

**A STUDY ON INSTITUTIONAL PRACTICES AND STUDENTS
ATTITUDE TOWARD SWAYAM MOOCS IMPLEMENTATION IN
THE HIGHER EDUCATION INSTITUTIONS OF ASSAM**

**A THESIS SUBMITTED IN PART FULFILMENT OF THE REQUIREMENTS
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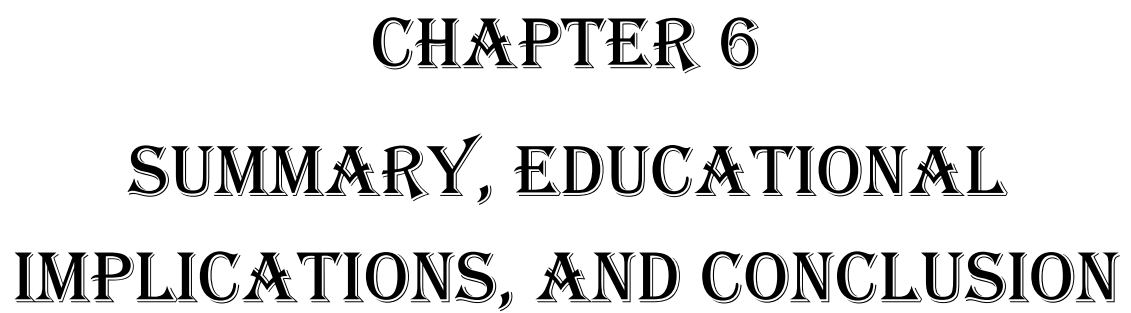
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CHAPTER 6

**SUMMARY, EDUCATIONAL
IMPLICATIONS, AND CONCLUSION**

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6.1 Introduction

The widespread adoption of internet-based technology has profoundly influenced every aspect of our everyday activities, and education has not been exempted from this transformation. It has caused alterations in the manner in which learning is provided. Traditional classrooms are diminishing in their exclusive role as the vital spot for education. The use of technology is extremely important in enhancing the teaching-learning and assessment processes, providing assistance to the development of teachers, and simplifying the administration of learning in educational institutions (NEP, 2020). Technology-enhanced learning through online educational platforms is increasingly prevalent among students at all academic levels, from ninth-graders to those pursuing doctoral degrees (Henrie et al., 2015)

The implementation and conduct of activities are about to be significantly transformed by the advent of Information and Communication Technology (ICT). One of the most notable aspects is the application of ICT to disseminate knowledge to broader audiences across various platforms and periods. In the present day, numerous technological applications have been embraced to facilitate instruction and learning, with MOOCs being one of them.

Massive Open Online Courses (MOOC) have evolved as the new buzzword in the education system in the past decade as the year 2012 marked as 'year of MOOC' (Pappano, 2012), and gaining popularity day by day. Massive Open Online Courses (MOOCs) are online-based courses that have no limitations on the number of participants or educational prerequisites for enrolment.

India is a relatively new country among a global population that is becoming older. In India, the median age is around 28, whereas it is 37 in China and the US, 45 in Western Europe, and 49 in Japan. The demographic dividend, an essential statistical measure, is the primary driving force behind India's recovery and emergence as a worldwide leader in different fields.

India's substantial labour force presents a singular opportunity to stimulate economic expansion considering the country's demographic transition. Nevertheless, in order to actualize this potential, the labour force must be competent and marketable. Despite notable progress, a substantial portion of India's working-age population continues to be unemployed, despite employability increasing from 33% in 2014 to more than 50% in 2023; this presents a substantial obstacle. It is critical to prioritize the improvement of educational standards in order to tackle this issue. The integration of open digital universities, contemporary school curricula, and the pervasive utilization of MOOCs are imperative in furnishing individuals with the requisite knowledge and competencies. Collaboration between the Ministry of Education and FICCI in 2013 validated the efficacy of Massive Open Online Courses (MOOCs) in expanding higher education, particularly in light of the impracticality of constructing adequate traditional educational institutions. With their ability to scale and improve the quality of education without requiring a substantial investment in physical infrastructure, MOOCs have made a significant contribution to the development of a skilled labour force. This strategy is consistent with the policy emphasis necessary to leverage the demographic shift, guaranteeing that the substantial labour force in India contributes positively rather than negatively.

SWAYAM is an indigenous MOOCs (Massive Open Online Course) platform in India that provides complimentary online courses covering a wide range of subjects to students and learners. The goal is to provide equal access to high-quality educational resources for all individuals, particularly those who are most marginalized. The courses offered on SWAYAM aim to mitigate the digital divide by granting everybody access to high-quality educational materials. Respected educators in the nation create these courses, and they are accessible at no charge. In the future, the integration of SWAYAM MOOCs with traditional education is projected to enhance the students learning results("SWAYAM EOI: Proposal for Course Development," n.d.). Since 2016, a total of 2448 distinct Massive Open Online Courses (MOOCs) have been created for SWAYAM. These courses have been used to offer a total of 6,945 courses, with over 2.47 million students enrolling in them.

Furthermore, roughly 8.63 lakh students have received certification from these courses so far. These courses bring significant attention and recognition to both the professors

and the institute that provides them, both nationally and internationally. SWAYAM courses are completely recognized and meet the criteria for credit transfer according to the UGC (Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds) Regulations, 2021. These regulations now enable an educational institution to provide up to 40% of the total courses in a particular program during a semester using online learning courses provided by the SWAYAM platform. The candidate's credits/marks earned from SWAYAM Certificate courses will be included in their transcript if the university has implemented the UGC (Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds) Regulations, 2021, which allows for credit transfer of MOOCs courses offered on the SWAYAM Platform.

6.2 RATIONALE OF THE STUDY

According to the AISHE report (2021-2022), the Indian higher education system is one of the oldest and largest education systems; globally, it includes 1168 universities, 12002 number stand-alone institutions, 45473 colleges, 4.33 crore students, and 15.98 lakh teachers. However, it is observable that the number of skilled and qualified teachers or instructors is less in accordance with the number of students who dream of gaining knowledge and experiences or learning new technologies. Nowadays, the number of these learners is increasing exceedingly. To face this challenge, a need to adopt an alternative method for fulfilling the desires of these learners arises. Considering the rapid technological advancements of the twenty-first century, it seems that the implementation of MOOCs is an exceptionally advantageous notion that ought to be embraced by all active and passive participants in the Indian education system.

MOOCs have revolutionized education by providing a flexible and accessible platform for individuals to acquire new skills and knowledge (May, 2018; Porter, 2015). These courses offer a wide range of subjects taught by experts worldwide, focusing on developing essential 21st-century skills such as critical thinking and digital literacy (Clarke, 2013; Ingólfssdóttir, 2014). As technology continues to shape the educational landscape, MOOCs are expected to play a vital role in preparing individuals for the demands of the global economy (Voogt et al., 2013). With their affordability and accessibility, MOOCs empower learners to adapt and excel in the dynamic 21st-century environment (Beattie-Moss, 2013; Porter, 2015). This course has all the scopes and

spheres of learning with technology, and it is also a learning platform to develop the thinking capabilities of learners while sitting anywhere. Learners can choose courses from diverse fields of education and expertise.

In India, there is exponential growth in the number of courses offered through MOOCs and the number of universities participating in these platforms. According to Pant et al. (2021), India ranked third in terms of registered users on the SWAYAM platform, indicating a high level of participation in MOOCs. As per a report by Shah (2022), Over ~ 1000 universities worldwide had offered thousands of courses to 22 crore earners on various platforms of MOOCs by the end of 2022(excluding China). In India, several universities have entered into strategic partnerships with MOOC platforms to provide content and certifications. Also, as per the UGC Credit Framework for Online Learning Courses through SWAYAM Regulation, 2021, an Institution can only allow up to 40% of the total courses offered in a particular program in a Semester through the online learning courses provided through the SWAYAM platform. These frameworks were put in place to assist learners in small institutions to access high-quality learning materials. However, little research has been conducted on the benefits to these learners of successful completion of these courses. Many studies say that most learners enrolled in MOOCs mainly because they wanted to learn about a specific topic, increase their knowledge, refresh what they had learned before, or learn a "just-in-time" topic that could help their work (Agarwal, 2012; Allon, 2012; Belanger & Thornton, 2013; Breslow, 2013; Evans, 2012; Fini, 2009; Kaul, 2012; Kolowich, 2013; Rice, 2013). Some studies also show that learners enrolled because they were curious about MOOCs (Belanger & Thornton, 2013; Jacobs, 2013; Martin, 2012; Young, 2013).

However, as we know, everything has its merits and demerits. In the present context, number of students enrolled in the SWAYAM platform is huge, but the completion rate is very low. According to the SWAYAM portal (2024), the number of students enrolled in different SWAYAM MOOCs was 3789020, but only 497848 (13.14%) completed the course. The high dropout rate is one of the major problems encountered in SWAYAM. The enrollment rate in MOOCs depends on a complex interaction of various elements, such as the platform's reputation, the quality of the course, the expertise of the instructor, the convenience of access, and the promotional efforts made by stakeholders such as students, SWAYAM coordinators, and course coordinators.

In India, Stakeholders play a significant role in successfully implementing SWAYAM MOOCs in higher education institutions. Among them, the government oversees the policies and direction of the SWAYAM MOOCs' development and operation. However, an extensive review of the related literature revealed a clear lack of empirical knowledge about the stakeholders' role in implementing SWAYAM at the university level in Assam (Bordoloi et al., 2020; Chatterjee & Nath, 2013; Sinha & Purkayastha, 2021). In this regard, the stakeholders must play the most crucial roles in inspecting the issues and challenges faced by the HEIs. Many studies have been formulated or conducted on students and teachers and their connection with SWAYAM MOOCs, considering the state of Assam in India. However, the review of related literature found that no such studies explained or contributed to the roles and mechanisms taken by the stakeholders to eradicate the problems faced by the students and teachers.

