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Research Article

Online Teaching: Perceptions, Challenges and Opportunities during and beyond Covid-19 Pandemic among Secondary School Teachers

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ABSTRACT

Due to the outbreak of COVID-19 and closure of educational institutions, a shift from offline to online classes was essential to maintain academic activities carry on. This necessitated to think the educators regarding their preparedness, concerns and challenges related to technical constraints while shifting the academic activities completely to digital mode. The purpose of the study emanated from the need to understand the perceptions, challenges, and opportunities of online teaching during COVID-19 experienced by the teachers. Survey method was adopted for the study and data collected from 328 secondary school teachers who were working both in private and public schools of Kerala, a southern state of India. The results of the study revealed that around 94.4% of the participants of the study agreed that they had proper accessibility to digital devices and tools to carry out online classes during the COVID-19 pandemic and 76% had reported that they had enough knowledge and competencies in handling these tools effectively for conducting the online classes. Approximately 73% of the teachers who took part in the survey confirmed that they make use of google classroom as a learning management system and 59.7% used google meet, 21.4% used Zoom and rest of them made use various digital tools for online content delivery. A large majority (78%) of the participants agreed that they would go for a blended class even after the COVID-19 pandemic where they make use of the possibilities of online mode of learning in the regular classes.

Keywords: Secondary school teachers; Google Classroom; Online Teaching; COVID-19

1. INTRODUCTION

The COVID-19 pandemic has created the biggest disturbances in education system and affected learners and teachers across the globe. Within short period of the outbreak of this pandemic around 94% of learners worldwide were affected, representing 1.58 billion children and youth across 200 countries (Policy Brief: Education during COVID-19 and beyond, 2020). The only solution to cater the needs of the learners and keep the educational activities to carry on, without any delay, was to apply online technologies in the teaching and learning activities. There was no enough time to understand and inquire about the stakeholders' perceptions, availability and proficiency of using the digital tools in the teaching and learning process. The urgent need and demands to meet the challenges caused by closing of educational institutions necessitated the government to quickly respond to the educational needs of the learners. Hence, it is an attempt to understand the perceptions, challenges and opportunities of the online learning caused by the Covid-19 and beyond.

If we analyze the origin of the education system, we can clearly see three waves of education system that prevailed across the globe-starting from gurukula system which originated in Indian subcontinent and as the civilization grew, the traditional institutional system of education and now it is in the form of online education. One of the reasons behind the establishment of traditional university and schools is that it provides an ambience of live learning with peers in the classrooms and perfectly enables the teachers to cater to the different needs of the learners. But it limited a few to enjoy the advantages of live classrooms interactions, as due to various reasons, a lion's portion of youth had to keep them away from schooling and university education. Hence to provide flexibility, openness, inclusiveness and affordability, the distance mode of education was started in different parts of the world and Kentor (2015) clearly expressed that online education is not at all a trend now but it is the mainstream mode of education.

The mode of distance learning can be traced back to 18th century but its progress happened in 1990's with the advance in communication and technology and reached in new heights as the online revolution kept on advancing (Kentor, 2015). The beginning of distance/remote learning was in the form of correspondence courses where teachers used to send the course materials to the learners (Verduin &Clark, 1991). Later on, Radio, television and then internet acted as the channel for distance mode of education (Kentor, 2015). It is a fact that internet will impact education system as Sener (2012) viewed

"education has been, is being, and will continue to be cyberized" (p.157).

Being a developing nation, India is also seeing an innovative change in education industry through online mode by imbibing the world class knowledge. India now considers online learning as integral part for its growth (Shankar & Nareshkkumar, 2018). As a result, with the existing practices of online education, India could manage the abrupt outbreak of Covid-19 pandemic and its destruction in the educational settings.

