A decorative scroll graphic with a black outline and a light gray shadow. The scroll is unrolled in the middle, with the top and bottom edges curled up. The text is centered within the unrolled portion.

**CHAPTER 1**  
**INTRODUCTION**



# CHAPTER 1

## INTRODUCTION

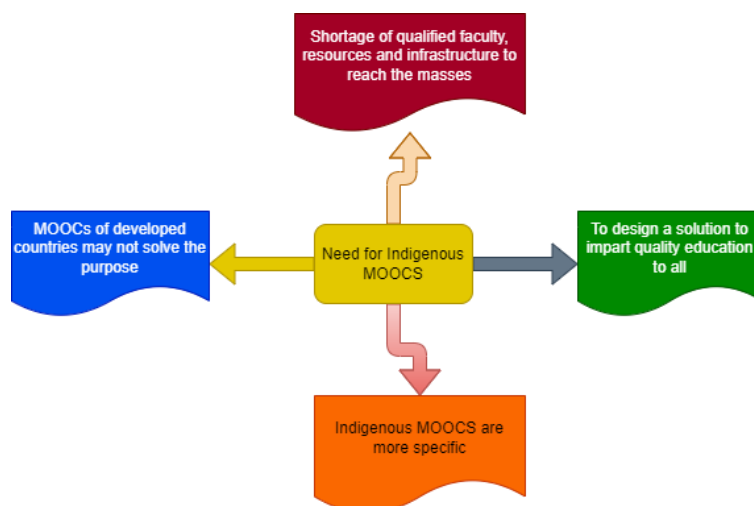
### 1.1 Introduction

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. Technology is essential in enhancing the teaching-learning and assessment processes, assisting teachers' development, 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. Currently, numerous technological applications have been embraced to facilitate instruction and learning, with MOOCs being one of them. MOOCs have evolved as the new buzzword in the education system in the past decade. The year 2012 marked the 'Year of MOOC' (Pappano, 2012), and they are gaining popularity day by day. MOOCs are online-based courses that have no limitations on the number of participants or educational prerequisites for enrollment. "A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs integrate social networking and accessible online resources and are facilitated by leading practitioners in the field of education" (McAuley et al., 2010). However, there is a need for Indigenous MOOCs to address educational challenges specific to certain regions. MOOCs from developed countries may not effectively meet local needs, and there is a shortage of qualified faculty, resources, and infrastructure to support mass education. Indigenous MOOCs can provide a solution by offering more specific and locally relevant content, thereby ensuring that quality education is accessible to all.

In the development of MOOCs, Open Educational Resources (OERs) have contributed massively, and they are also gaining equal importance and visibility with MOOCs (Bozkurt et al., 2019; Dalsgaard & Thestrup, 2015), as many MOOCs are using quality learning material already available as OERs. MOOC can be considered as an extension of online courses, characterized by massive enrolment and open access via the Internet (Baker & Passmore, 2016) and "free" too many people—as in "free to students." These days, MOOCs are offered at almost all education levels, ranging from school to higher education. Professional development MOOC is another critical dimension that has been added to it.

**Figure 1.1 Indigenous MOOCs (Dash & Panigrahi, 2023)**



According to the Global MOOCs Market – Industry Trends and Forecast to 2030 reports, the MOOC market is rapidly growing, driven by universities and venture capitalists looking to invest in these programs. The market is valued at USD 9,209.55 million in 2022 and is forecasted to reach USD 84,474.06 million by 2030.

### 1.1.1 Philosophical Bases of MOOCs

A MOOC is more than just a vast, publicly accessible online course; it incorporates four distinct principles rooted in connectivism: autonomy, diversity, openness, and interactivity. These fundamental principles underpin the reflective practice and instructional learning process (Dash & Panigrahi, 2023).

Dewey (1993) defines reflection as an engaged and consistent process of thoughtfully examining any knowledge or belief. Reflective practices include an analysis of one's methods of instruction and the identification of areas seeking improvement (Jarvis, 1992). MOOCs undoubtedly operate under a distinct and precisely defined philosophy, which represents a fundamental departure from conventional instruction and learning methods to address worldwide information exchange and knowledge generation developments. Wilson and Conyers (2014) define metacognition as the cognitive ability to evaluate one's teaching philosophy to improve student learning. According to Hartman (2001), instructors' self-reflections positively enhance the learning environment and increase learner achievement.

Furthermore, self-reflection and metacognitive reasoning are crucial components of course development, redesign, and implementation. At this juncture, educators and scholars specializing in education should possess fundamental comprehension and knowledge of Massive Open Online Course design, development, and implementation strategies. The learner must develop the ability to filter and evaluate essential information. Consequently, connectivism emphasizes the learner's capacity to acquire knowledge through connections, as opposed to their present level of understanding (Siemens, 2005). Despite the growing recognition of connectivism as a theoretical framework for learning, it has yet to achieve widespread acceptance. As the teaching and learning process in the twenty-first century is constantly changing, it is feasible that this mode of delivery strategy would transform. MOOCs play a significant role in achieving Sustainable Development Goal 4 by increasing the accessibility, affordability, and inclusivity of quality education. They offer educational opportunities to remote and underserved populations, support continuous learning, and meet the diverse needs of learners through flexible, scalable, and high-quality content from leading institutions. MOOCs help bridge educational gaps by providing vocational and technical skills, professional development for educators, and addressing current industry demands. They also promote global collaboration, innovative teaching methods, and personalized learning experiences. Furthermore, MOOCs empower marginalized groups, particularly women and girls, and ensure educational continuity during emergencies. By featuring courses on sustainability and fostering global awareness, MOOCs inspire learners to contribute to sustainable development, thus advancing the goal of inclusive and equitable education for all, as outlined in SDG 4.

