those with low digital competence. In this present globalized world, digital literacy [16]-[19] that encompasses a wide array of skills has occupied a significant place in teacher education [20]. Digital tools or resources act as critical support systems in teaching. Being digitally literate, competent [21] and updated with the new and emerging technologies helps in facilitating learning and disseminating knowledge [22]. However, teaching is also about change management, adaptability, learning, resilience, providing solutions and more importantly staying informed with the latest technological advances. In addition, retaining the quality of the course is of paramount importance given any setting. The pandemic circumstances have provided an on-going litmus test for educational practitioners with their online instructional capabilities examined under the critical eye of the world.

III. Research Methodology

IIS Jubail, composed of 318 teaching staff members who were not completely familiar with online teaching, had to make the mandatory transition instantly. Zoom was the chosen online platform and Google forms were used for assessments. After nearly four months of switching from traditional to online teaching, an online questionnaire survey was carried out in July 2020 to investigate how the teachers of IIS Jubail conducted online teaching. The study aims to draw reflections and valuable insights into teachers' perceptions about online teaching modes and their preferred method of teaching in the future. In light of the above discussion, this study addresses the following research questions (RQ 1-5):

RQ1. What was the initial reaction of teachers on hearing about online classes?

RQ2. What is the level of comfort of teachers about online classes as of July 2020?

RQ3. What are the advantages and disadvantages of online teaching?

RQ4. What are the teachers' suggestions to improve online teaching?

RQ5. What is the level of preparedness of teachers for transition to a techno-traditional teaching method after the pandemic is over?

A. Research Design

The study conducted was descriptive in nature and qualitative data was systematically gathered. The aim or objective of descriptive research is to describe a phenomenon and its characteristics by placing more emphasis on what rather than why something has happened [23]. As observation and survey tools are frequently used to gather data in descriptive researches [24], this study used a custom-designed survey questionnaire as a tool to examine the teachers' online teaching experiences during the COVID-19 pandemic. The questions were drafted based on interaction with teachers during a periodic school staff meeting. It was not empirical in nature and was purely used to gather information regarding attitudes and perceptions. 94% of the teachers working at IIS Jubail responded to the questionnaire. The questionnaire link was shared with the teachers on the school's WhatsApp groups by the Section Supervisors with an instruction that all the teachers are required to submit their feedback before the deadline. Although not specified as mandatory, it was perceived as important by the teachers themselves. Hence, a large number

(94%) chose to give their feedback. This data was collected by the authors for the purpose of routine internal review and is also being used in this study with the consent of the school Principal. The results and accompanying insights from the questionnaire may be considered representative of all International Indian Schools in the Kingdom of Saudi Arabia.

B. Participants

The online questionnaire was filled out by 299 teachers (7% male and 93% female), which make up 94% of the school's total of 318 teachers. They collectively teach 6655 students. 100% of the respondents were Indian expatriates residing in Saudi Arabia. 70 % teachers had their children studying online in the same school at the same time as they themselves teach, while most of the remaining teachers do not have children staying with them (because they are in university or staying elsewhere). More than half of the respondents fell in the age groups of 35-44 years and more than a quarter were between 45-54 years. The number of years of total teaching experience of the respondents varied from a few months to more than twenty years. The online subjects taught by the respondents were English, Mathematics, Science, Social science (English being the medium of all instruction), Arabic and eight Indian regional languages (Gujarati, Hindi, Kannada, Malayalam, Marathi, Tamil, Telugu and Urdu). The classes taught were from kindergarten to 12th grade. Data of demographic characteristics are presented in Table I.

TABLE I: PARTICIPANTS' DEMOGRAPHIC DETAILS

Participants' demographics	Number of respondents	Percentage (%)
Gender		
Male	21	7
Female	278	93
Age in Years		
34 or less	45	15.1
35-44	166	55.5
45 to 54	82	27.4
55 or above	6	2
Teaching Experience in Years		
0 to 4	63	21.1
5 to 9	113	37.8
10 to 14	69	23.1
15 to 19	34	11.4
20 or above	20	6.7
Wing Taught		
Boys'	148	49.5
Girls'	169	56.5
(Both Boys' and Girls')	18	6
Subject Taught		
English	105	35.1
Hindi	55	18.4
Mathematics	101	33.8
Science	96	32.1
Social Science	34	11.4
Regional languages	33	11
Others (Business Studies, Computer Science, etc.)	52	17.4

