



CHAPTER 2
REVIEW OF RELATED
LITERATURE

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2.1 Introduction

This chapter provides a comprehensive summary of the existing research conducted in the current area of study. The review of educational research provides a comprehensive understanding of the methodological design, significant findings, and recommendations for enhancing a particular field. The current study reviewed a comprehensive evaluation of literature from multiple published sources, including doctorate theses, articles, research papers from reputable journals, books, policy documents, and online information with keywords such as "MOOCs," "SWAYAM," "Attitude," "MOOCs and higher education," "MOOCs course developer," "OER" "SWAYAM coordinator." This chapter encompasses an extensive range of studies, which have been organized and presented according to research undertaken both in India and abroad.

2.1.1 Studies conducted in India

Nagasampige & Nagasampige (2017), in a research paper entitled "A qualitative study on usage and effectiveness of MOOCs in Indian university education system." This study aimed at overview of MOOCs, their development, challenges such as high dropout rates, the need for assessing efficiency and effectiveness, and the importance of addressing student motivation and learning outcomes in Indian university system. The study's findings indicate that postgraduate students have a greater awareness of MOOCs. Students choose to enroll in MOOCs in order to supplement their normal courses. Moreover, participants found the content in MOOCs to be well-structured and advantageous for achieving learning goals.

Pramanik (2018) conducted a study to see the attitude of postgraduate students towards SWAYAM courses. The study population consisted of students enrolled in post-graduate programs at several colleges and campuses affiliated with the University of Calcutta. A random sampling strategy is used to choose 100 students for the sample. The survey revealed that the majority of the respondents lacked awareness of SWAYAM. Moreover, a considerable number of participants expressed strong agreement that language and cultural diversity pose a substantial obstacle to the widespread adoption of MOOCs.

Nayak (2018) conducted a study entitled "Survey report on awareness among LIS professionals/students about SWAYAM: a government of India initiative on e-learning." The primary aim of the study was to investigate the level of awareness among professionals and students in the Library and Information Science field regarding SWAYAM, as well as the extent of its popularity. A digital survey was administered to professionals and students in the field of Library and Information Science (LIS) through various social media platforms. The findings indicate that a majority of professionals and students have expressed interest in SWAYAM, with a significant proportion of them having already enrolled in the available LIS courses. Moreover, it demonstrates their inclination for video lectures and online courses from digital libraries. In addition, the findings indicate that the quantity of LIS courses is comparatively lower than that of other courses.

Pathak (2019) conducted study on the "Role of Massive Open Online Courses in Indian education system". The study's findings emphasize the emergence of Massive Open Online Courses (MOOCs) as a crucial means of delivering high-quality education worldwide, with a specific emphasis on the interest and obstacles encountered within the Indian education system. Originally designed for fundamental education and professional competencies, MOOCs have transformed into widely-used platforms with enhanced online engagement capabilities, generating significant attention in India. Identified challenges include the inadequate development of oral communication skills, feelings of isolation among learners, and limits in delivering hands-on training online. Suggestions encompass the implementation of a nationwide quality evaluation framework, instructional programs for teachers, and evaluations of performance to bolster the efficacy of online education platforms in India. It is crucial to solve these obstacles in order to achieve better learning results.

Vijay et al. (2019) conducted study on "E-Learning: Courseware, MOOCs, SWAYAM, E-PG PATHSHALA". The author's primary focus is on E-Learning, which refers to a learning system that utilizes E-Resources, such as computers, computer networks, and multimedia mobile devices. E-learning systems include a unique feature known as "any time anywhere" access, which allows learners to access the system at their convenience and from any location. It has been discovered that the Government of India offers high-quality e-learning courses online. The Ministry of Human Resource Department and

the IIT sectors are collaborating. The Government of India offers high-quality e-learning courses online. The Ministry of Human

Resource Department and the IIT sectors are collaborating.

Mathai (2019) conducted a study on the “Impact of MOOC in Teachers' Education Through SWAYAM Platform”. In the Indian context, Massive Open Online Learning Course (MOOC) is a recent development that offers prospects for lifelong learning. The study examines the SWAYAM platform in India, highlighting the significance of Constructivist and Connectivist learner-centred theories of learning in MOOCs for teachers' education. It also addresses the difficulties encountered in implementing a specific MOOC on 'ICT in Teaching and Learning' with a substantial enrollment of 8612 learners. It also highlights the shift towards learner-centred interactive learning environments and the role of technology-enabled learning in making education more engaging.

Duha et al. (2019) conducted a study on “MOOCs: The Indian Journey So Far”. The authors examine different MOOC initiatives, such as SWAYAM in India, to gain a comprehensive understanding of the range of courses available and the different types and formats of content provided. These include video lectures, assignments, quizzes, presentations, demonstrations, and content uploaded on MOOC platforms that can be accessed globally through the internet. The authors conclude that MOOCs are user-friendly and do not have any age restrictions. MOOCs facilitate the widespread availability of courses and generate substantial worldwide interest.

Manoel et al. (2019) conducted a study on “Exploring SWAYAM: How India is Making MOOCs an Integral Part of its Education System”. All facets of SWAYAM, India's national MOOC platform, are explored, from its inception to its day-to-day functioning to how the platform is meeting its goal of increasing access to quality education across India. SWAYAM is the official Massive Open Online Course (MOOC) platform of India. It provides students with the opportunity to gain academic credit through online courses. As of December 2018, 16% of schools were authorized to grant credit for SWAYAM courses. In, addition, by May 2019, 21% of public higher education institutions had incorporated MOOCs into their educational programs.

Mondal & Majumder (2019) investigated the topic "Impact Of 'SWAYAM' Towards Academic Achievement. The study aims are to find out the impact of SWAYAM on academic achievement in India, evaluate its effectiveness in hosting MOOCs, and understand its role in providing learning opportunities without the fear of failure. The main findings include the distribution of students across different streams, the lack of gender difference in online learning participation, and the higher likelihood of participation in digital classes for students in commerce and science streams.

Panda (2019) conducted study on a SWAYAM, a MOOC platform initiated by the Government of India, which aims to democratize education by ensuring access, equity, and quality for learners across various educational sectors. The Study highlights its success in providing inclusive, quality education to diverse populations, particularly benefiting those from remote areas. However, challenges such as technological barriers, low completion rates, and the need for content localization persist. Addressing these issues through enhanced infrastructure, policy support, and technological innovations, including AI and personalized learning, is crucial for SWAYAM's future. Collaborations with international institutions can further enrich its offerings, ensuring sustained growth and impact on India's educational landscape.

Kumar & Kumar (2020) conducted a study that focused on understanding learners' satisfaction with the MOOCs. The study aims to examine the variables that influence the level of satisfaction among learners when utilizing MOOCs. A structured questionnaire has been modified based on prior research on the topic of satisfaction with online training. The satisfaction derived from MOOCs has been examined based on four parameters: course delivery, course assessment, and course support. An overall satisfaction rating has been measured using a five-point scale. The study revealed that the assessment, content, and delivery of a course had a substantial impact on the overall satisfaction level of MOOCs. The qualitative findings indicated that the participants acquired knowledge from the course, and a majority expressed a preference for SWAYAM and Coursera MOOC websites.