2. RESEARCH METHOD

2.1 Significance of the Study

The covid-19 outbreak has really made the biggest disorder in education system across the world. It really affected near about 1.6 billion learners across all continent. The shock of the Covid-19 crisis in all spheres of life, especially in education has been unprecedented and unique in nature. The crisis has exacerbated the already existing educational discrepancies and inequalities by reducing the educational opportunities for the children, youth and adult-those living in rural areas, refugees, and persons with disabilities- to continue their learning. UNESCO report (2020) states that around 23.8 million children and youth may not have access to education in the coming years due to the pandemic's economic impact. One of the positive dimensions of this crisis was that it stimulated innovation within education sectors and all the stakeholders of education like students, parents, teachers and academic leaders were forced to accept the innovative and technological approaches to support education and training. Distance learning through online mode was only the solution for the dismay caused by Covid-19. UNESCO's Global Educational Coalition developed distance learning solutions to support education continuity and reminded the stakeholders across the nations about the duty to take care the educational needs of the people.

Looking at all over the world, many countries have yet to decide to finalize the date to reopen and few of them have already planned to open the educational institutions. Government, parents, teachers and students are still in confusion regarding when and how to approach the next phase of covid-19. The closing of educational institutions for longer period has created an educational inequality in the learners because the home resources, parental involvements in school assignments which are of great significance for educational success and these are not equally available to all children (Fairness Policy Brief Series, 2020). 188 countries were forced to impose nationwide education institutions' closures which affected 1.5 billion children and youth (Policy Brief: The impact of Covid-19 on children, 2020).

There have been great efforts by UNESCO as Covid-19 educational response in the form of various activities. The Global Education Coalition which was launched by UNESCO to support countries to continue learning practices and reaching children and youth who are at risk due to school closure is an example in this regard. UNICEF, World Health Organization (WHO), the World Bank, Global Partnership for Education, Organization for Economic Cooperation and Development (OECD) have joined the coalition to mitigate the adversaries due to closure of educational institutions by stressing the needs to support the disadvantaged groups. The private sectors like Microsoft, Google, Coursera, Zoom, Facebook etc. have contributed various resources and technology to support teachers, parents and students during this unparalleled educational disruption. With the support of United Nations and similar agencies, the developed, developing and underdeveloped nations managed to confront the pandemic situation specially to make alternatives for teaching and learning after the closing of educational institutions.

The schools of United Kingdom were closed in March, 2020 with the intention to help community from Covid-19. The government solved the issue of education during lockdown period through remote teaching and learning. Most of the schools used resources from Oak National Academy and also the Bitesize Daily Program offered by BBC. Teachers instructed the students through video streaming services (Collins, 2020). Among the nations it was China who started to ensure learning when classes were interrupted by Covid-19. World Bank's Edtech team say that in February 2020 itself China started for online classes for nearly 200 million school students. The initiative for online education was launched 'Ensuring learning undisrupted when classes are disrupted' by the Ministry of Education and this initiative helped the teachers to plan the implement teaching process. Ministry of Education activated collecting nationwide resources for the updating online course materials and resources. Around 24,000 online courses have been prepared for university students 22 authorized online course platforms were made accessibly for free online courses. Teachers adopted various appropriate teaching methodologies to enhance learning.

OECD (2020) in its note on School Education during Covid-19 say that at the time of lockdown the Finnish government started instruction and guidance for students and planned for alternative methods, including distance learning, digital learning environments and more over testing and grading are also continued. For Finland, the virtual mode of education was in widely use even before the Covid-19 pandemic. The Finnish National Agency for Education instructed educational institutions to plan and various kinds of flexible learning provisions. Moodle, Google Classrooms, Ville, Teams, Skype and Zoom etc. made accessible for the students to carry out projects and tasks independently and attend classes online. Finland had already existing practice to communicate between parents and school through online mode and these platforms were used for posting student assignments, test scores, grades and notes/feedback between home and school. Helmi, Wilma (Primus), Student plus and Sopimuspro etc. were the main platforms used for primary and secondary education. Moodle, streaming services like Adobe connect, Zoom and Notebooks, Digital Matriculation Examination etc. were also applied in higher education. There were lot of initiatives established by Ministry of Education and Culture of Finland to meet the educational challenges raised by the lockdown such as content repositories and tools for students and teachers.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan has a centralized website which synthesizes all information related to COVID19 response, including various coping strategies that schools have undertaken. School districts and schools have employed different coping strategies. While many of them are ICT-based distance learning (e.g., online-class delivery, video-conferences, groupware-based instructions.

