CHAPTER VI
SUMMARY AND CONCLUSION

6.0.0 INTRODUCTION

Massive Open Online Courses (MOOCs) have emerged as a significant form of Open Distance Learning. These courses are considered massive because they have no limitations on student enrolment. They are open to anyone worldwide with internet access and are conducted entirely online, encompassing instruction, testing, and discussions. A MOOC can be defined as a course that allows unlimited enrolment, may have a specific start and end date, welcomes participants from diverse backgrounds, shares all course components online, and offers features such as video lectures, discussion forums, online assignments, and assessments leading to certifications. According to Goel & Goel (2012), Open Distance Learning through MOOCs has immense potential for implementation in teacher education, both in pre-service and in-service modes, which has been an overlooked area. Teacher education in India has been slow to adopt technological advancements for educational purposes, hindering its progress. In this study, researchers developed a MOOC specifically designed for Student Teacher Educators and evaluated its effectiveness using an achievement test, reaction scale, and interview schedule, all developed and validated by the researcher.

The developed MOOC provided students with exposure to a new method of learning and encouraged them to utilize various authentic open educational resources available on the online platform. This enabled self-paced and flexible learning among the students.

6.1.0 SIGNIFICANCE OF MOOC

MOOCs are open and accessible to all with a stable internet connection. There is no kind of biasness concerning caste, creed, gender, etc. So learning through MOOC is considered to be inclusive. Learners can select any course of their choice irrespective of their previous background. The courses are also free in most cases and provide financial assistance in paid courses. MOOCs have discussion forums where students can talk with other learners from different places and backgrounds. The course provides students with self-paced learning

and learning at their own convenient time. People who are doing a job and lack time to study physically mode can enrol in such courses and get the benefits of online learning. In addition, MOOCs provide the opportunity to realise the sustainable objective of delivering inclusive and high-quality education to all, as well as opportunities for lifelong learning.

A study conducted by Pandit, (2016) reveals that, “In a country like India, where most people are residing in remote areas and do not have adequate access to skill enhancement and quality learning, MOOC can play a pivotal role”. As per a study conducted by Kaur (2019), the major advantages of MOCs in Higher Education are scalability, free education, removal of other constraints of boundaries, jobs, etc. MOOCs force professors to improve their lectures, develop futuristic designs to ensure students keep up, bring people together from different parts of the world, and provide many business opportunities for making platforms and collaborating with universities like Coursera and Edx. Hence, MOOCs are a welcome step that comes with immense benefits to various stakeholders of the Indian education system. India enrols the second largest number of students in MOOCs after the USA (Shah, 2018). It is thus predictable that MOOC's impact is going to be felt strongly in the education system in India in improving standards and availability of quality education in all fields with the click of a button.

6.2.0 PRESENT STATUS OF MOOC IN TEACHER EDUCATION

Teacher Education is an important discipline to improve the quality of school education. According to Goel & Goel (2012), “ Teacher Education is a discipline which educates the progressive generations on what has gone by, where we are, where we want to go, and what we like to create, observing healthy, meaningful and long life. Innovations in Teacher Education are very rare. It may be attributed to various factors. Novel ideas do not incubate because of adverse external conditions. There are wide gaps between the visionaries and actors. So, very often the innovations have a short life and die down in the institutions, where these originate. Sometimes, the most innovative programs fail in the formal system, because, these are beyond the view & purview of the apex bodies.” Teacher Education programs largely follow traditional methods of teaching and infusion of modernization is also very slow. The programs are always novices to new modes of teaching In India, Teacher Educators are reluctant in adopting or experimenting with innovative teaching approaches. It's crucial to remember that teaching isn’t a field that’s known for creativity, so change can be tough. As science and technology are advancing in India, the methods of

teaching are also not confined to the chalk-and-talk method but moving more towards a method which focuses on the need of students. But the outlook of teachers towards adopting such innovative approaches to teaching is a big challenge(Parvin, 2021). The Teacher Education program should prepare students to use new technology in the classroom to meet the needs and aspirations of students in the twenty-first century. To fulfil these educational demands of students, we require teachers who know how to deliver knowledge and who truly care about students and their future success.