Subaveerapandiyan & Ahamed (2020), in an article entitled "Awareness and Usage of SWAYAM Courses Among Library and Information Science Students: A Survey". The study aims to assess the level of awareness of the SWAYAM Course, the amount of time dedicated to studying in the SWAYAM Course, the challenges encountered by

students throughout their pursuit of the courses, and the learning outcomes achieved by students through SWAYAM Courses. Furthermore, it was discovered that students studying Library and Information Science possess a broad awareness of SWAYAM courses and perceive them to be helpful for acquiring knowledge. However, they encounter obstacles such as time constraints and insufficient support, which ultimately result in dropouts.

Shukla (2020) conducted a study on "Quantitative Analysis of the Courses Completed by the SWAYAM (MOOC) During 2014-2019". The study objectives include analysing discipline-wise courses, the total number of courses completed yearly, institute-wise course completions, course duration, and enrolment numbers of SWAYAM courses during 2014-2019. According to the study findings, the courses in the area of Computer Science Engineering were the most frequently conducted during the investigated time. There was an upward trend in the overall number of courses conducted from 2014 to 2019. The user did not provide any text. Institutes such as IIT Mumbai and IIT Kharagpur offered a more significant number of courses in comparison to other institutes.

Bordoloi et al. (2020) conducted a study on lifelong learning opportunities through MOOCs in India. The paper delves into the significance of lifelong learning for societal advancement, advocating for the integration of MOOCs to facilitate continuous knowledge enhancement and skill acquisition for livelihood opportunities in India. It stresses the need for educational institutions to adopt best practices, particularly under the SWAYAM platform, to ensure equitable access and quality education. Challenges surrounding the adoption of MOOCs in India, the limited practical utility of online courses in the country, and the UGC's mandate for MOOC integration in higher education are highlighted. The study also addresses the challenges in implementing the CBCS and emphasizes the disparity between global trends in online education and the current state of digital education in India.

Gupta et al. (2020) conducted a study on "Flexible Higher Education through SWAYAM." This paper aims to suggest a versatile online degree framework utilizing SWAYAM, which has been endorsed by the education regulator, in order to establish a genuinely online and tuition-free higher education system for engineering and management. This framework will enable students to select courses flexibly and

accumulate credits towards their degrees. The study outlines the difficulties faced in MOOC education and suggests a versatile online degree structure for cost-free education in engineering and management. Its objective is to address the obstacles encountered in both laboratory and non-laboratory courses within these degree programs.

Kundu & Bej (2020) conducted a study on “Perceptions of MOOCs among Indian State University students and teachers.” The research paper delves into the perceptions of Massive Open Online Courses (MOOCs) among Indian State University students and teachers, driven by the global trend of MOOC popularity and the limited studies on MOOC acceptance in India. It aims to explore the motivations, benefits, and challenges faced by students and teachers engaging in MOOCs, contributing to the enhancement of higher education quality through e-learning. With a robust sample size of 480 respondents, the study ensures a comprehensive understanding of MOOC perceptions in Indian academia, emphasizing ethical considerations and confidentiality. Through this research, valuable insights are provided to academic planners to foster the growth of MOOCs in India and improve the overall e-learning landscape.

Agnihotri & Pandit (2020) conducted a study on “Overview and Future Scope of SWAYAM in the World of MOOCs: A Comparative Study with Reference to Major International MOOCs.” SWAYAM is an online academic resource platform sponsored and developed by the Ministry of Human Resource Development based on the principles of "access, equality and quality" as mentioned in this paper with the Recommendations for SWAYAM to become a significant MOOC player, SWAYAM compared with international MOOCs for future viability and scope and Identifying areas of improvement for SWAYAM to become a primary MOOC. The study findings emphasize the importance of SWAYAM in the landscape of free MOOCs in India, the urgency for expansion and quality improvement, the challenge of a limited user base compared to major MOOCs, and the role of citizens in promoting and benefiting from such initiatives.

Mohan et al. (2020) conducted a study on "Intention and barriers to use MOOCs: an investigation among the postgraduate students in India." The study explores the domain of Massive Open Online Courses (MOOCs) in education, emphasizing its contribution to narrowing the digital divide and improving educational accessibility, especially in

developing nations such as India. It also explores the significant influence of MOOCs on Indian students since they offer a well-organized learning experience with predetermined courses, evaluations, and opportunities for peer engagement. Furthermore, the study examines how gender influences the adoption of technology. The study found that habit was the most influential predictor of behavioral intention to use MOOCs among postgraduate students, with hedonic motivation, platform content, and performance expectancy also playing significant roles. Gender was identified as a moderator, with male participants showing a stronger inclination towards MOOCs and higher completion rates compared to female users. Factors like effort expectancy, social influence, and facilitating conditions did not significantly influence the intention to use MOOCs among the students in the study.

Ambadkar (2020), in the article "E-Learning Through SWAYAM MOOCs- Awareness and Motivation Among Commerce Students." The study conducted on the knowledge and motivation of Commerce students regarding SWAYAM MOOCs indicated a lack of awareness among the participants, despite their favourable inclination towards learning through SWAYAM MOOCs. Most participants were postgraduate Commerce students, with a more significant proportion of female students. Concerns were expressed about the absence of individualized classroom instruction in MOOCs, highlighting potential challenges in learning without direct teacher guidance. In addition, a minority of respondents had previous familiarity with MOOC sites, with Future Learn being the most widely acknowledged. The results highlighted the importance of encouraging students to use MOOCs. They indicated the need for collaboration across different groups to improve the value of SWAYAM certifications in the job market.

Virani et al. (2020) conducted a study titled "Adoption of Massive Open Online Courses (MOOCs) for blended learning: the Indian educators' perspective." The study introduces a theoretical framework based on the Technology Acceptance Model (TAM) to examine the willingness of educators in the Indian educational context to adopt Massive Open Online Courses (MOOCs) for blended learning. The study conducted empirical testing with educators from Higher Educational Institutes (HEIs) in Pune. The study discovered that many characteristics, including social context, perceived usefulness, perceived ease of use, and content quality, have a substantial impact on

instructors' intentions to adopt MOOCs. This study enhances our comprehension of the acceptance of Massive Open Online Courses (MOOCs) from the viewpoint of teachers. It highlights the significance of these factors in promoting blended learning experiences.

Sanzgiri (2020) studied "MOOCs for Development? A Study of Indian Learners and their Experiences in Massive Open Online Courses The study found that Indian learners are predominantly male, younger, more inclined towards informal education, and had higher levels of education compared to participants in previous studies on MOOC learner demographics. Moreover, the present study identified various demographic and motivational disparities among learners on FutureLearn and NPTEL, which might be attributed to the different goals of the two platforms. A comprehensive examination of learners' experiences indicated that a wide range of individuals, especially on the FutureLearn platform, are utilizing MOOCs to enhance their knowledge in specific areas of personal interest. Furthermore, some individuals are utilizing FutureLearn resources to support their teaching endeavors. In contrast, learners on the NPTEL platform, who often faced technical difficulties, including connectivity problems, utilized MOOCs as a supplementary resource to compensate for the inadequate education provided by numerous Indian colleges.

