

EXPLORING LEARNERS' BEHAVIOUR TOWARDS ONLINE LEARNING: A STUDY OF SWAYAM MOOCS

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Abstract : The swift rise of online learning platforms has greatly shifted the educational landscape in India, and SWAYAM is a central initiative that seeks to democratize access to education. This study explores learners' behaviour towards SWAYAM MOOCs- awareness, adoption, reasons related to dropout, and motivation factors for the completion of a course. A quantitative research approach was used to obtain data through a structured questionnaire from a heterogeneous group of learners. Results suggest 87.1% of respondents are aware of SWAYAM. Significant reasons for adoption are flexibility, affordability and good academic standards, while those for dropping out are limited time to engage in studying the courses; complexity of course content and interaction with instructors.

Overall, participants were satisfied with platform access and relevance while showing neutral attitudes towards instructor effectiveness and certification recognition. The most dominant reasons for the course completion were receiving the academic credit, the interesting design of the course and the assessment. SWAYAM successfully provides equitable higher education, but improvements in interactivity, quality of instruction and course credits are necessary for sustained learner engagement. These findings influence policy and educators who strive to enhance the retention and satisfaction of learners in MOOCs, which would be beneficial for India's vision on technology-enhanced and inclusive education.

Keywords: - SWAYAM, MOOCs, Online Learning, Learner Motivation, Dropout, Digital Education

1.0 Introduction

Learning is evolving with digital tech making knowledge accessible globally. MOOCs like SWAYAM aim to democratise education through flexible, high-quality online courses that break socioeconomic and geographic barriers (Li et al., 2022). However, issues remain, especially regarding learner interaction and dropout rates (Chen et al., 2020). Understanding learner behavior is vital, as intrinsic motivation (curiosity) and extrinsic motivation (certification) heavily influence engagement and performance (Howarth et al., 2016). Intrinsically motivated students, who enjoy learning itself, tend to excel, while extrinsically motivated students learn mainly when expecting rewards.

In India, SWAYAM was launched in 2017 as part of the Ministry of Human Resource Development's Digital India campaign and aims to provide education through digital video courses, undergraduate and postgraduate

degree programs, etc. Despite reaching many, retention is poor, with completion rates in the single digits (Singh et al. 2025). Early research shows higher attrition from the limited instructor presence, peer interaction, rigid formats and the absence of individually tailored feedback — all things that affect motivation and persistence.

International literature offers rich theoretical and conceptual contingents to comprehend learner behaviour in MOOCs; empirical research is scarce in Indian. Further, the cultural context, academic background and technological resources available to SWAYAM users provide a distinct opportunity to test existing models derived from technology acceptance and social learning theories (Li et al., 2022; Chen et al., 2020). The present study seeks to explore the behaviour of SWAYAM MOOCs learners, considering motivation, technology acceptance, course quality and perceived ease of use as well as social interaction toward engagement, satisfaction and intentions to complete. Combining quantitative and qualitative approaches, this research aims to shed light on the human side of online learning — not only what learners do online, but also why they do so, and how platforms such as SWAYAM can better cater to those pursuing lifelong learning.

2.0 Literature Review

An exploratory study of 572 students in 4 MOOCs connects their out-of-course activities with performance and grades (Sanagustin et al., 2019). It looks at course design and patterns of professional learning behaviour. Preferences repeat at high- levels, but their sequences of interactions vary. These patterns range from video playbacks, consumerist actions to metacognitive interactions. Recommendations revolve around including interactive video elements and promoting engagement and metacognition (Egloffstein et al., 2023).

(Ahmad et al., 2023) The paper also feels positive about SWAYAM MOOCs and appreciates content, delivery and machine learning. Methew (2018) considers learners' acceptance, based on the Four-Quadrant model and Kirkpatrick's analysis model, with a focus on growth and future research trends. The results hope to help practitioners and contribute to the body of knowledge about MOOCs' social consequences. (Topali et al., 2018) also investigates learner behaviour (i.e. problem reporting and activity traces). It finds patterns to help struggling learners, reduce dropouts and seeks richer data.