The attitude of students towards MOOCs has been a topic of interest for educational stakeholders worldwide, particularly in the context of the COVID-19 pandemic. Recent studies have shown that there is a mixed attitude among students towards MOOCs.(Sanzgiri, 2020; Liu et al., 2015; Kundu & Bej, 2020). While some students find MOOCs to be a convenient and flexible way to access education, others have expressed concerns about the lack of personalized interaction and support compared to traditional classroom settings (Yemi-Peters & Oladokun, 2022; Arbaugh, 2017; Zheng et al., 2015; Watted & Barak, 2014; May 2018). As educational institutions continue to navigate the challenges presented by the pandemic, understanding and addressing the attitudes of students toward MOOCs will be crucial in shaping the future of online education. Furthermore, exploring ways to enhance the overall experience and engagement of students in MOOCs will be essential in ensuring their effectiveness and appeal in the long term.

MOOCs have gained significant attention in higher education institutions as a means to provide accessible and flexible learning opportunities (Liu et al., 2019). MOOC course coordinators play a crucial role in creating and developing engaging and interactive course content, incorporating multimedia resources, implementing effective instructional strategies, and ensuring that the courses are user-friendly and accessible to all learners(Yemi-Peters & Oladokun, 2022; Dash & Panigrahi, 2023; Kim, 2016). University administrators, on the other hand, play a key role in integrating MOOCs into

the overall educational strategy of the institution and provide the necessary support and resources for MOOC development and implementation, including funding, technical infrastructure, and policy guidance (Ossiannilsson et al., 2016; Liu et al., 2019). So, by collaborating with faculty and other stakeholders, administrators can identify areas where MOOCs can be integrated effectively, develop a roadmap for implementation, and monitor the progress and impact of MOOCs on student learning outcomes (Liu et al., 2019). In the Indian context, the role of SWAYAM course coordinators and SWAYAM coordinators is crucial in effectively practicing MOOCs. SWAYAM MOOCs course coordinators are responsible for creating courses that align with the national curriculum framework and cater to the diverse educational needs of Indian learners. (Singh, 2019; Dash & Panigrahi, 2023) They ensure that the content is relevant, culturally inclusive, and accessible to a wide audience. SWAYAM coordinators, on the other hand, work closely with universities and higher education institutions to facilitate the integration of SWAYAM MOOCs into the academic framework. They liaise with administrators, faculty, and students to promote the adoption of SWAYAM courses, provide support and guidance on leveraging the platform effectively, and monitor the impact of MOOCs on student learning outcomes (Mathai, 2019). Therefore, by engaging with MOOC course coordinators and coordinators, university administrators can ensure that SWAYAM courses are integrated seamlessly into the institution's educational strategy and that the necessary support and resources are provided for their development and implementation. This collaboration can lead to the effective utilization of MOOCs in India's higher education landscape, providing accessible and high-quality learning opportunities to a wide range of learners.

Research on the SWAYAM MOOCs phenomenon is robust, particularly from the learner's viewpoint and institutional strategy perspective. However, there is a noticeable gap in the examination of the creators/facilitators and technological components, as noted by Liyanagunawardena (2013a). In this study, the researcher wants to explore the present scenario as well as observe the problems, practices, and organizational performance of different higher education institutions/universities and stakeholders regarding the implementation of SWAYAM MOOCs. The study will also focus on the positive aspects, such as freedom from geographical barriers, flexibility, diversity, dynamic opportunities, and outcomes.

Higher education institutions in Assam have actively embraced the SWAYAM practices to enhance their educational offerings. The higher education institutions in Assam have integrated SWAYAM courses into their curriculum to provide students with a diverse range of learning opportunities. There are many colleges and universities in Assam that have collaborated with SWAYAM to offer courses in various disciplines such as science, technology, engineering, mathematics, humanities, and social sciences. This initiative has not only expanded the educational resources available to students but has also facilitated the faculty members' adoption of new teaching methodologies. (Singh & Pal, 2022; Purkayastha & Sinha, 2021); The interactive nature of SWAYAM courses has enabled students to engage in self-paced learning and has provided them with access to high-quality educational content from renowned experts in their respective fields. (Mahanta, 2017; Baruah, 2022; Kumar et al., 2022; Jana, 2020). As a result, the integration of SWAYAM practices has contributed to the overall advancement of higher education in Assam by creating a more dynamic and inclusive learning environment. In addition to the integration of SWAYAM courses into the curriculum, the higher education institutions in Assam have also organized workshops and training sessions to familiarize both faculty members and students with the SWAYAM platform. This has enabled them to make the most of the diverse range of courses available and effectively utilize the interactive features of the platform to enrich the learning experience. Therefore, students have been able to complement their traditional classroom learning with online resources, broadening their understanding of various subjects and gaining valuable skills through self-paced study.

Examining the institutional practices and students attitudes towards MOOCs in higher education institutions is a complex task that is based on the substantial influence these elements have on the acceptance, efficacy, and overall achievement of MOOCs. Different components, such as acceptance, efficiency, and quality of MOOC programs, influence the researcher to examine the institutional practice and students attitudes toward MOOCs in higher educational institutions.

Institutional practices refer to the set of policies, support structures, technical infrastructure, and instructional methodologies that educational institutions put in place to aid the process of learning (Gao & Yang, 2016; Gašević et al., 2014). Examining these practices is essential as they have a direct impact on the quality and availability

of MOOCs. Technological infrastructure, administrative support, effective pedagogical tactics, and thorough faculty training are crucial elements that can improve the learning experience and guarantee the successful implementation of MOOCs. Moreover, the establishment of guidelines about the incorporation of MOOCs into official curricula, the acknowledgment of credits earned from MOOCs, and the provision of financial assistance for the creation of MOOCs can have a significant impact on the level of involvement from both teachers and students, hence encouraging wider acceptance and utilization of these courses. Students perception and acceptance of MOOCs play a crucial role in determining the success and popularity of these courses. These attitudes comprise the way students perceive, are motivated by, and intend to behave towards MOOCs (Mulik et al., 2016; Mohan et al., 2020). Examining students perspectives is crucial as it offers a valuable understanding of their level of involvement, contentment, and the perceived worth of MOOCs. Favorable attitudes towards MOOCs can result in increased rates of retention and completion, as well as a heightened inclination to enroll in subsequent MOOCs. Hence, the interaction between institutional practices and students views is crucial for improving the quality and availability of MOOCs in higher education institutions (Sammour et al., 2015). By considering and dealing with these variables, educational institutions can cultivate a favorable learning atmosphere, enhance the efficiency of MOOCs, and eventually contribute to superior learning results for students. So, higher education institutes nurture the culture of MOOC-based learning platforms at their own campus to enhance accessibility and learner performance.

Most of the research conducted by the SWAYAM program is highly utilized. However, awareness levels vary (Subaveerapandiyam & Ahamed, 2020; Lal, 2024; Shewale, 2021; Nagasampige & Nagasampige, 2017; Rahul & Mohile, 2021; Ambedkar, 2020; Deivam et al., 2024). Students, especially those in Library and Information Science, find these courses beneficial, but they face different challenges. According to the researchers, despite the potential of MOOCs, challenges such as high dropout rates, lack of ICT skills, and inadequate infrastructure persist (Nagasampige & Nagasampige, 2017; Jagetiya, 2018; Sun et al., 2018; Manojkumar et al., 2017). Many studies focus on students, teachers, and their connection with MOOCs, taking into account the state of Assam in India (Purkayastha et al., 2021; Ambedkar, 2020; Rizvi, 2020; Kumar, 2022). However, there are no studies that explain or contribute to the roles and

mechanisms taken by the stakeholders to eradicate the problems faced by the students and teachers. Most of the current studies have been centered around engineering disciplines, leaving out perspectives from other academic fields. A few studies have investigated the perspectives of course coordinators and SWAYAM coordinators about SWAYAM MOOCs. There is a lack of extensive research examining the overall perception, practices, and challenges associated with SWAYAM MOOCs in Assam. Therefore, the present study aims to investigate institutional practices for implementing SWAYAM MOOCs in higher education institutions in Assam and how students attitudes contribute to effective SWAYAM MOOC implementation.

6.3 Statement of the Problem

The problem of the study is stated as:

A Study on Institutional Practices and Students Attitude toward SWAYAM MOOCs Implementation in the Higher Education Institutions of Assam.

6.4 Operational Definitions

SWAYAM MOOCs

SWAYAM MOOCs is an online course aimed at unlimited participation and open access via the web. SWAYAM MOOCs for the present study would include the SWAYAM platform, which is provided by the Ministry of Education, India

Institutional Practices:

Different strategies and techniques are practiced in the higher education institution of Assam to manage SWAYAM MOOCs and their implications for student learning. In this study, Institutional practices refer to the various processes involved in the proper utilization and implementation of SWAYAM MOOCs as per the UGC guideline (2017), which are measured by the following dimensions: adoption, awareness, and promotion.

Higher Education Institution:

Higher education institutions in this study include all ten higher education institutions in Assam where SWAYAM MOOCs are adopted.

Stakeholders:

The stakeholders for the present study are defined as those who are affected by implementing the SWAYAM MOOCs in higher education institutions of Assam. Stakeholders in the present study refer to students, SWAYAM coordinators and SWAYAM Course coordinators who are associated with SWAYAM MOOCs implementation.

SWAYAM Coordinator

According to SWAYAM regulation 2017, the university must designate a SWAYAM Coordinator/facilitator to guide the students throughout the course and to facilitate/conduct the Lab/Practical sessions/examinations.

Course Coordinator:

According to SWAYAM regulation, 2017 Course Coordinator shall be a Subject Matter Expert (SME) belonging to a reputed educational institution/Industry or a specialist in the field identified and entrusted with the task of developing an online course in a given area by the National Coordinator.

Attitude

Attitude can be defined as the way in which a person views and evaluates something or someone, a predisposition or a tendency to respond positively or negatively toward a certain idea, object, person, or situation. For the present study, attitude towards SWAYAM MOOCs shall be measured as a combination of Course content, Learning Strategies, Assessment and Certification, and relevance of SWAYAM MOOC.

Gender

It refers to the binary gender identities of learners as male and female students studying in higher education institutions of Assam.

Locality

It refers to the area in which the higher education institution is situated in Assam. It can be located in rural, semi-urban and urban areas.

Stream

It refers to the specific academic discipline within the higher education institution in Assam. It can be categorized into various streams, such as Arts, Science and Commerce.