Immediately after the lockdown and closing of the institutions, the first step was taken by the Ministry of Human Resource Development (HRD), India, on March 21, 2020 to share various free digital e-Learning platforms for students and teachers to continue their learning and complete the courses as far as possible and conduct the end semester examinations. University Grants Commission (UGC), at various phases of the lockdown, constituted the committee for conducting online classes and examinations. Various digital platforms were updated and made accessible for the stakeholders to make the learning process carry on. In order to stop the spread of COVID-19 pandemic in the educational institutions and to ensure continuity in teaching- learning process, Ministry of Education and UGC issued several directives/ advisories/ guidelines to the universities and colleges, including the one to impart online education by making the best use of e-resources. Through all the communications made by Ministry of Education and UGC, it was emphasized to continue with teaching-learning processes using online modes such as Google Classroom, Cisco Webex Meeting, You Tube streaming, OERs, SWAYAM platform (www.swayam.gov.in), Swayam Prabha (www.swayamprabha.gov.in) (available on *Doordarshan* (Free dish) and Dish TV), e-yantra (www.e-yantra.org), Virtual Labs (www.vlab.co.in), FOSSEE (https://fossee.in), application of spoken tutorials (www.spoken-tutorial.org), National Digital Library (NDL) (https://ndl.iitkgp.ac.in), electronic journals (https://ess.inflibnet.ac.in) etc.

DIKSHA portal which contains e-Learning content for students, teachers, and parents aligned to the curriculum, including video lessons, worksheets, textbooks and assessments, QR codes in textbooks to facilitate students to go beyond the book. e-*Pathshala* an e-Learning app by NCERT for classes 1 to 12 in multiple languages, The National Repository of Open Educational Resources (NROER) portal which provides a host of resources for students and teachers in multiple languages including books, interactive modules and videos, SWAYAM hosts 1900 complete courses starting from school level (class 9 to 12) to higher education (undergraduate and postgraduate) levels. All these initiatives were in use before the outbreak of Corona-virus but these online platforms were made as indispensable part of education by India during the Covid-19 pandemic.

In view of Covid-19 pandemic and subsequent lockdown, in India, the UGC constituted an Expert Committee to make recommendations on the concerns related to the Examinations and the Academic Calendar to avoid academic loss and take appropriate measures for the future of students. This Expert Committee was headed by Prof. R. C. Kuhad, Former Member, UGC and Vice Chancellor, Central University of Haryana, along with other members. But as the unlocking of the country after the lockdown did not fully happen, UGC had to rethink about opening of the educational institutions and carry out the admission process for the fresh batch. UGC guidelines for re-opening the universities and colleges post lockdown due to covid-19 pandemic has issued on 05th of November, 2020 highlight the preventive measures and Covid-19 appropriate behaviors. With the observance of the guideline of UGC, all the educational institutions are getting ready to start the new academic year. As of now, the admission process, induction and the classes are planned to be conducted through online mode, to say that, the teaching, learning and evaluation are going to be fully in online mode. In this scenario, it is good to know the perceptions of the stakeholders on online learning and the challenges and opportunities of the online education in Covid-19 post era.

2.2 Objectives of the Study

- To examine accessibility and expertise to use online learning tools among teachers
- To check the preference of online tools used among teachers during online classes
- To understand the perceptions of teachers on psychological issues of using online learning tools
- Examine teachers' views on the experiences of remote teaching during the COVID-19 pandemic

2.3 Method of the Study

The investigator employed a survey method to collect teachers' and students' opinions about their perception, challenges, and opportunities in terms of online learning during the COVID-19 pandemic.