C. Data Collection and Research Instrument

The survey instrument, a self-designed Google Forms questionnaire to collect data, was administered online due to the pandemic restrictions. A written permission to collect and use this data for the present study was obtained from the competent higher authorities of the school. 9 questions were included in the preliminary questionnaire out of which 6 were validated by experts and thus the final questionnaire was standardized. The customized questionnaire with demographic details comprised of both closed-ended and open-ended questions which answer the five research questions (see Table II). Having the participants fill out a profile ensured that the data was verifiable and authentic. To encourage honest feedback, the participants were informed in writing at the beginning of the questionnaire that the responses would remain confidential. A description at the beginning of the questionnaire explained to the respondents the type of questions to follow, the approximate time required to finish the questionnaire, an assurance that the personal details and individual responses would be kept confidential unless the participant gave written consent to quote them, and a declaration that the participant was aware of the possibility of the results being published. The online questionnaire was distributed on teachers' WhatsApp groups, of which all the teachers are active members. The questionnaire was open for filling for 7 days from 23 July-30 July 2020. The teachers were requested to separately send any multimedia teaching materials that they had developed as tools for remote teaching to the authors of this paper via email.

TABLE II: DATA COLLECTION INVENTORY

Research Questions	Question type	Data (Scale)
RQ 1. What was the initial reaction of teachers on hearing about online classes?	Closed-ended	6 pt. scale
RQ 2. What is the level of comfort of teachers about online classes as of July 2020?	Closed-ended	3 pt. scale
RQ 3. What are the advantages and disadvantages of online teaching?	Open-ended	no scale
RQ 4. What are the teachers' suggestions to improve online teaching?	Open-ended	no scale
RQ 5. What is the level of preparedness of teachers for transition to a techno-traditional teaching method after the pandemic is over?	Closed-ended	3 pt. scale

D. Data Analysis (Qualitative)

The researchers chose to use descriptive statistics (measures of frequency) to find out percentages and values (number of respondents) for the responses to the survey questions. The responses to the questions were analyzed using Microsoft Excel. The responses to questions pertaining to RQ1 RQ2 and RQ5 (close-ended) were plotted in the form of pie graphs (Fig. 1, Fig. 2 and Fig. 6). The responses to questions pertaining to RQ3 and RQ4 (open-ended) were plotted as bar graphs (Fig. 3, Fig. 4 and Fig. 5). Additionally, descriptive statistical measures (Mean, Standard Deviation, Kurtosis, Skewness) were used to further assess the data and have a better insight into RQ1 (Table III) and Pearson Correlation was used for RQ2 (Table IV).

IV. RESULTS AND FINDINGS

A. Results for RQ1 (Initial Reaction of Teachers on Hearing about Online Classes)

When the change was introduced, 64% participants had positive initial feelings like excitement, happiness, and confidence, while about 33% had negative thoughts like doubts and worries (Fig. 1).

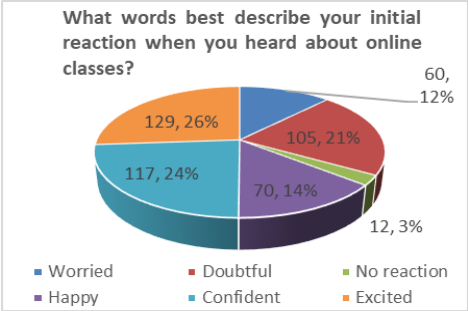

Fig. 1. Initial reaction about online classes.

B. Descriptive Statistical Analysis (for RQ1)

Table III displays the descriptive statistics, and the results are shown for research question 1. It is also observed that mean is more than SD which indicates that the data is not spread over a large range of values. Frequencies were calculated, and it is observed that the highest frequency showed that the teachers are confident (Table III). The mean is 82.16 and SD is 43.56 which indicate that the data is not spread as the SD is less than the mean.