### **1.1.2 MOOCs vs. OER**

MOOCs and OER (Open Educational Resources) are both significant components of modern education. MOOCs are online courses with unrestricted enrollment, evolving from open content to open learning processes (Kukhareno, 2023). They offer a new method of education, incorporating various tools and social services, requiring careful content selection and pedagogical skills for successful implementation. On the other hand, OER is a flexible resource that promotes equal access to education, with the potential for sustainable impact when integrated into MOOCs (Margoum, 2022; Ebner & Schön, 2021). OER can enhance open education by providing scalable and accessible resources, contributing to open innovation, research, and science (Ramirez-Montoya, 2020). In essence, while MOOCs focus on course delivery and organization, OER emphasizes creating and sharing educational materials to support diverse learning needs. MOOCs are, nevertheless, licensed to permit re-use and adaptation in specific circumstances. However, in terms of learning and instructional design, MOOCs have the potential to be significantly more than OER (Chapman et al., 2016). As a technology-mediated teaching and learning process, MOOCs can transform and enhance the quality of education by emphasizing peer learning in addition to OER.

### **1.1.3 MOOCs and Sustainable Development**

MOOCs play a crucial role in integrating Sustainable Development Goals (SDGs) into educational curricula. According to Zhu et al. (2023), the effectiveness of MOOCs is in enhancing student participation, reducing learning costs, and addressing communication challenges between teachers and students. MOOCs have been developed to address subjects such as renewable energy sources, waste management, and sustainable development under the 2030 Agenda for Sustainable Development. (Sonwalkar & Maheshkar, 2015). Furthermore, research has explored the adoption of SDG content in MOOCs, emphasizing the importance of incorporating SDGs in online courses to facilitate learning about sustainability goals (Wang et al., 2022). In the realm of development education, MOOCs have the potential to provide educational materials and chances for individuals to develop an understanding of sustainability and global environmental protection, as well as to observe how universities instruct knowledge about sustainability in an accessible digital setting (Zhan et al., 2015). Content sharing regarding sustainable development issues may benefit significantly from MOOCs.

MOOCs have the potential to address a significant obstacle in sustainable development education, which is that "MOOCs focus on sharing knowledge, skills, values, and perspectives throughout a lifetime of learning in such a way that it encourages sustainable livelihoods and supports citizens to live sustainable lives" (UNESCO, 2005)

In addition, MOOCs play a pivotal role in advancing Sustainable Development Goal Four by offering inclusive and quality education through innovative teaching methods utilizing electronic resources. By providing practical knowledge and enhancing visualization of concepts, MOOCs contribute to long-term benefits for learners and practitioners, aligning to ensure equitable quality education for all. Furthermore, MOOCs not only aid in achieving SDG 4 but also have a broader impact on all 17 Sustainable Development Goals, showcasing their potential to revolutionize education and make learning more accessible and effective for a diverse global audience.

Furthermore, the different studies also investigate how MOOCs might improve the general public's comprehension of the SDGs. Communicating extensively with individuals from various nations and cultures fosters a heightened sense of awareness and critical engagement with crucial sustainability concerns in students. In addition, academic institutions that offer MOOCs on sustainable development target strategic and policy objectives for global sustainability (Cotton et al., 2007).

**Figure 1.2 MOOCs provide multiple solutions**



## 1.2 An Overview of MOOC's Historical Development

Learning theories are a systematic collection of concepts that explain how individuals acquire, retain, and recall knowledge. There are four well-known learning theories:

Behaviourism, Cognitivism, Constructivism, and Connectivism. Behaviourism originated from the research conducted by J. B. Watson, E. L. Thorndike, and B.F. Skinner. Learning is perceived as the process of acquiring a novel behaviour or modifying existing behaviour. The notion of cognitivism posits that individuals engage in information processing rather than only reacting to stimuli. The cognitive approach to learning theory emphasizes the study of mental processes rather than observable behaviour. Constructivist scholars claim that individuals form their worldviews by synthesizing personal experiences and internal knowledge. Constructivist theorists perceive learning as a cognitive process in which humans generate novel ideas or concepts by drawing upon their existing knowledge and past experiences. Connectivism is a learning paradigm that has emerged in the digital age and was established by George Siemens in 2005.

The University of Manitoba in Canada supported the development of one of the first MOOCs called "Connectivism and Connected Knowledge" in 2008. This course was taught by George Siemens and Stephen Downes. This innovative course established the foundation for the widespread adoption of MOOCs, shaping the format and implementation of subsequent online education endeavours. This MOOCs were founded on the principles and concepts of Connectivism. This learning theory emphasizes the importance of networks and connections in the process of acquiring knowledge. Although the course was only available for credit to 25 students physically present on campus, a staggering 2300 individuals from across the world enrolled in the course without receiving any academic credit. Subsequently, numerous courses were provided that capitalized on technological advancements, such as Web 2.0. Dalit Levy enrolled in PLENK2010: Personal Learning Environments, Networks, and Knowledge in 2010. According to Levy's firsthand account (2011), learning in the MOOC was feasible despite the considerable number of diverse participants, the extensive amount of distributed knowledge, the multi-modal discourse among participants, and the substantial time required to manage and organize these factors.

Furthermore, he observed that while the expert conveyed their ideas verbally during live sessions, learning also occurred through various communication channels, such as the chat space, where participants shared their thoughts, ideas, and links in real-time as they listened to the main speaker. He also suggested that PLENK2010 could potentially

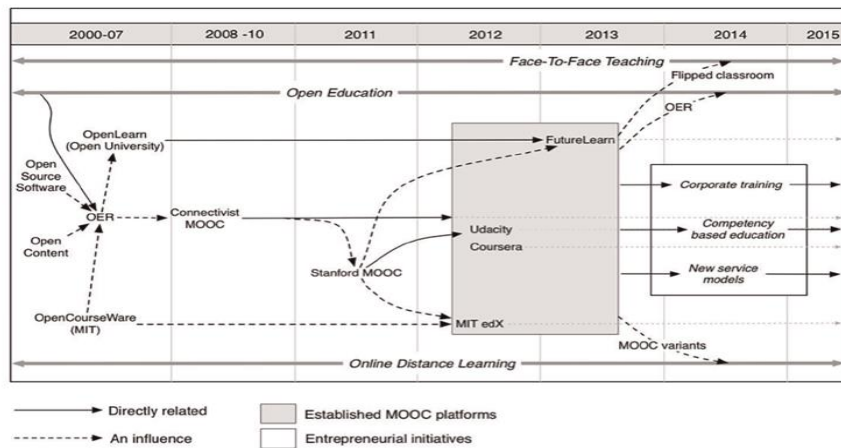


serve as a model for a learning environment that promotes learning without being bound by a rigid assessment framework. His ultimate conclusion was that a daily email generated by a computer to compile student blogs, Twitter posts, and discussion topics played a role in enriching the learning experience.

