Teacher's Experiences of Online Teaching During COVID-19 Pandemic and E-Moderation

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Abstract — In no realm of life has Covid-19 pandemic wreaked as much visible upheaval as education. The COVID 19 pandemic resulted in total closure of schools in India for almost four to five months now. Lectures quickly shifted to online platforms, posing challenges to teachers and students. The use of education apps has exploded. Online education which was a misty prospect on the horizon before the pandemic, has now become the mainstay. And after the pandemic is over most of the teachers might switch back to the traditional mode of teaching. All of a sudden shift to digital learning due to COVID 19 pandemic has been troublesome for many teachers and students. In this paper we discuss an e moderation model and how it can provide a frame work to teachers for effective online learning. A survey was also done based on the different stages of the model. To understand teachers experiences and perceptions about online teaching and learning during the COVID 19 pandemic period and their preparedness in using e-moderation for online learning, the survey was conducted. The study brings out key issues which need to be addressed by the teachers during planning online education. Teachers need to create an environment of socialization, knowledge construction and critical thinking for successful online learning.

Keywords — emoderation, online learning, COVID 19, teaching learning.

I. INTRODUCTION

With the expansion of Internet and World Wide Web there are many opportunities for teaching and learning to be done online in a creative and effective manner. Until now, online learning was considered optional but the current COVID 19 pandemic has brought it into the mainstream. From technology enhanced learning we are now in the time of learning made possible by technology.

Many forms of technology assisted learning like distance learning, blended learning and flipped learning are being experimented by researchers worldwide even before the pandemic struck the world1, 2, 3. Technology has immense potential in education from providing online readings, discussion forums, interactive videos and simulations to let a learner move at his or her own pace through recorded lectures. Much of research has

already been done in this area. But how teachers are using technology to enhance the learning experiences in the online environment needs to be researched more. Now that there is a paradigm shift of traditional teaching to online teaching due to the pandemic, there is an urge to learn technology. There is an overload of webinars, workshops and courses targeting on various tools for online education. Of course teachers need to be tech savvy for online teaching but this is not the only requirement to achieve the desired outcomes. Engaging students online has become a challenge for many teachers.

Online education needs to have a purpose with a focus on achieving the desired outcomes. The online learning environment should take advantage of all possibilities offered by technology like discussion forums, socialization, and interaction apart from sharing of materials and conducting online classes via video conferencing apps only.

Appropriate learning design plays a key role for successful learning in the online mode also4. In this paper we introduce one such type of 'practical' learning design approach that has a foundation of constructivist principle of learning, the Gilly Salmon 5 stage model5. This model provides a frame work for designing strategies for effective teaching and learning. The results of an e-survey are presented next which was conducted from July 15 to July 31. The questions of the survey were based on the five stages of the Gilly Salmon model and it brings out the teacher's preparedness for online teaching and their perception about online teaching and learning during COVID 19 pandemic.

II. METHODOLOGY

For the success of online learning, Gilly Salmon has given a five stage model based on constructivist principles of learning. The model has already been applied in several online programs. The e-moderation model describes online teachers as e -moderators. She highlights that the role of e-moderators to be critically important in the online learning environment. According to this model online learning environment should be designed for human interaction and communication. This model provides a structured framework for e moderation and e-tivities for active online learning. The

five stages of the model as shown in Figure 1 are as follows:

Access

The first stage in this model is access to various tools and environment which support online teaching and learning. Participants who are not familiar with these tools and environment might face problems in taking up the course. They may not be able to keep up the pace and may require extra time. Encouragement by the e-moderator plays a key role here.

Online socialization

A learning community is formed with interaction among the participants and the facilitator. These initial interactions are very important as they set the base.

Information exchange

The groups start workings together to complete various tasks and enthusiastically participate in different e-tivities. Participants become more confident in their role as e learners with sharing and assisting each other.

Knowledge construction

With the guidance of the facilitator and through various e-tivities learners begin construction of knowledge.