Amit et al. (2020) conducted a study on Towards Participatory MOOCs. The paper discusses the potential of MOOCs and mobile learning for rural communities, the challenges associated with MOOCs' departure from the original philosophy towards a revenue generation business model, and the importance of considering MOOCs as a viable alternative to meet the learning needs of developing countries. The study findings indicated that MOOCs and mobile learning have the potential to bring about significant advancements in education for rural communities. There is growing optimism about the inclusivity of MOOCs, thanks to the increasing availability of mobile devices and internet connectivity. Furthermore, there is a noticeable shift in the original philosophy of MOOCs towards a business model focused on generating revenue.

Sharma & Chakravarty (2021) conducted a study on "Understanding user perceptive and satisfaction level towards MOOCs: A comparative analysis of SWAYAM and Coursera'. The outcomes of the study highlight that MOOCs have significantly increased student enrolment in higher education in India, aligning with the global trend,

with platforms like NPTEL, mooKIT, IITBombayX, and SWAYAM offering diverse courses. These courses provide free or low-cost access global participation, and eliminate the need for physical infrastructure. However, challenges such as lack of personalized content, limited instructor interaction, and absence of a physical classroom persist. The study employed a qualitative research approach, reviewing literature and analysing secondary data to understand factors influencing successful MOOC implementation and challenges faced by Indian university students, emphasizing the positive impact, advantages, challenges, and methodological framework of MOOCs in India.

Jena & Jena (2021) conducted a study titled "Virtual Learning on SWAYAM Platform by engineering and technology students during Covid-19: An Analysis". The study's findings revealed the patterns of learners' interest in the field of engineering and technology. The current analysis concludes that the field of computer science and engineering is the most highly desired, followed by a sub-category that encompasses multiple disciplines.

Shewale (2021) conducted a study on "Awareness of MOOC SWAYAM Among Library and Information Science Professionals: A Survey." It was discussed in the study how MOOCs are rapidly gaining popularity in India, offering free education through online platforms and the SWAYAM initiative by the Indian Ministry of Human Resources and Development aims to provide high-quality education for all, from schooling to postgraduate levels.

Rahul and Mohile (2021) conducted a study "A Study on E-Learning using SWAYAM (MOOCs) - Awareness among Under Graduate and Post Graduate Students." This study analyses the awareness level of SWAYAM (MOOCs) among undergraduate and postgraduate students. It is a pilot study of undergraduate and postgraduate students of Mumbai University. The data was collected through Google Forms, and 105 respondents responded, of which 61 were undergraduate and 44 were Post Graduate students. The survey determined that students exhibit a preference for classroom instruction in contrast to online coaching. Furthermore, it was found that 39% of the students lacked awareness of SWAYAM, the MOOC platform. Consequently, the government must adopt appropriate measures.

Kumar & Mahendraprabu (2021) conducted a study on “Open educational practices of SWAYAM programme among research scholars.” The study finding revealed that these individuals actively utilized the platform for skill development and knowledge enhancement, showcasing a positive attitude towards open educational practices. Research scholars reported benefits such as improved understanding of complex concepts, enhanced research skills, and increased confidence in their academic pursuits. However, challenges such as time constraints, technical issues, and the need for more interactive sessions were also identified. Addressing these challenges could further optimize the effectiveness of the SWAYAM programme in supporting the academic growth of research scholars.

Shewale (2021) conducted a study on "Awareness of MOOC-SWAYAM Among Library and Information Science Professionals: A Survey". The study aimed at discusses the importance of MOOCs, the role of ICT in education, the Digital India project, and the significance of SWAYAM in modern teaching methods. The finding of the study exhibited that - 90.5% of LIS professionals are aware of MOOCs, indicating a high level of awareness among the surveyed professionals. The online survey conducted received 74 responses from LIS professionals, providing valuable insights into the awareness of SWAYAM among this group. The study highlights the importance of digital learning platforms like MOOCs and SWAYAM in the education sector.

Purkayastha et al. (2021) conducted a study titled "Awareness on Massive Open Online Courses (MOOCs) among the Postgraduate Students of North East India with Special Reference to Assam University, Silchar and Tripura University, Agartala: A Study". The study aims to quantify students level of awareness, perception, and attitude towards MOOCs, ascertain their inclination to enrol in MOOCs, pinpoint issues encountered in accessing MOOCs, and evaluate their understanding of enrolling in MOOCs and transferring credits through CBCS. The primary discoveries encompass evaluating students awareness and interest towards MOOCs, stressing the beneficial influence of MOOCs on education, and underscoring the necessity for assistance and knowledge regarding enrolment in MOOCs. The recommendations prioritize the dissemination of information regarding MOOCs and the facilitation of collaboration among universities in North East India.

Joan & Sheeja (2022) examined a research study on the “Correlation between SWAYAM learning and its achievement among prospective teachers - a study in Kanniyakumari district”. The integration of SWAYAM MOOCs into teacher education in Kanniyakumari District demonstrates a clear relationship between SWAYAM learning and the academic success of prospective teachers, as evidenced by their participation in mandatory online courses. The authors of this article developed a tool named "Checklist for SWAYAM Learning" and implemented it in the College of Education located in Kanniyakumari District. No notable disparity was observed in the residential location and academic discipline of the participants, as well as in the outcomes of the SWAYAM examination.

Gulati et al. (2022) conducted a study on "Understanding User Perceptive and Satisfaction Level towards MOOCs: A Comparative analysis of SWAYAM and Coursera". The study objectives are to understand users' perspectives and satisfaction level towards MOOCs, explore features of MOOCs with a focus on comparing SWAYAM and Coursera, and anticipate the increasing popularity of MOOCs in the future. The study underscores the significance of user opinions in evaluating MOOCs, the utility of sentiment analysis tools like AppBot, and the value of analyzing user reviews for enhancing online learning platforms.

Dhamdhare (2022) conducted a study titled "Study of Use of an Additional Reading Material in SWAYAM MOOC Platform in India and Need of Learner-Centric Personalized Adaptive Real-time Reading Material in MOOCs". The study objectives are to analyze the additional reading material and digital reading patterns of learners in various MOOC platforms, focus on the neglected aspect of additional reading material in MOOCs, and propose the use of learning extension Trajectories (LxT) in the Learner-Centric MOOC model to provide personalized and shortened reading lists to learners. The study highlights the significance of using personalized and adaptive reading material in a Learner-Centric MOOC model to enhance learner engagement and understanding, emphasizing the need for tailored resources and strategies to improve knowledge acquisition.

Sikarwar et al. (2022) conducted study on “Perceptions of SWAYAM Distance Learning Platform”. The study delves into the perceptions of teachers and students towards the SWAYAM platform, a significant MOOC platform in India. Through the

use of questionnaires and factor analysis, the research identifies key factors influencing the perception of both teachers and students. For teachers, fourteen factors were uncovered, including active learning and convenience, while students perception was shaped by eight factors like innovative learning and flexibility. The study recommends extending this research to the school level, involving a broader range of participants such as teachers and students, and suggests further categorization based on educational status and intentions to utilize the platform.