2.4 Participants

The perceptions, challenges, and opportunities of online education of teachers during COVID-19, were explored using a scale of *Teachers' Perception towards Online Teaching*. A combination of convenience sampling (researchers themselves contacted teachers to invite them to participate in the study) and snowball sampling (the participating teachers were asked to forward the scale to their friends via social media, email etc.) were used. The purpose of this attempt was to make sure maximum participation in the study. As a result, around 428 teachers of Kerala, a southern state of India, both from public and private schools during the scholastic year of 2020-2021 took part in the study.

2.5 Instruments and Data collection procedure

The investigator developed scale on 'Teachers' Perception towards Online Teaching Scale ' used to explore the opinions of the teachers during the emergency remote teaching carried out due to the pandemic. The items in the scale were developed based on experiences of the researcher and a review of the related literature (e.g., Dong et al., 2020; Lase et al., 2020; Abdulamir & Hafdh, 2020). During the item development for the scale, opinions of various psychological counselors, researchers, teacher trainers, and academicians were consulted. According to the suggestions and expert opinions from the subject experts, revisions in the scale were carried out and formed into the final version. The Scale consists of 30 items in five point Likert type, and few closed ended type questions. The developed tool (Teachers' Perception towards Online Teaching Scale) was given to the teachers through online platforms. Each participant took approximately 10 -15 min to complete the scale. The data collection process was carried out using online method like google form due to the pandemic situation.

3. RESULTS AND DISCUSSION

3.1 The Accessibility and Expertise to use Online Tools among Teachers

Majority of the participants were provided technical support to conduct their classes through online during the live class sessions. 94.4% agreed that they do have access to the digital tools to provide online classes to the students during the pandemic. In detail, the data showed that the teachers (at all level of school education) were involved in the process of teaching not only providing teaching support but also encouraging the students to actively participate in the online classes. 76% of the teachers who participated in the study agreed that they had complete knowledge and competency in dealing with the digital tools for conducting the classes for the students online during the pandemic. 15% of them stated that they had to get the support from their family members of friends each time when they had to present an online session. While some teachers agreed that they had taken special effort to handle the digital tools at the beginning of the pandemic since they were not familiar to this kind of programs (7%) and 2% of the participants in the study stated that they had never considered the relevance of the online education as it makes the learners boring and unfocused from learning (Fig. 1).

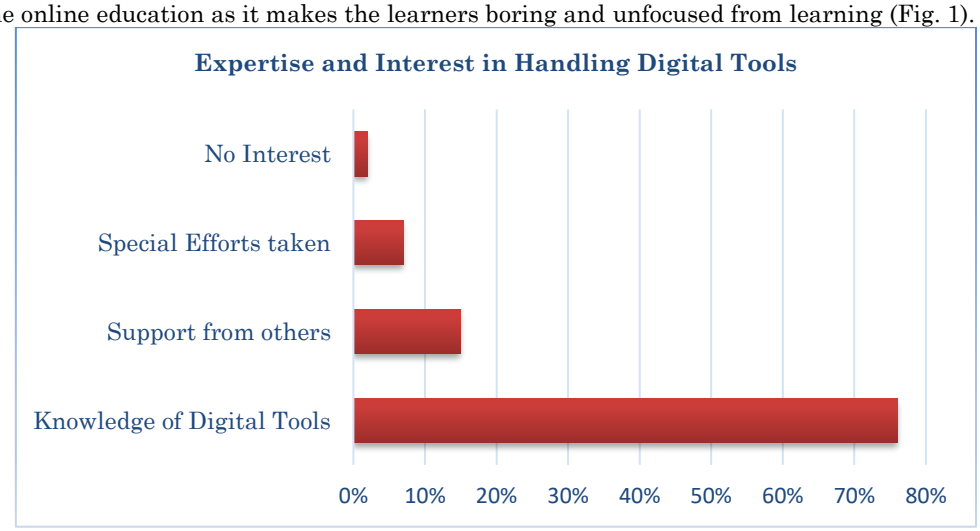

Figure 1. Expertise in Digital tools for Online Classes

3.2 Preference of online tools used among teachers during online classes

Various learning management systems and digital tools were used by the teachers during the pandemic to continue the learning activities. On the basis of availability, easiness in managing the teaching activities, and evaluation, the preference of the teachers varies in the use of online tools. 73.8% of the participants in the study stated that they have made use of Google Classroom to manage their online classes during the remote teaching. 21.4% of the teachers have applied Moodle, a popular learning management system, to carry out the classes whereas, 22.3% of the teachers were provided customized teaching platform for their online classes which was arranged by the institution. It was observed that around 2.5% of the teachers were neither used such learning management system nor they were asked to handle such system (**Fig. 2**).

