Exploring the Undergraduate Perception towards SWAYAM Portal Effectiveness

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Abstract— Since its launch in 2017, the SWAYAM portal has gained immense popularity. Over the years, the number of MOOCs offered on SWAYAM as well as the number of students enrolled in them, both are showing a steady rise but very little is known about the enrolled students' perception regarding the portal. Do the students find the SWAYAM portal effective or not? This paper attempts to find an answer to this question which can help improve and refine the effectiveness of the portal further.

The present research is descriptive and has followed the survey method to know the perception level of the undergraduates towards the effectiveness of SWAYAM Portal. A 5-point Likert scale was developed, converted into a Google form and sent to all the enrolled students (96850) of undergraduate-level 42 SWAYAM MOOCs, selected through probability way of sampling particularly systematic random sampling, out of which 1348 undergraduate students formed the valid final sample. Descriptive statistics such as frequency, percentages and mean have been used to analyse the data. Overall, the undergraduate students show a positive perception towards the SWAYAM MOOC platform but with a need to improve its awareness and visibility. The findings of this study can be beneficial for MOOC developers & designers, educators, education policymakers and can also be extended to higher education system of the India, for further enhancing the SWAYAM portal and learner engagement.

Keywords—Awareness, Engagement, Enrolment, SWAYAM MOOCs, Portal User-friendliness.

I. INTRODUCTION AND BACKGROUND

First appeared in 2008, Massive Open Online Courses (MOOCs) are online courses that anyone, anywhere can participate in, usually for free. They are open to anyone who wants to register, and classes often have tens of thousands of participants (Hoy, 2014). Basically, MOOC is a course aiming at large-scale interactive participation and open access via the web (Littlejohn, 2013).

MOOCs have been often criticized for their poor design (Cooper & Sahami, 2013; Yuan & Powell, 2013). But, otherwise, online learning environments such as the MOOCs should have an effective, user-friendly and aesthetic design incorporating effective navigation and search features, customizable content, and, consistent interface and interface components. The importance of design in MOOCs is further highlighted by the challenges faced while learning on a massive scale with different needs and experiences. These kind of challenges are more prominent while designing for MOOCs rather than designing for face-to-face or other online instruction formats. So, a good design of the learning platform can help promote MOOC participants' levels of engagement and allow effective pedagogical principles to benefit the learners. Supporting this observation, findings by Vaibhav & Gupta (2014) specify that presentation of any online learning platform is an important factor for successful retention of the users. Thus, an attractive and clearly designed user-friendly interface with easy navigation can pool in more enrolments into the SWAYAM MOOCs and also retain them. Achieving this can only be possible if we try to understand the perspectives and perception of the students for whom these courses are designed because understanding the students' perception not only helps improve and successfully implement online learning, but also ensures promotion of students' learning growth and achievements.

With majority of the students (78.9 % as per AISHE, 2021-22, MoE, 2025) in India enrolled at the undergraduate level, particularly in non-technical courses, this study focusses on this major chunk of students i.e. the undergraduates enrolled in non-technical SWAYAM MOOCs. Thus, the purpose of this study is to explore the perception level of the undergraduates towards the effectiveness of the SWAYAM portal and the findings can be used further to improve the portal in order to make it more effective and better received by the students.

II. LITERATURE REVIEW

Various researches have highlighted and established the importance of portal design in the MOOCs including the findings of Liu et al. (2015) which emphasize that due to the massive number of participants and their different learning goals and behaviours, the design of the interface for a MOOC delivery platform becomes crucially important. Ambadkar (2020) too emphasizes that the design features of MOOCs may directly affect the student participation in a course. If the visual design and navigation within a course are boring then this has been found to demotivate MOOC students (Fournier & Kop, 2015). Navigation, thus, plays an important role in facilitating online learning (Farag & Shemy, 2011; Hsu et al., 2009), and, better design and navigation tools in a MOOC can further enhance the study progress of learners (Jansen, 2004).

Although MOOCs are gaining popularity over the years, literature indicates that both the awareness and use of MOOCs is very low among majority of the students and thus there is also a need to increase the visibility & awareness of MOOCs. Further, findings by Liu et al. (2015) as well as Deshpande & Chukhlomin (2017) emphasize that accessibility has been found to significantly impact student motivation to learn and hence MOOC educators need to work on robust course designs and pay careful attention to accessibility also. Hence, it is important that the MOOCs are easily searchable and accessible to the students.