John & Sheeja (2022) in the article "Correlation between SWAYAM Learning and Its Achievement among Prospective Teachers - A Study in Kanniyakumari District." The main objective of the study was to examine the relationship between SWAYAM learning and academic performance among aspiring teachers, utilizing a survey methodology. The importance of SWAYAM Learning as a prominent platform for online education and obtaining information was highlighted. The study investigates the relationship between SWAYAM learning and the academic performance of future teachers in the College of Education in Kanniyakumari District. It emphasizes the compulsory character of SWAYAM courses and the significance of obtaining certificates and gathering information through the platform.

Naveen (2022) conducted a study on "UGC Regulations on Credit Framework for Online Courses through SWAYAM, 2021". This study examines the UGC regulations regarding the credit system for online courses, with a specific focus on SWAYAM. It emphasizes the incorporation of ICT to create a holistic platform for High School, Higher Education, and Skill Sector courses. The NEP, 2020 guidelines highlight the importance of establishing logical linkage between online and traditional classroom learning to enable accessible and cost-effective quality education. The function of SWAYAM as a comprehensive and dynamic e-content platform that provides multimedia learning experiences, facilitates peer connections, and employs a hybrid delivery approach is vital in improving the educational landscape. In addition, the paper examines the regulatory mechanisms implemented by UGC, such as prompt notification of SWAYAM-based courses and the integration of SWAYAM with SWAYAM Prabha, to streamline online learning processes and foster a favorable learning environment for both students and educators.

Singh (2022a) conducted a study on “Quality of MOOC for teachers' professional development: Participants' perception”. In this paper author discussed the study on MOOC quality for teachers' professional development perception and how teachers prefer MOOCs for cost-effective, time-saving, and competency development by using analysis and assessment of various TDP programs and Examination of quality dimensions based on teacher perceptions. Identification of assessment strategies used in MOOCs. Preference for traditional assessment strategies over innovative ones for data collection and analysis with find out that quality aspects are missing in many MOOCs for teacher development. Teachers are ready to consider MOOCs for professional development and learners prefer flexibility in assessment strategies in MOOCs. E-mail is a crucial communication tool, but responses vary.

Mandal & Yadav (2024) conducted a study on "Current trends of MOOCs in India: historical background, development and challenges purpose". The study aims to analyze the factors that contribute to the effective implementation of quality and inexpensive MOOC programs, as well as to identify the hurdles and challenges faced by students from different Indian universities when using MOOCs. The study's findings demonstrate the significance of MOOCs in India, emphasizing their ability to solve accessibility and cost concerns in education. However, the report also acknowledges the obstacles that hinder their proper implementation.

Mandal and Yadav (2024) in the article titled "Current Trends Of MOOCs In India: Historical Background, Development And Challenges". This study aimed to ascertain the diverse factors that affect the effective implementation of cost-effective MOOC programs and to identify the obstacles and difficulties encountered by students from various Indian universities when using MOOCs. The primary conclusions highlight the favorable influence of MOOCs on the accessibility, affordability, and student empowerment in higher education.

Sinha (2024) conducted a study on "Implementation of MOOCs: Approaching Challenges and Prospects of Indian Higher Education". The study objectives include understanding the importance of MOOCs in India, analysing the current status, identifying challenges and prospects, providing authentic information to stakeholders, exploring the viability of introducing factors for enhanced educational outcomes, and reviewing successful MOOC implementations for promoting equality and quality

education. It was also found that MOOCs are considered the future of online study, making education accessible globally and offering quality educational opportunities. Further scrutiny is needed on the social constructivism of learning through MOOCs.

Bhesera and Lal (2024), in the article titled "Access, Equity, and Quality in Higher Education: Envisioning India Through SWAYAM". The objective of the study was to assess the accessibility, equity, and quality of SWAYAM courses for learners in higher education. The goal is to analyze how SWAYAM contributes to the educational landscape in India, particularly in terms of providing enriched knowledge and learning experiences. The main findings of the paper include the description of SWAYAM as an indigenous MOOC platform in India offering quality education from Class 9 to post-graduation, designed by professionals using a four-quadrant quality parameter with multimedia technology for rich learning experiences, and providing free courses accessible through web and mobile app with opportunities for certification.

Lal (2024) in the article entitled "Evaluation of Awareness & Impact of SWAYAM". The study aims to evaluate the level of awareness and the effects of SWAYAM courses on students and professionals. Furthermore, it seeks to analyze the extent to which SWAYAM courses contribute to professional growth. The main findings include discussions on empirical studies abroad on online learning programs, the varying awareness levels of SWAYAM among students in different courses, and feedback on the content delivery of SWAYAM courses.

Ingle and Bavaskar (2024) examined a research study on "SWAYAM: A Study Based on Content Analysis". The objectives of the study were analysing collection development in SWAYAM from 2008-2023, conducting a study based on 390 articles in the Web of Science database during 2008-2023, and summarizing prior research on research productivity and institutional performance assessment in India. The main findings include high utilization of the SWAYAM program, recommendations for improving open educational practices, and suggestions for future research directions.

2.1.2 Studies conducted in abroad

Liu et al. (2014) investigated the topic titled "Understanding MOOCs as an Emerging Online Learning Tool: Perspectives from the Students." This study investigated the learning experiences of participants in a six-week massive open online course (MOOC)

in journalism, which included a total of five thousand students from 137 countries. The primary results indicated that 84% of the respondents were employed in professional occupations, whereas only 28.9% had a background in journalism. The primary reason for not completing the course was a lack of time. The majority of participants expressed a favourable learning experience, while they highlighted the absence of feedback and subpar quality as negative aspects.

Hew and Cheung (2014) conducted a study entitled "Students and Instructors' Use of Massive Open Online Courses (MOOCs): Motivations and Challenges". The study provides an extensive examination of the utilization of Massive Open Online Courses (MOOCs) by instructors and students, with a specific emphasis on their motives and problems. The text delineates the motivations behind students enrollment in MOOCs, including the pursuit of knowledge in novel subjects, personal growth via challenging oneself, intellectual curiosity, and the acquisition of completion certificates. Simultaneously, it underscores the obstacles encountered, such as the absence of incentives, difficulties in comprehending the course material, and insufficient assistance. In addition, the study examines the reasons why instructors choose to teach MOOCs, including curiosity, personal satisfaction, and a desire to help others, as well as the difficulties they encounter, such as assessing student assignments, limited feedback, time and financial constraints, and low student engagement in online discussions. The review procedure entailed a qualitative classification utilizing the constant-comparative method to succinctly summarize the existing knowledge on incentives and problems related to the usage of MOOCs.

Abeer and Miri (2014) in the article "Students Preferences and views about learning in a MOOCs". The study aimed to explore undergraduate students preferences and perspectives on learning in Massive Open Online Courses (MOOCs) and to identify the educational values associated with this mode of learning. The research involved gifted undergraduate students from various disciplines at Al-Qasemi College, engaging them in MOOCs through the Coursera platform and evaluating their experiences based on specific criteria provided by the researchers. The study's findings revealed that the analyzed MOOCs predominantly focused on promoting knowledge and understanding, with fewer emphasizing higher-order thinking skills like analysis and evaluation. Only

a small number of courses aimed at developing critical thinking and creativity indicate a potential area for improvement in MOOC educational goals.

