Google tools for sustainable educational practices: implication in teacher education

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Abstract

The new normal in the Covid 19 pandemic situation has created a new learning scenario in the academic world. The UGC has given a series of guidelines to safeguard the educational spectrum of the country. One is to take care of the health of the students and teachers at the same time to meet the standards of the academic. Online learning has become the watchword for the new scenario. This paper tries to analyse the positive implication of digital tools usage for the sustainable educational practices from the experiences of the teachers and the various implications of online learning over the past six months.

Keywords: Online teaching, flexibility, teacher as designers, new knowledge, motivation, time saver.

Introduction

With the arrival of ICT, education has changed drastically and the new normal during the Covid 19 pandemic situation has created new learning scenarios in the academic world. Education has changed dramatically, with the distinctive rise of e- learning, and teaching undertaken remotely and on digital platforms[1-2].

Nuere and Miguel[3] has said "this new paradigm of virtuality is not presented as something new. The new normal has forced teachers and members of the academic fraternity to reinterpret, rethink education and its mechanisms. The theories of learning, methods, didactics, and communication is placed into a virtual space which is presented with all kinds of creation".

The UGC has given a series of guidelines to safeguard the educational spectrum of the country. One is to take care of the health of the students and teachers at the same time to meet the standards of the academic. Online learning has become the watchword for the new scenario. This paper tries to analyse the implication of digital tools usage for the sustainable educational practices from the experiences of the teachers over the past six months.

Research questions: i. What are your positive experiences on the online teaching scene? ii. What are your opportunities and road ahead in teacher education through online education?

Delimitation: The study is delimited to: i. The teachers of the department of Education, ii. The use of Google classroom and Google meet, power point presentations & videos.

Setting of the study: The study is conducted in the department of Education of a private university. Since online teaching was taken up due to Covid- 19 the selected University decided to use Google classroom and Google meet for the online mode of teaching. Teachers were exposed to a webinar on online teaching – learning methodology, they were also given training, on the use of Google drive, Google classroom and Google meet. Additionally, the university appointed online coordinators for each department for the smooth functioning of the online classes. It was decided each week will be considered as a module and teachers were expected to upload teaching materials as notes, ppt or video for the students. Teachers were encouraged to meet the students through Google Meet once or more in a week when possible. Practical classes were demonstrated live for the students, and videos of practical classes were uploaded. Students also demonstrated live the various teaching skills for their teaching practicals. Some due to the interruptions, opted for recorded videos as their practicals. These were stored by the teachers.

Assumptions of the study: This study assumed that training given to the teachers for online teaching was fairly good for them to launch on to the online teaching. The teachers were asked to give their views and share their experiences on online teaching. The study assumed that teachers responded carefully, and also shared all their experiences about their online teaching.

Method of study

The study is qualitative research. It is interested in exploring human experiences, hence it comes under phenomenology. According to Cresswell cited by Savin-Baden and Howel[4], qualitative research approach attempts to uncover what several participants who experience the phenomena have in common. Phenomenological researchers may investigate the phenomenon in its outward form, which includes objects and actions, as well as in its inward form, which includes thoughts, images and feelings[5].

Sample of the study: The technique of sampling done in the study is purposive sampling[6]. The sample of the study included ten teachers currently teaching at the Education department. The teachers were interviewed in a focus group. Their documents, reflections were analysed and observations were conducted.

Role of the researcher: Maxwell has mentioned, in qualitative research a researcher is the primary instrument, his or her identity can bring in bias. In order to avoid bias, member checking was utilized during the interview and after the interview to ensure credibility, validity and transferability of the study as suggested by Lincoln and Guba, cited by Grundmeyer[7].

Instruments used in the study: The author used focus interviews, observations, and self reflections on specific areas as given in the research questions for data collection. Furthermore, triangulation was done and final conclusions were drawn.

Data Analysis

The data collected were read and analyzed using open coding. Common recurring themes were highlighted and codes were given[8,9]. Coded self reflections were compared with the focus interviews to find relationships. Qualitative researchers tend to measure in ways such as unstructured interviews, that yield words to describe the extent to which traits are present. Pattern further points out these words when refer to specific behaviours, and events in the reports, gives the reader the meanings that have been attached to the themes[10].

Establishing Trustworthiness: According to Neuman[6] qualitative studies consider a range of data sources and employ multiple measurement methods. According to Marshall & Rossman[8] posits that, describing the setting of the study, participants and pattern of interactions will be the validity of the study. The researcher gave detailed explanations of all these areas to ensure validity of the study. Furthermore, Marshall & Rossman mentioned that "triangulation is the act of bringing together more than one source of information to bear a single point." The researcher constantly compared multiple sources of data for confirmation. Thus generalizability, dependability of the study was enhanced.

Research results: On analysis of the data collected five themes correlated with the first research questions: *what are the positive sides of online teaching?:* i. Flexibility, ii. Teachers are designers using variety of options, iii. Gaining new knowledge, iv. Active, motivation in learning, v. Time saver.

Flexibility: Flexibility is one of the major responses of the teachers. All ten teachers mentioned that online teaching is flexible for both teachers as well as students. Participant U said, the lectures can be recorded which means students can refer to these videos whenever they have doubt or not sure about a certain topic, students absent due to whatever reasons can also see that day's lecture by simply viewing the recordings. Participant Chi, E, Sa, M, N, Sm, has mentioned that online

teaching has helped teaching and learning at anytime, anywhere". Sm, has further reiterated that, "online teaching has helped us to connect even in the remotest parts." This statement was strengthened by the experience related by participant Su, he stated, one student on her way from quarantine on a two wheeler was attending the live class. Such flexibility is possible with technology.