6.3.0 MOOC: OPPORTUNITIES FOR FUTURE

The Indian government recognizes the value of MOOCs in promoting Entrepreneurship, Education, and Training, and has set aside funds in its budget to support the creation of more MOOCs. The government's recent initiatives to provide quality education for people at all levels will be dependent on the expansion of online learning. To increase the enrolment in Higher Education in India and to provide quality world-class education to all, MOOC can be a significant option. To address the objective of increasing enrolment in higher education in India and ensuring access to quality education for all, Massive Open Online Courses (MOOCs) can serve as a significant option. As the demand for affordable, high-quality education rises among the youth and educational institutions and governments worldwide prioritize e-learning and digital literacy, MOOCs have emerged as an integral part of the global education system (Subrahmanyam & Swathi, 2017). MOOCs in the future will create an efficient environment for providing online educational needs. Higher Education institutes should offer MOOCs in the future to boost the reputation of the organization and make it an innovative institute, act as the basis for Educational Research and Development, get income from MOOCs through certificates, promote academic debate in the universities concerning the mode of instruction, pedagogy, and in-classroom teaching, promote the belief in Open Education and be in and be associated with open activities (Haywood & Macleod, 2015).

Institutions offer MOOCs for various purposes, including expanding education access, conducting experimentation, and extending their brand (Educause, 2012). Higher Education institutes offering MOOCs can have multiple benefits. By becoming a leader in innovation, institutes will get an opportunity to collaborate with various third-party firms working in this field. Students' enrolment in institutes can increase and teachers in class will get various modes to adapt to. Teachers need to adopt MOOCs for stimulating fun and

engagement among them, providing students with various modes of learning and also for their academic growth. MOOC showed exponential growth during Covid-19 and students at all levels enrolled in MOOC courses for a variety of reasons and numerous skills. The potential of such a course also needs to be tried and tested in a professional course like Teacher Education and with this objective, this research study was adopted.

6.4.0 IMPLICATIONS OF THE REVIEW OF RELATED LITERATURE

MOOCs are considered a revolution in the field of online education and their numbers have proliferated in the past few years. It has gathered tremendous attention not only from researchers but also from the general public. Thus the investigator has tried to study the work conducted in the field of Massive Open Online Courses concerning the present study. The reviews of the study were categorized as under:

- Studies related to awareness of MOOC
- Studies related to Teachers' and Students' perceptions of MOOCs
- Studies related to users Teachers’ and Students’ factors and motivations to adopt MOOC
- Studies related to the experience of Teachers and Students' in using MOOC
- Studies conducted on different components or Quadrants of MOOC
- Studies related to drop-outs in MOOC
- Studies conducted on the development and implementation of MOOC
- Studies conducted in the area of teaching-learning of Research Methodology

The researcher reviewed a total of seventy studies out of which fifteen were from India and fifty five from abroad. The studies were related to awareness of MOOC, perception of MOOC, motivation to adopt MOOC, quadrants of MOOC, design, development & implementation of MOOC and teaching-learning of Research Methodology. The researches reviewed have the following implication for the present studies:

- MOOCs promote self-paced and flexible learning.
- MOOCs are found to be more effective in a learner who is intrinsically motivated, mature, and likes to do independent work.
- Students in post-graduation have a higher bend towards the usage of MOOCs.

- Students are more actively involved in the learning process when they have control over their learning.
- Although a few studies have been done abroad, there is a dearth of studies on the development and implementation of MOOCs in India. Only two studies were found by the researcher on the development of MOOC in India. One on Teacher Educators and one on B.Ed. students.
- There is a dearth of studies where MOOC has been developed by the instructor. In most cases, the MOOC is adopted from commercial platforms and implemented in the classroom in stand-alone or blended forms and effectiveness is observed.
- Institutions should adopt platforms that support various forms of assessment like self, peer, and automatic assessment.
- The major reason for students not completing the course is nonresponsive to instructors, delay in response, long videos, and personal reasons.
- Institutions should develop their own MOOC platform and degree course-specific MOOC on it so that even if commercial platforms are taken down, they still have their courses running.
- MOOCs are effective when videos are divided into chunks or small segments of eight to ten minutes. Shorter videos were found more engaging.
- Although blended learning, project-based learning, video-based learning and mind maps have been explored to teach Research Methodology, the researcher was unable to find any study where MOOC was used to teach Research Methodology.