6.5 Research Questions

- i. What are the institutional practices towards SWAYAM MOOCs implementation in the higher education institutions of Assam with reference to prescribed norms of UGC?
- ii. What are the Problems faced by the stakeholders towards the SWAYAM MOOCs implementation in the higher education institutions of Assam?
- iii. What may be the remedial measures regarding SWAYAM MOOCs implementation from the stakeholders' view?

6.6 Objectives of the Study

- i. To study the institutional practices towards SWAYAM MOOCs implementation in the higher education institutions of Assam with reference to prescribed norms of UGC.
- ii. To study the attitude of students towards SWAYAM MOOCs implementation in the higher education institutions of Assam
- iii. To find out the significant difference between the attitudes of students towards the SWAYAM MOOCs with regard to gender, locality, and stream.
- iv. To find out the challenges faced by the stakeholders towards SWAYAM MOOCs implementation in the higher education institutions of Assam.
- v. To provide different remedial measures suggested by the stakeholders regarding the different problems faced during the implementation of SWAYAM MOOCs.

6.7 Hypotheses of the Study

H₀1. There is no significant difference between the attitudes of students towards the SWAYAM MOOCs with regard to locality.

H₀2. There is no significant difference between the attitude of students SWAYAM MOOCs with regard to gender.

H₀₃. There is no significant difference between the attitudes of students towards the SWAYAM MOOCs with regard to the stream.

6.8 Research Methodology

The present study focused on providing a comprehensive description of the institutional practices of SWAYAM MOOCs' implementation in the Higher Education Institutions of Assam and Students attitudes towards SWAYAM MOOCs. Moreover, the study aimed to evaluate the effectiveness and problems related to the implementation of SWAYAM from the viewpoints of students, the SWAYAM coordinators, and the SWAYAM course coordinators. As per the demand of the study, the researcher collected both quantitative and qualitative data. Therefore, the researcher adopted a Descriptive Survey Research Design for conducting the research study.

6.8.1 Population

In this study, the population is ten higher education institutions in Assam, including Assam Don Bosco University, Dibrugarh University, Gauhati University, Assam Royal Global University, Cotton University, Krishna Kanta Handiqui State Open University, Mahapurusha Srimanta Sankaradeva Viswavidyalaya, Assam University, Tezpur University, and Krishnaguru Adhyatmik Viswavidyalaya. where SWAYAM MOOCs courses are adopted. For this research, the study's target population was all the student participants, SWAYAM course coordinators, and SWAYAM coordinators of SWAYAM MOOCs.

6.8.2 Sample and Sampling Technique

In this study, the sample consisted of 424 students, 10 SWAYAM coordinators, and 14 SWAYAM course coordinators belonging to those ten higher education institutions that were selected as the final sample of the study. The researcher selected the sample using the purposive sampling technique in the case of choosing only those students who had completed or participated in at least one or more SWAYAM MOOCs. In the second stage, the researcher selected all the 10 SWAYAM coordinators from these ten higher education institutions. In the third stage, the researcher selected all 14 SWAYAM course coordinators of Assam as the study sample.

6.8.3 Tool used for the study:

Tool I: An attitude scale for Students of a Higher Education institution

The present tool is an attitude scale; it is prepared for the students of the higher education institution. These items of the attitude scale were categorized into four distinct dimensions such as the relevance of SWAYAM MOOCs, course content, learning strategies, assessment, and feedback.

Tool II: A questionnaire for the SWAYAM Coordinator and SWAYAM Course Coordinator

The present study also employed a questionnaire to investigate the institutional practices toward SWAYAM MOOCs implementation in Higher Education Institutions. The researcher developed a semi-structured questionnaire to study the Institutional Practices. The questionnaire has three dimensions, namely (a) Adoption of SWAYAM MOOCs, (b) Awareness of SWAYAM MOOCs, and (c) Promotion of SWAYAM MOOCs.

Tool-III questionnaire for students, SWAYAM Course Coordinator, and SWAYAM Coordinator

Three questionnaires were developed by the researcher for the students, SWAYAM coordinators, and the SWAYAM course coordinators to gather information regarding the challenges they encounter with SWAYAM MOOCs and suggestions for the successful implementation of the SWAYAM program. The questionnaire has four dimensions namely-(a) course content, (b) Learning strategies, (c) assessment, (d) discussion forum.

6.8.4 Analysis Techniques of the Data:

For conducting this research, the researcher adopted the following statistical methods:

- Percentage used in the analysis of the responses given by the students, SWAYAM course coordinator, and SWAYAM coordinator in different tools namely attitude scale for students, questionnaire for the SWAYAM coordinator, and SWAYAM course coordinator.

- A Mann-Whitney U test is used to find out the significant differences between students in terms of different variables. This technique was used for the data which are collected from the students.
- The Kruskal-Wallis test was used to find out the significant differences between students in terms of locality and stream. This technique was used for the data collected from tools, namely the attitude scale toward SWAYAM MOOCs.
- This study followed the six phases of thematic analysis as outlined by Braun and Clarke (2006), using NVivo software, a widely used qualitative data analysis software program. This six-step framework proposed by Braun and Clarke (2006) is considered to be the most robust approach to thematic analysis, owing to its provision of a well-defined and practical framework, as noted by Maguire and Delahunt (2017). The recorded responses have been transcribed into a Microsoft Word document and then imported into the NVivo software for further analysis.

6.9 Major Findings of the Study:

Findings of the Objective no- 1:

Results and discussion related to Objective No one was given with regards to the institutional practices towards MOOCs implementation in the higher education institutions of Assam with reference to prescribed norms of UGC.

SWAYAM coordinators' response on institutional practice towards SWAYAM MOOCs

1. The study identified that all ten universities mentioned were actively participating and utilizing Massive Open Online Courses (MOOCs) through the SWAYAM portal. They had specific policies and guidelines for the practice of MOOC programs in their institution.
2. The data revealed that 30% of the universities were actively involved in the development of MOOCs supported by adequate resources and institutional support. In comparison, the majority of the institutions (70%) were not involved in the development of MOOCs due to resource constraints, lack of technological infrastructure, financial limitations, or readiness to shift pedagogically from traditional to online education.

3. The finding indicated that all ten SWAYAM coordinators were fully aware of the different SWAYAM National Coordinators.
4. The results indicated that a significant majority of students (60%) at the university had requested the adoption of SWAYAM MOOCs reflecting a strong interest in integrating these online courses into their university curriculum. Nevertheless, it was crucial to acknowledge that 40% of students had abstained from making such a request.
5. The study revealed that 90% of SWAYAM coordinators were aware of the UGC Amendment 2021 related to SWAYAM MOOCs, highlighting the significant outreach and impact of the amendment within the academic community. The UGC Amendment 2021 appeared to have a special focus on ensuring that up to 40% of courses in a program could be on SWAYAM.
6. It had been found that 50% of the SWAYAM coordinators showed positive views and believed that the courses available on the SWAYAM portal motivated students to enroll in such MOOC courses, which meant they appreciated the flexibility, accessibility, and affordability of SWAYAM MOOCs whereas the other half of the SWAYAM coordinators were highly concerned about the quality of online education, lack of face-to-face interaction, self-discipline required for online learning.
7. The findings revealed that 20% of the responses indicated that training programs for SWAYAM course coordinators regarding designing MOOCs had been organized, suggesting a proactive approach toward enhancing the quality and effectiveness of MOOC offerings. These proficient course coordinators were likely better equipped to design attractive and pedagogically sound courses, thereby potentially enhancing Students learning experiences. Conversely, an 80% negative response highlighted the fact that the SWAYAM Coordinator had organized no such program
8. According to the findings, 60% of the SWAYAM Coordinators had actively participated in workshops related to MOOCs, demonstrating a significant level of engagement and a willingness to enhance their knowledge and abilities in managing online courses. This active participation was crucial for the administrators to effectively coordinate the SWAYAM platform, ensuring that the MOOCs were well-designed, implemented, and aligned

with educational standards. However, the fact that 40% of SWAYAM administrators did not participate in such workshops indicated a gap that could potentially affect the platform's effectiveness and the quality of education provided.

9. The findings revealed that the majority (90%) of the SWAYAM coordinators had organized awareness programs for students regarding MOOCs, as it was essential to focus on the benefits and opportunities that MOOCs offer.
10. According to the findings, 13.33% of instructors had received personalized guidance and advice; 13.33% of instructors had received MOOC-related books and reports covering topics such as online education, instructional design, technology integration, and other pertinent topics; 13.33% of instructors had participated in formal training sessions that specifically addressed online pedagogy; 33.33% of instructors had received hands-on demonstrations of various features, activities, or tools available within the MOOC platform, and 26.67% of instructors had not received any of the forms above of professional development or support from the SWAYAM coordinator.
11. The study revealed that 30% of teachers had received incentives for developing SWAYAM MOOCs from their university. Teachers who received incentives likely felt a greater sense of recognition for their efforts. It confirmed the importance of their contribution to the educational system, potentially boosting morale and motivation. In comparison, the remaining 70% did not.
12. According to the findings, only 10% of the SWAYAM Coordinators had responded that students were provided incentives for participating in these courses. They further commented that during the Corona pandemic, when some universities provided the SWAYAM examination fee to promote the program. This form of assistance might have been viewed as a direct motivation, facilitating students ability to access and promote the courses. However, the majority (90%) of coordinators reported that no such incentives were provided.

13. The finding indicated that the majority (90%) of respondents had expressed a strongly favorable response about the presence of a database for students participating in various MOOCs through the SWAYAM portal.
14. According to the findings, 80% of universities actively monitored students progress on the SWAYAM platform, reflecting a commendable dedication to ensuring the efficacy of SWAYAM initiatives. However, 20% of universities did not engage in such monitoring, highlighting a concerning gap in support mechanisms for students utilizing the SWAYAM platform.
 - ❖ According to the survey results, 30% of universities used moderator feedback, 20% of universities used peer group members' reports, 20% of universities used personal tracking from the course instructor, 20% of universities used personal tracking from the course instructor, 10% of universities used self-evaluation technique, 20% of universities used tracking through mentors, 30% of universities used tracking through SPOC, and 20% of universities used SWAYAM coordinator monitoring of student's progress who had registered on the SWAYAM platform from their university.
15. The finding demonstrated that the majority (90%) of the respondents said they received colleague support; 70% of respondents received administrator support or encouragement; 20% of respondents received additional compensation; 30% of respondents received technical support; 30% of respondents received teaching or service recognition; 20% of respondents experienced happiness and commitment; 20% of respondents helped the university grow; 30% of respondents received valuable items for annual faculty productivity reports, and 20% of respondents received financial incentives for implementing SWAYAM MOOCs
16. The findings related to different ways of promotion adopted by the SWAYAM coordinator in higher education institutions.
 - The study revealed that the majority (80%) of the SWAYAM Coordinators used personal and professional conversations; 40% of the respondents used colleagues in other geographical areas, 40% of the respondents used influencers and professional associations, and 30% of

the SWAYAM Coordinators used special lectures by industry experts to promote SWAYAM MOOCs in higher education institutions.