Teachers are designers of learning using variety options: The second theme which emerged is, teachers are designers of learning, by making use of the variety of options available. Eight participants mentioned that they used variety options in their teaching and learning scenario. Participant U said, " using different tools makes a significant difference," while participant Chi stated "I feel online resources have benefitted the teachers by providing a variety of ready-made materials like videos or other multimedia materials, classroom activities, full lesson plans, games, or educational animations or simulations." Participants N, Su, Sa, Sm, reported about the videos, they are able to prepare and post. Participants M and Sm mentioned about the lecture videos he/she has posted. Three (Sa, E, U) participants stated, "Grading is easier and faster" Participant M suggested that since open book test is more used in this scenario , teachers are designing "application questions" for assessment. This aided in higher order learning of the students

Gaining new knowledge: Gaining new knowledge is the third theme that emerged from the data collected. Nine participants pointed out that online teaching has helped in "learning about new applications in digital technologies and web based tools and technologies for academic purposes." Participant U said, "through online, teachers are getting more content than normal textbooks which is resulting in giving more activities to students." Participant Sa suggested that " it makes us (teachers) aware of the new learning" with technology tools and that we need to keep up with the changes." She further reiterated that teachers learn to use technology and keep us updated with our knowledge." Participant J mentioned that there is easy access to teaching materials, related topics can be searched online and incorporated in teaching. In line with participant J, Participant M stated that "online teaching will make students explore large learning materials and can get more feedback from each student and can make teaching more specific and effective." Participants Chi has pointed out that "technologies contribute to create new scenarios that facilitate and promote different processes inside the classroom, and which connect and help transfer knowledge to the outside world." Gaining new knowledge must help students and teachers in transferring knowledge to daily life thus, as participant E mentioned, "opportunities for learning continue".

Active motivation in learning: Three participants have mentioned that active learning is possible due to online teaching. Participant J has mentioned that "dull and boring lessons can be transformed into interesting lessons."Participant U mentioned, "technology can boost the students self

motivation and self paced learning." Participant E says, "technology savvy" is an opportunity online teaching has given teachers. which can boost their interest in learning online teaching.

Time saver: Two participants mentioned about online teaching as a time saver. Participant U has mentioned that online teaching " is saving a lot of teachers' time" which was reiterated by participant R. Participant R has mentioned online teaching has helped in better time management. Agreeing to R participant U has mentioned online teaching has helped in" saving a lot of the teacher's time"

What are your opportunities and road ahead in teacher education through online education?

Blended learning: Analysing the data for this research question the main idea which has come is blended learning. Participant Chi says" the main aim of education is mobilization of the cognitive (head), Psychomotor (hands) and affective (heart) domains of learning. Hence digitization of education can never do away with contact classes which provides humane aspects of education, we can always consider a combination of curriculum transactions through both modes: offline and online. Participant N states that "future is unpredictable, and online classes can never take the place of face to face class. Online class can be used as a support class for face to face class" Participant J also feels " technology cannot replace traditional face to face classes.

There is another thread of thought among a group of four participants that online teaching will gain popularity and is going to stay. Participant E believes that "face to face classes will slowly phase out and relationship with teacher and students will be affected"

Sa reported that from now onwards teachers will be" facilitators of learning", there will soon herald " highly interactive platform for learning and there will be easy access of learning material at different locations". Participant Su mentioned, the future of online teaching will be sustainable with the use of computer animations and robotics. Participants Sm predict that "future students from many countries can connect together and students can get the benefit of listening from expert teachers sitting at their own home".

Conclusion

Online Education has become a necessity for the country due to the pandemic situation. It has its own characteristics, and is filling a niche for many students and the institution during this time of lockdown. According to the guidelines of the UGC all the academic institutions have started the online teaching programme. Training was given to the teachers for online teaching. Since they are on the online mode it was imperative to understand the positive aspects of online teaching and the future ahead. Technology is just a tool, and tools are intended to be used for the benefit of humankind, meaning that humans must control the tools and not the other way around. In a traditional classroom teacher is the actor, it is the instructor's task to engage the students and capture their attention[11]. As the study denotes there is a lot of flexibility for the students and teacher when online teaching and learning takes place. Sahasrabudhe[12] as mentioned in the article *"You take exams when you are ready. These tests are centre-less, where candidates sit online, anytime, anywhere in the world"*. The flexibility we see now in online classes is a stepping stone towards this end.

Another theme which has emerged is, teachers move into the role of designing teaching learning experiences with the help of a variety of options available online. Teachers are making use of the options available and creating videos, audios, power point presentations which are recorded and posted in the Google classroom. This is social production for teaching and learning processes.

Wilmarth[13] reiterated, in 2008 Google engineers estimated that the web is growing by several billion individual Web pages per day. There is only one explanation for the incredible rate of creating, copying, mixing and remixing of information available to anyone with internet connection, and that is the raw power of social production to create information and knowledge artifacts. Thus teachers are turning into designing teaching experiences that contain ripple effects on the students. They (the students) in turn submit assignments in such formats.

The participants also mentioned that online teaching has opened new opportunities and knowledge for the teachers and students. Those who were not new to technology started learning to use technology for online teaching, those who knew technology started to experiment new options and exploring, teaching materials from wide areas of sources.

It is a time saver for teachers, since the materials collected can be reused by updating, and record keeping became easier as well as examinations became whole lot new with open book examinations and more application questions were used in open book examinations. Motivation is increased due to a wide variety of learning materials and interesting assignments and activities. Also self learning is on the rise. The study clearly points towards blended learning. The pandemic has brought in change in the academic field and the change is not going back to traditional classrooms. The future trend is toward blended learning.

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