After reviewing the studies the researcher concluded that although MOOC has been explored in Teacher Education none of the studies has been done on developing a MOOC for M.Ed. students or Student Teacher Educators. In addition to this researcher was unable to find a study wherein a MOOC on Research Methodology has been developed and implemented at the post-graduation level.

6.5.0 RATIONALE

MOOCs are the new revolution sweeping the Higher Education sector. Providing excellent Higher Education and preparing youth for their livelihood and careers is India's defining challenge and opportunity for the 21st century. The National Council of Educational Research and Training (NCERT) highlighted the importance of exploring unconventional models of education such as distance learning, open learning, and flexible learning

approaches in a position paper in 2006. They emphasized the need for flexible systems, forward-looking curricula, and a career-oriented focus aligned with the demands of the 21st century. It is crucial to engage the education system to play a significant role in improving the teaching and learning environment, making it more meaningful for both teachers and students. In this context, MOOCs provide a solution to these challenges by offering access to education for large populations. Moreover, MOOCs can deliver diverse and high-quality instruction that individual instructors may not be able to develop on their own (Daniel, 2012).

Teachers should carefully consider whether they have the necessary resources and commitment to successfully develop and deliver it. Most of the time lecture method is adopted in the classroom and sometimes teachers make use of ICT components like videos, PowerPoint slides, or audio to teach students. Students most often have no knowledge about MOOCs courses available on various platforms neither they are made aware of the same by their teachers. Despite the availability of some practises and research, a great number of educators and students are still learning about MOOCs as an educational endeavour. However, an increasing number of institutions are following the norm in their efforts to create open MOOCs and online learning to adhere to contemporary pedagogical trends, to make the institutions visible in the market for learning services and to reach larger communities of learners (Sekret & Morze, 2017).

According to Daniel (2018), Research Methodology equips students with the essential knowledge to improve their research skills and potentially pursue successful careers in research. However, research has consistently highlighted poor learning outcomes associated with research methods courses in universities. These courses are often described as pedagogically rigid, conceptually challenging, and lacking adaptability to future career paths. Students often perceive the content of research methods courses as disconnected from practical applications. They also encounter various challenges in learning Research Methodology, such as formulating research questions, comprehending theory or literature, grappling with data analysis, understanding technical terminology related to fundamental concepts, and lacking numerical skills for quantitative methods. Addressing the difficulties in teaching research methods courses is a challenging task due to the limited pedagogical research on innovative teaching approaches in this subject. MOOCs in Research Methodology can serve as a viable alternative for delivering these courses effectively.

With the increasing connectivity, initiatives like Digital India, and a growing emphasis on online learning, it is an optimal time for the Teacher Education system to align with these emerging trends (Singh & Chauhan, 2017). University Grants Commission recently in April 2022 published the guidelines for pursuing two academic programs simultaneously in hybrid, physical or online mode. This policy will also promote more institutes to offer MOOC programs to students so that the problem of student attendance and being present in two places at the same time is solved. Despite the rapid growth of MOOCs in recent years, this format is still evolving and not yet fully established. To attract more students, MOOC providers need to focus on offering improved learning tools rather than solely relying on providing high-quality multimedia materials online (Rai & Chunrao, 2016). Efforts need to be taken to maximize the engagement among learners, monitor their learning, and make learning interesting so that the dropout rate can be minimized. This study can provide Student Teacher Educators not only a new platform for teaching and learning but will also promote them to adopt such practices in the future. It will provide a path for future Teacher Educators to get acquainted with an innovative teaching-learning platform, promote professional development, create awareness for MOOCs and equip them with 21st-century technical skills. From the review of the literature, the investigator did not come across any study, research, or investigation based specifically on developing a MOOC for Student Teacher Educators. Therefore, the investigator was enthusiastic to work in this area and to develop a MOOC on selected topics of Research Methodology.

6.6.0 STATEMENT OF THE PROBLEM

DEVELOPMENT AND IMPLEMENTATION OF A MOOC IN RESEARCH METHODOLOGY FOR STUDENT TEACHER EDUCATORS

6.7.0 OBJECTIVES OF THE STUDY

The researcher had formulated the following objectives to complete the present study in a step-by-step approach.

1. To develop a MOOC on Research Methodology for Student Teacher Educators.
2. To implement the MOOC on Research Methodology for Student Teacher Educators.