Evans and McIntyre (2014) conducted a study titled “MOOCs in the humanities: Can they reach underprivileged students?”. The study investigated humanities-focused MOOCs offered by Coursera and edX, with a specific emphasis on course descriptions that emphasized peer-to-peer communication activities such as peer editing, discussion boards, and virtual meet-ups. The study also examined the efficacy of online learning for disadvantaged students, emphasizing that students with lower academic performance and those who had traditionally struggled with online education encountered challenges in transitioning to this learning method. The results indicated that MOOCs in the humanities are tailored for academically proficient and self-driven learners rather than disadvantaged folks who may require affordable opportunities for higher education the most. The study proposed that online courses should transition to collaborative learning settings and implement support systems to augment success rates for disadvantaged students.

Papathoma (2015) conducted a study titled “Investigating Different Types of Assessment in Massive Open Online Courses”. The primary goal of the study is to evaluate the learners' perspectives on the various forms of assessment in MOOCs. 2. The objective is to examine the impact of various assessment methods on student enrolment and subsequent course completion. 3. To investigate the perceived efficacy of each assessment style in facilitating their learning. The topic at hand is investigated through the utilization of online ethnographic methods, which involve conducting interviews and making observations online. Thematic analysis is conducted by utilizing a sample of 12 participants from MOOCs, who were interviewed online, and analysing 13 online observations. The findings of this qualitative research study indicate that while participants acknowledge the advantages of peer assessment, they exhibit a preference for automated assessment due to its familiarity and precision. Furthermore, individuals do not prefer self-assessment. Feedback from learners also indicates that providing explicit instructions for assessment aids them in doing peer evaluation with greater efficiency. Furthermore, some learners believe that the utilization of many sorts of assessments can have a favourable impact on Students learning, as each type serves a distinct function.

Ulrich & Nedelcu (2015) conducted a study on the views and expectations of MOOCs among Education Science students and faculty at the University of Bucharest. Emphasized the advantages and difficulties of MOOCs, as well as the enthusiasm expressed by both groups in personally engaging with MOOCs. The study's findings indicate that MOOCs have garnered significant attention as a revolutionary field in higher education, distinguished by their accessibility and possible advantages. Both students and professors exhibit a favorable disposition towards them.

Sammour et al. (2015) title of the study on “MOOCs in universities: Intelligent model for delivering Online Learning Content”. The studies examine the preparedness of students to participate in Massive Open Online Courses (MOOCs) and the reception of MOOCs in universities. The study seeks to evaluate the viability and reception of virtual study programs as potential ways to augment student involvement and graduation rates in MOOCs. The data indicate that although MOOCs have many benefits, a small proportion of learners successfully finish the courses due to a lack of motivation, particularly because universities frequently do not acknowledge MOOC diplomas as valid credits. In addition, the research suggests two virtual study programs: a "virtual international study program" and a "virtual exchange study program." These programs have the potential to enhance student engagement and promote the adoption of MOOCs in academic environments.

Li, Xu. (2015) conducted a study titled “The Application of MOOCs in the Classroom Teaching, Higher Education of Social Science.” The outcomes of the study showed that the significance of MOOCs in education, highlighting their accessibility, impact on teaching methods, and role in blended teaching models, emphasizing the internationalization and competitive power of MOOCs, and the importance of mastering key points in learning, regardless of the teaching method used. It presents MOOCs as a valuable addition to traditional classroom teaching, offering a new horizon for both teachers and students.

Li (2015) conducted a study about utilization of Massive Open Online Courses (MOOCs) in the context of classroom instruction is being explored in the field of higher education, specifically in the realm of social science at WAYAM. The paper does not particularly discuss MOOCs. The focus of the study is on the overall utilization and influence of MOOCs in traditional classroom instruction. MOOCs, or Massive Open

Online Courses, offer a novel approach to teaching that expands the possibilities for educators and provides students with a platform to engage with knowledge. Through MOOCs, teachers can explore new methods of instruction and thinking, while students can benefit from interactive tools, exchange with peers, and collaborative problem-solving. It is evident that MOOCs serve as a valuable supplement to traditional classroom teaching, emphasizing the importance of interaction and exchange for student growth. Moreover, MOOCs introduce fresh perspectives and formats to the teaching landscape, fostering student interest and concentration in the learning process. However, it is important to note that MOOCs are not a universally applicable method for classroom instruction.

Julie et al. (2015) conducted a study on the topic of "Liberating Learning: Experiences of MOOCs." This article aims to gain comprehensive insights into the learning experiences of individuals who completed one of the University of Southampton's initial two courses in 2014 through conducting in-depth interviews with ten MOOC completers and engaging in discussions with five academics involved in MOOC development. The primary objective is to enhance understanding of the participants' motivations for studying in this manner, as well as the learning opportunities and challenges they encountered.

Shakya et al. (2016) assess the level of awareness of MOOCs among college students. This study examines the level of awareness among college students in the Far-Western Region of Nepal regarding online learning platforms such as MOOCs. The research employed a mixed methods research approach. A study revealed that a significant proportion of students are unfamiliar with popular MOOC providers such as Coursera, edX, Future Learn, and Udacity may also lack awareness of MOOCs in general.

Manojkumar et al. (2017) conducted a qualitative study on the concept of MOOCs, their rapid development, high dropout rates, student motivations, and the importance of addressing student motivation, distraction, and learning outcomes in MOOC research. The study's findings indicate that postgraduate students in university colleges have a significantly higher level of awareness of MOOCs compared to graduate students. Furthermore, MOOCs have proven to be effective in achieving the learning objectives of the learners and enhancing their learning experience in universities. The feedback

received regarding the organization of content and the outcomes of the learning process has been overwhelmingly positive.

Kumar & Al-Samarraie (2018) did a study on Massive Open Online Courses (MOOCs) in Malaysian higher education institutions, specifically focusing on the perspectives of the teachers. Analyze the practical implementation of the MOOC education method in higher education in our country. This paper examines the high value that learners place on the MOOC (Massive Open Online Course) mode and discusses the practical challenges of implementing MOOC education in higher education. The analysis focuses on qualitative assessment of the practical problems associated with implementing MOOC education in higher education.

Sun et al. (2018) conducted a study titled “Understanding Students engagement in MOOCs: An integration of self-determination theory and theory of relationship quality.” The study aims to assess the extent of student engagement in Massive Open Online Courses (MOOCs) through the application of self-determination theory and the theory of relationship quality. The findings suggest that fulfilling the basic psychological needs for autonomy, competence, and relatedness positively impacts intrinsic motivation, leading to increased levels of psychological engagement in MOOCs. Moreover, the degree of trust and dedication in a connection significantly influences the psychological engagement of students, therefore resulting in their active involvement in MOOCs. The results emphasize the importance of intrinsic motivation and the strength of interpersonal connections in enhancing student engagement and perhaps reducing attrition rates in MOOCs.