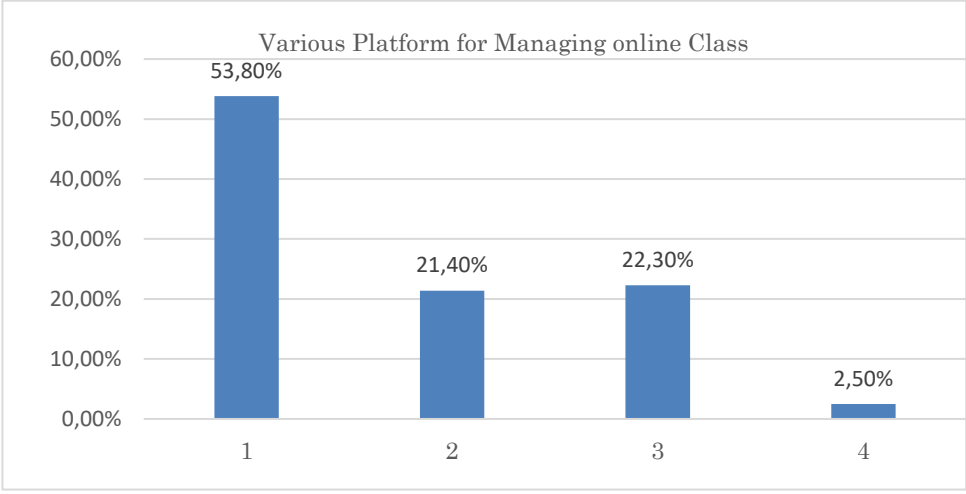

Figure 2. Various Platform for Managing online Class

Teachers stated that they used various kinds of online applications for content delivery such as google meet, zoom, webex, Microsoft Team and the like. In few institutions, the teachers were provided with specially developed online tools for content delivery. Majority of the teachers commonly made use of the google meet to conduct live classes to teach lessons (59.7% of the participants) and Zoom was another online application preferred by the teachers to teach online (21.4% of the participants). 9.5& of the teachers reported that they make use of webex, 2.7% of the them stated that they use Microsoft Teams, and 6.7% of the participants conveyed that their education institutions specially developed and customized digital platform for content delivery during remote teaching (**Fig. 3**).