- The study also found that the majority (80%) of the SWAYAM Coordinators used campus notice boards; 80% of the respondents organized workshops, seminars, and talk shows; 40% of the respondents used institutional magazines; 30% of the SWAYAM Coordinators used community publications; 50% of the SWAYAM Coordinators used community publications; 10% of the SWAYAM Coordinators used the homepage of universities' websites; 30% of the SWAYAM Coordinators used TVCs(Television commercial) and radio jingles produced by UGC; and 40% of the SWAYAM Coordinators used posters for promoting SWAYAM MOOCs in higher education institutions.
- 50% of the SWAYAM Coordinators used social media networks like WhatsApp, Twitter, and Facebook; 40% of the respondents asked influential individuals to share information through social networks, and 20% of the respondents used blogs and articles in related forums to promote SWAYAM MOOCs in higher education institutions.
- Furthermore, the study revealed that 60% of participating institutions had laboratories accessible to students; the majority of institutions (80%) had sufficient access to computers for the students; 70% of participating institutions had libraries accessible to students. However, only 30% of the responses indicated that fewer participating institutions had dedicated monitoring cells in place to assist students in efficiently participating and completing the MOOC courses. SWAYAM course coordinators' response on institutional practice towards SWAYAM MOOCs

SWAYAM coordinators' response on institutional practice towards SWAYAM MOOCs

17. The analysis of the data revealed that all the ten universities mentioned had been actively participating in and utilizing MOOCs through the SWAYAM portal.

18. The findings showed that 100% awareness of different SWAYAM National coordinators indicated a high level of knowledge and awareness among the SWAYAM course coordinators.
19. The results showed that 85.71% of SWAYAM course coordinators had been aware of the UGC Amendment 2021 related to SWAYAM MOOCs, while 14.28% of SWAYAM course coordinators had not been aware of the UGC Amendment 2021 related to SWAYAM MOOCs.
20. The findings revealed that the majority of the (92.86%) SWAYAM course coordinators had received technical support; 71.43% of the respondents had received administrator support or encouragement; 85.71% of the respondents had received monetary benefit; 42.86% of the respondents had received colleague support or encouragement; and 28.57% of the SWAYAM course coordinators had received teaching or service recognition when teaching MOOCs.
21. The result showed that all the SWAYAM course coordinators had positive views regarding MOOCs significantly impacting their teaching philosophy. The course coordinators offered a range of explanations for how they perceived MOOCs as having a revolutionary impact on their teaching practice. Many had highlighted the opportunity for lifelong learning and the ability to access expertise from diverse fields and experts globally, which had improved their effectiveness as instructors and increased the learning experience for students. Furthermore, they emphasized the advantages of interacting with a varied group of learners, which expanded their viewpoints. Furthermore, the SWAYAM course coordinators recognized the positive impact of MOOCs on their teaching abilities. This included the capacity to effectively engage and instruct a significant number of students at the same time, integrate relevant course content into their curriculum, and adopt more systematic and interactive teaching methods.
22. The result indicated that 78.57% of the SWAYAM course coordinators had actively participated in different workshops related to MOOCs, demonstrating a proactive approach to professional development and

staying updated with emerging trends and practices in online education. At the same time, 21.43% of the SWAYAM course coordinators had not participated in such courses.

23. According to the findings, the majority of the (90%) SWAYAM course coordinators had made awareness programs for students regarding MOOCs.
24. The results indicated that 57.14% of the SWAYAM course coordinators had trained other MOOC instructors in regard to designing or teaching SWAYAM MOOCs. In comparison, 42.86% of the SWAYAM course coordinators had not organized such courses. The majority of coordinators who were involved in training contributed significantly to the quality and consistency of MOOCs offered on SWAYAM.
25. The findings showed that 78.57% of the SWAYAM course coordinators had provided suggestions to other MOOC instructors in regard to designing SWAYAM MOOCs. In comparison, 21.43% of the SWAYAM course coordinators had not provided any suggestions.
26. The study revealed that all the SWAYAM course coordinators had actively participated in participation in different orientation programs related to SWAYAM MOOCs.
27. The findings showed that 35.71% of the SWAYAM course coordinators had received incentives for producing SWAYAM courses. In contrast, the remaining 64.28% had not.
28. The results revealed that all 14 SWAYAM Course coordinators had promoted SWAYAM MOOCs in their institution.
29. The finding revealed that 64.28% of the SWAYAM course coordinators had been motivated by Career development, 78.57% of the respondents had been motivated by commitment to open education; 71.43% of the respondents had been motivated by curiosity; 50% of the respondents had been motivated by expanding their professional network; 71.43% of the respondents had been motivated by financial incentives; 78.57% of the

respondents had been motivated by curiosity about learning new technology, and 14.28% of the respondents had been motivated by passionate about the content for teaching a SWAYAM MOOCs..

30. This study revealed that 64.28% of SWAYAM course coordinators had used moderator feedback, 50% of SWAYAM course coordinators had used unit-based progress; 64.28% of universities had used personal tracking from the instructor; 50% of SWAYAM course Coordinators had used personal tracking from the course instructor; 14.28% of SWAYAM course coordinators had used weekly or daily reports offered; 14.28% of SWAYAM course coordinators had used interaction through the course portal who had registered on the SWAYAM platform from their university.
31. According to the findings, the majority (57.14%) of the SWAYAM course coordinators had received MOOC-related book reports; 21.43% of the respondents had received an assigned advisory role from their institution; 28.57% of the respondents had received training programs in online pedagogy provided by their institution; 21.43% of the SWAYAM course coordinators had received training in technology tools for making video lectures; 35.71% of the SWAYAM course Coordinators had received informal demonstrations of the features, activities, or tools of their MOOCs to colleagues or others; 28.57% of the SWAYAM course Coordinators had provided a link to their MOOCs as an example to others, and 14.28% of the SWAYAM course Coordinators had received support through CET(Center for Education Technology) support system provided by different IITs.
32. The results revealed that all 14 SWAYAM Course coordinator Promote SWAYAM MOOCs in their institution.
 - This study revealed that all the SWAYAM course coordinators (100%) used personal and professional conversations, colleagues in other geographical areas, alumni networks, and students; 92.86% of the SWAYAM course coordinators used influencers and professional associations for promoting SWAYAM MOOCs in higher education institutions.

- The majority (85.71%) of the SWAYAM Coordinators used posters; 57.14% of the respondents used institutional magazines; 21.43% of the respondents used campus notice boards and community publications; 14.29% of the SWAYAM course Coordinators used intranets and mailing lists; 35.71% of the SWAYAM course Coordinators used the homepage of universities' websites and 14.29% of the SWAYAM Coordinators used TVCs and radio jingles produced by UGC for promoting SWAYAM MOOCs in higher education institutions.
 - The results revealed that all the SWAYAM Coordinators (100%) used social media networks like WhatsApp, Twitter, and Facebook; 40% of the respondents used influential individuals to share through social networks, and 78.57% of the respondents used promotion in online communities/forums on related subject areas for promoting SWAYAM MOOCs in higher education institutions.
33. The findings showed that 92.86% of the SWAYAM course coordinators interacted through online discussion forums; 92.86% of the respondents interacted through MOOCs platform messages; 78.57% of the respondents interacted through personal mail; 57.14% of the SWAYAM course coordinators interacted through virtual meetings and 14.29% of the SWAYAM course Coordinators interaction through social media connections (e.g., Facebook, Twitter) to encourage in their MOOCs.

Finding Related to Objective no 2

34. The finding revealed that most of the students (41.75%) students have an extremely unfavourable attitude towards SWAYAM MOOCs.
35. Following this, 18.16% of students have a highly unfavourable attitude towards SWAYAM MOOCs, 21.46% of students have a below moderately unfavourable attitude towards SWAYAM MOOCs, 13.44% of students have a moderate attitude towards SWAYAM MOOCs, 3.77% students have above moderately favourable attitude of towards SWAYAM MOOCs, 1.41% students have a highly favourable attitude of towards SWAYAM MOOCs.

Finding Related to Objective no 3

36. The first hypothesis of the study there is no significant difference between the attitude of students towards the SWAYAM MOOCs with regard to gender. After using the Mann-Whitney U test, it is found that there is no significant difference between male and female postgraduate student's attitudes towards the SWAYAM MOOC with regard to gender($U=18514.000$, $P>.05$). The study's findings show that male and female postgraduate students have similar attitudes towards SWAYAM MOOCs.
37. The second hypothesis of the study there is no significant difference between the attitude of students towards the SWAYAM MOOCs with regard to locality. After using the Kruskal-Wallis test, it is found that there is no significant difference in Students attitude scores towards SWAYAM MOOCs according to their locality [$\chi^2(2)=1.968$, $p>.05$]. After evaluating the mean rankings of the different categories, it is evident that urban, rural, and semi-urban students have a similar attitude toward SWAYAM MOOCs.
38. The third hypothesis of the study is that there is no significant difference between the attitude of students towards the SWAYAM MOOCs with regard to the stream. After using the Kruskal-Wallis test, it is found that there is no significant difference between the attitude of students towards the SWAYAM MOOCs with regard to stream [$\chi^2(2)=4.483$, $p>.05$]. After evaluating the mean rankings of the different categories, it is evident that humanities, commerce and science students have a similar type of attitude toward stream.

Finding Related to Objective no 4

Challenges faced by the stakeholders regarding course content

❖ Challenges faced by the students related to course content

39. The finding revealed that most of the students (43.87%) believed that the lack of quality content was not a problem in the implementation of SWAYAM MOOCs, and 72.88% believed that the quality of audio used in MOOCs was good.