TABLE III: STATISTICAL SUMMARY OF RQ 1

Question	Mean	SD	Standard Error	Sample Variance	Kurtosis	Skewness
Initial reactions of teachers about online classes	82.1666	43.56	17.78654	1898.166	-0.2160	-0.7300

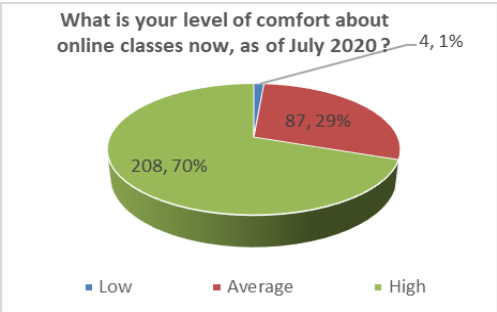

Fig. 2. Comfort level after 4 months.

C. Results for RQ2 (Level of Comfort as of July 2020)

Initially, when online classes were introduced, 64% participants had positive initial feelings like excitement, happiness, and confidence, while about 33% had negative thoughts like doubts and worries (see Fig. 1). But, after four months of online teaching, the comfort level for respondents was high (70%), average for 29% and low for 1% (Fig. 2).

D. Inferential Statistical Analysis (for RQ2)

For inferential Statistical Analysis, Pearson Correlation Coefficients were calculated (Table IV). The researchers analyzed the correlation between the teaching experience of the respondents and the comfort level after four months of online teaching. It was found r= -0.71131. The researchers infer that the teachers with more teaching experience were less comfortable with online teaching and found it difficult to adopt the paradigm shift.

TABLE IV: SUMMARY OF CORRELATION BETWEEN TEACHING EXPERIENCE AND COMFORT LEVEL OF TEACHING ONLINE (RQ2)

	r	Significance	
	Years		Comfort
Teaching experience in years	1		
Comfort	-0.71131	0.05	1

E. Results for RQ3 (Advantages and Disadvantages)

A large number of respondents felt that the main advantages of online teaching were that it improved their technical skills and also enhanced learning experiences by using online tools such as presentations, videos, and audios. Other advantages like saving commuting time, reducing social anxieties, and balancing work and home responsibilities were also significant (Fig. 3). In contrast, the disadvantages perceived by the teachers were harm caused to the eyes due to prolonged usage of gadgets, poor internet connectivity issues, and lack of face-to-face interactions. In addition, the teachers stated inability to ensure student presence, limited assessment tools, and some malicious interference as the other disadvantages (Fig. 4).

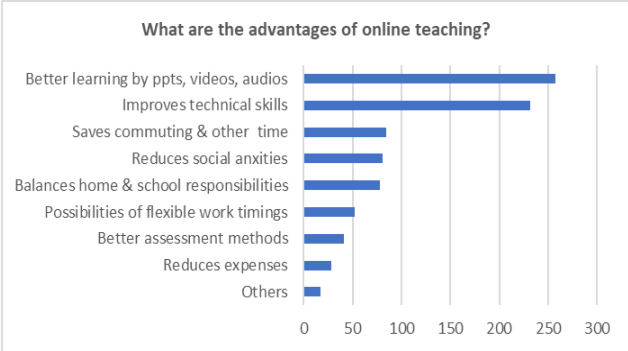

Fig. 3. Advantages of online teaching.

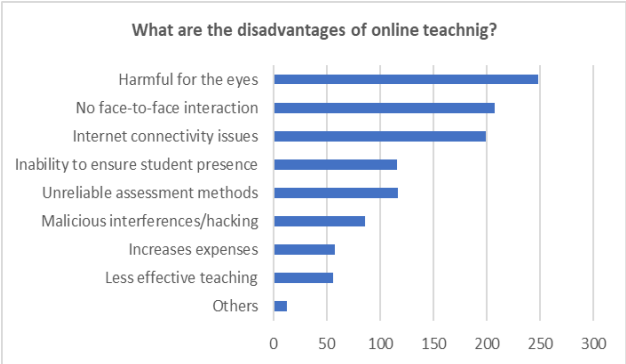

Fig. 4. Disadvantages of online teaching.

F. Results for RQ4 (Suggestions)

The respondents suggested that online teaching may be improved by conducting teacher training workshops (31%), providing alternate platforms (30%), guiding parents to monitor their children during the classes (19%), providing gadgets (5%) and fast internet facility to teachers (7%) and exploring better assessment tools (9%) (Fig. 5).