In 2011, Stanford University introduced three complimentary courses that attracted over 100,000 participants. Two of these courses, one taught by Widom and the other by Andrew Ng, were given on a platform that later became Coursera. The third course, taught by Sebastian Thrun and Peter Norvig, was available on a platform that later became Udacity (Tirthali et al., 2014). Although these courses were available online to a large number of participants, they did not have the same theoretical foundation as the earlier MOOCs. Therefore, the newly developed MOOCs were referred to as xMOOCs, while the previous MOOCs were labelled as cMOOCs.

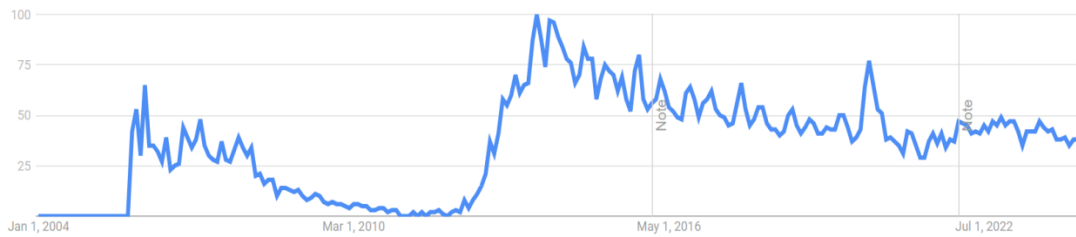
The "c" in the cMOOCs stands for a connectivist approach, and the "x" in xMOOCs for "extension" focuses on the massive enrolments or extensions, such as IIMBx being an extension of the IIM Bangalore campus. While CMOOCs focus on learner-generated content to provide a personal and very subjective learning experience, xMOOC focuses on educator-generated content with automated assessment. cMOOC aims to use the collective intelligence of the learning community to generate knowledge and is participant-led. On the other hand, xMOOC typically offers a linear journey for the learner, as prescribed by the educator. While cMOOC is based on the connectivism learning theory, xMOOC essentially uses the Behaviourism learning theory.

**Figure 1.3 Evolution of MOOCs (Das, 2023)**



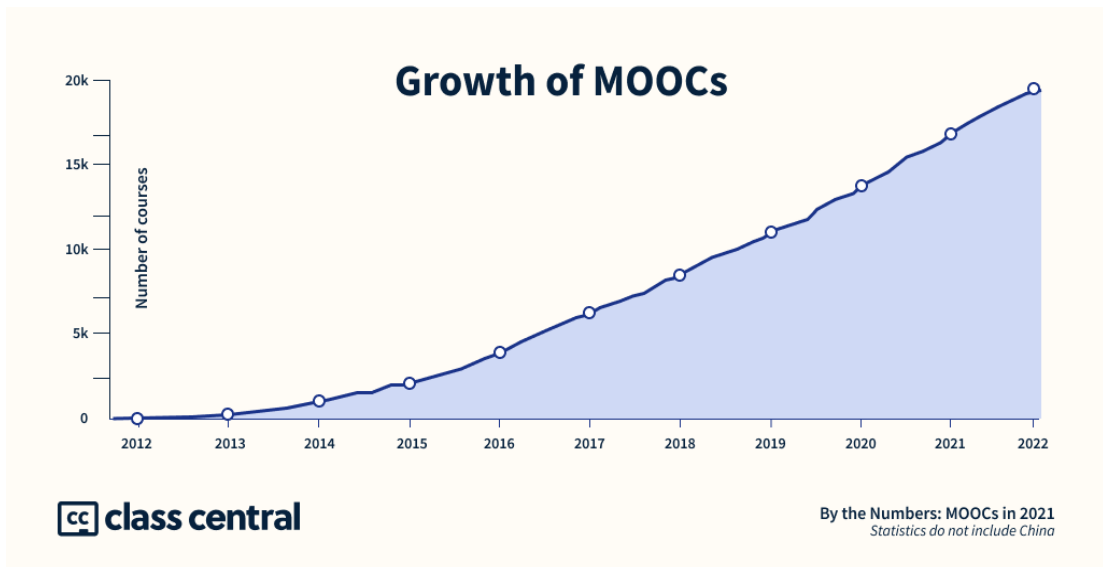
Several American colleges began providing complimentary online courses to the general public, resulting in the establishment of Coursera (affiliated with Stanford University), edX (affiliated with Harvard and MIT), and Udacity (affiliated with Stanford University) in 2011-2012. Furthermore, the consortium of 12 universities known as FutureLearn was established in the United Kingdom at the end of 2012. Figure 1.3 depicts a basic diagram of the evolution process. MAUT offers a concise overview of its history, while Aldahmani et al. (2020) examine the development process of MOOCs to evaluate their potential advantages and difficulties. In the last decade, more than 1200 universities worldwide have introduced free online courses. Several nations, such as India, China, Italy, Israel, Mexico, and Thailand, have independently started their MOOCs. These countries include India (NPTEL, 2014 & SWAYAM, 2016), China (XuetangX16, 2013), Italy (EduOpen, 2016), Israel (Campus-il, 2018), Mexico (MéxicoX, 2015), and Thailand (ThaiMOOC, 2017). In 2021, the global enrollment for MOOCs hit 200 million, marking a decade since their beginning. Currently, SWAYAM, India's MOOC platform, has a total enrollment of 30 million and is experiencing consistent growth. Therefore, it is crucial and pertinent to comprehend the many aspects of MOOCs in India and investigate the strategies.

**Figure 1.4 Google Trends graph about MOOCs (Google Trends, 2024)**



The Google Trends graph illustrating the evolution of interest in MOOCs from 2004 to 2024 showcases a remarkable surge in global engagement with online learning. The initial subdued interest is followed by a steep incline and peak in 2016, underlining their widespread acceptance and peak popularity. The MOOC ecosystem encompasses 220 million learners and 19.4K courses from around 1,000 universities.