Further, talking about the perception regarding MOOC quality, something as simple as what pre-course information is provided on the MOOC portal is also considered as an important factor (Gamage et al., 2015). Several studies have been carried out based on system quality which refers to several quality features of the MOOC system, that include: ease of use, flexibility, usability (Alyoussef, 2021; de Carvalho Junior et al., 2019), understandability, design features, user-friendliness, the integrity of the system, learnability of the learning environment (Xiao et al., 2020) and perceived usefulness (Albelbisi & Yusop, 2020; Alyoussef, 2021; Singh & Sharma, 2021). Drake et al. (2015) have given five principles as a foundation, to inform the MOOC course designers and course managers, in designing and developing a new course, namely - meaningful, engaging, measurable, accessible, and scalable.

Thus, as a synthesis to these studies, MOOC portal has emerged as a major aspect contributing towards the effectiveness of MOOCs and certain important dimensions have been identified which constitute this factor such as MOOC Portal Awareness; Accessibility of Portal; Portal Design Attractiveness; User-friendliness of MOOC portal; Information Clarity of Portal; Searchability & Enrolment. These dimensions have been used as guiding variables for scale formation in this study, which are given below in the Table 1:

TABLE 1
GUIDING VARIABLES AND RESPECTIVE ITEMS

	Guiding Variables/Dimensions	Scale Items
MOOC Portal Effectiveness	1. SWAYAM Portal Awareness 2. SWAYAM Portal Accessibility 3. SWAYAM Portal Design Attractiveness 4. SWAYAM Portal User-friendliness 5. SWAYAM Portal Informativeness and Course Enrolment	1. Before enrolling in MOOC, I was well aware and familiar with the SWAYAM portal and its Online Courses (MOOCs) 2. SWAYAM Portal is easily searchable and accessible 3. I like the overall design and appeal of SWAYAM portal at first glance 4. SWAYAM portal has a user-friendly interface and intuitive navigation 5. SWAYAM portal clearly informs about its objectives/purpose therefore it was easy to find the course of my interest and get enrolled

III. OBJECTIVE OF THE STUDY

The objective of the present study is to describe the level of perception of undergraduate students towards the effectiveness of SWAYAM Portal in terms of its identified dimensions.

IV. RESEARCH METHODOLOGY

The present research is descriptive and has followed the survey method to know the undergraduate perception. A 5-point Likert scale with anchors from "Strongly Disagree" to "Strongly Agree" was developed through literature review and after going through Face & Content Validity as well as Reliability checks, including pretesting, was sent as a Google form to all the enrolled students (96850) of 42 undergraduate level SWAYAM MOOCs, selected by using the probability way of sampling particularly systematic random sampling. 1348 undergraduate students responded appropriately and were considered as valid final sample.

Descriptive statistics were applied on the collected responses, and frequency, percentages along with mean have been used to describe the level of perception of undergraduate students towards the effectiveness of SWAYAM Portal.

V. RESULTS AND DISCUSSION

To know the perceived effectiveness of the SWAYAM portal amongst the undergraduate students, responses were collected in terms of its identified dimensions such as SWAYAM Portal Awareness, its Accessibility, Attractiveness, User-friendliness, and, Portal Informativeness and Course Enrolment, which are given below in Table 2:

TABLE 2
PERCEPTION OF UNDERGRADUATES TOWARDS THE SWAYAM PORTAL EFFECTIVENESS

No.	Dimensions		SD	D	UD	A	SA	Mean
1.	SWAYAM Portal Awareness	F	71	193	136	710	238	3.63
		P	5.3	14.3	10.1	52.7	17.7	
2.	SWAYAM Portal Accessibility	F	35	46	59	778	430	4.13
		P	2.6	3.4	4.4	57.7	31.9	
3.	SWAYAM Portal Design Attractiveness	F	24	54	96	828	346	4.05
		P	1.8	4.0	7.1	61.4	25.7	
4.	SWAYAM Portal User-friendliness	F	24	68	77	821	358	4.05
		P	1.8	5.0	5.7	60.9	26.6	
5.	SWAYAM Portal Informativeness and Course Enrolment	F	24	41	74	828	381	4.11
		P	1.8	3.0	5.5	61.4	28.3	

SD=Strongly Disagree, D=Disagree, UD=Undecided, A=Agree, SA=Strongly Agree; F=Frequency, P=Percent %   (Source: Bharadwaj, 2025)

The responses of the students towards the statements related to various dimensions of SWAYAM Portal are as follows:

- In regard to the statement about SWAYAM Portal Awareness most of the students i.e. 70.4% [17.7% (SA) + 52.7% (A)] students agreed that they were aware of the SWAYAM portal before they enrolled in the MOOC in comparison to 19.6% [5.3% (SD) + 14.3% (D)] students who were not aware of SWAYAM portal before enrolling in the course. 10.1% students were undecided regarding the same.