40. Most of the students (52.60%) perceived that language barriers among learners did not face challenges in implementing SWAYAM MOOCs
41. The results exhibited that most of the students (58.25%) considered that the graphics used in MOOCs were appropriate.
42. The finding also revealed that 41.51% of respondents indicated that the syllabus was very vast. In comparison, 43.87% disagreed with this notion.

❖ Challenges faced by the SWAYAM Coordinator related to course content

43. The study revealed that most of the SWAYAM coordinators (70%) believed that the lack of quality content was a problem in MOOCs courses.
44. The finding also shows that most of the SWAYAM coordinators (60%) considered that the quality of audio used in MOOCs was not good, and most of the SWAYAM coordinators (60%) thought that the language barrier among learners created difficulty in the implementation of SWAYAM MOOCs.
45. The findings also indicate that the views of the SWAYAM coordinators were equally divided, with 50% believing that the graphics used in MOOCs were appropriate and 50% believing they were not, and 60% of respondents believed that the syllabus for SWAYAM MOOCs was not very vast.

❖ Challenges faced by the SWAYAM course coordinator related to course content.

46. The study revealed that most of the SWAYAM course Coordinators (64.28%) thought that the lack of quality content was not a problem in the implementation of SWAYAM MOOCs. In comparison, 100% of SWAYAM course coordinators consistently feel that the audio quality in MOOCs was excellent.
47. The study exhibited that (100%) SWAYAM course coordinators consistently felt that the language barrier among the learners creates difficulty in the implementation of SWAYAM MOOCs. However, 71.43% of respondents find the graphics used in MOOCs courses to be appropriate, and 100% of

the SWAYAM course coordinators consistently believed that the syllabus for the SWAYAM MOOCs course needed to be more comprehensive.

Challenges faced by the stakeholders regarding assessment and discussion forum

❖ Challenges faced by the students related to assessment and discussion forum

48. The findings indicated that most of the students (53.07%) agreed that adopting an exam-centric strategy did not create challenges in the implementation of SWAYAM. In comparison, most of the students (41.27%) considered that the lack of continuous active engagement in the discussion forum created issues for the smooth functioning of SWAYAM MOOCs.
49. According to the survey results, there is a mixed perception that the absence of lab work is a significant drawback in the implementation of SWAYAM MOOCs. The findings also indicate that 41.51% of respondents viewed the lack of lab work as a substantial disadvantage. In contrast, 43.87% of respondents disagreed with this viewpoint
50. The finding also showed that most of the students (62.03%) did not face problems with credit transfer at the end of the course, and 64.86% of the respondents did not perceive that assignments created hurdles in implementing MOOCs through SWAYAM

❖ Challenges faced by the SWAYAM coordinator related to assessment and discussion forum.

51. The findings indicate that 60% of SWAYAM coordinators believed adopting an exam-centric strategy does not create challenges in the implementation of SWAYAM, while most of the students (70%) of views of the SWAYAM Coordinator believed that the lack of continuous active engagement in the discussion forum creates problems in the smooth functioning of SWAYAM MOOCs.
52. According to the survey results, there is a mixed perception that the absence of lab work is a major drawback in the implementation of SWAYAM

MOOCs. The findings also indicate that 50% of SWAYAM Coordinators perceived that the absence of lab work was a major drawback in the implementation of SWAYAM (MOOCs), and 50% believed it was not.

53. The finding also shows that the majority of SWAYAM Coordinators (60%) did not experience issues with credit transfer at the conclusion of the course, and 43.87% of the SWAYAM coordinators thought that assignments did not create hurdles in the implementation of MOOCs through SWAYAM.

❖ Challenges faced by the SWAYAM course coordinator related to assessment and discussion forum.

54. The findings indicate that 78.57% of participants viewed the exam-focused strategy as not posing challenges in the implementation of SWAYAM MOOCs. However, the majority of respondents (57.14%) did not believe that the lack of continuous active engagement in the discussion forum created problems for the smooth functioning of SWAYAM MOOCs.

55. According to the survey results, there was a mixed perception that the absence of lab work is a major drawback in the implementation of SWAYAM MOOCs. The findings also indicate that 50% of respondents believed that the absence of lab work was a major drawback. Conversely, 42.85% of respondents expressed disagreement with this perspective.

56. The finding also revealed that the majority of 85.71% of respondents were confident that assignments did not create obstacles in the implementation of MOOCs through SWAYAM and all the SWAYAM course coordinators (100%) in the survey had encountered difficulties related to credit transfer upon completing the course.

Challenges faced by the stakeholders regarding learning strategies.

❖ Challenges faced by the students related to learning strategies

57. The findings indicate that the majority of the students (48.11%) believed that the lack of time created an obstacle in the implementation of SWAYAM MOOCs.

- 58. The finding also showed that 47.40% of the respondents agreed that the lack of individual instruction is one of the major drawbacks in the implementation of SWAYAM MOOCs.
- 59. The study also shows that 41.03% of students considered that lacking creativity posed challenges in implementing SWAYAM MOOCs, and 44.81% of students thought that the limited availability of resources for accessing courses created barriers to implementing SWAYAM MOOCs. However, the majority of students (50.94%) did not consider the lack of trained teachers to be a significant obstacle in the implementation of SWAYAM MOOCs.

❖ challenges faced by the SWAYAM coordinator related to learning strategies

- 60. The findings indicate that the majority of the SWAYAM coordinators (60%) did not think that the lack of time created an obstacle in the implementation of SWAYAM MOOCs, and 80% of the SWAYAM coordinators did not consider that the lack of individual instruction was one of the major drawbacks in implementing SWAYAM MOOCs
- 61. The finding also showed that the majority of the SWAYAM coordinators (60%) did not agree that lack of creativity created problems in the implementation of SWAYAM MOOCs
- 62. The findings also indicate that 50% of the respondents do not think that the limited availability of resources to access courses creates barriers to the implementation of SWAYAM MOOCs.
- 63. The result exhibited that most of the students (50%) did not feel that the lack of trained teachers was a major drawback in the implementation of SWAYAM MOOCs

❖ Challenges faced by the SWAYAM course coordinator related to learning strategies

- 64. The study revealed mixed perceptions regarding the views of the SWAYAM course coordinator on the lack of time, which creates an obstacle in the

implementation of SWAYAM MOOCs. It has been found that half of the respondents (50%) believed that the lack of time was a significant obstacle in the implementation of SWAYAM MOOCs. The remaining 50% of the participants did not consider that the lack of time creates an obstacle in the implementation of SWAYAM MOOCs, while the majority of respondents (57.14%) did not perceived the lack of individual instruction as one of the major drawbacks in the implementation of SWAYAM MOOCs.

65. The study also showed that the majority of the respondents (64.28%) did not agree that the lack of creativity created problems in the implementation of SWAYAM MOOCs, and the majority of respondents (78.57%) did not perceive that the limited availability of resources created barriers to the implementation of SWAYAM MOOCs.
66. The study also revealed that the majority of SWAYAM course coordinators (57.14%) did not consider the lack of trained teachers as a major obstacle in the implementation of SWAYAM MOOCs.

Challenges faced by the students related to the relevance of SWAYAM MOOCs

❖ Challenges faced by the students related to the relevance of SWAYAM MOOCs

67. The findings indicate that most students (54.01%) felt that due to a lack of student interest, they were not participating in SWAYAM MOOCs, while mixed perceptions regarding students views on the cost of examination fees. 41.27% of students believed that the examination fees posed a challenge to the successful implementation of SWAYAM MOOCs, while 38.21% of students did not consider examination fees to be a major issue.
68. The findings also indicate that a significant portion of students (46.46%) considered that insufficient prior knowledge about the topic presented a major obstacle in the implementation of SWAYAM MOOCs.
69. The findings indicate that most of the students (54.95%) agreed that a lack of motivation posed a challenge in implementing SWAYAM MOOCs.

However, 54.48% of students perceived technical issues were a major obstacle in implementing SWAYAM MOOCs

70. The findings exhibited that 37.74% of students did not think that over-the-course expectations posed challenges for the implementation of SWAYAM MOOCs.

71. The findings indicate that the majority of respondents (69.10%) were satisfied with how the educational administration was implementing SWAYAM MOOCs

❖ Challenges faced by the SWAYAM coordinator related to relevance of SWAYAM MOOCs

72. The findings indicate that most of the SWAYAM coordinators (60%) felt that due to a lack of student interest, they were not participating in SWAYAM MOOCs, and most of the SWAYAM coordinators (90%) believed that the cost of examination fees did not create trouble in the implementation of SWAYAM MOOCs.

73. The findings also revealed that most of the SWAYAM coordinators (60%) considered that insufficient prior knowledge about the topic did not create obstacles in the implementation of SWAYAM MOOCs, while most of the SWAYAM coordinators (60%) believed that the lack of motivation created difficulty in the implementation of SWAYAM MOOCs

74. The findings exhibited that most of the SWAYAM Coordinators (54.48%) perceived that technical issues did not create hurdles in the implementation of SWAYAM MOOCs

75. The findings indicate that 100% of SWAYAM coordinators considered that over-the-course expectations did not create trouble for the implementation of SWAYAM.

76. The findings also indicated that most of the SWAYAM coordinators (80%) did not agree that over-the-course expectations created trouble for the implementation of SWAYAM MOOCs

❖ Challenges faced by the SWAYAM course Coordinator related to the relevance

77. The findings indicate that the majority of respondents (78.57%) disagreed with the notion that lack of student interest was a significant factor in non-participation in SWAYAM MOOCs. However, 100% of respondents agreed that the cost of examination fees significantly hindered the successful implementation of SWAYAM MOOCs.
78. The findings also indicate that the majority of respondents (78.57%) disagreed with the notion that insufficient prior knowledge about the topic created obstacles in the implementation of SWAYAM MOOCs, while the majority of respondents (71.43%) disagreed with the notion that the lack of motivation created difficulty in the implementation of SWAYAM MOOCs.
79. The findings indicate that most of the SWAYAM course coordinators (57.14%) agreed that technical issues did create hurdles in the implementation of SWAYAM MOOCs, and the findings also indicate that 57.14% of SWAYAM course coordinators did not perceive that over-the-course expectations created trouble for the implementation of SWAYAM MOOCs.
80. The findings exhibited that most of the respondents, 78.57% of respondent did not face any problems from educational administration in the implementation of SWAYAM MOOCs.