Development

The experience gained and knowledge constructed can be applied to different areas by the learners.
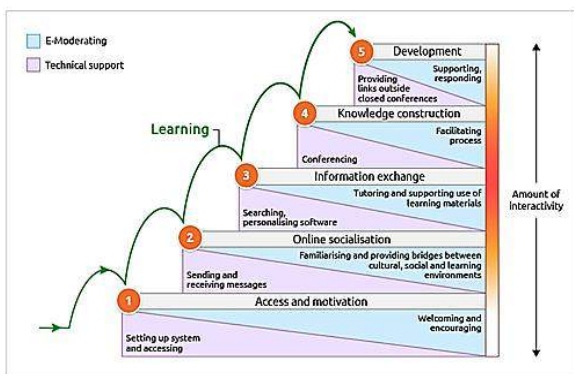

Figure 1: The five stage Gilly Salmon model of emoderation

(Source: https://www.gillysalmon.com/five-stage-model.html)

To study the experience of teachers in conducting online classes during COVID 19 pandemic and how e-moderation could help them in enhancing the learning experiences of the students, an e survey was conducted which included secondary teachers of the government schools of state of Madhya Pradesh.

The survey was prepared keeping in mind the five stages of Gilly Salmon's e moderation model as given above.

A total of 290 valid responses were obtained during the study.

III. RESULTS AND DISCUSSION

A. Teacher's access to technology and e-moderation

This section examines the teachers access to technology and willingness to support online teaching.

The survey revealed that 83.33% teachers favour the traditional method of teaching and learning, 94.44% had gained experience of taking online classes during the pandemic and 55.55% would like to use the online method even after the pandemic is over.

However, the teachers were not much familiar with blended learning and flipped learning (only 16% were familiar). Results regarding access and motivation are shown in Figure 2.

The survey revealed that 83.33% use their smartphones for conducting online classes with the help of mobile data packs (88.88%). 70% of the teachers did not have wifi access in their schools.

Regarding institute support (Figure 3) in creating a technology enabled environment it was found from the survey that only 15.78% teachers received Learning Management System (LMS) support from their school (MOODLE, Canvas etc).

Regarding the network bandwidth/speed of Internet (download and upload) 36.84% teachers found the speed to be satisfactory. 42.10% had wifi access in their schools.

Access to software (eg. MATLAB, Geogebra, graphics software etc.) in schools was available to 27.77% teachers however it was interesting to note that 52.63% teachers used open source softwares for teaching various concepts. 44.44% teachers were satisfied with support for maintenance and repair of ICTs available in their schools.
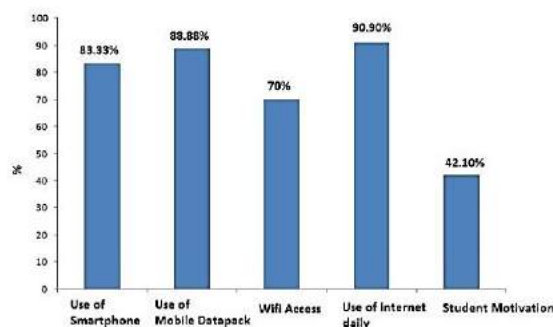

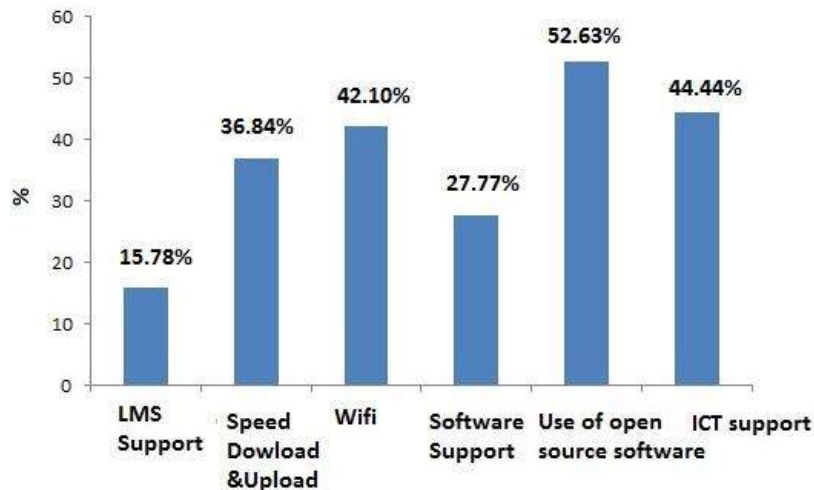*Figure 2: Teachers access to technology and student motivation*