3. To study the effectiveness of the developed MOOC in terms of achievement of Student Teacher Educators.
4. To study the effectiveness of the developed MOOC in terms of the reaction of Student Teacher Educators on the following components:
    - Course structure and planning
    - Video Lessons
    - Discussion forums
    - Assessment
    - Additional resources
    - Feasibility
    - Instructor support
    - Overall effectiveness
5. To study the experiences of Student Teacher Educators in learning through MOOC.

6.8.0 HYPOTHESIS

The following null hypothesis was formulated and tested at the 0.01 level of significance.

H_0: There is no significant difference in the post-test mean achievement score of the control and experimental group in Research Methodology.

6.9.0 EXPLANATION OF THE TERM

- MOOC: MOOC stands for Massive Open Online Course. It is defined as, an online course hosted on a platform that can enrol many students simultaneously, may have a set start and end date, open for all irrespective of the background, all components are shared online, and has major components like video lectures, discussion forum, online assignments and assessments leading to certifications and badges.
- Student Teachers Educators: All students enrolled in the two-year M.Ed. program across India.

6.10.0 OPERATIONAL DEFINITION OF TERMS USED

- Achievement in Research Methodology: Score secured by the Student Teacher Educators in an Achievement Test in Research Methodology prepared by the researcher.
- Effectiveness in terms of reaction towards MOOC: Effectiveness in terms of reactions towards MOOC is the intensity index of 4.0 and above in a five-point reaction scale in terms of individual components and all the components as a whole.

6.11.0 DELIMITATION OF THE STUDY

The study is limited to the topics, Introduction to Educational Research, Sampling and Types of Research Methods(Qualitative, Quantitative, and Mixed-Method) taught in the curriculum of M.Ed. the first year.

6.12.0 DESIGN OF THE STUDY

The present study was quantitative and an experimental study was adopted. The research design used was quasi-experimental. As the quasi-experimental has various designs under it, a pre-test post-test non-equivalent control group design was adopted.

6.13.0 POPULATION OF THE STUDY

In the present study population comprised of all the Student Teacher Educators studying in the two-year M.Ed. programme in India in the academic year 2021-2023.

6.14.0 SAMPLE OF THE STUDY

For the present study sampling process adopted was convenience sampling based on the permission granted by the institution for conducting the research and implementing the Massive Open Online Course. Two institutions from Gujarat state with sufficient enrolment were chosen conveniently to conduct the research i.e. Department of Education, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara and Kameshwar College of Education, affiliated to Gujarat University situated in Ahmedabad. All the Student Teacher Educators studying in the Department of Education, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda in the batch of

2021-2023 were selected as experimental group and all the students teacher educators studying in the batch of 2021-2023 in Kameshwar College of Education, Ahmedabad were selected as control group.

6.15.0 TOOLS FOR DATA COLLECTION

Three tools were developed by the researcher for the present study which includes:

a. Achievement Test in Research Methodology

An achievement test in research methodology was constructed by the researcher. The same achievement test was used both in the pre-testing and post-testing control and experimental group. It was prepared in both English and Gujarati language. The achievement test was constructed keeping the topics to be taught through MOOC in mind. The achievement test consisted of 50 multiple-choice questions and was 50 minutes duration. The achievement test was prepared using multiple choice question options in Google form. The question prepared by the researcher took into consideration all three levels of the cognitive domain i.e. Knowledge, understanding and application. The items in the test were divided uniformly among all three broad topics. The developed achievement test was validated by the subjects and language experts.

b. Reaction Scale

The reaction scale was prepared using a linear scale in Google form. The scale had 35 statements related to the developed Massive Open Online Course and items pertaining to its videos, discussion forums, assessments and additional resources, overall planning, feasibility etc. The reaction of the participants was collected on a five-point scale with scale points like strongly agree, agree, undecided, disagree and strongly disagree. The developed achievement test was validated by the experts.

c. Post-Experimental Interview Schedule

The research had prepared an interview schedule of 23 open-ended and close-ended questions which included, general information about the participants, experience with the MOOC, the challenges faced in any of the quadrants during the implementation process,

suggestions on improvement of the Course as well as suggestion for future MOOC developers and learners.