Finding Related to Objective no 5

Student Suggestions Regarding solving the different problems that they faced related to SWAYAM MOOCs

81. **Student-Centric Assessments:** Students suggestions for enhancing the assignment and discussion forum in MOOCs focused on boosting the collaborative and interactive facets of these platforms. Some students recommended increasing engagement through more sophisticated means while avoiding lengthy sets of objective questions and written assignments. They also suggested incorporating oral tests and providing creative

strategies despite potential logistical challenges. Other students advocated for assignments that encouraged regularity and punctuality, along with updated assessment management. Further, the participants highlighted the need to improve assessment quality by enhancing interaction, incorporating practical examples, and including videos. (Aydın, 2021; Sanzgiri, 2020; Nawrot & Doucet, 2014)

82. Interactive Discussion Forums: Students emphasize the importance of interactive and responsive discussion forums that facilitate the addressing of problems quickly. They propose adding short, interactive sessions in addition to live classes during the course and also upholding a constructive and courteous discussion forum. Several students suggest using social media in discussion forums to enhance their efficacy. In general, students also propose that the inclusion of immediate feedback and clear guidelines for participation in discussion forums enhances the quality of the discussions. s.(Hew & Cheung, 2014; Seethamraju, 2014; Hew & Cheung, 2014)

Student suggestions regarding course content

83. Clarity: Some of the students have emphasized the need for course materials to be more explicit, more concise, and easier to understand. They pointed out that overly complex language and dense text can hinder learning, making it difficult for students to grasp critical concepts and retain information (Wan et al., 2020).

84. Diverse learning materials: When questioned about learning materials, students felt that there was an integrated, more comprehensive range of components in the course, including interactive quizzes, simulations, podcasts, infographics, and gamification, to meet the demands of various learning styles (Li & Canelas, 2019; Almuhanha, 2018; Singh, 2022b; Gameel & Wilkins, 2019; Major & Mira Da Silva, 2023).

85. Technical improvement: Some of the students suggested using modern technology to enhance the quality of video and audio. Furthermore, some students also suggested using artificial intelligence (AI) to personalize the content according to a learner's progression, preferences, and preferred learning style, therefore enhancing the engagement and effectiveness of the learning experience.

86. **Updated contents:** Students noted the importance of updating the SWAYAM MOOCs course content to reflect current advancements and trends in their respective fields. They believed that incorporating the latest developments not only kept the curriculum relevant but also enhanced their learning experience by providing insights into contemporary practices and innovations.

Student suggestions regarding Learning Strategies

87. **Engagement and Motivation:** Some of the students asserted that the integration of more instructive sessions provided valuable knowledge and understanding. Interactive sessions, which involved dialogues and group activities, were also seen as beneficial. According to the comments made by some students, utilizing advanced techniques like graphics and animation, along with new educational technology, made the learning experience more engaging. The implementation of frequent exams helped maintain student engagement and offered instant feedback, hence enhancing motivation.
88. **Interactive and Practical Learning:** The participants suggested incorporating more interactive sessions into the curriculum to ensure active participation and motivation among students. Furthermore, this provided more hands-on learning opportunities that enhanced theoretical understanding and improved overall learning outcomes. Including online labs and interactive simulations helped provide a virtual environment for students to perform experiments and visualize complex concepts.
89. **Support and Communication:** According to the participants, to enhance engagement and motivation in online classes, students emphasized the need to receive individualized attention and establish connections with each student. Sufficient learning materials and acknowledgment of successful instructional methods were essential. Establishing connections, facilitating peer learning, and cultivating collaboration were essential for overcoming obstacles in MOOCs. Some of the students said the assignments should assess both the level of engagement and the ability to be on time, and implementing personalized, interactive, and student-centered approaches greatly improved the quality of the online learning experience.

90. **Teaching Methods:** The study's participants elaborated that integrating multiple languages in teaching increased student participation. It was recommended to incorporate sophisticated sets of objective questions and written tasks in order to foster a sense of seriousness. Despite the logistical hurdles, oral examinations also yielded benefits. It was crucial to offer innovative tactics and a diverse range of themes for debate.

Student suggestions regarding Relevance of SWAYAM MOOCs

91. **Reduced Course Content:** Some students suggest that the syllabus and course content should be reduced. Courses should be more efficient and more specific, and more new courses should be introduced, especially in technical fields.
92. **User Interface and Experience:** Some students reported that the SWAYAM portal is not user-friendly, and students have technological difficulties when it comes to enrolling, registering, and selecting exam centers. The platform needs to be updated and more user-friendly. Providing better visual content and including a user-friendly and intuitive interface can significantly enhance the learner's experience. Ensuring that Optimizing the learning platform for mobile use may significantly improve accessibility and user experience.
93. **Examination and Certification:** There is a need to decrease examination fees, make exam time more convenient, and improve cooperation about exam venues. Certification processes should also be improved.
94. **Teaching and Learning Methods:** Teachers should use innovative teaching methods and have good communication skills. Live classes and quizzes, along with interactive learning strategies, can improve engagement. In order to enhance the course's level of engagement and effectiveness, it is imperative to provide comprehensive information, detailed explanations, informative videos, and illustrative examples.
95. **Awareness and Accessibility:** More awareness should be created about SWAYAM courses, especially in rural areas. The platform should be more inclusive and reduce examination fees for underprivileged students.

96. **Technical Support and Infrastructure:** Technical issues should be addressed, and enhancing infrastructure is crucial. The exam centers should be more accessible and closer to students homes that's helps the stress and inconvenience of traveling long distances can be reduced.
97. **Feedback and Suggestions:** There should be a mechanism for quick responses to student queries and suggestions, and student feedback should be actively used to improve the platform.

SWAYAM Coordinator Suggestions Regarding solving the different problems that they faced related to SWAYAM MOOCs

SWAYAM Coordinator suggestions on course content

98. **Content engaging, updating, and interactive:** Some SWAYAM coordinators include interactive elements such as videos, interactive quizzes, and multimedia that can be integrated into the content of courses to make MOOCs content more attractive and enjoyable for learners. The course should be well-structured with obvious learning goals, organized materials, and easy navigation. These features enable the SWAYAM coordinator and other students to easily navigate through the course while at the same time understanding its contents. This may include having clear outlines for a course, summarizing modules, and making instructions simple for activities. Some SWAYAM coordinators also suggest that content must be updated with current trends in practice is crucial to ensure that learning remains relevant and meaningful. Some of the coordinators also frequently review MOOC course materials to keep up with the latest developments within their field.
99. **Practical orientation and societal relevance:** The emphasis on practical orientation and societal significance in revising course content for MOOCs is a new approach to education that suits the changing global landscape. Some SWAYM coordinators suggest teachers can make learning more beneficial for students by ensuring that their skills are relevant to real-life professional circumstances instead of theoretical issues so as to narrow the gap between theory and practice. Some SWAYM coordinators suggest course content must be improved for MOOCs; they should focus on

providing practical skills and knowledge that are relevant to real-world applications and beneficial to society. This can include courses on humanities, entrepreneurship, sustainability, and technology, which will address current and future societal challenges and needs. They also comment that this can help students understand how what they have learned is applicable in real-life situations as opposed to simply increasing their comprehension levels about concepts taught, thus making them better able to remember or recall such information, given the improved understanding of its applicability in everyday life.

100. **Developing courses on emerging fields:** The SWAYAM coordinator stressed the importance of developing courses on emerging fields in MOOCs. According to them, this was a way of ensuring that learners had access to state-of-the-art knowledge and skills, as well as enhancing their competitiveness within the rapidly changing job market. These topics were diverse and included artificial intelligence, blockchain technology, cyber security, and data science. Staying current with these new fields enabled one to acquire the latest skills and prepared one for modern workplace hurdles. SWAYAM MOOCs platform considers this kind of course development a great leap forward.
101. **Skill-based courses:** The SWAYAM coordinator highlighted the relevance of incorporating skill-based training courses into MOOCs. They thought that such classes could significantly improve the valuable significance of MOOCs and boost students capabilities by targeting specific skills critical for various sectors, including communication, problem-solving, and technical skills. They also emphasized the role of awards and motivation in encouraging students to opt for relevant courses, which could enhance their confidence and understanding of foundational programs, thereby encouraging further studies and skill development. Hence, the addition of skill-based programs and inspirational approaches are viewed as considerable enhancements to the SWAYAM MOOCs system.

SWAYAM Coordinator Suggestions Regarding Assignment and Discussion Forum

102. **Social media integration:** The SWAYAM coordinator proposed that social media platforms should be integrated into MOOCs to promote student participation and collaboration. They argued that integrating WhatsApp and Telegram discussion forums with popular social media networks could increase learner access and engagement. This way, it was easier for learners to take part in conversations and browse through course materials, and social media might have been helpful in promoting collaboration among fellow students. Furthermore, they suggested that groups or project teams could be formed on social media sites so as to enable the participation of students in group-based assignments and focus on community building amongst learners, the promotion of peer-to-peer learning, and the exchange of ideas plus other digital resources.
103. **Assessment and assignment methods:** The SWAYAM coordinator emphasized the importance of developing courses on emerging fields in MOOCs. They believed that this approach not only provided learners with access to cutting-edge knowledge and skills but also enhanced their competitiveness in the rapidly evolving job market. The courses covered a range of relevant topics, including artificial intelligence, blockchain technology, cybersecurity, and data science. By staying updated with these emerging fields, learners were better equipped with the latest expertise and prepared for the challenges of the modern workforce. This approach to course development is seen as a significant improvement in the SWAYAM MOOCs platform.
104. **Discussion forums:** The SWAYAM coordinators suggest several improvements for discussion forums in MOOCs. They propose grading students for active participation in forums to promote meaningful interactions and knowledge sharing. They also suggest offering incentives or rewards for active participation to motivate learners and encourage students to share their experiences and insights can foster a sense of community and collaboration. Creating a dedicated space for students to ask questions and seek clarification can ensure timely and accurate responses.