(Almufarreh C Arshad, 2023) Investigate learners' MOOC continuation and mention career success, training and satisfaction as the main indicators. Content richness, interactivity, and curiosity are found to drive satisfaction. The paper presents the Technical Education MOOC, which was conducted through SWAYAM, and observes that there was a decline in Interest over time and levels of engagement remained low, with only 49% participants (out of 962) being active. Obstacles are workload, minimal contact, and technical problems. Ideas may include self-paced formats, practical involvement, to on-the-spot feedback for positive engagement. (Tulsi, 2019)" Scrutiny of the two kinds of learners reveals four behaviours that capture the differences between extreme and less experienced learners; these have driven their completion and drop-out rates and also best highlight the design gaps present in each platform.

3.0 Objectives of the Study

1. To measure awareness of SWAYAM among the learners.
2. To identify the determinants that influence course adoption in SWAYAM.
3. To find the reasons for Dropout in SWAYAM courses.
4. To know the drivers behind students' completing their courses.

4.0 Methodology

This research applied a quantitative approach to investigate the behaviour of learners towards online learning on SWAYAM MOOCs. In analysing attitudes, perceptions and engagement aspects that influence SWAYAM courses adoption, satisfaction and challenges were identified. A structured questionnaire was used for data collection, which included closed- and open-ended questions, as well as Likert-scale items on awareness, accessibility, motivation, ease of use, usefulness satisfaction, and obstacles. The measurable values were obtained through MOOCs, online learning research within a specific range.

The final questionnaire was circulated in online and offline networks via Google Forms. The respondents were informed about the research and consent. The targeted population was 100. A total of 70 complete responses were received. Responses were exported from Google Forms and analysed in Excel, excluding incomplete responses. The findings centred on the awareness, engagement, satisfaction and challenges of SWAYAM learners.

5.0 Analysis and Interpretation

5.1 Learners' Awareness and behaviour towards SWAYAM :Data reveals that an overwhelming majority of the respondents (87.1%) know about the SWAYAM, whereas just 12.9% either do not know or are unaware of it, demonstrating strong outreach and visibility of the platform. Learners' perception. Overall, students' experience with SWAYAM is positive, as depicted in Table 1. 34 participants agreed or strongly agreed that the course's content is related to their interests and needs. The reception of flexibility in learning was quite good, where 37 participants stated that flexibility helped them learn at their own pace. Certification received a good response, 31 respondents are also happy with the certification for credit, and 29 are neutral. The instructor's knowledge and clarity are also favourably rated (24 agreed, 29 neutral), but the pedagogy needs improvement. 10 respondents strongly agreed, 24 agreed, and 26 did not respond, indicating that the links and content were perceived as easily navigable on this platform. Overall, SWAYAM appears to be associated with high levels of learner satisfaction; however, improvements in course quality and the prestige of certificates are likely to further increase engagement.

Table 1: Familiarity of SWAYAM MOOCs

| Questions | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|--|----------------|-------|---------|----------|-------------------|
| Is the content of SWAYAM courses relevant to my academic or professional interests? | 14 | 20 | 28 | 2 | 6 |
| The flexibility in learning encourages me to use SWAYAM. | 8 | 29 | 23 | 3 | 7 |
| Does the certification offered by SWAYAM add value to my resume/career? | 12 | 19 | 29 | 3 | 7 |
| Are the instructors knowledgeable and provide comprehensive explanations of the course material? | 8 | 26 | 28 | 3 | 5 |
| Is the SWAYAM platform easy to access and navigate? | 10 | 24 | 26 | 3 | 7 |

The results show that learners of SWAYAM are very satisfied and trusting. 50 respondents indicated they would recommend SWAYAM courses, 5 are not, and 15 were undecided. The data show a favourable trend in learners' perceptions of the learning experience; however, the presence of unsure participants in this regard highlights the importance of encouraging further participation to enhance the learning experience.

5.2 Factors influencing the adoption of SWAYAM MOOCs: Regarding adoption factors, Table 2 indicates that the respondents consider flexibility in learning (41) and low-cost access (39) as the major reasons to choose SWAYAM. These results underline the attractiveness of the platform as a low-cost and low-threshold educational device. In addition, course content quality (31 responses) and certification value (30 responses) are also strong motivators for participation, meaning that trustworthiness as well as enhancing skills remain key motivators. There was a balanced response in terms of career-oriented (25) and intrinsically interested learners (22).