Figure 3: Institutional support regarding technology

B. Online Socialisation and emoderation

During COVID 19 most of the people have resorted to social media for social interaction. Social media can be used to form online groups which can serve as platforms for collaboration, networking, sharing and generation of knowledge which would ultimately lead to the enhancement of teaching-learning process. As can be seen from figure 4, the survey revealed that 94.73% teachers used Facebook among other social media for social interaction. WhatsApp was used by 94.44% teachers for sending content related materials to their students. 55.55% used social media daily. However only 22.22% teachers have used social media for creating a cultural, social and learning environment.
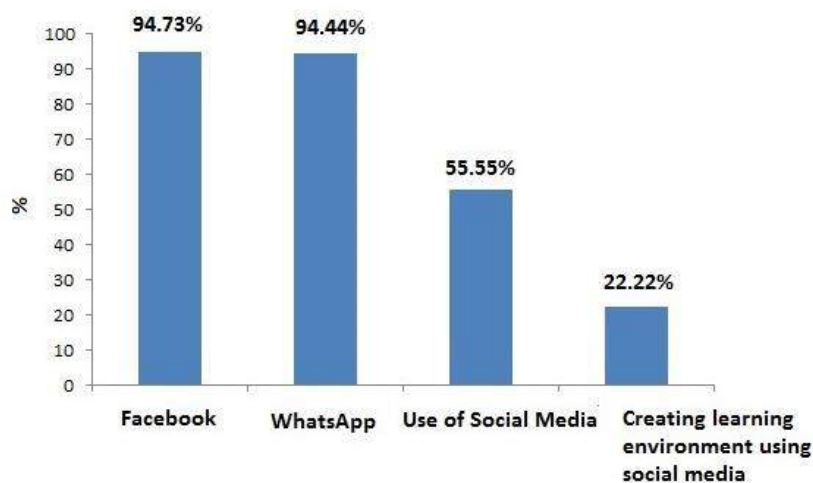

Figure 4: Use of social media by teachers

C. Information exchange and emoderation

Preparation of learning resource material might be tedious task if the teacher is not well versed with technology. Right from preparation of e-notes, handling data, making presentations, using simulation soft wares to conducting online assessment all processes need training and experience. During the pandemic many teachers have sent learning materials through messaging apps. Figure 5 shows the number of skilled teachers in different computer related activities. The statistics showed that email could be used by all the teachers so the response was 100% in this case. In using word (72.22%), excel (77.77%), power point (66.66%), search engines (83.33%), a higher number of teachers could satisfactorily use them. The problem was with creating animations and videos (27.77%), creating online games (16.67%), web page design (22.22%), using drawing or paint programs (28.16%). Regarding assessment which has evolved as the biggest challenge for teachers in e learning, 55.55% teachers claimed that they could satisfactorily use online assessment tools.
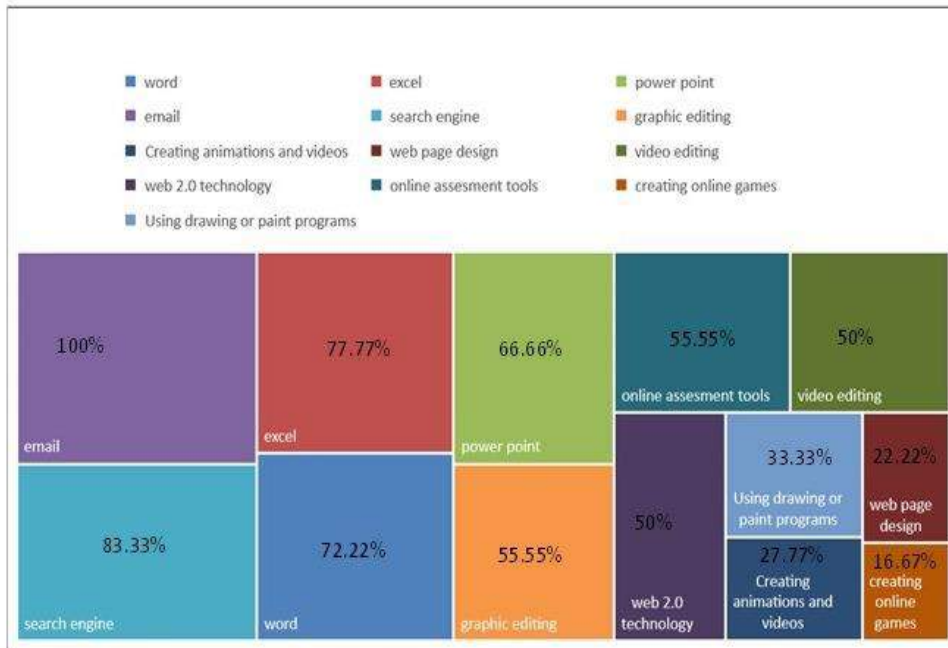
Figure 5: Percentage of skilled teachers in different computer related activities