Providing clear guidelines for effective online communication and etiquette can foster a positive learning environment. Lastly, providing opportunities for group projects or assignments can promote teamwork and peer learning.

105. **Timely exams and assignments:** The SWAYAM coordinators highlighted the importance of timely exams and assignments in MOOCs. They believed that conducting exams and assignments regularly, especially for courses other than NPTEL, ensured consistency and accountability. They also stressed the significance of maintaining regular attendance in course lectures, submitting assignments on time, and actively participating in group discussions for practical assessment.

SWAYAM Coordinator Suggestions on Learning Strategies

106. **Innovative pedagogy:** The SWAYAM coordinators suggested the use of innovative pedagogy in MOOCs to improve learning outcomes. They proposed employing creative teaching methods such as project-based learning, problem-based learning, and inquiry-based learning. They also advocated for adding interactive and multimedia components to MOOC course content, including videos, animations, simulations, and interactive quizzes. They believed these additions could solidify important concepts and make the learning process more engaging. Furthermore, they suggested enhancing the learning experience through the efficient integration of technology into the educational process, providing access to a wide range of resources and tools to supplement traditional teaching methods.
107. **Conceptual clarity:** The SWAYAM coordinator emphasized the importance of conceptual clarity in MOOCs. They suggested using innovative strategies that prioritized understanding underlying concepts and principles over rote learning. They believed that this approach could help students gain a deeper understanding of the subject and enhance their ability to apply knowledge in real-world scenarios. This focus on conceptual clarity over memorization is seen as a significant improvement in the teaching approach in MOOCs.

108. **Student-friendly and reliable:** The SWAYAM Coordinator proposed making the courses well-organized, easy to navigate, and accessible. They believed that implementing an Activity-Based Curriculum (ABC) approach could enhance the learning experience by providing hands-on activities and practical experiences (Beach et al., 2014). They also emphasized the importance of keeping the course content up-to-date to reflect current trends and practices. They suggested that instructors should have regularly reviewed and updated their course materials to incorporate the latest developments in their field. Lastly, they propose offering students opportunities to reflect on their learning progress and goals, which can boost motivation and improve the overall learning experience.
109. **Regularity and consistency:** The SWAYAM coordinators highlighted the importance of regularity and consistency in MOOCs. They suggested regularly hosting webinars or live sessions to deepen learners' understanding of the course content and address any doubts or questions. They also emphasized the need for students to maintain consistent attendance in course lectures, complete assignments on time, and actively participate in group discussions. They believed that these practices were crucial for staying engaged and reaching learning goals.
110. **Participation and engagement:** The SWAYAM coordinators believed that this approach helped create a dynamic learning environment where students could learn from each other's perspectives and experiences. This fostered a sense of community and collaboration among learners, enhancing the overall learning experience.

SWAYAM Coordinator suggestions on Learning Needs

111. **Resources and materials:** The qualitative analysis revealed that the resources and materials provided by SWAYAM MOOCs played a crucial role in bridging knowledge gaps for all learners, thereby enhancing their overall understanding of the course content. By offering a diverse array of supplementary materials, such as video lectures, interactive quizzes, and reading resources, SWAYAM ensured that learners had multiple avenues to explore and comprehend complex concepts. These resources catered to

different learning styles and paces, allowing students to revisit and review the content as needed.

112. **Accessibility to all:** SWAYAM Coordinators suggested that courses should have been accessible to all learners, including those with disabilities and limited access to technology. This could have been achieved by offering transcripts for videos, using accessible formats for course materials, and providing support for learners with special needs. They also emphasized the need for a supportive and inclusive learning environment that encouraged respect, empathy, and understanding among both students and instructors.
113. **Mentorship or Guidance:** Offering mentorship from instructors improved the learning experience by providing personalized support and feedback through virtual office hours, one-on-one consultations, and mentoring programs. SWAYAM Coordinators also emphasized the need for continuous monitoring and awareness generation. They suggested that reducing examination fees could enhance access and participation in MOOCs. Furthermore, they stress the importance of proper monitoring and support from teachers, underscoring the importance of ongoing support and guidance for learners in the online learning environment.
114. **Feedback:** The SWAYAM coordinators believe that feedback from students is crucial for continuous improvement. By actively seeking and incorporating this feedback, course Coordinators must ensure that their courses meet the needs and expectations of learners. This process ultimately leads to a more effective learning experience.

SWAYAM Coordinator suggestions on Implementation and Management

115. **Monitoring and awareness:** Providing consistent feedback and support to students is essential for keeping them motivated and focused on their learning objectives. This involves giving feedback on assignments, quizzes, and exams and offering support through online forums, office hours, and other communication channels.
116. **Inclusive policy:** The SWAYAM coordinator highlighted the policy development for MOOCs by SWAYAM. This suggested that the policy was effective and cooperative, reflecting a favorable stance toward coordinating

and managing MOOCs. This approach contributed to the inclusivity of the platform, ensuring that it catered to a diverse range of learners.

117. **MOOCs facilitators:** They recommend assigning proficient facilitators to provide assistance and direction to participants in the MOOCs program. This can enhance the learning experience and provide valuable guidance to learners.
118. **Feedback:** The SWAYAM coordinators believed that feedback from students was crucial for continuous improvement. By actively seeking and incorporating this feedback, course Coordinators must ensure that their courses meet the needs and expectations of learners. This process ultimately leads to a more effective learning experience.
119. **Courses in regional languages:** The study's participants elaborated that SWAYAM offering courses in multiple languages improved accessibility and inclusivity in MOOCs, making them more relevant and engaging for learners from diverse linguistic backgrounds. This approach underscored the significance of language diversity in MOOCs for reaching learners from various linguistic backgrounds.

SWAYAM Course Coordinator Suggestions Regarding solving the different problems that they faced related to SWAYAM MOOCs

SWAYAM Course Coordinators' Suggestions on Assessment

120. **Constructiveness in the assignment:** The viewpoints of SWAYAM Course Coordinators emphasize the importance of several key factors in enhancing the educational experience in MOOCs. These include providing timely and constructive feedback on assignments and assessments, offering clear and concise instructions, accommodating various learning styles and preferences through diverse assessment methods, increasing student-coordinator participation through regular forums and interactive assignments, and ensuring the consistency of end-term tests for academic integrity.

SWAYAM Course Coordinators' Suggestions on Communication and Support

121. **Communication Strategy:** The SWAYAM course coordinator highlights the importance of active participation, comprehensive support systems, conducive settings, and efficient communication strategies in MOOCs. Regular live sessions and discussion boards foster a sense of community and enhance the learning experience. Multiple support channels ensure timely assistance for learners. Creating a supportive environment encourages learners to participate in discussions and debates. At the same time, an effective communication plan, including clear guidelines on course expectations and regular updates, is crucial, especially for students in remote areas. Local chapters can act as a bridge between students and the institution, offering tailored support and guidance. These strategies collectively contribute to an enriched educational experience in MOOCs.
122. **Special support:** The SWAYAM Course Coordinators emphasizes the need to assist students with disabilities through accessible resources, assistive technologies, and support services. The participant's statement highlights the necessity of providing additional assistance and resources for students with impairments to ensure their full engagement in courses. This approach not only promotes inclusivity but also ensures that all learners are fully engaged in the learning process.
123. **Staffing and workload:** The findings highlight the significance of adequate staffing and workload management in MOOCs. The coordinators emphasize that having a sufficient number of experts, including course instructors and support personnel, is essential for the efficient functioning of MOOCs. Furthermore, dedicating enough staff to course development and relieving them from other duties allows them to focus on creating high-quality courses.

SWAYAM Course Coordinators' Suggestions on Course Content

124. **Creation and Updates:** The SWAYAM Course Coordinators emphasizes the importance of continually updating course content in MOOCs to maintain its relevance and quality. This involves integrating new concepts, consulting quality textbooks and reference books, logically organizing and

coherently presenting course content, ensuring cultural sensitivity and inclusivity, and actively seeking student feedback. The exploration of innovative approaches to course design and the integration of interactive components are also highlighted as crucial for enhancing student engagement and interaction. Regular updates not only ensure that the content remains current but also allow for the integration of new technologies, teaching strategies, and research findings, resulting in more engaging and informative courses.

125. **Professional Video Editors:** The consensus among SWAYAM course coordinators is clear: experienced video editors are vital to enhancing MOOCs by producing visually engaging and concise videos that capture and sustain learner interest (Ogunyemi et al., 2022). They agree that professional editing can transform educational content, making it more accessible and easier to understand, which is essential for maintaining the attention and interest of learners. By investing in professional video editing and focusing on creating shorter, well-crafted videos, the quality of online learning experiences can be significantly improved.
126. **Review System:** The SWAYAM course coordinator advocates for a system that involves anonymous reviewers and coordinators at all levels to ensure high-quality, accurate, and up-to-date content. This mirrors practices in successful MOOC platforms like NPTEL, where a comprehensive review process involving peer and expert evaluations is fundamental to maintaining content quality and relevance. Such a system not only guarantees the excellence of the material but also leverages feedback for future improvements, thereby fostering a continuous cycle of quality enhancement in online education.
127. **Smaller Course Modules:** The research findings highlight that segmenting course content into smaller modules is beneficial for learners. It enhances understanding by simplifying organization and accessibility, making it easier for learners to digest and retain information. This modular approach is effective in improving both comprehension and memory recall.
128. **Time for Development:** The SWAYAM course coordinators highlight the significance of allocating ample time for course creation, which is essential

for producing high-quality content. Furthermore, it facilitates the involvement of experts who can further refine the quality of course videos, leading to a more polished and engaging educational experience.

SWAYAM Course Coordinators' Suggestions on Learning Strategies

129. **Effective Interaction and Materials:** The research findings emphasize the value of interactive learning and the provision of additional resources in enhancing educational experiences. By integrating supplementary materials like readings, case studies, articles, and webinars, courses can offer a richer learning context and deeper understanding of the subject matter. Furthermore, fostering peer interaction and collaboration through group projects, feedback, and forums, as well as creating opportunities for learners to connect with industry experts via guest lectures and networking events, can significantly enrich the learning journey. These elements contribute to a more comprehensive and engaging educational environment that extends beyond traditional course materials.
130. **Engagement:** The finding highlights the effectiveness of using a variety of media types to boost learner engagement in online courses. By incorporating videos, audio snippets, infographics, and interactive simulations, educators can cater to different learning preferences, ensuring that all students find the course material accessible and engaging. This multimedia approach not only keeps learners interested but also supports a more dynamic and interactive learning environment, which is crucial for maintaining attention and enhancing the educational experience.