In contrast, a relatively lower number of students mentioned influence by the faculty recommendations (20), earning academic credits (17), or the ICT learning environment (15), showing that institutional and social based factors have a less significant role in platform adoption. Overall, the findings highlight that flexibility, affordability, and quality are the core elements shaping learner engagement with SWAYAM.

Table 2: Factors influencing the adoption of MOOCs

| Factors influencing the adoption | Response | Factors influencing the adoption | Response |
|----------------------------------|----------|---------------------------------------|----------|
| Flexibility of learning | 41 | Earn credits | 17 |
| Quality of Content | 31 | Faculty experts from top institutions | 17 |
| Free or low cost | 39 | ICT-enabled learning environment | 15 |
| Certification value | 30 | Upgradation of Skills | 25 |
| Recommendation by | 20 | Others | 7 |

| | | | |
|-------------------|----|--|--|
| Faculty/friends | | | |
| Personal interest | 22 | | |

5.3 The most significant elements that make SWAYAM popular: From Table 3, it is evident that the most appreciated features of SWAYAM are courses for free along with recognised certification (42), flexibility in learning (34), and courses of expert faculty (27). These are the factors which have emphasised the role of the platform in transforming it into an equal, fruitful and trustworthy learning opportunity. Some other strengths are course availability (20), a user-friendly interface (19), and government reliability (10) to ensure access and trust. Low responses for lifelong learning support (12), credit transfer (12), and weekly check-ins (9) suggest these considerations were currently less important in moment-to-moment choices among learners. In general, SWAYAM acceptance is significantly determined by affordability, credibility, quality of content and flexible learning model.

Table 3: The most significant elements that make SWAYAM popular

| The most significant elements that make SWAYAM popular | No. of Response | The most significant elements that make SWAYAM popular | No. of Response |
|--|-----------------|--|-----------------|
| Free access to high-quality educational content | 42 | Credits are transferable to academic programs | 12 |
| Certification from reputed institutions | 37 | User-friendly interface and accessibility | 19 |
| Courses taught by top faculty and subject experts | 27 | Weekly assignments and proctored exams for evaluation | 9 |
| Flexibility to learn anytime, anywhere | 34 | Government-backed credibility and trustworthiness | 10 |
| Availability of courses in multiple disciplines | 20 | Others | 3 |
| Support for lifelong learning and skill development | 12 | | |

5.4 The Primary Reasons for Dropping Out: By far the most common dropout reason was lack of time (37 users), underscoring how few people have the time to pursue self-directed online learning. Other factors were irrelevant content (9 cases), difficult course materials (4 cases) and courses that did not meet expectations (8 respondents). Challenges such as too little user interaction with the instructor (8), bad interface design (6), linguistic difficulty (5), and financial pressure are worth thinking about. In addition, exam scheduling and centre problems (6) as well as ambiguous course objectives (5) were sources of learner dissatisfaction. Taken together, issues of time, content relevance and engagement seem to be the main reasons behind SWAYAM dropouts.

Table 4: Dropping Out Reason

| Dropping Out Reason | No. of Response | Dropping Out Reason | No. of Response |
|--------------------------------------|-----------------|-------------------------------------|-----------------|
| Lack of time | 37 | Less user-friendly SWAYAM interface | 6 |
| Complex content | 4 | Language barriers | 5 |
| Technical issues/internet access | 9 | Less interactive content delivery | 5 |
| Lack of interaction with instructors | 8 | Financial constraints | 5 |
| Unclear course objectives | 5 | Exam schedule and centre | 6 |
| Not relevant to my needs | 9 | High examination fee | 5 |
| Below the expectations | 8 | Others | 12 |

5.5 Motivation to complete SWAYAM courses: The data show that most participants (16 rated 5, 14 rated 4, and 24 rated 3) had high or moderate motivation to complete their SWAYAM courses. Another smaller group (7 rated 2 and 11 rated 1) also had low motivational scores. This indicates that although the majority of students are inclined towards a positive tendency, some show decreasing interest, maybe because of stress caused by workload, content difficulty, or lack of communication. Better support, engagement and course design might help to sustain motivation.