**Figure 1.5 Timeline of the MOOCs development(2012-2022).**



### 1.3 The Development of MOOCs in India

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 U.S., 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 (Basantia & Kumar, 2021). Collaboration between the Ministry of Education and the Federation of Indian Chambers of Commerce & Industry in 2013 validated the efficacy of 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 substantial 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.

*"The Indian higher education system has undergone massive expansion to become the largest in the world, enrolling over 70 million students. Such expansion would have been unimaginable without the extensive use of Information and Communication Technology (ICT) tools. To illustrate, if India were to create this additional capacity through increase in brick-and-mortar institutions alone, it would have had to build six universities and 270 colleges each month in the last 20 years have been impossible to achieve with India's limited resources. Instead, India chose to go the MOOCs way."*

**Source: Source: "From 2013 to 2030: the mechanics of change" (2019)**

The digital revolution in India has served a crucial role in the country's growth and has driven it to the forefront of competing to become a developed economy. The digital revolution is leading to significant transformations in several sectors, such as banking, education, commerce, agriculture, healthcare, rural development, and others of a similar nature. Higher education is a primary area of emphasis in the digital revolution taking place in India. Disruptive revolutionary technologies are revolutionizing the

conventional approaches to education, hence facilitating India's transition into a "Knowledge Economy." One of the main catalysts for technological advancement in education in India is the implementation of MOOCs (Paroi & Srivastava, 2017). These courses enable thousands of students to engage concurrently, without any geographical limitations, and at no cost.

**Table 1.1 Evolution of education systems in India. (Das, 2023)**

<b>Name of learning paradigms</b>	<b>Mode of study material</b>	<b>Space: teacher and student</b>	<b>Time: Sync/ async</b>	<b>Intervening medium</b>	<b>Mode of interaction</b>
<i>Gurukul</i>	Physical	Co-located	Sync	Face-to-face	One-to-One
<i>Classroom</i>	Physical	Co-located	Sync	Face-to-face	One-to-One
<i>Open &amp; Distance</i>	Physical	Separated	Async	Postal Mail	Sparse
<i>Digital</i>	Electronic	Co-located	Sync	Face-to-face	One-to-Many
<i>Online/Remote</i>	Electronic	Separated	Sync	Internet	One-to-Many
<i>MOOCs</i>	Electronic	Separated	Async	Internet	Machine-to-Many

The development of education in India is a narrative of ongoing adjustment and change, demonstrating the nation's abundant cultural legacy and its ability to adapt to evolving societal demands. Indian education has a long history, starting from roughly 1500 BCE during the Vedic period. During this time, the Gurukul system was prevalent, and education was primarily based on mentoring and oral instruction. Notable educational centers like Takshashila, Nalanda, and Vikramashila were later established, further contributing to the rich heritage of education in India. The Gurukul system,

characterized by the cohabitation of students with their gurus and the provision of individualized instruction, progressively incorporated the use of written texts and collaborative learning. During the Medieval and Early Modern periods, Maktabas and Madrasas emerged as educational institutions that maintained the practice of individualized instruction while also accommodating the needs of a broader range of students. Nevertheless, the arrival of British colonial control brought about a notable change, as the British demolished ancient structures in order to establish a classroom-focused approach, which formed the basis for the contemporary education system in India.

Following India's independence, the country undertook a determined effort to construct educational institutions on a large scale, resulting in the creation of esteemed establishments such as the IITs, IIMs, and AIIMS. However, the difficulty of expanding physical infrastructure prompted the investigation of Open and Distance Learning (ODL), in which the Indira Gandhi National Open University (IGNOU) played a crucial role in making higher education accessible to all. The advent of the digital revolution in the 1990s brought about significant changes to the education system in India. The advent of personal computers and the internet has brought forth new methods of education, allowing anyone to access digital materials and participate in remote and online learning. This transition not only increased the availability of education but also facilitated a more adaptable and student-centred approach. With the ongoing advancement of technology, the Indian education system will probably persistently introduce new ideas and methods to cater to the varied population while maintaining its core values of mentoring and lifelong learning (Basantia & Kumar, 2022).

In the development of MOOCs in India, National Mission on Education through Information and Communication Technology (NMEICT) is crucial in promoting the growth and acceptance of MOOCs in India. NMEICT was initiated to utilize technology to improve educational access, fairness, and excellence. It carries out extensive initiatives to develop, distribute, and authenticate online educational content. This mission includes several programs, namely SWAYAM, SWAYAM PRABHA, and the National Digital Library of India (NDLI), each catering to different aspects of digital learning. NMEICT ensures the widespread accessibility and long-term viability of

MOOCs by offering high-quality e-materials at no charge, providing infrastructure such as academic clouds for computing, and developing digital libraries and content repositories. Furthermore, it promotes the establishment of local branches and fosters academic connections, thus enhancing the integration of MOOCs into India's educational ecosystem. The efforts made by NMEICT have led to a substantial increase in the number of people visiting and engaging with its platforms.

In India, the growth of MOOCs was primarily driven by organizations such as IGNOU, NPTEL, SWAYAM, and others. The Ministry of Education (MoE) played a crucial role in coordinating various initiatives related to open institutional education, content generation, distribution, and certification in collaboration with higher education institutions (HEIs). The Ministry of Education (MoE) provided funding for projects at the national level as well.

#### **1.4 Evolution of MOOCs Amidst the COVID-19 Pandemic**

The COVID-19 pandemic has led to a surge in demand for MOOCs as individuals seek online learning opportunities to adapt to remote education (Yin, 2016). It has led to the closure of campuses globally, impacting over 94% of the student population and prompting a shift towards flexible teaching methods like MOOCs. MOOCs, as a subset of distance education, provided a more flexible and innovative educational experience during lockdowns, accelerating the modernization of education systems (Joshi et al., 2020; Kumar, 2020; Khaliq et al., 2023). The outbreak of COVID-19 forced universities to transition to online teaching, with MOOCs playing a crucial role in ensuring the continuity of education for millions of students worldwide. MOOCs provide a platform for students to continue learning during lockdowns, showcasing their adaptability and effectiveness in ensuring educational continuity during challenging times (Yang & Lee, 2020). The impact of COVID-19 on MOOC development highlights the potential of online learning to shape the future of education by offering flexible and scalable solutions for learners globally. By 2021, MOOCs had secured their place in Higher Education Institutions worldwide, promising to continue playing a crucial role in the transformation of Higher Education through the acquisition of essential competencies by academics for digital transformation.