6.10 Educational implication of the study

The educational implications of this present research study denote how the findings and insights derived from the research can be applied to improve teaching, learning, and academic policies.

For Policymakers:

- i. **Policy Formulation:** This study would be helpful to the policymakers for providing guidelines regarding formulation of all-encompassing policies to encourage SWAYAM MOOCs' broad adoption and incorporation into

Assam higher education curricula. These regulations ought to give the institutions precise instructions on how to integrate MOOCs into their curricula, guaranteeing that they conform with standards and objectives for education.

- ii. **Funding and Support:** It is about the allocation of enough funds and resources to help with the creation, execution, and upkeep of SWAYAM MOOCs. This includes funding for the development of courses, financial incentives for institutions, and resources for the technical infrastructure needed to guarantee the smooth delivery of MOOCs.
- iii. **Accessibility Initiatives:** This study may give suggestions to the policymakers on the establishment of inclusive policies to ascertain that all students, especially those from rural or underserved locations and those with disabilities, can participate in SWAYAM MOOCs. In order to satisfy a range of learning demands, this may entail offering the internet, the required technology tools, and adaptive learning resources.
- iv. **Incentives for Participation:** This study shows a path regarding how to create and put into action incentives for encouraging academics and students to take part in and contribute to SWAYAM MOOCs. Academic credits, diplomas, chances for professional growth, and acknowledgment of teacher contributions are a few examples of these incentives.
- v. **Introduce ratings and reviews system on the SWAYAM platform:** Introducing a rating system for SWAYAM courses can significantly enhance the platform's utility by allowing students to provide feedback on course quality, similar to how users rate apps on the Play Store.

For Educational Administrators:

- i. **Curriculum Integration:** This study emphasises the need for the active inclusion of SWAYAM MOOCs into the institutional curriculum in order to enhance existing courses and provide students with more possibilities to learn. In order to achieve academic objectives and improve the entire educational experience, this integration should be carefully designed.
- ii. **Resource Allocation:** It ascertains that sufficient technical assistance and infrastructure are available to enable SWAYAM MOOC access. This study

involves offering instructors and students dependable internet access, computer laboratories, and technical support.

- iii. **Student Support Services:** It is advisable that provide specialized support services for students to help them succeed in SWAYAM MOOCs and navigate the platform. It includes academic advice, tutoring, technological help, and counselling to assist students in handling any difficulties they may encounter.
- iv. **Awareness Campaigns:** This study facilitates targeted awareness campaigns to inform students and faculty about the benefits and opportunities offered by SWAYAM MOOCs. These campaigns might feature course offerings, highlight success stories, and provide guidance on how to enroll and participate properly.
- v. **Collaboration with SWAYAM course coordinator:** This study indicates that for courses to be customized to students individual needs, educators must collaborate effectively. By working together, they can develop tailored courses that meet specific local educational challenges and requirements.

For Teachers:

- i. **Professional Development:** The present study is impactful because it utilises SWAYAM MOOCs as a resource for continuing professional development that helps to stay current with the newest trends and practices in education. Teachers can embrace new pedagogical approaches and improve their teaching abilities with the support of this ongoing learning.
- ii. **Supplementary Resources:** The study also shows ways to incorporate SWAYAM MOOCs as supplementary resources to enhance instruction in the classroom and offer a variety of educational tools. Students may be able to gain new insights and resources from this to enhance their comprehension of the course material.
- iii. **Student Motivation:** This study has the potential to motivate students to sign up for SWAYAM MOOCs so that they can become self-directed learners and take charge of their education. Students can study topics of interest and increase their enthusiasm to learn by taking part in MOOCs.
- iv. **Assessment and Feedback:** This study may be helpful for guiding how to utilise the evaluations and feedback from SWAYAM MOOCs to enhance conventional grading schemes and offer thorough assessments. This finding can

help teachers identify areas where students need additional support and tailor their lesson plans consequently.

For Students:

- i. **Self-Paced Learning:** Findings from the research can also assist the students in self-paced learning by leveraging the flexibility of SWAYAM MOOCs to learn at their own pace and manage their study schedules efficiently. Students can manage their time between other commitments and their academic obligations in this self-paced learning environment.
- ii. **Skill Enhancement:** This study also promotes student participation in SWAYAM MOOCs to acquire new skills and knowledge that complement their formal education. Students who complete these courses will be able to build highly marketable practical abilities in the employment market.
- iii. **Career Advancement:** This study attempts to enhance employment prospects by acquiring industry-relevant skills through SWAYAM MOOCs. Employers may find students more appealing if they have completed MOOCs since they show initiative and dedication to lifelong learning.
- iv. **Academic Support:** Attention should also be paid to utilizing SWAYAM MOOCs as additional academic support for difficult subjects. These courses can offer extra clarifications, drills, and materials to aid students in understanding complex ideas.
- v. **Lifelong Learning:** Students should develop a habit of lifelong learning by regularly enrolling in SWAYAM MOOCs to stay updated with new developments in their field of interest. This commitment to continuous learning can help students remain competitive in a rapidly changing job market.

For SWAYAM Course Coordinators:

- i. **User-Centered Design:** This research could lead to new methods for developing courses that focus on the user experience and are engaging, interactive, and accessible to a broad audience of learners. To enhance the learning experience, this involves incorporating interactive exercises, multimedia elements, and user-friendly navigation.
- ii. **Content Relevance:** This study could lead to ensuring that the SWAYAM MOOCs' content is current, pertinent, and in line with academic and industry

requirements. Proper attention must be given to reviewing and updating course materials frequently to reflect industry breakthroughs and current trends.

- iii. **Feedback Incorporation:** It is important to actively seek and consider input from educators and students in order to improve course offerings continuously. SWAYAM course coordinators should make necessary adjustments to the course content, structure, and delivery strategies based on the feedback provided.
- iv. **Innovative Pedagogies:** For enhancing the learning process, it is essential to incorporate cutting-edge pedagogical strategies such as project-based learning, gamification, and adaptive learning technology, as these methods can increase engagement and improve educational outcomes.
- v. **Assessment Techniques:** The SWAYAM Course coordinator should develop effective assessment techniques to measure student learning outcomes and provide valuable feedback accurately. Student achievement should be evaluated using various methods, including practical projects, peer evaluations, and quizzes.
- vi. **Scalability:** SWAYAM courses must be developed to effortlessly cater to a large number of students without compromising quality. This requires creating modular course structures, streamlining information delivery, and establishing robust support systems for managing high enrolment rates.

6.11 Recommendation for Further Studies

As the researcher conducted the present study and derived the findings of this study, the following potential areas are identified, where similar studies could be conducted. After deriving the findings of the study, the researcher identified certain potential areas in which similar studies can be conducted in future ventures.

- i. Conduct a longitudinal study to track the impact of MOOC implementation over an extended period, examining changes in institutional practices and student attitudes over time.
- ii. Compare the effectiveness of MOOC implementation across different types of institutions (e.g., public vs. private universities, rural vs. urban colleges) to identify factors influencing success and challenges.
- iii. Extend the study to include other regions or states with similar or different sociocultural

- iv. contexts to examine how institutional practices and student attitudes towards MOOCs vary across diverse populations.
- v. Evaluate the effectiveness of training programs for instructors on designing and delivering MOOCs, assessing their preparedness, confidence, and ability to engage students effectively in online learning environments.
- vi. Investigate factors contributing to student retention and dropout rates in MOOCs, including course design, student engagement strategies, and support services, to develop targeted interventions

6.12 Conclusion

MOOCs revolutionize education by providing a flexible and accessible platform for individuals to acquire new skills and knowledge. These courses span a wide array of subjects, leveraging global expertise to focus on nurturing pivotal 21st-century skills like critical thinking and digital literacy. With the ever-evolving role of technology in shaping educational paradigms, MOOCs become a cornerstone in equipping learners with the competencies required to thrive in the global economy. The burgeoning adoption of MOOCs within India exemplifies their impact, particularly evidenced by the exponential growth in course offerings and university participation on platforms such as SWAYAM. India's remarkable third-place ranking in registered users on the SWAYAM platform underlines the country's extensive engagement with MOOCs. This surge complements strategic partnerships between various Indian universities and MOOC platforms aimed at enriching content and certification quality. A comprehensive study sheds light on the assimilation and application of SWAYAM MOOCs within the higher education landscape of Assam. The investigation reveals a predominantly negative attitude toward MOOCs among students and academic institutions alike, illustrating their vital contribution to support traditional educational methodologies and promote avenues for lifelong learning. This study further articulates the varied levels of SWAYAM MOOCs integration across different educational institutions, featuring exemplary cases of full integration backed by strong student support frameworks. However, the path to comprehensive adoption faces obstacles such as technological constraints, administrative indifference, and a lack of faculty training. These challenges underscore the imperative for a cohesive MOOC implementation strategy, calling for increased intervention from educational authorities to ensure uniform quality and

accessibility, thereby enhancing the educational ecosystem's capacity to harness the transformative potential of MOOCs in enriching learning experiences and outcomes.

The study finds that due to various factors, such as unreliable internet access, limited access to devices, and lack of awareness, the perspective on SWAYAM MOOCs is overwhelmingly negative. Learners express a negative view of the courses. This study underlines the importance of integrating SWAYAM MOOCs with the prevailing curricular structures to affirm their utility and applicability. Achieving this integration requires intimate cooperation between MOOC providers and academic institutions to design courses that align with regional educational needs and standards.

Moreover, to tap into the fullest potential of SWAYAM MOOCs in reshaping the educational landscape of Assam, a holistic strategy is essential. Such a strategy encompasses infrastructure improvements, increased institutional support, and comprehensive awareness campaigns aimed at enlightening faculty and students about the advantages and best practices of using MOOCs effectively. It is also critical to motivate faculty toward incorporating MOOCs into their instructional methodologies and to establish mechanisms for ongoing course enhancement based on student feedback.