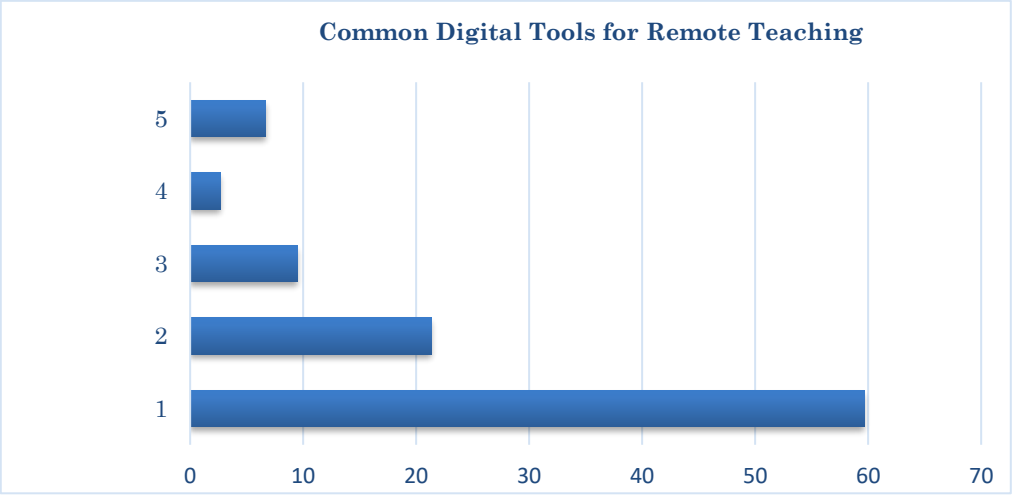

Figure 3. Common Digital Tools used by teachers during Covid-19

3.3 Perceptions of Teachers on Psychological Issues of using Online Learning Tools

COVID-19 has disconnected the students from their peers and teachers to such an extent that they were kept aloof from learning activities for a long period of time. This social disconnection has created an atmosphere where they received less support for their social and emotional needs (Azevedo et al., 2020). In all spheres of life, the evidence from the field reveal that the COVID-19 pandemic has accelerated the levels of anxiety and stress among the students (Banati et al., 2020). As a result, learners started to confront various issues related to health, mental health, and other related psychological issues. These issues are not confined to students alone but teachers also experience the same (Cachón-Zagalaz et al., 2020; Kim & Asbury, 2020; UNESCO,2020). According to the present study results, it was found that 74% of the participants strongly agreed that they do have sleep related issues, 36% of them reported their interest in teaching has decreased. 43% of the teachers who took part in the survey strongly confessed that they experience certain health issues like eyes pain, backpain, head ache, and other related health issues. 43% of the teachers strongly agreed that they do feel a sense of loneliness (**Fig. 4)**.

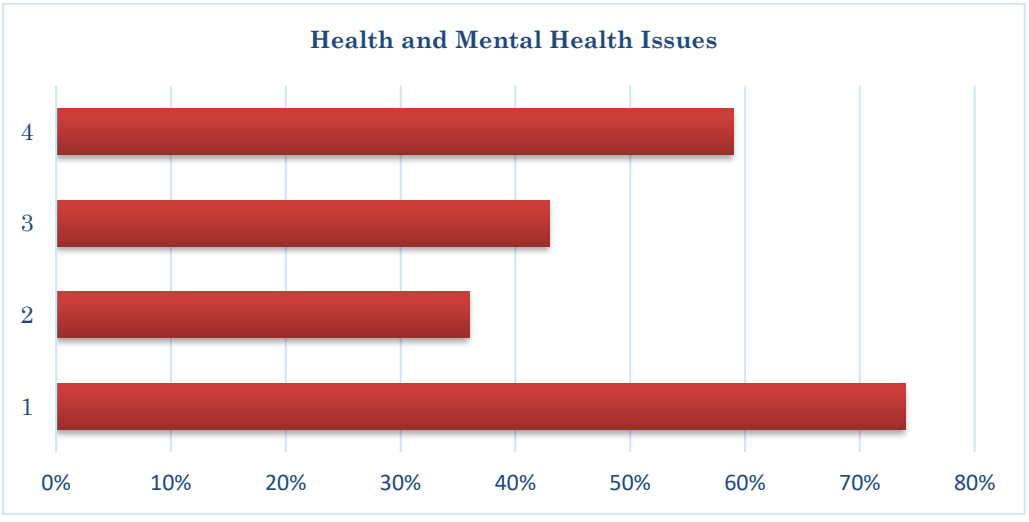

Figure 4. Health and Psychological Issues among the teachers

3.4 Teachers' views on Teaching during the COVID-19 pandemic and the Beyond

With the outbreak of COVID-19 virus across the globe from March 2020, at around 153 nations have deferred face-to face earning and this has affected around 119 million learners which makes 68.5% population of the world (UNESCO,2021). The conventional offline education system fully dependent on online teaching. A complete transformation has occurred in the