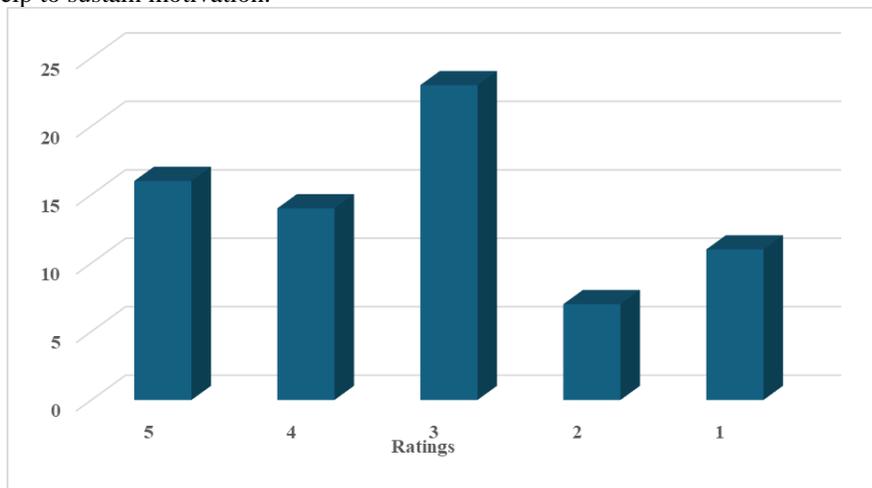


Figure 1: Motivation Level

The findings reveal that accrual of academic credits is the most persuasive factor (28) for enrolling in SWAYAM courses, followed by course design and quality (27 participants) and benefits from assessment/certification (24). These can be seen as indicating that the learners are mostly motivated by a pragmatic, easy-to-measure gain in terms of academic and career benefits from well-supported learning experiences. Prompting from the instructor (21) and group members/the teacher (19) were also reported to influence engagement, indicating that both social and academic interactions are important for maintaining learner motivation. Meanwhile, those for a more user-friendly interface (16) and interactive content (17) signal room for improvement in the ease of use as well as learner engagement and interaction. On the whole, enhancement of academic incentives, instructional quality and user experience might further enhance course completion rates on SWAYAM.

Table 5: Factors influencing the completion of the course

| Factors influence the completion of the course | Response | Factors influence the completion of the course | Response |
|--|----------|--|----------|
| To earn credits | 28 | A more user-friendly SWAYAM interface | 16 |
| Course Design & Content | 27 | Institutional or External Support | 10 |
| Instructor & Support | 21 | Quicker response to queries and doubts | 9 |
| Assessment & Certification | 24 | More engaging and interactive content | 17 |
| Encouragement from peers/teachers | 19 | Others | 3 |

5.6 Preference of Courses and Continuation of SWAYAM MOOCs : The statistics indicate that a high proportion (63) of learners would like to continue learning on SWAYAM, and 7 would not like to continue. This optimistic future identity reflects students’ appreciation of the platform’s flexibility, pertinence, and learning setups. An increasing variety of courses, better value of certifications and a more interactive learning experience may also facilitate deeper engagement.

In terms of interest in subject, Management and Commerce was the popular choice (26), followed closely by Humanities and Social Sciences (25) and Skill Development/Vocational Education (24). These choices show a strong preference for vocational and hybrid-learning courses that enhance workforce prospects. The moderate interest in Education (14), Science (12) and Engineering and Technology (12) indicates the inclusion of

SWAYAM popularity across various disciplines. On the other hand, fewer responses for Law (11), Agricultural and Food Sciences (9), and Health and Medicine (8) may be due to course specificity or lack of availability. In general, the preferences raise opportunities for a specialisation/industry-aligned and skill-based learning.