Hakami (2018) conducted a study examining the motivational elements that influence learners' intentions to continue using Arabic MOOCs. This study seeks to address this deficiency by investigating the elements that influence learners' intentions to persist in utilizing MOOCs. The study utilized a combination of qualitative and quantitative methods, employing both exploratory and explanatory approaches. A systematic review identified the existing deficiencies in the literature about the continuation of MOOCs and served as the foundation for the research inquiries. The study's findings demonstrate unequivocally that there are direct, significant, and positive connections between continuance intention and intrinsic motivations, perceived utility, Arabic language support, perceived ease of use, and perceived reputation. Furthermore, the

perceived usefulness is directly influenced by factors such as the perceived simplicity of use, support for the Arabic language, reputation, intrinsic motives, and the willingness to acquire a certificate. Moreover, the perceived ease of use was directly influenced by intrinsic incentives, the provision of Arabic language help, and the benefits of free courses.

Kleinman (2018) investigated the topic “Teaching at Scale: Instructor Experiences with Massive Open Online Courses (MOOCs)”. The primary objective of the study was to investigate the motivations of faculty members for teaching MOOCs, as well as to examine how their views and experiences both within and outside the university influence their MOOC experience. The researcher examines the factors influencing university faculty's decision to engage in a novel and possibly hazardous form of online teaching, as well as the ways in which their views, values, and experiences are interrelated and influence their practices in teaching MOOCs. Researchers undertook a study to interview faculty members of MOOCs at the University of Michigan. The study focused on a single university. The results present a collection of profiles of the individuals involved in the study, as well as a thematic analysis of their motivations for teaching MOOCs and their experiences. Researchers have identified four primary factors that influence teachers' decision to introduce a Massive Open Online Course (MOOC). The decision was influenced by multiple variables rather than a single motivating cause. Their motivations included a desire for a platform, an interest in experimenting, altruism, and a goal to enhance their reputation or that of their programs. Researchers have identified several themes in the experiences of MOOC faculty. These include the instructors' claims that they gained significant knowledge about teaching through their involvement in MOOCs, the distinction between participants who felt isolated in their MOOC work and those who formed connections, the heightened visibility that came with teaching a MOOC, which occasionally caused discomfort, and the challenge of balancing the time demands of creating a MOOC with the already busy schedules of successful faculty.

Zhu and Sari (2018) conducted a study on "Instructors' Experience of Designing MOOCs in Higher Education: Considerations and Challenges." The objective of the study was to examine the factors and difficulties that instructors encounter when designing MOOCs, with a specific focus on pedagogical, resource, and logistical issues.

This investigation drew upon existing literature and previous studies to get valuable insights. The study employed an exploratory mixed methods design based on the approach proposed by Creswell and Clark (2007). The survey questions encompassed several aspects, such as demographics, design, delivery, and problems. These questions were refined based on input received from reviewers. The study found multiple factors and difficulties in the design of MOOCs, emphasizing pedagogical elements such as learning goals, evaluation techniques, and support for collaborative learning, as well as resource-related factors such as platform capabilities and institutional backing. Furthermore, it was observed that there were logistical difficulties, such as limited time for the development of MOOCs. To overcome these issues, instructors frequently tackled them by examining and analysing other MOOCs and requesting help from peers, universities, and platform support staff. The study highlighted the significance of comprehending and tackling pedagogical, resource, and logistical obstacles to improve the design and implementation of MOOCs in higher education.

Liu et al. (2019) conducted a study entitled “Digital Transformation Challenges: a case Study Regarding the MOOC Development and Operations at Higher Education Institutions in China.” The study examined the experiences and expectations of MOOC administrators and academic members involved in the development, teaching, and operation of MOOCs in Chinese higher education institutions. The study conducted a survey of administrators and faculty members from 50 higher education institutions in China in order to gain insight into the establishment and functioning of MOOCs in these schools. The study on MOOC development and operations in higher education institutions in China found that both governmental authorities and institutions played significant roles in leading the development and operation of MOOCs. Colleges and universities in China have managed to create systems for the development of MOOCs despite obstacles such as insufficient technical support, lack of curriculum design expertise, and the absence of national standards. The study emphasized the significance of exchanging knowledge between MOOC and non-MOOC institutions in order to improve the implementation of online learning. Suggestions encompassed enhancements in technical assistance, training in curriculum design, and the implementation of nationwide benchmarks to promote the progress and functioning of MOOCs in the Chinese higher education system.

Doo and Tang (2019) conducted a study to examine how openness, benevolence, and instructional self-efficacy impact the level of work engagement among MOOC teachers. The study utilized a 5-point Likert scale to evaluate aspects such as work engagement, openness to experience, compassion, and instructional self-efficacy. Information was gathered from over 3000 MOOC instructors using platforms like Class Central and Coursera. The study results indicated that MOOC instructors are driven mainly by their curiosity towards emerging technologies and their enthusiasm for imparting their expertise, thereby highlighting their openness to novel experiences. However, the study recognized certain constraints, such as a low rate of response, a sample size that was slightly above the necessary amount, the lack of student perspectives, and a limited number of demographic inquiries. These constraints yielded valuable insights into the methodology, motivational factors, and boundaries that were addressed in the study.

Luik et al. (2019) conducted a study on "Participants and completers in programming MOOCs." The study sought to determine the demographic and socioeconomic characteristics of participants and completers in three programming MOOCs that had different levels of difficulty. The study revealed that the complexity of the subject matter has a direct impact on the rates of completion, with prior familiarity with the issue also exerting a substantial influence. The relationship between age, education, work status, and the difficulty level was not easily determined. However, the findings offer significant insights for MOOC instructors to enhance assistance for varied participant groups. This might be achieved by providing more flexibility tailored to the characteristics of the participants.

Mendez et al. (2019) conducted a study on "Exploring SWAYAM: How India is Making MOOCs an Integral Part of its Education System." All facets of SWAYAM, India's national MOOC platform, are explored, from its inception to its day-to-day functioning to how the platform is meeting its goal of increasing access to quality education across India. SWAYAM is India's national MOOC platform allowing students to earn academic credit online, with 16% of institutions allowed credit in Dec 2018 and 21% of public higher education institutions integrating MOOCs into their offerings by May 2019.

Luik et al. (2019) conducted a study on "Participants and completers in programming MOOCs." The study aimed to examine the demographic and social background traits of individuals who participated in and successfully completed three programming MOOCs of different levels of difficulty. The study investigated the correlation between completion rates and variables such as gender, age, educational attainment, and work position in MOOCs. The study revealed that the complexity of the subject matter had an impact on the rate of completion, with prior knowledge in the field also playing a substantial factor. Nevertheless, the relationship between age, education, and employment position with the level of difficulty in MOOCs was not easily discernible. The results highlighted the significance of taking into account the diversity of participants and customizing support systems in MOOCs to improve completion rates, particularly for specific categories of participants, such as employed individuals who may need greater flexibility in completing the course.