D. Knowledge construction and e moderation

To facilitate the teaching-learning process, teachers either conduct online classes through various video conferencing applications or by sharing material in all kinds of format like word files, videos, slideshows PDFs through messaging applications or email. Results of the survey pertaining to this stage are shown in Figure 6. During online sessions, 94.44% teachers believe that giving proper breaks is important, so that the students will have the time to think about the topic and frame their questions as doubts. 77.77% teachers feel that online tools are easy to use when conducting lectures.

Regarding teaching of subjects like mathematics and science, 55.55% believe that handling equations and diagrams is not difficult; however, 88.88% teachers find it difficult to conduct practical's in the online mode. 66.66% teachers believe that online classes are successful only when if there is support of parents. Regarding feedback, 83.33% teachers believe that it may be difficult to get an immediate feedback on what was being taught. According to 92.44% teachers, in online classes there is lack of direct contact with students which makes the teaching less effective.
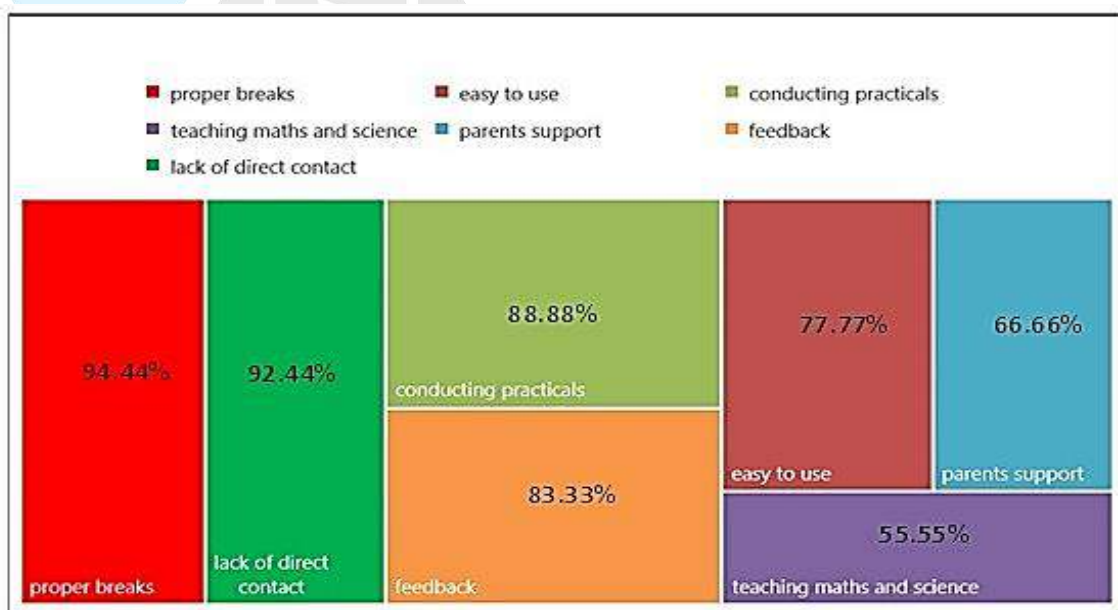

Figure 6: Teachers perception of online classes and knowledge construction

E. Development and e-moderation

Teachers support to the learners during and after the online classes plays an important role in the emoderation process. Responding to the queries of each and every learner is equally important. Teachers need to create a motivated stress free environment for its learner. Different active learning strategies need to be planned to provoke critical thinking among the learners. 50% teachers believe that, online classes promote the development of students' interpersonal skills (e.g.,