## 1.5 NEP 2020: Revolutionizing Indian Education with MOOCs

In 2020, India unveiled the eagerly anticipated National Education Policy in place of the NEP 1986, marking the culmination of the narrative surrounding MOOCs in India. NEP 2020 describes India's vision for the future educational system. It encompasses vocational training and elementary through higher education in both urban and rural areas of India. The objective is to revolutionize the education system in India by 2030 by means of the National Educational Technology Forum (NETF), which serves as a forum for the open interchange of thoughts regarding the application of technology to improve learning, assessment, planning, and administration. Although NEP has received a generally favorable reception, the implementation of the program has generated valid concerns. (D'Souza, 2023)

The implementation of digital learning models, including MOOCs, has been significantly advanced throughout all levels of education in India as a result of the National Education Policy 2020. The policy delineates an all-encompassing strategy and strategic plan to utilize MOOCs in order to facilitate opportunities for lifelong learning, establish digital learning infrastructure and content, incorporate technology into the pedagogical process, permit adaptable academic models, and guarantee inclusive access by means of language assistance. The NEP 2020 specifies the provision of online courses, applications, television channels, and electronic books, and the establishment of libraries and knowledge resources outfitted with ICT (NEP, 2020: Clauses 21.9, 21.10). NEP, 2020 Clauses 24.4d, 21.9, and 4.32 require the establishment of electronic libraries containing multimedia digital content such as e-books, online coursework, games, simulations, and AR/VR resources. NEP, 2020 Clauses 23.5 and 23.6 underscore the significance of incorporating educational technology into pedagogy via digital teaching-learning methodologies, the creation of educational software and content, and teacher preparation. In order to expand access, the policy also promotes flexible curricula, entry/exit pathways, assessments, and certification that utilize online/distance modalities such as MOOCs. In addition, it mandates the provision of online education, including MOOCs, in every language spoken throughout India (NEP, 2020: Clause 22.19). Although this development is praiseworthy, a significant obstacle still stands in



guaranteeing successful execution through the development of sophisticated technological infrastructure, valuable content, and proficient personnel.

## 1.6 An Overview of SWAYAM

SWAYAM is an indigenous MOOCs 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 (Basantia & Kumar, 2022). 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 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.

**Figure 1.6 MOOC-SWAYAM**



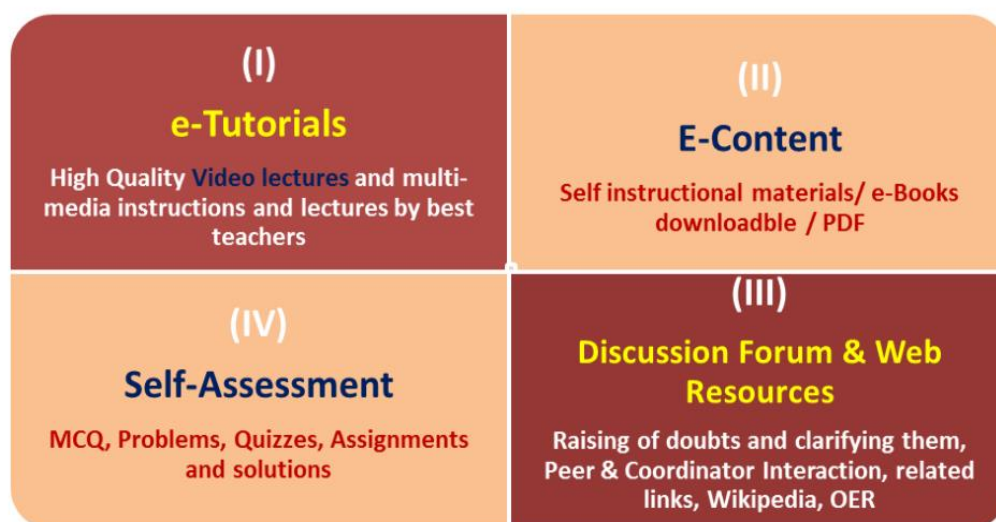
SWAYAM courses are completely recognized and meet the criteria for credit transfer according to the UGC Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds Regulations, 2021. These regulations now enable an educational institution to provide up to 40% of the total courses in a certain 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.

### 1.6.1 Structure of SWAYAM

The teaching and learning philosophy of SWAYAM is founded on a four-quadrant approach, outlined as follows:

**Figure 1.7 Four quadrants of SWAYAM courses.**



**Quadrant-I:** The educational resources may consist of many forms of media, such as organized video and audio, animations, simulations, video demonstrations, virtual laboratories, interviews, and more. Furthermore, transcriptions of videos may be provided. The outcome of these factors relies on the specific subject matter and the instructional approach used by the instructor.

**Quadrant-II:** The second quadrant refers to additional learning materials, usually in the form of a webpage that contains carefully selected hyperlinks to high-quality content available on the internet. These resources may consist of self-instructional materials, e-books, illustrations, case studies, open-source content available on the

internet, research papers and journals, anecdotal information, the historical evolution of subjects, and articles.

**Quadrant-III:** This platform serves as a discussion forum where learners may express their uncertainties and receive prompt explanations from the Course Coordinator or members of their team.

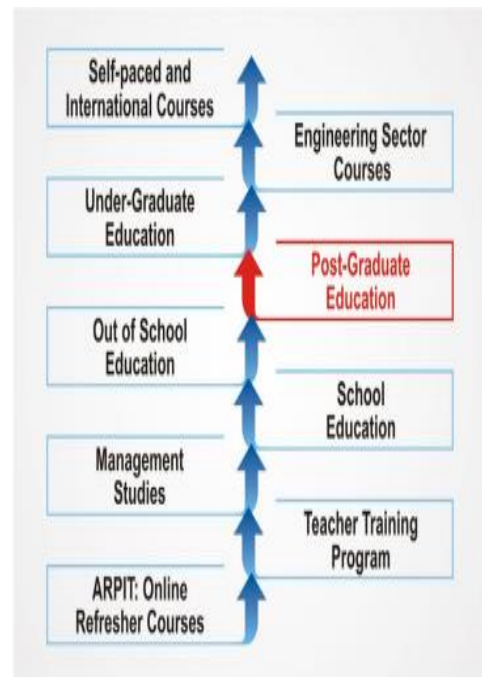
**Quadrant-IV:** An assessment may consist of several types of questions, such as multiple-choice, fill-in-the-gaps, matching, short-answer, and long-answer questions. Furthermore, it may include quizzes, assignments with solutions, and the opportunity to address common misunderstandings.