Table 6: Courses of Learners' Preference

| Types of courses | Responses | Types of courses | Responses |
|--------------------------------|-----------|---|-----------|
| Engineering and Technology | 12 | Agricultural and Food Sciences | 9 |
| Humanities and Social Sciences | 25 | Architecture and Planning | 2 |
| Science | 12 | Language and Literature | 14 |
| Management and Commerce | 26 | Skill Development / Vocational Education | 24 |
| Education | 14 | Annual Refresher Programme in Teaching (ARPIT) | 6 |
| Law | 11 | School Education (NCERT Courses for Classes 9–12) | 7 |
| Health and Medicine | 8 | Other | 7 |

5.7 Types of Examination preference given by learners

Most respondents (31) preferred multiple choice questions (MCQs) for MOOCs, followed by a mix of MCQs and short-answer questions (20). Fewer favoured the Project or practical work-based Assessment (12), with even fewer endorsing assignment-based assessments (2) and online exams (4). This suggests learners want flexible assessments, so a MOOC platform like SWAYAM should balance rigour with stress reduction.

Table 7: Types of Examination preference given by learners

| Types of Examination | No. of Response | Types of Examination | No. of Response |
|--|-----------------|--|-----------------|
| Multiple Choice Questions (MCQs) only | 31 | Project or practical work-based assessment | 12 |
| A combination of MCQs and short answer questions | 20 | Online examination | 4 |
| Assignment-based evaluation without a final exam | 2 | Others | 1 |

The majority of SWAYAM learners gave positive feedback, with 31.4% on top ranking 5 and 27.1% on second-best score 4. About 31.4% expressed moderate satisfaction through score 3. A small portion gave the least satisfaction score as 1, at 4.3% and 5.7% learners gave 2 rating. The representation reveals that overall positive feedback is high, and a small number of learners are dissatisfied. Participants view SWAYAM positively based on the level of satisfaction and benefits.

Some learners have expressed concerns about the dashboard user interface and the difficulty of accessing content on mobile phones. The majority of the suggestions are to facilitate an intuitive dashboard, session navigation, dark mode, better course filtering, and many more. The rest discussed technical aspects in the courses due to problems such as responsiveness and network interruptions in sessions. Moreover, others suggest the need to improve the learning session contents, such as clear videos and audio, using high-quality multilingual subtitles, and motivating lecturers. Learners want more instructor presence, tighter quality control and practical project-based learning with live meetings. There were also demands for regional language content and more courses, particularly in humanities, commerce and skill-based employability areas. Learners suggested SWAYAM move beyond theory and include field exposure, industry projects and career skills in the courses to make them more inclusive and future-ready.

6.0 Discussion

The results indicate that awareness of SWAYAM is relatively high, with more than 85% of respondents having heard of it, highlighting its growing visibility in India's digital learning landscape. Respondents' overall perception of flexibility, convenience and relevance of content was high. However, neutral perceptions concerning instructor effectiveness and a lack of certificate recognition indicate that enhanced pedagogical support and greater academic acceptance are needed for legitimacy.

Respondents in the survey show flexibility, affordability and quality content as some of the key drivers for

adoption of SWAYAM. The dropout data indicate that time constraints, the level of complexity and lack of teacher interaction are the main obstacles to course completion. These considerations, if addressed through exam registration fee, greater faculty-learner interaction and better instructional design, could contribute to learner retention.

The provision of academic credit, structured learning, and relevant assessment that is motivated by the inclusion of “academic and career incentives to persist” supports the contention that such visible academic and career benefits inform persistence. Also, the increased demand in Management and Commerce, skill-based courses, suggests that there is a new inclination towards job-centred learning paths. To keep up this encouraging trend, SWAYAM should expand the variety of its courses, increase the acceptance of certificates, and provide resources for more interaction. Long-term learner engagement and the platform's overall effect will ultimately depend on maintaining access, encouraging pedagogical innovation, and developing industry-relevant programs.

7.0 Conclusion

This study shows that Indian students are increasingly aware of SWAYAM and are enjoying it as a flexible and economical choice for higher education. Most students are pleased with how simple it is to use and value the content's dependability. Nevertheless, obstacles such as inadequate interaction with the instructor, limited recognition of degrees and time management are still addressed in participation and achievement. The findings also suggest that learners are mostly motivated by academic credits, good course structure, and professional potential, indicating a developing trend of skill-focused and job-driven learning. Improving the quality of training and increasing interaction, as well as improving institutional acceptability of the certification, are critical approaches to improving participation. The study shows SWAYAM's capacity to democratise education in India by addressing cost and access, while underlining the need for continuous educational innovation to ensure greater satisfaction for learners and the long-term sustainability of online learning.

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