6.16.0 DEVELOPMENT OF THE MOOC

MOOCs are Online Courses with the capacity to enrol unlimited students, open to all and consist of components like video lessons, assessments, discussion forums and additional resources. In the present study the platform to host the Course was called techtor.in. The researcher developed the MOOC, along with its different quadrants and platform, to host the MOOC. The following steps were involved in this process:

- Self-enrolment in MOOC to understand its basics and technology
- Selection and analysis of content for MOOC
- The content selected for MOOC was then divided into three Specialisations Course
- WordPress was selected as a Content Management System to design the website
- Designing various web pages on the platform WordPress
- Selection of an LMS plugin called LIFTERLMS to develop the course
- Development and selection of Quadrants for MOOC including video lessons, discussion forums, assessments and additional resources.
- Assembling the Quadrants in the Course Builder feature of the LIFTERLMS. i.e. planning the Lesson and Modules
- Designing Additional elements of MOOC like pre course survey, feedback forms, important instructions, certificates, badges, introductory videos, emails and announcements.
- Development of an E-Manual to assist users in understanding how to effectively and efficiently use the course
- Development of a Tutorial/demo Video to navigate the course smoothly
- Development of an Orientation Presentation on MOOC for the experimental group
- Validation of the MOOC by experts
- Pilot testing of the MOOC

After all the above steps were conducted by the researcher the MOOC along with its platform was available and ready for implementation purposes.

6.17.0 DATA COLLECTION

The study was carried out in September 2021, when institutions were getting back to normal after the second wave of the pandemic, and a majority of the students and teachers were working from home. The researcher sent an email to different instituting running two years M.Ed. Course in Gujarat, to get permission to conduct the study. The institution which replied to the email and gave permission was taken as a sample for the study. Data were collected from the experimental and control group during the implementation phase. Pre-test and post-test were administered in both the control and experimental group. The Massive Open Online Course was implemented in the experimental group and the control group was taught through the Conventional method. The data collection process lasted for approximately four months.

6.18.0 DATA ANALYSIS

The researcher used the Mann-Whitney U which is a non-parametric test for testing the hypothesis. Achievement test scores of the control and experimental group were analysed by using the Mean, Standard deviation and Standard error of the mean. To analyse the reaction scale Frequency, Percentage and Intensity Index(II) were used. The data collected from the interview schedule was analysed using Content Analysis.

6.19.0 FINDINGS OF THE PRESENT STUDY

Following are the findings of the present study.

- 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 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. Students 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 (MOOC).

- Before implementing the MOOC, in the orientation session, the researcher found that the majority of Student Teacher Educators were unaware of the term MOOC.
- Although few Student Teacher Educators had visited platforms where such courses were being offered they did not know that it was called a MOOC.
- Student Teacher Educators enjoyed learning through Massive Open Online Course and found it a unique medium for remote learning.
- Manual and tutorial videos guided the Student Teacher Educators in registration for each course.
- Daily progress reports shared on WhatsApp, lead to an increase in the number of Student Teacher Educators completing the course on time.
- Student Teacher Educators cooperated and helped each other on WhatsApp groups when a query was raised by a peer student. So it promoted peer learning.

6.20.0 EDUCATIONAL IMPLICATIONS OF THE PRESENT STUDY

From the findings of the present study, the following implication can be drawn for teacher educators, administrators, researchers and policymakers:

- The effectiveness of the MOOC suggests that incorporating MOOC can be a valuable addition to traditional educational methods. Teacher education institutes should consider integrating MOOCs into their curriculum to enhance student learning outcomes in skill-based subjects like Research Methodology.

- Teacher educators need to be trained for developing Massive Open Online Courses (MOOC) in their respective subjects by utilising the various free open-source software available online.
- All teacher educators must be encouraged to develop MOOC courses for their professional growth.
- The administration of teacher education institutes must provide relevant support in the form of technical devices so that MOOCs can be integrated into teaching-learning effectively.
- Researchers should develop MOOCs which are similar to the curriculum of the M.Ed. course so that they can be used for students unable to attend face-to-face classes.
- All higher educational institutions should provide options to learn through offline or online mode using MOOC.
- Policymakers must allow students to learn through MOOCs available on various global and local platforms and credits should be accommodated in their study.
- Teacher educators should explore different platforms available on the web to make MOOC courses and also for implementation in the classroom.
- Through various awareness programmes, Student Teacher Educators should be made aware of the MOOCs
- More research should be done in designing affordable and sustainable MOOCs.