### 1.6.2 Scope of SWAYAM

According to the Government of India (Department of Higher Education, Ministry of Human Resource Development, 2015), SWAYAM would include the following:

Figure 1.8: Scope of SWAYAM (Dash & Panigrahi, 2022)

- a) The curriculum of the courses covers a wide range of disciplines, including arts, science, commerce, performing arts, social sciences, humanities, engineering, technology, law, medicine, agriculture, etc. These courses are designed to provide certification-ready knowledge in their respective fields.
- b) Modules for school education at the 9-12 grade levels, designed for teacher training and to serve as teaching and learning aids for children in India. These modules aim to enhance their understanding of subjects and improve their readiness for competitive tests required for entry into professional degree programs.
- c) Skill-based courses include both post-higher secondary school skills now taught in polytechnics and industry skills accredited by sector skill councils under different Ministries.



- d) Implementation of a comprehensive curriculum and professional certification program in the higher education sector, specifically designed to align with the choice-based credit system (CBCS), is now being used in India for undergraduate studies.
- e) Curricula and courses are designed to cater to the educational requirements of Indian residents, both inside India and outside, throughout their lives.

### 1.6.3 National coordinators of SWAYAM

The following organisation listed below serve as the National Coordinators for each Sector. Their responsibilities include developing e-content, delivering online courses, and managing course assessment processes on SWAYAM. Nevertheless, the Ministry can appoint National Coordinators periodically, based on the requirement to broaden the range of Courses to be provided:

**Figure 1.9: SWAYAM National Co-coordinator**



The NCs are responsible for implementing SWAYAM according to its specific rules. SWAYAM employs the same four-quadrant pedagogy (Figure 1.9) as NPTEL. However, it adapts its course delivery and evaluation systems to accommodate the varying levels of education, requirements, and disciplines. In 2019, Singh conducted a study on the functionality of the SWAYAM platform, explicitly focusing on navigation, content management, interactions and communications, and assignment administration. The study gathered feedback from faculty members who were involved in the development of MOOCs. Over time, a significant number of its recommendations were implemented.

As of October 2024, the following are the primary stats of SWAYAM:

Table 1.2 Enrollment Status and Successful Certification (Higher Education)

<b>SWAYAM Different Platform Enrollment Status and Successful Certification (Higher Education)</b>					
<b>NCs</b>	<b>Partnering Institutes</b>	<b>Course completed</b>	<b>Enrollment</b>	<b>Registration for examination</b>	<b>Successful certification</b>
<b>AICTE</b>	7	406	19,91,942	1,60,783	19,170
<b>IGNOU</b>	3	1348	18,70,239	51,246	34,148
<b>CEC</b>	19	1,532	34,53,261	1,10,758	76,261
<b>IIMB</b>	3	328	15,46,598	38,476	23,643
<b>NIOS</b>	1	518	34,57,262	0	0
<b>NCERT</b>	8	313	4,52,340	0	0
<b>NITTTR</b>	3	237	5,47,033	33,453	23,852
<b>NPTEL</b>	26	6,887	2,84,20,108	35,90,913	23,41,289
<b>UGC</b>	133	276	3,12,401	12,723	9,579
<b>Total</b>	196	11439	40059242	3837569	2508772

Source: SWAYAM Portal ([https://SWAYAM.gov.in/nc\\_details/](https://SWAYAM.gov.in/nc_details/)).

**Table 1.3 Year-wise use of SWAYAM enrollment data**

<b>Year</b>	<b>Semester</b>	<b>Course Enrollments</b>	<b>Exam Registrations</b>	<b>Certifications</b>
<b>2024</b>	January	3789020	885483	497848
<b>2023</b>	July	3680563	710413	437788

Source: SWAYAM Portal ([https://SWAYAM.gov.in/nc\\_details/](https://SWAYAM.gov.in/nc_details/)).

An examination of the enrollment and completion data for SWAYAM's MOOCs demonstrates the significant extent and influence of online education in India. The data revealed a substantial number of enrollments from different national coordinators, with NPTEL at the top with over 28 million enrollments, demonstrating a high demand for MOOCs. Nevertheless, the number of certifications achieved is relatively minor when compared to the number of enrollments, indicating a probable decline in course completion.

Table 1.3 also indicates a significant decline in student engagement and success from January 2024 to July 2024, which may signal a high rate of students leaving the program. The substantial decrease in course enrollments from 3,789,020 in January 2024 to 288,280 in July 2024, coupled with the total absence of exam registrations and certificates in July 2024, indicates that a considerable proportion of students may have terminated their studies. The dropout rate can be ascribed to a multitude of variables, including academic challenges, course discontent, financial constraints, or external situations impeding Students ability to pursue their education. The significant disparity in the figures highlights the pressing necessity for additional examination and intervention to tackle the root issues and bolster student retention.

This data also indicates that although MOOCs are effective in recruiting learners, there is a requirement for better assistance and course design in order to increase completion rates and guarantee that learners not only enroll but also successfully finish courses and obtain certification. The data emphasizes the significance of MOOCs in offering easily accessible education and underlines the difficulties in attaining high certification rates,

which reflects the continuous endeavor to improve the quality and efficacy of online learning platforms.