Wahidah & Nasir (2020) conducted a study on "Analysis of Massive Open Online Courses (MOOCs) In Higher Education". The main aim of the study is to evaluate the importance of MOOCs in higher education institutions and their ability to tackle different educational difficulties, such as limited capacity, unequal distribution of resources, and discrepancies in quality. The study's findings demonstrate that MOOCs were created to address educational obstacles by enabling flexibility in terms of learning time and place, providing high-quality learning materials from respected universities, and leveraging a variety of web-based content forms. The review emphasizes the significance of MOOCs in improving educational accessibility, fostering social learning through online discussion forums, integrating gamification ideas, and ensuring high-quality content through collaborations with prestigious universities. Furthermore, the research highlights the importance of MOOCs incorporating easily navigable Indonesian-language materials, adaptable interfaces, concise video lengths, interactive multimedia elements, and unrestricted content availability.

Wanzhi & Jinlong (2020) conducted a study on "MOOC—A New Model of Internet Educational Communication." This paper examines the influence of the Internet MOOC model on current education communication. It proposes a reform strategy for education communication based on an analysis of the pros and cons of the MROC

model. It concludes that MOOC is a novel form of educational communication that offers advantages in terms of flexibility and convenience.

Dai et al. (2020) investigate "Understanding continuance intention among MOOC participants: The role of habit and MOOC performance." The research paper delves into the factors influencing continuance intention among MOOC participants, focusing on the roles of habit and MOOC performance. By conducting a questionnaire survey with a large sample size, the study aims to understand learner behavior in online courses and validate a model with hypothesized relationships between key constructs. The results indicate that the reconstructed model effectively accounts for a substantial amount of variability in the intention to continue using a product or service. This emphasizes the observed sequence of pleasure, attitude, and intention to continue using a product or service in consumer behavior and IT usage. This study highlights the significance of emotions in decision-making processes and verifies the connecting impact of confirmation on the intention to continue, providing insight into the variables that encourage long-term participation in MOOCs.

Dai et al. (2020) investigate "Understanding continuance intention among MOOC participants: The role of habit and MOOC performance." The study aimed to investigate the intention of MOOC participants to continue their involvement, with a specific focus on the influence of habit on performance in MOOCs. The study aimed to examine the variables that affect participants' choice to continue their involvement with MOOCs. The research findings suggest that both habit and performance in MOOCs are important factors in deciding whether participants will continue their involvement. The study emphasized the importance of regular behaviour and the influence of individual success in MOOCs on the probability of ongoing participation.

Jordan (2020) conducted a study titled "Initial Trends in Enrolment and Completion of Massive Open Online Courses." The objective of the study is to investigate the factors that influence the rates of enrolment and completion in MOOCs by reviewing data that is accessible to the public. The study aims to offer a comprehensive perspective on the progression of enrolment and completion statistics since the establishment of MOOCs, hence illuminating the advancement of the MOOC domain. The study uses linear regression analysis to explore possible patterns in enrolment and completion rates, with a focus on an exploratory research method. The study's findings demonstrate

notable shifts in the MOOC landscape, suggesting a decline in enrolment figures over time, with an average of approximately 43,000 students in each course. Completion rates exhibit consistency across multiple criteria, although display a negative association with the duration of the course. The study emphasizes that completion rates in MOOCs are typically low, with a median average of 6.5%. This underscores the need to comprehend the many aspects that impact student involvement and performance in online courses.

Liu et al. (2021) conducted a study titled “Quantifying the Influence of Achievement Emotions for Student Learning in MOOCs.” The study aimed to examine the impact of accomplishment emotions on student learning in Massive Open Online Courses (MOOCs) through the analysis of more than 400,000 forum posts from 13 MOOCs. The goals involved constructing machine-learning algorithms to identify achievement emotions and measuring their influence on academic achievement. The study employed six machine-learning models to detect achievement feelings, with Random Forest yielding the most accurate results. The Linguistic Inquiry and Word Count (LIWC) library was utilized to extract textual elements in order to identify achievement feelings in MOOC discussion forums. The results demonstrated that distinct accomplishment emotions exerted diverse impacts on students learning outcomes, hence enabling customized emotional feedback to optimize learning in MOOCs.

Voudoukis & Pagiatakis (2022) conducted a study on “Massive Open Online Courses (MOOCs): Practices, Trends, and Challenges for the Higher Education”. The advent of MOOCs has had a significant impact on higher education globally. With more accessibility and a wider range of educational choices, learners are compelling higher education institutions to reassess their instructional methods and align with current educational trends. There are numerous factors that influence students decision to engage in a MOOC. Some examples include obtaining a degree, securing a new career, receiving a promotion, obtaining a post-retirement job, gaining admission to a college, and utilizing it for corporate training purposes. Due to this rationale, both public and private colleges are initiating a reassessment of their educational strategy and techniques, both domestically and internationally. The question at hand is whether MOOCs can be seen as the future of education or if the current surge of interest in them will ultimately show to be a temporary phenomenon that will collapse in the near future.

Ebba & Ossiannilsson (2022) conducted a research investigation on Massive Open Online Courses (MOOCs) with a focus on lifelong learning, equity, and liberation. This paper examines global education initiatives as a global common and argues that knowledge is a universal entity created by individuals, accessible to anyone, anywhere, and at any time. The authors also explore the various ways in which MOOCs can contribute to the advancement of human rights, equity, and liberation. The study utilizes a systematic literature review and a mixed methods approach. The report finishes by providing suggestions for future research on the topic.

Peters and Oladokun (2022) conducted a study on “Adoption and use of new learning web technologies: Massive Open Online Courses (MOOCs)”. The study’s primary goal was to examine the adoption and use of MOOCs, discuss their importance in the learning process, explore their roles in facilitating learning, investigate their potential in promoting lifelong learning, identify their challenges and benefits, and highlight the impact of MOOCs on activities in tertiary institutions. Findings revealed that MOOCs emphasize learner engagement and self-organization based on individual learning goals and interests. MOOCs play a significant role in promoting lifelong learning and are considered an emerging pedagogical approach for delivering education in the digital age. MOOCs are utilized to enhance teaching and learning processes, particularly in the context of business education.

Wei & Taecharungroj (2022) conducted a study on "How to improve the learning experience in MOOCs: an analysis of online reviews of business courses on Coursera." This study aimed to explore the factors driving positive/negative learning experiences in business MOOCs through an analysis of online reviews, aiming to provide data-driven recommendations for improving MOOC design and delivery in higher education. The main discovery of the study emphasizes the significance of instructors' professional and celebrity image in attracting learners to business MOOCs. Moreover, it suggests that course design and structure should be user-friendly and straightforward for learners to handle. Furthermore, the study recommends that course content, information, and assessments should be stimulating rather than excessively difficult. Lastly, it advocates for the use of peer reviews in both the learning process and its validation.

Patiño-Toro(2023) conducted a study on "Proposed methodology for designing and developing MOOCs for the deaf community." The study's primary goal was to determine the importance of designing MOOCs to meet the needs of the Deaf community, emphasizing key aspects for effective development and highlighting the advantages of MOOCs over traditional courses. The findings of the study exhibited that MOOCs have improved educational accessibility and quality, emphasizing the importance of designing inclusive courses for individuals with disabilities, like the Deaf community. The proposed methodology focuses on collaboration, user experience, and addressing the unique needs of Deaf individuals.

