

CHAPTER V

FINDINGS & DISCUSSION

5.0.0 INTRODUCTION

The objective of the present study was to develop a MOOC and implement it on Student Teacher Educators in the subject of Research Methodology. The effectiveness was studied in terms of achievement test scores in Research Methodology, reactions of Student Teacher Educators and post-experimental interviews. The data was analysed and interpreted in chapter four. In the present chapter, the researcher has presented the detailed findings and discussion based on the analysis and interpretation of the data.

5.1.0 FINDINGS OF THE STUDY

From the analysis and interpretation of the data, the following findings have been derived.

- The Massive Open Online Course was found effective in terms of significantly enhancing students' achievement in Research Methodology.
- The Massive Open Online Course was also found effective in terms of the positive reaction of students towards it.
- The Student Teacher Educators found the course interesting, flexible and self-paced.
- The ideal videos are those where the duration is less than ten minutes and the presence of video embedded interactions is present.
- MOOCs and traditional learning both are equally important. The instructor is of prime importance for any course, be it online or in face-to-face mode.
- The primary challenge encountered by students on the MOOC platform pertained to distinguishing between the processes of registration and login within the course. Student Teacher Educators found it difficult to differentiate between these two procedures.
- On the other hand, the Student Teacher Educators expressed immense enthusiasm and eagerness to develop courses similar to this one for their students in the future. Their excitement stemmed from the positive experience they had with the MOOC and the valuable learning opportunities it provided.

In addition to these findings, the researcher also noted the following observations among the student teacher educators during the implementation of the Massive Open Online Course:

- Prior to implementing the MOOC, during the orientation session, the researcher discovered that a majority of Student Teacher Educators were unfamiliar with the term MOOC.
- Although a few Student Teacher Educators had previously visited platforms where online courses were available, they were unaware that such courses were referred to as MOOCs.
- The Student Teacher Educators thoroughly enjoyed the experience of learning through Massive Open Online Courses and regarded it as a distinctive medium for remote learning.
- The manual and tutorial videos assisted the Student Teacher Educators in the registration process and smooth navigation for each course.
- The sharing of daily progress reports on WhatsApp resulted in an increase in the number of Student Teacher Educators who successfully completed the course within the designated timeframe.
- Whenever a peer student raised a query, the Student Teacher Educators exhibited cooperation and actively supported each other through the WhatsApp group. This dynamic promoted peer learning among the participants.

5.2.0 DISCUSSION

The national platform SWAYAM is providing education to millions of students in India and is an indigenous platform for running MOOCs. SWAYAM is a government-sponsored initiative aimed at achieving the three cardinal principles of education policy: access, equity, and quality. The goal of this initiative is to make the best teaching and learning resources available to everyone, particularly the most disadvantaged. Verma (2021) conducted a study to find the perception of participants towards the effectiveness of the SWAYAM platform and the responses of participants reflected that SWAYAM could be a solution to most of the educational problems by providing quality education, flexibility in education, transparency, instant feedback etc. As mentioned in the literature review Aljaraidh (2019), and Singh & Chauhan (2017) recommended that higher learning

education should introduce and implement MOOCs for their abundant advantages and also be given facilities to design and integrate MOOCs in their regular classroom practices. Despite that, awareness about MOOCs is still not adequate in teacher education (Shaikh 2017, Sivakumar, 2019).

Teacher education programmes largely follow traditional methods of teaching and infusion of modernisation is also very slow. The programmes are always novice to new modes of teaching. In the present study, a Massive Open Online Course was developed for Student Teacher Educators on the subject of Research Methodology. This Massive Open Online Course was hosted on a platform named techtor.in and had four major quadrants in the form of interactive videos, discussion forums, assessments and additional materials. The MOOC was found to be effective in terms of significantly enhancing students' achievement in Research Methodology. This finding was supported by the studies of Inchiparamban (2017), Alturkistani et al. (2018), Ismail et al. (2018) and Andone & Mihaescu (2018), Uppal (2019) and Tzovla et al (2021) those implemented Massive Open Online Course in Educational Technology, Data Science, Food and Beverage presentation, Web Technologies, ICT Integration in Higher Education and a Professional Development MOOC respectively and found it to be effective in enhancing the achievement. The most probable reason for the success of the present study could be the exposure of the group to a Massive Open Online Course divided into chunks of three specialised courses, the content in the course was taught through interactive videos, support of additional materials after every video, assessments, discussion forums, activity and games through a variety of online software and online support for all enquiries through WhatsApp. In addition to these Student Teacher Educators also received badges after each module and certificates at the end of the course. Student Teacher Educators also had the privilege to check their learning through the embedded quiz in the videos and watch the videos again and again to revise the concepts.

The other reason for the MOOC being effective for Student Teacher Educators may be because most of the learners were mature learners who were independent and preferred self-directed learning. A similar type of result was observed in a study from Kilgore (2018) which emphasised that MOOC offers an alternative platform for learning for students who are intrinsically motivated and like to work independently. Rathee, (2018) also suggested that MOOCs are more suited to those who are highly self-motivated. Other than that, students have been learning from traditional teaching methods for ages and become

interested in a new mode when introduced in the classroom. Studies conducted by Soffer & Cohen (2015), and Griffiths et al. (2015) also identified one of the benefits of MOOC as exposing students to other styles of teaching.