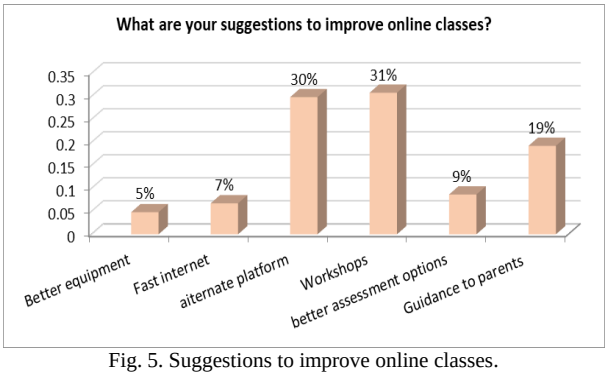

Fig. 5. Suggestions to improve online classes.

G. Results for RQ5 (Transition to Techno-traditional Teaching Method)

It was also found that when the school reopens, the teachers showed mixed teaching method preferences. 30% of teachers were in favour of traditional classroom teaching; 25% teachers preferred 3-4 days traditional and 1-2 days online teaching method; and 45 % preferred 3-4 days online and 1-2 days traditional classroom teaching (Fig. 6). So, a significantly large number (70%) indicated that in the future, blended teaching method would be preferred by them. The increase in the comfort level about online classes with the passage of time seems to be a major factor for this preference.

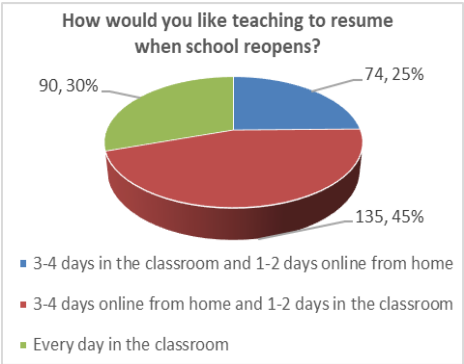

Fig. 6. Preferred teaching method after school reopens.

V. Discussion

The current study is designed to evaluate the sudden transition of the teachers of IIS Jubail from physical classroom teaching to online teaching due to the COVID-19 pandemic, their comfort level, perceptions of advantages and disadvantages of online teaching and their future preferred mode of teaching once the pandemic is over and school education is normalized. The teachers displayed a positive approach to meet the learners' needs as is evident from the suggestions given by them to improve their professional skills.

The study reveals that online teaching may not be the method preferred by teachers aged above 55 years, but an interesting finding is that blended teaching as a future teaching method is supported by a significant number of teachers. This may be ascribed to the many positive attributes of online teaching. Also due to their familiarity and comfort with online teaching (Fig. 2) and awareness about the limitations of face-to-face teaching method that the teachers gained over a period of time, blended teaching was preferred by them. Blended learning that combines face-to-face as well as online or computer-mediated instruction [25]-[27] has developed and evolved tremendously in the recent decades [25], [28]-[30] and is recommended to implement for better achievement and accomplishment of educational goals. In a way, blended learning that involves the combination or mixed types of web-based teaching, pedagogical approaches, instructional technologies with actual job tasks, creates a harmonious effect of meaningful learning [28] (p.1). Promoting self-efficacy and offering student-centred learning that involves the usage of both technology and learning tasks and materials outside the traditional classroom environment [31], blended learning has now become the essential need. It generates opportunities for students to actively engage resulting in direct and meaningful impact on their performances and learning outcomes [32].