education system and hence to understand the experience and views of the teachers on their views of online teaching during and even beyond the COVID-19. The experience of the teachers who participated in the present survey differently viewed their easiness in managing the teaching and learning process during online teaching. Around half of the participants 49.5% strongly disagreed to the point that online teaching mechanism is not easy to manage and thus their perfection in teaching activities get low level where as a large majority of the participants (78% teachers) agreed that even during the post COVID-19 period, the education system in the country should move to a blended system of teaching where there should be a perfect amalgamation of online and offline mode of teaching must be carried out. 29% of the participants strongly agreed that online teaching is better than the conventional mode of education whereas rest of them (71%) either disagreed or remained uncertain on this but majority of the teachers (82% of the participants) reported that online teaching and its mechanism have reduced their effort of evaluation process and agreed that online mode of education gives easiness in assessing the students (**Fig. 5**).

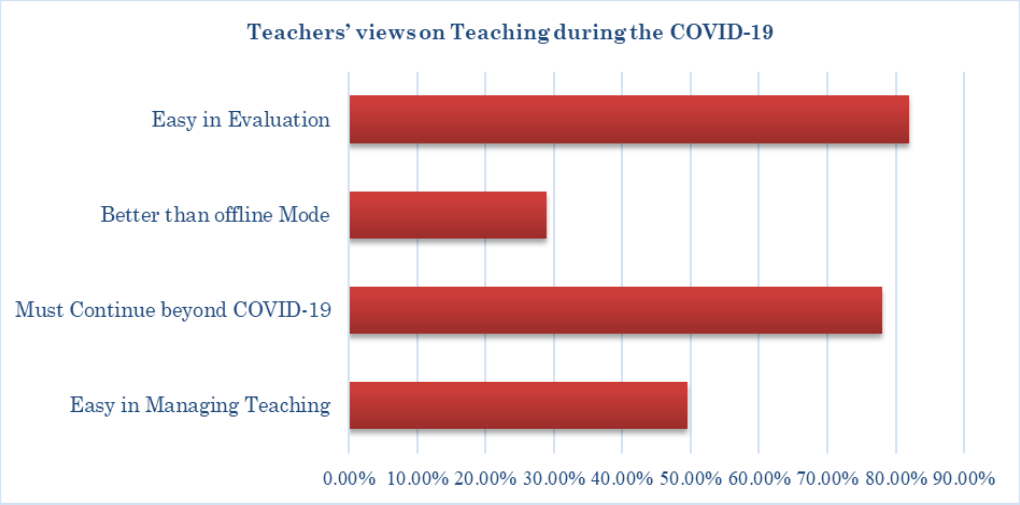

Figure 5. Teachers' views on Teaching during the COVID-19

CONCLUSIONS AND RECOMMENDATIONS

The study conducted by Li & Lalani (2020) have reported various educational problems and issues emerged as a result of COVID-19. Irrespective of the issues, COVID-19 has paved a way for making the educational system online. Rather it enhanced the educational agencies to think about the blended mode of learning even after the COVID-19 period. Hence what is necessary is to identify the concerns, issues, and challenges faced by the teachers about the online teaching. Therefore, what is important is that to provide continuous and comprehensive support and training to the teachers to effectively deal with the situations (Jena, 2020). So, there must be mechanism and arrangements to share the best practices and resources, updating the pedagogical practices suitable for digital learning environment for the teachers.

Continuous involvement in online classes during the pandemic period has increased the level of psychological and health related issue and hence the school management and educational agencies must give due importance to the mental health of the teachers. There must be timely guidance and counseling sessions, mental health interventions, and training sessions to be given to the teachers to stay healthy and mentally free.

The study revealed that majority of the participants are in the view to amalgamate both online and offline mode of teaching and learning in the future. There must have a plan to incorporate the online teaching and learning platforms in the face-face teachings even during the post COVID-19 periods so that it may help both teachers and learners to be prepared for the worst situations of pandemic ahead and as a result, the learning in the future may not be disrupted. The resource service, online evaluations, synchronous and asynchronous mode of interaction with students may be allowed in the future pedagogical practices.

CONFLICT OF INTEREST

The author declares that they have no competing interests.

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