- A majority of 89.6% [31.9% (SA) + 57.7% (A)] students found the SWAYAM portal to be easily searchable and accessible in comparison to 6% [2.6% (SD) + 3.4% (D)] students who disagreed to its easy searchability and accessibility while 4.4% students were undecided regarding the same.

- The SWAYAM Portal Design appealed to a major chunk of 87.1% [25.7% (SA) + 61.4% (A)] students in contrast to only 5.8% [1.8% (SD) + 4.0% (D)] who did not find the overall design of SWAYAM portal attractive. And 7.1% could not make up their minds regarding the same.

- In regard to the statement about SWAYAM Portal User-friendliness, a high majority i.e. 87.5 % [26.6% (SA) + 60.9% (A)] students found the interface user-friendly and easy to navigate while 6.8% [1.8% (SD) + 5.0% (D)] students showed their disagreement regarding the same and 5.7% students remained undecided on it.

- Regarding statement related to SWAYAM Portal Informativeness and course enrolment, 89.7 % [28.3% (SA) + 61.4% (A)] students agreed and found that the SWAYAM portal clearly informs about its objectives making it easy to find the course of interest, to which only 4.8% [1.8% (SD) + 3.0% (D)] students showed disagreement. But 5.5% students were undecided.

The responses of the undergraduates regarding their perception towards the SWAYAM Portal effectiveness are represented in the figure-1 below:
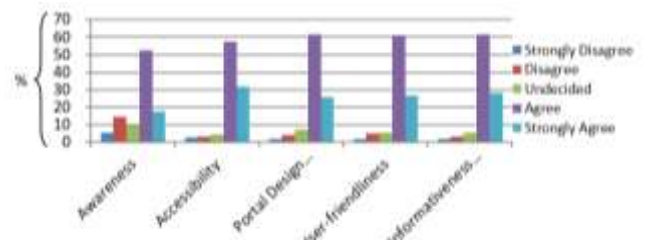

Figure- 1: Perception of undergraduates towards SWAYAM Portal Effectiveness

(Source: Bharadwaj, 2025)

Further, based on the mean scores it can be seen that most of the students perceive the SWAYAM Portal to be effective (Mean Score: 3.99) with SWAYAM Portal Accessibility (Mean Score: 4.13) perceived as most effective whereas SWAYAM Portal Awareness (Mean Score: 3.63) perceived as least effective, which can also be seen in the figure-2 below:

Figure- 2: Perception of undergraduates towards SWAYAM Portal Effectiveness based on Mean Scores

Thus, from the above results it can be seen that majority of the students have a positive perception towards all of the dimensions of SWAYAM Portal but for SWAYAM Portal Awareness it is marginally lesser. This means that overall the students have a positive perception towards the clarity of information on the SWAYAM portal, its easy searchability and user-friendliness, its easy and intuitive navigation, its awareness and familiarity as well as the overall design and appeal of the SWAYAM portal. But, about one-third proportion of the students are not aware of or familiar with the SWAYAM Portal including those who are indecisive towards its awareness. This aspect cannot be overlooked therefore more attention should be given towards the SWAYAM Portal Awareness. Even as per other researches, not only in India but also in other countries, the awareness about MOOCs is very low among the students (Allen & Seaman, 2014; Ambadkar, 2020; Kumar & Singh, 2017; Muzafavora & Kaya, 2014; Shakya et al., 2016; Shigeta et al., 2017). According to Muzafarova & Kaya (2014), although Government of India, Ministry of Human Resource Development (MHRD) is making all efforts to popularize the SWAYAM portal, there is a need to measure the degree of SWAYAM MOOCs' awareness among the target audience i.e. the students and also the ability of the target users to use the portal. Additionally, it has been observed by Kundu & Bej (2020) that awareness of MOOCs is higher in Indian universities located in urban areas than rural areas and awareness is higher among Indian postgraduate students than graduate students.

VI. CONCLUSION

From the findings it can be concluded that overall the students perceive the SWAYAM portal and its various dimensions as effective but there is need to improve its visibility and awareness among the students. As per research by Chang et al. (2015); Devgun (2013); Howarth et al. (2016); Pramanik (2018), since MOOC is a relatively new concept for students and not all students are familiar with it, awareness of MOOCs should be spread using social media sites, blogs along with traditional methods as well as through senior schools and colleges as this will help increase registrations. Also, awareness programs and workshops can also be conducted at College and University level, not only for the students but also for the teachers and faculties so that they can raise awareness among the students regarding the MOOCs offered on SWAYAM and encourage them to enrol.

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