After the advent of the pandemic, online teaching has enabled the students and teachers to stay connected and the teacher-learner gap to be minimised. IIS Jubail teachers perceived that online teaching reduced commuting time, anxieties, and is safe during this crisis which stands in line with a qualitative case study, where the researchers felt that online mode was adaptable, saved time for travel as well as other expenses [33]. The online mode has helped teachers enhance their technical skills through teacher-training workshops, online research, and knowledge gained through their personal experiences. They believe that it is necessary to continue with this method until it is safe to reopen schools. Undoubtedly, classroom teaching can go hand-in-hand with online teaching even in a post-pandemic period, as this experience has introduced the benefits of online teaching to the teachers. Thus, the concept of a blended approach is favoured by a good proportion of teachers after the new normal is resumed just like the proportion who favoured classroom teaching. Teaching online is not an easy job and it requires more effort, and preparedness than the face-to-face classroom. As noted in one of the studies [34], effective online teachers face a bigger challenge in comparison to the traditional classroom. While instructors in a traditional classroom can adjust and accommodate the delivery mechanism as the course evolves, online instructors need to design the course well in advance and be completely absorbed with communication through mails, threaded discussions and chats, thereby being involved to a greater degree than the traditional classroom [34] (p.74). This is quite evident from a recent study highlighting school teachers' perceptions concerning online teaching practices in Pakistan where content re-structuring was one of the major challenges among others during the pandemic [35]. Reference [36] states that online teaching and learning requires some adjustments and both students and teachers need to devote more time in comparison to traditional classroom teaching. This involves the preparation of PowerPoint presentations and extra teaching-learning materials [37]. One finding of this study was that it revealed a fascinating relationship; the respondents having more years of teaching experience needed lesser effort though they found themselves less comfortable with online teaching, probably because they were more satisfied with their prior experience of classroom teaching.

The open- ended question posed to the teachers regarding their suggestions to improve online classes revealed interesting views. A few teachers believed that only classroom teaching was effective for their students. According to Sindhu Anil (English teacher), "Online classes are not effective for K.G. (Kindergarten) children." Some kindergarten topics are very difficult to monitor or sometimes impossible to teach online like hand-eye coordination, motor skills like building blocks, inclusive of other activities involving sharing, social development and personal touch. Also, the process of teaching cursive writing (with trace-over letters) highly recommends physical presence of the teacher. School as a place nurtures the environment for development of early childhood. Closer to our finding, a previous quantitative research study among Indonesian elementary school teachers displayed that the majority of teachers (73.9%) consider online learning as ineffective during the Covid-19 pandemic conditions [38]. Another study of Chinese parents' perceptions and beliefs about young children's online learning amidst this crisis included absence of learning environment with peers, weak self-regulation among children, inability to concentrate (being easily distracted) and potential harm to their eyes due to excessive screen use, among many reasons resulting in their rejection of online learning [39]. In addition, IIS Jubail teachers suggested enabling the webcams as mandatory for the students, while others suggested to continue with online classes till the pandemic ends. The apparent reason being, online learning was the only choice available for conveying learning during such crisis situations [38]. Further research is necessary to study the effectiveness, logistics, curriculum, and other aspects of online learning during emergencies. This study also showed that even though teachers of older age category had more years of teaching experience, yet their limited knowledge of usage of online teaching tools or resources, lack of techno-pedagogical skills might be the reasons for lesser online teaching comfort level than their younger counterparts. Support and assistance from school administrators are imperative in this aspect. In contrast, another study done during the pandemic found that older faculty with higher education, more teaching experience, and higher academic rank favoured online education [40] (p.4740). Perhaps it is premature to draw conclusions about perception of online teaching based on teachers' age only.

The respondents perceived that there were advantages and disadvantages of online teaching. A sudden switch to online teaching by the school led the teachers to explore new tools not commonly used earlier. Knowledge of technical skills is largely recommended in online environments [41] or else instructors might find themselves spending more time in technical training instead of building the course content [42]. Hence, having good grasp of these skills is of utmost necessity in the educational world. Lack of knowledge or expertise in usage of technology [35] is a major issue that the teaching fraternity encountered during this crisis. A glimpse at the results of one of the recent studies conducted on EFL teachers in Indonesia during the pandemic, showed diverse challenges and suggested implications for teachers to be adaptive to the changes, practically prepare for usage of applications, as well as update and explore integration of technology in teaching [43]. Some teachers note a few drawbacks of remote teaching like occasional internet signal breaks and difficulty in ensuring fair conduction of assessments. Many teachers perceive that screen time needed for online teaching takes a toll on health, especially on the eyes. The findings of unstable internet connectivity, and sore eyes due to excess screen exposure were also shown in recent COVID teaching studies [37], [43]. Finding it intolerable to watch computer screens for long duration [44], and inadequate network access [38] largely influence the online learning process. Since interaction in online environment is limited and supervision by teachers is not easy, IIS Jubail teachers strongly suggest that parents and students should be counselled regarding the discipline needed to maximise the effectiveness of online learning and it should be mandatory for students to enable their webcams during the online classes. According to [45], though there are positive experiences with online teaching, yet it has eliminated the value of mentorship and learning, due to lack of human interaction or personal contact in our society. IIS Jubail teachers perceived the absence of physically meeting or interacting with students as one of the biggest disadvantages which is akin to another study that stated that the lack of personal touch did not make the class seem lively [37]. Non-availability of a suitable teaching space is perhaps not reported as a disadvantage in this study when compared to other COVID teaching studies. The reason being, teachers live in school-provided housing accommodations that are fairly spacious, and the spouses of most Indian expatriate teachers are employed in companies and live in company provided housing or adequately spacious self-rented houses or apartments. In addition, the issue of keeping pets is nearly unheard of because of the short-term nature of expatriate job contracts in Saudi Arabia and the constant feeling of being unsettled. Furthermore, findings of the open-ended questions shed more light on teachers' perceptions and views of online teaching as reflected here – "In the present condition, online teaching is safe for all because it is saving the academic future of students as well as precious lives and health" says Hetal Shukla (Hindi teacher). In the same vein, Nimmy Joy (Mathematics teacher) believes, "the safety of students and staying alive is more important during this pandemic." Another respondent Seemi Asif (Hindi teacher) opines:

I am satisfied and the students are also excited to attend the online classes. They learn more enthusiastically in this digital world. It is like an adventure for them and the class is very lively and interactive. They enjoy the classes, understand what they are taught and are very happy.

Nevertheless, a few concerns expressed by teachers include delay in eliciting responses from some of the students and inadequate interaction at times. Sufficient data has been collected during this study and borrowing the narrative from the respondents has added more substance to the findings.

VI. Limitations

Name of respondent was a required field in the questionnaire to ensure authenticity, but it is possible that the lack of anonymity may have led to some bias in answering a few of the questions. Additional research conducted to gather

information from students about their learning experiences would be desirable to establish whether the teachers' perceptions match those of their students.

VII. Conclusion

Educational institutions in Saudi Arabia have been able to adjust to the disruptions caused by the pandemic. While the state of economically challenged students is a matter of concern during the crisis in many countries, Saudi Arabia to a certain degree is self-sufficient and hence the case of digital divide is relatively less. IIS Jubail has taken measures to overcome the impediments caused due to the pandemic. A crucial aspect of the technology adopted by the school is that it minimized financial expenses; the apps and software utilized by the teachers are free versions. The focal point of this complete transaction is technology. COVID-19 pandemic has provided ample opportunities for teachers to experiment and explore effective teaching with technology [46], for technology has grown exponentially in the recent decades, facilitating the rise of digital education that will go a long way in improving the nature of online teaching. WhatsApp is the most effective and convenient means of communication between teachers, students, parents, and administrators. The teachers were aware of the pandemic crisis and its huge impact on the educational systems. Despite teachers voicing their concerns that online teaching had some drawbacks, some of them expressed a preference for a blend of online and traditional classroom teaching in the future, as they perceived that this blending of educational styles would increase the effectiveness of teaching. They displayed their readiness and willingness for blended learning. Likewise, training teachers to harness their techno-pedagogical skills will prove beneficial for their delivery mechanism in blended format. IIS Jubail has acknowledged and recommended the blended mode by establishing on-campus training of teachers to enhance their delivery of teaching. Furthermore, "faculty-faculty support is of utmost importance because, despite existing or forthcoming challenges in the educational field, peer support goes a long way in creating a successful teaching learning experience" [47] (p.14). Educational organizations need to support and provide the teachers with online teaching aids and equipment. With the COVID-19 pandemic that has stirred a digital revolution, this need that was earlier overlooked by many schools has now become extremely important. In conclusion, the traditional educational paradigm of educators and students seems to have drastically evolved into a more techno-traditional mental framework. The possibilities of introducing amendments to curricula and lesson transaction patterns need to be explored by educational reformers, practitioners, policy makers, and teacher educators. Fusing online teaching content and conventional teaching practices has the potential for increased teaching-learning effectiveness.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Manjusha Chitale conducted the research and analyzed the data. Ashma Shamail further analyzed the data and contributed towards introduction, literature review, discussion and conclusion. Both authors worked on the paper and approved the final version.

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