Videos in MOOCs are an important component and a major learning component. The videos were made using various presentation templates and a screen recording with voice-over was carried out. This is in line with the recommendation from Guo et al. (2014) of filming video in a less formal setting and big-budget studio productions may not always be necessary. It was observed from the study that videos with a more personal feel may be more compelling than hifi studio recordings. It was made sure that videos were not too long, as more time on the video the attention span of students decreases. Atapattu & Falkner(2017), Mor & Warburton (2016), and Guo et al. (2014) also emphasised keeping videos shorter around 8-10 minutes to maintain students' interest. The videos were also having several quizzes in the form of embedded interactions in between for revision and self-reflection. This brief video, which is mixed with quizzes, resembles one-on-one instruction(Glance et al., 2013). Student teacher educators reported these pops as the most interesting feature of the MOOC and also found it quite engaging. There is also empirical evidence that the inclusion of interactive components to videos might potentially increase student engagement and attention span (Cummins et al., 2015; Geri et al., 2017 as cited in Shah et al., 2022).

The MOOC was hosted on a platform built using WordPress which is easy to use and customise. Students also found the platform well-designed. Having its platform for hosting a MOOC and not depending on a supplier platform has many benefits. One such study by Najafi et al. (2014) also stated that if an integrated MOOC's supplier platform is deleted, the teacher may have to find a substitute or leave the integration. MOOC platforms designed exclusively for school courses may be able to solve these issues. The Massive Open Online Course was also found effective in terms of the positive reaction of students towards it. Student teacher educators found the course interesting, well-planned, and structured and the content was fun to learn and engaging. This finding is consistent with that of Alturkistani et al. (2018) and Ismail et al. (2018) which state that MOOC provides an engaging learning experience. Student Teacher Educators found the course self-paced and flexible to learn at any preferred time. A study conducted by Andone & Mihaescu (2018) and Oakley et al. (2016) also reported MOOC as a novel method which promotes

self-paced learning. The current study found through Student Teacher Educators reactions that they never felt lost in the course as the instructor was always available to help students and all their queries were solved through WhatsApp. This is an interesting finding as literature in past has found that the major reason for dropping out from a course is the non-responsive of instructors or delay in response. Data collected from the interview also supported that the criteria for choosing a traditional mode or a MOOC mode only is an instructor. So, teachers' support is very crucial in the implementation of a MOOC and instructors should not leave the students on their own after taking a course. One possible reason for this is that the number of students was less in this course and the instructor was able to manage the students' query but it becomes difficult when the number of students is more. Hence when planning to implement a MOOC, a group of instructors or assistants should be present, to solve students' queries.

The Research Methodology course which is an important component of the curriculum for Student Teacher Educators not only is important for conducting research and writing the thesis but also for developing rational thinking. The majority of the time lecture method is being used for its transaction, although learning by doing, cooperative learning, computer-assisted simulation, video passed learning, and electronic mind map (Lehtinen 2005, Rohilla 2020 Tungprapa 2015, Arantes & Rodrigues 2018, Mekonnen 2020 as reviewed in chapter two) have also been tried, tested and proved to be effective. In the present study, an attempt was made to develop MOOC in the area of Research Methodology and provide Student Teacher Educators with a unique mode to learn using interactive videos, discussion forums, additional resources and automated quizzes. Student Teacher Educators had positive reactions towards the course and also preferred to learn other topics through this method. A possible explanation for this might be that students learn better when they have control over their learning (Hardway & Stroud, 2014).

During the implementation of MOOC, the researcher made sure that progress report was shared daily on WhatsApp among Student Teacher Educators. In this progress report, the percentage-wise progress of each student was shared, which was automatically generated through the platform. Consequently, it was also observed that the pace of students completing the course on time increased gradually. The observed increase in the number of students completing the course on time could be attributed to avoiding the feeling of being left behind. This observation could be important to control the high rate of dropout

in MOOCs but more research in this direction is required. Another important observation was that the major challenge faced by students was registering or logging in to the course. Although later students solved this issue by reading the manual and going through it. Any new platform being made for MOOC should always have a manual or tutorial video as it's a new platform and video relating to it may not be available on YouTube. Interview data revealed that students wanted the duration of the course to be flexible. Rothkrantz (2016) also emphasised that an inability to manage their study makes students drop out of the course. So instructors need to be flexible in deciding the start and end dates of the course. The prime purpose of the study was never to compare the conventional method of teaching with MOOC. Both methods have their advantages and shortcoming. The data in the present study revealed that MOOC is more or less effective than the conventional method of teaching Research Methodology hence it can be used as an alternative where in shortage of staff teaching Research Methodology is there. It can be also used as a supplementary material to enhance conventional methods, can be used as a resource for blended learning, for remote students, students with a working background and many more. Overall the MOOC was effective could be because of the change in the mode of learning, introduction to a new platform, variety of learning resources being provided to Student Teacher Educators, interactive videos, all resources in one place, continuous guidance through WhatsApp, timely feedback on assignments, daily progress report, learning at any preferred time, user-friendly interface of the platform, mobile-friendly courses and not many technical challenges. Another possible explanation for this might be due to the planned and organised manner in which the MOOC was implemented.

When the MOOC was being implemented majority of the students were unaware of the term MOOC. Although few had done some MOOC on another platform were unaware that it was called MOOC. Hence one benefit of making such courses is making aware of such courses on the internet. Student teacher educators in the present study also had continuous queries on WhatsApp and were also interested, eager, captivated and engrossed in learning through the various quadrants of MOOC. The other perk of developing a MOOC is that it is a teaching-learning resource which will always be available to the teachers, in the long run, to use in their teaching process. Moreover, if the teacher wants she can also revise the resources as per new knowledge creation and keep the course updated. Accordingly, it can be said that MOOC is an innovative way of teaching a subject, by allowing students to learn

at their own pace, is tutor and web-supported, can be used as complementary material in other modes of teaching for teachers and is a beneficial resource for learning online.