## **1.7 Overview of SWAYAM Plus**

SWAYAM Plus is a pioneering endeavor by India's Ministry of Education designed to significantly improve the country's higher education system, following the goals outlined in NEP 2020. This platform aims to support the country's ambitious objectives of attaining a Gross Enrolment Ratio (GER) of 50% by 2035 and 65% by 2047. SWAYAM Plus utilizes technology and non-linear growth models to provide top-notch, job-oriented education. This is achieved through partnerships with prominent industry players and ed-tech companies. It includes a wide range of industries such as Manufacturing, Energy, IT, Healthcare, and others. It provides adaptable language resources in local dialects to reach learners across the country, especially in smaller areas. Under the leadership of IIT Madras, SWAYAM Plus aims to establish a system for enhancing professional and career growth. It seeks to provide fair opportunities for accessing top-notch educational and certification programs, ultimately cultivating a pool of highly skilled individuals to meet India's future requirements. (Ministry of Education, 2024)

## **1.8 Innovations and extensions of MOOCs in India**

India has experienced notable progress and breakthroughs in the field of Massive Open Online Courses (MOOCs) in the past few decades. These advancements are intended to improve the ease of access, inclusiveness, and overall educational experience for students throughout the country. Two prominent domains of innovation encompass Credit Mobility and Multi-lingual MOOCs.

### **1.8.1 Credit Mobility**

In 2016, the UGC implemented credit mobility, which enables schools to offer up to 20% of the total courses in a semester through SWAYAM. Consequently, any student, whether enrolled as a regular or part-time student in any educational institution in India, is eligible for credit transfer that can offer a maximum of 20% of the total courses in a semester through SWAYAM. Any student, whether they are enrolled as a regular or part-time student in any educational institution in India, is eligible for credit transfer.

Credit mobility became popular in 2021, and the maximum ceiling for credit mobility per semester increased to 40%. In addition, the UGC established the Academic Bank of Credits (ABC) in 2021 to simplify the administration and transferability of credits. Institutions enroll with ABC and transfer the credits earned by the students to their accounts. This system ensures the preservation of the integrity, validity, and confidentiality of student credits, facilitates seamless credit transfer in a digital format, and expedites credit recognition. Credit Mobility has significantly enhanced the impact of MOOCs as a robust and complementary component of education in India, capable of playing a substantial role in the curriculum. In a recent study, Singh and Kakkar(2023) examined the effects of credit mobility and found that it has led to a significant rise in student enrollment. However, this increase in enrollment has been accompanied by a notable decline in certification rates.

### **1.8.2 Multi-lingual MOOCs**

India has a total of 22 languages, which are known as scheduled languages and are officially recognized, granted status, and encouraged. Approximately 96.71% of the people in the country speak one of the 22 scheduled languages as their native language. Many students receive their education in their native language and may have difficulties while transferring to English for technical studies. The MOOC courses, on the other hand, are predominantly conducted in the English language. During the initial stages of development (2000-2010), the limited availability of MOOCs in subjects like engineering, science, and management, which were taught exclusively in English, was not seen as a hindrance.

Nevertheless, as education continues to expand through online and digital platforms, the decision to incorporate MOOCs at all educational levels, including school education, adult education, and lifelong learning, and the overall expansion of educational perspectives nationwide, it has become essential to recognize that proficiency in English should not be a mandatory requirement for accessing education through MOOCs. Therefore, India must have multi-lingual MOOCs. Multilinguality poses a significant problem due to the wide range of fields and levels, as well as the variety of languages involved. However, NPTEL had a head start, which SWAYAM is also now embracing.



## 1.9 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 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 COVID-19 pandemic's rapid shift to online learning has piqued the interest of many educational stakeholders in what students think of MOOCs. This research is crucial as it aims to provide a comprehensive understanding of student attitudes towards MOOCs, a topic of increasing relevance in the current educational landscape. Studies show that students' attitudes toward MOOCs are varied. While some students appreciate the convenience and flexibility offered by MOOCs, others voice concerns over the lack of personalized interaction and support compared to traditional classroom settings (Sanzgiri, 2020; Liu et al., 2015; Kundu & Bej, 2020; Yemi-Peters & Oladokun, 2022; Arbaugh, 2017; Zheng et al., 2015; Watted & Barak, 2014; May, 2018). As educational institutions continue to adapt to pandemic-related challenges, understanding and addressing student attitudes toward MOOCs is essential to improving the efficacy and appeal of online education in the long term.

Previous studies, however, have often needed a comprehensive demographic analysis. For instance, Sivakumar (2019) examined student-teacher awareness of MOOCs but did not consider demographic factors such as gender, locality, or academic streams. Similarly, Pramanik (2019) studied postgraduate students' perceptions and beliefs about MOOCs without delving into demographic aspects. Other studies, such as Jenifer et al. (2022), looked at demographic factors like gender but did not conduct statistical tests to validate any observed differences. They observed that female enrollment in MOOCs was higher than that of male students but left this observation unexplored. Kambli and Thomas (2022) analyzed the relationship between awareness and attitudes among undergraduate students but also did not incorporate demographic variables like gender, locality, or academic stream.

The present research aims to address these gaps by systematically incorporating demographic variables—gender, locality, and academic streams—into the analysis of student attitudes toward MOOCs, specifically SWAYAM MOOCs. This focus aligns with the researcher's objective to determine whether these demographic factors significantly influence student attitudes, helping to understand if certain groups might have more positive or negative attitudes toward MOOCs based on their backgrounds.

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.