Ucha (2023) investigated the "Role of course relevance and course content quality in MOOCs acceptance and use'. The main objective of this research project was to examine how the relevance of a course and the quality of its material affect the acceptability and usage of MOOCs by learners. This study aimed to expand on the technology acceptance model (TAM) in order to gain a better understanding of MOOCs acceptance and to facilitate its adoption. The primary results of the study emphasize the significance of course relevance and course material quality in enhancing the adoption of MOOCs. This has practical consequences for the implementation of MOOCs and sets the groundwork for future research.

Pesesse et al. (2023) conducted a study on Designing a MOOC in face-to-face sessions. The primary aim of the study was to evaluate the educational advantages and disadvantages of integrating a Massive Open Online Course (MOOC) titled "Introduction to Histology: exploring the tissues of the human body" into traditional in-person teaching sessions, with the goal of attaining specific learning objectives. The study's findings emphasized the successful integration of learning objectives at various cognitive levels, the beneficial effect of mixing online and in-person activities, and the efficacy of targeted assessments in preparing students. The study also highlighted the significance of additional research to comprehend the educational influence of MOOC-based hybrid projects comprehensively.

Patiño-Toro (2023) conducted a study on "Proposed methodology for designing and developing MOOCs for the deaf community." The study's primary aim is to determine the importance of designing MOOCs to meet the needs of the Deaf community, emphasizing critical aspects for effective development and highlighting the advantages

of MOOCs over traditional courses. The study's findings exhibited that MOOCs have improved educational accessibility and quality, emphasizing the importance of designing inclusive courses for individuals with disabilities, like the Deaf community.

Vladimir, Nikolaevich, and Kukharenko (2023) conducted a study on MOOCs: an insider's perspective on a novel educational method with historical, organizational, participatory, and evaluative aspects. This article investigates the role and conditions for the utilization of MOOCs in the modern educational system. The authors explore the history of MOOC creation and dissemination, tracing the evolutionary transition from open content to open learning processes. The result is that MOOCs are a new and evolving method of education. Key issues include selecting and evaluating open content, as well as assisting students.

Deivam et al. (2024) investigated "Awareness and Barriers of SWAYAM Courses (MOOCs) among Prospective Teachers in Dindigul District, Tamil Nadu, India". The main findings of the study highlight the analysis of SWAYAM courses awareness barriers, with a majority of prospective teachers having an average level of awareness, and recommendations for the Ministry of Education to promote SWAYAM courses through various mediums and educational institutions.

2.1.3 Critical Review of the Related Literature

The aforementioned reviews of MOOCs encompassed several themes associated with the field of study. Through the analysis of these reviews, the researcher gained an extensive knowledge of the subject matter and the related fields that have been investigated in various regions across the globe. Furthermore, it has facilitated the researcher in comprehending and formulating the research inquiries, choosing a suitable methodology, grasping the analysis procedures, and concluding the report. The studies investigated in this research have employed several approaches for gathering and analyzing data. The review categories into two themes given an overall understating of the effectiveness of MOOCs. Firstly, reviews about studies conducted in India, and secondly, studies conducted outside of India, provided an extensive understanding of the topic.

The above literature review discussed the study on MOOCs, particularly the SWAYAM program in India, and revealed several key findings:

- i. According to the review of the relevant literature, Course assessment, content, and delivery significantly influence overall satisfaction levels among MOOC participants. However, many students are still unaware of these courses despite their promotion by educational institutions and media (Kumar and Kumar, 2020; Shukla, 2020; Das & Pawar, 2022; Duha et al., 2019).
- ii. The literature analysis also revealed that the SWAYAM program is highly utilized, but awareness levels vary (Subaveerapandiyan & Ahamed, 2020; Lal, 2024; Shewale, 2021; Nagasampige & Nagasampige, 2017; Rahul & Mohile, 2021; Ambadkar, 2020; Deivam et al., 2024). Students, especially those in Library and Information Science, find these courses beneficial, but they face different challenges, such as time constraints and lack of support, which lead to discontinuation (Ingle & Bavaskar, 2024; Subaveerapandiyan & Ahamed, 2020; Kundu & Bej, 2020; Pathak, 2019; Nayak, 2018).
- iii. MOOCs have positively impacted education by providing lifelong learning opportunities and promoting collaboration among universities (Bordoloi et al., 2020). Purkayastha et al. (2021) also emphasizes the need for increased awareness and guidance in enrolling in MOOCs, particularly in North East India.
- iv. The empirical literature mentioned above demonstrates that the use of personalized and adaptive reading materials in learner-centric models enhances engagement and understanding. Effective learning outcomes depend on critical factors such as course design and instructional quality (Dhamdhere, 2022; Aldowah et al., 2019; Wei & Taecharunroj, 2022).
- v. According to the review of the relevant literature, 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) The study recommends improving open educational practices and suggests areas for future research.
- vi. Previous literature found no significant difference in participation based on residential locality or branch of subjects. However, gender disparities exist,

with fewer women participating in more challenging MOOCs (Mondal & Majumder, 2019; Mohan et al., 2020; Luik et al., 2019).

- vii. The literature analysis also revealed that Platforms like NPTEL, moocKIT, IITBX, and SWAYAM have facilitated significant growth in MOOC enrollments (Kumar & Kumar, 2020; Pramanik, 2018; Panda, 2019; Ingle & Bavaskar, 2024; Shukla, 2020; Dhamdhare, 2022; Bhesera & Lal, 2024; Vijay et al., 2019; Sanzgiri, 2020; Sharma & Chakravarty, 2021) Government initiatives have been crucial in providing quality e-learning opportunities.
- viii. Although MOOCs have achieved educational objectives, the lack of female participation and a preference for traditional classroom environments highlight areas that require improvement. Feedback underscores the significance of course pertinence, excellence, and the necessity for improved support mechanisms.
- ix. The majority of studies have employed a quantitative methodology to examine the practices of MOOCs in higher education institutions.

Based on a brief review of the relevant literature and the identified gaps in the study, the following conclusions can be made:

Based on a brief review of the relevant literature and the identified gaps in the study, the following conclusions can be made:

- i. There is a noticeable scarcity of research focusing specifically on attitudes and practices towards SWAYAM MOOCs in higher educational institutions in North-East India, especially Assam, pointing towards an unexplored area of academic inquiry.
- ii. Many studies have been conducted 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) But according to the review of related literature found no such studies that explained or contributed to the roles and mechanisms taken by the stakeholders to eradicate the problems faced by the students and teachers.
- iii. 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.

iv. The existing literature does not establish that the relationship between demographic characteristics and attitudes towards SWAYAM MOOCs has not been significantly explored. This area could reveal important insights into how different groups perceive and engage with MOOCs.

v. There is a lack of extensive research examining the overall perception, practices, and challenges associated with SWAYAM MOOCs in Assam, indicating a critical area for future investigation to enhance the effectiveness of these platforms in the region.