6.21.0 SUGGESTIONS FOR FUTURE RESEARCH

From the findings of the present study, the following suggestions are proposed for further research:

- Development of MOOC in other subjects of the M.Ed. curriculum can be considered.
- A study on awareness about Massive Open Online Courses among M.Ed. students can be considered.
- Implementation of MOOC available on SWAYAM or other global platforms and its effectiveness can be studied by M.Ed. students.
- The effectiveness of a MOOC in a blended mode along with a face-to-face mode can be considered.

- The effectiveness of different quadrants in a MOOC on Student Teacher Educators can be studied.
- The effectiveness of a MOOC on a larger sample of M.Ed. students can be done, whereas a pre-experimental design can be adopted.
- Research on the importance of the Instructor's role in a MOOC environment can be studied.
- A comparative study of blended learning and MOOC can be carried out.
- Research could be conducted on the implementation of MOOC learning at various levels of Teacher education programmes.
- Research on using Massive Open Online Course as supplementary material and as a resource in blended learning can be studied in the M.Ed. programme.
- Research on teachers' and developers' views on developing a MOOC and challenges faced while designing a MOOC can be studied.

6.22.0 CONCLUSION

The pandemic and the subsequent lockdown affected all the sectors in the country. As colleges and universities got closed teachers resorted to online learning. Experimentation with different platforms began and MOOCs emerged as one of the major sources of remote learning. Although MOOC was not a new concept before the pandemic and has its existence since 2009, its acceptance among learners increased during the Covid-19 period. MOOCs are not only accessible from anywhere but also accommodate massive students at the same time at no extra cost. They are a plethora of platforms where students from arts can learn a subject of science, with only one requirement and that is interest in learning. Higher education institutes from around the globe, from various fields are trying their best to make MOOC and reach millions of students but its infusion in the area of teacher education in general and M.Ed. programme in particular is still limited. The present study attempted to develop a Massive Open Online Course for Student Teacher Educators in the subject of research methodology. The platform for hosting the MOOC, its quadrants, a manual, a tutorial video and an orientation presentation were developed by the researcher and implemented by Student Teacher Educators. The distinguishing features of the course development were that it had interactive videos, modules with numerous lessons, a variety of additional resources, a personalised open source platform to host the MOOC, ample

opportunities for students to get support from the instructor, automated assessment and set start and end date which where flexible.

This MOOC was not only effective in terms of achievement of Student Teacher Educators but they also had positive reactions for the same. The student-teacher educator found the course interesting, self-paced, fun, and engaging and they also preferred to learn other topics of research methodology through MOOC in the future.

The student teachers educators are postgraduate students who are mature learners. Such students don't require the transmission of knowledge from the teacher, they only require proper guidance and direction to get access to relevant knowledge related to the subject. The role of teacher educators here is to mentor and tutor them. MOOC promotes the role of the teacher as a guide. All the relevant education materials are placed in one place for the students in a self-study format and the teacher only guides them, keeps them motivated to complete the course in time and also solves their challenges along the way.

Doing research and learning about research is of paramount importance for students. Research is not just a subject to learn it is a skill that remains in the life of students till eternity. Research methodology is studied to solve daily life problems and is necessary to acquire knowledge that is still unknown. The course is important for the degree requirement of M.Ed. and also occupies a large portion of competitive exams. Despite that less importance is given to the way it is transacted and the majority of students find it challenging, boring and uninteresting subject to learn. So it always remains a challenge for teachers to teach research methodology in a way that engages students and awaken interest among them. Hence teachers need to come out of the four walls of the classroom and try hands-on innovative approaches using technology to teach the students. Accordingly, more teachers should focus on developing Massive Open Online Courses either by exploring a variety of resources available online or make their resources. This in turn will make their classes fun, engaging and an alternative mode of learning will be introduced to students.

According to National Education Policy (2020), Teacher education is an indispensable sector for making future teachers that will shape the future of the next generation. They should not only be well-versed in Indian values but also master of latest advances in education and pedagogy. The teacher and teacher educators in future will be dealing with digital natives. These students will be well versed with the latest technology and will prefer

learning through the latest technology. Hence teacher education institutes should promote the development of more such MOOCs and their implementation that can provide flexibility to students to learn anywhere and anytime. The developed MOOC can be used as a resource for online learning, can complement traditional learning and can also be used in higher education institutes where there is lack of teacher educators to teach the subject of research methodology.