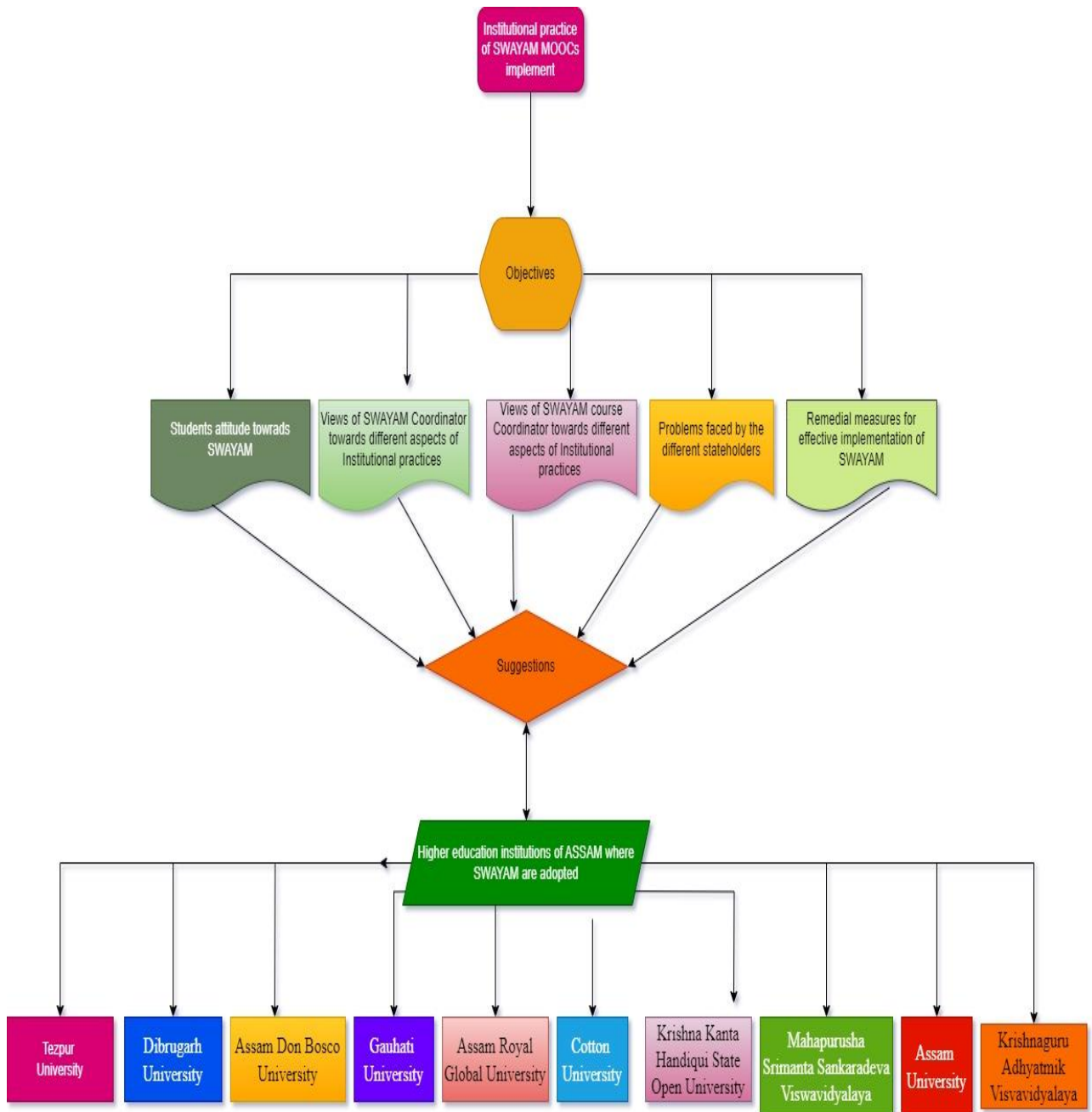
Examining the institutional practices and students attitudes towards MOOCs in higher education institutions is a complex task that is based on the substantial influence these elements have on the acceptance, efficacy, and overall achievement of MOOCs. Different components, such as acceptance, efficiency, 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 acknowledgement 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 (Subaveerapandiyan & 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.

**Figure 1.10 Conceptual framework**





### **1.10 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.

### **1.11 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, university must designate a SWAYAM Coordinator/facilitator to guide the students throughout the course and to facilitate/conduct the Lab/Practical sessions/examinations.

### **SWAYAM 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.

### **1.12 Research Questions**

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

### **1.13 Objectives of the Study**

1. To study the institutional practices towards SWAYAM MOOCs implementation in the higher education institutions of Assam with reference to prescribed norms of UGC.
2. To study the attitude of students towards SWAYAM MOOCs implementation in the higher education institutions of Assam
3. To find out the significant difference between the attitude of students towards the SWAYAM MOOCs with regards to gender, locality, and stream.
4. To find out the challenges faced by the stakeholders towards SWAYAM MOOCs implementation in the higher education institutions of Assam.
5. To provide different remedial measures suggested by the stakeholders regarding the different problems faced during the implementation of SWAYAM MOOCs.

### **1.14 Hypotheses of the Study**

Ho1 There is no significant difference between the attitudes of students towards the SWAYAM MOOCs with regard to locality.

Ho2 There is no significant difference between the attitude of students SWAYAM MOOCs with regard to gender.

Ho3 There is no significant difference between the attitudes of students towards the SWAYAM MOOCs with regard to the stream.

### **1.15 Delimitation of the Study**

The present study was delimited to the following points:

1. The current study was delimited to non-technical courses offered through SWAYAM MOOCs.
2. The current study was delimited to postgraduate students, SWAYAM course coordinators and SWAYAM coordinators of higher education institutions in Assam.

### **1.16 Organizations of the Thesis:**

The present reports consist of 6 chapters. The following is a description of each chapter:

#### **Chapter I- Background of the study:**

This chapter presents a comprehensive understanding of the study's background by conceptualizing SWAYAM MOOCs.

#### **Chapter II: Review of Related Literature:**

This chapter provides a comprehensive summary of the research conducted in the current field of study. It offers an understanding of the research methodology, significant findings, and suggestions for enhancing the specific subject.

#### **Chapter III: Research Methodology:**

The third chapter focuses on the methodological design employed for the study, including the research design and method, population, sample, tool, data collection procedure, tabulation of data, and techniques used for data analysis.

#### **Chapter IV: Data Analysis and Interpretation:**

The fourth chapter presents an analysis of the collected data.

#### **Chapter V: Result and Discussion:**

The fifth chapter presents the results and discussion derived from the data analysis.

**Chapter VI: Summary, Educational Implications, and Conclusion:**

Ultimately, the thesis concludes with a comprehensive summary in chapter 6. This study presents the main discoveries and discusses the educational implications. Moreover, ideas for future research are proposed.

In this chapter, the researcher effectively outlines the background of the study by offering a clear conceptual overview of MOOCs and detailing their historical evolution in India. This section further illustrates the SWAYAM platform, highlighting its significance in the context of online education. Moreover, it articulates the rationale for the study, presents the statement of the problem, defines key terms operationally, and sets forth the objectives and hypotheses, concluding with the delimitations of the study.