ability to relate or work with others). According to 72.22% teachers, online classes will increase the amount of stress and anxiety students experience and 33.33% teachers believe that online classes improve student learning of critical concepts and ideas (Figure 7). 66.66% teachers agreed that they were happy about the student-teacher interaction during online teaching and learning. 50% teachers agreed that students ask questions or clear doubts during online lectures (Figure 7).
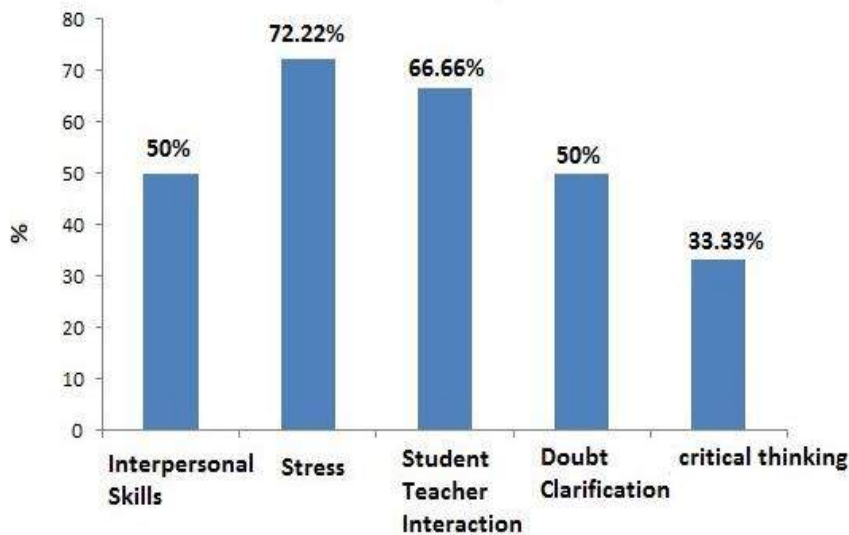

Figure 7: Teachers support in online learning

The results of the survey clearly indicate the lack of understanding and preparation of teachers for the online environment. We all are aware that the act of teaching online is very much different from the face to face mode. Teachers are also not familiar with blended and flipped learning approach and they will require training to create such a learning environment. Research also favours the blended learning approach as compared to the traditional approach in achieving the desired learning outcomes.

There are some specific skills for online facilitators that need to instilled to achieve success in the online mode of education. The Gilly Salmon five stage model has the foundation of the constructivist approach of learning and it can be used as a practical learning design approach by the teachers. The model emphasizes the role of teacher as central in designing various e-tivites for facilitating, directing cognitive and social processes to achieve the desired learning outcomes.

Many teachers view online education as a method of transmission of content only with no emphasis on socialization. In our survey also only 22.22% teachers used social media for discussion on various educational issues with their students. The stage two of the Gilly Salmon model emphasizes on this aspect. The teacher or

e-moderator needs to create opportunities for socialization through planned e-tivities6,7. The e-tivities should promote interpersonal engagement of the participants by supporting their individual, cultural, educational and personal needs. Development of online community and student networks for discussion of the e-tivities and promotion of collaboration among them needs to be formed. The third stage of the model is information exchange whereby the teacher has to design challenging e-tivities through the use of various online tools. These e-tivities should be designed in an interesting way to simulate productive information sharing7.

The fourth stage which is knowledge construction should be built upon constructivist principles of learning where students are given a chance to explore a problem through collective experience and personal reflection. Teacher acts as a facilitator by giving the students ample opportunity to participate in the e-tivities through videos, photos or any other method which will be related to the learning outcome. The last stage which is development is achieved through critical pedagogy by using specifically designed e-tivities. Students should now become capable of applying the knowledge that they have gained in the practical world.

IV. CONCLUSION

The results of the survey indicate that teachers were largely unprepared when they were pushed into the online mode of teaching and learning due to the COVID 19 pandemic. Due to lack of training, online education has become a process of transferring information and not knowledge construction. While digital learning has clear uses, there is a wide consensus that it cannot substitute for classroom experience. As in the case of traditional method of learning, online learning also demands quality and innovation in delivery of knowledge. Using an appropriate learning design to plan the different teaching strategies can enhance student satisfaction of online learning. The Gilly Salmon five stage model for e-moderation can provide a framework to the teachers in designing the online learning environment. Even after the pandemic is over more technology will be melded into teaching and learning and the recent National Education Policy addresses this issue. It stresses on the fact that we all should be ready with alternatives modes of quality education an important aspect that the current pandemic has taught us.

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