

E-Learning Through SWAYAM MOOCs- Awareness And Motivation Among Commerce Students

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Abstract: The introduction of Massive Open Online Courses (MOOCs) is one of the key drivers of technological innovation in education in India. Indian Government has launched its own indigenous MOOC platform SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds). The objective of introduction of SWAYAM courses is to provide easy access, equity and quality education to all. The success of SWAYAM portal depends on awareness about this portal among the possible users and its scope in enhancing lifelong learning skills. This study examines the awareness of MOOCs and SWAYAM platform among students of Commerce and factors influencing utilization of SWAYAM/ MOOCs by students. The study reveals low awareness of SWAYAM MOOCs among Commerce students although a positive attitude towards learning through SWAYAM MOOCs is observed. One of the major factors influencing utilization of MOOCs as a learning tool was lack of ability to use ICT skills. Lack of classroom teaching and one to one contact with educators was also perceived as a constraint in learning through MOOCs. The study concluded that there is a need to encourage students to adopt MOOCs as a learning resource. This will need collaborative effort between Government, all national coordinators of SWAYAM, Universities and also Industry Academia interactions to promote acceptability of certification provided by SWAYAM in job market.

Index Terms: Awareness, Commerce, ICT, MOOCs, MHRD, Online Courses, SWAYAM, Students.

1 INTRODUCTION

Digital revolution in India is playing an important role in the progress of country and placing India in forefront on its road map to become a developed economy. The digital revolution is leading to major transformations in sectors of banking, education, shopping, agriculture, health, rural development, financial inclusion and many more such areas. One of the major focus areas of digital revolution in India is higher education, where disruptive innovative technologies are changing the traditional methods of teaching and learning and paving way for India to become a 'Knowledge Economy'. The introduction of Massive Open Online Courses (MOOCs) is one of the key drivers of technological innovation in education in India which enables thousands of learners to participate in these open and free courses simultaneously without any barriers of geographical boundaries. MOOCs are open, relatively free online courses which integrate methods like online learning, assignments, online discussions, use of open educational resources, video based learning into its delivery of course to its participants across the world. Although the MOOCs phenomena is not new to the world and to Indian participants as major MOOC providers like Coursera, Edx, Udemy, Futurelearn, Class2Go have already been delivering MOOCs for a long time, Indian Government has launched its own indigenous MOOC platform SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds). "SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged.

SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy," (About Swayam, 2019). The success of SWAYAM portal depends on awareness about this portal among the possible users and its scope in enhancing lifelong learning skills. Recent studies and discussion on MOOCs focus on faculty perspectives about MOOCs (Dumont & Raggo, 2018); Faculty experience in designing and developing MOOCs (Collins, 2018); Instructors experiences with MOOCs (Kleinman, 2018); Assessing learning outcomes of MOOCs (Qiu & Xu, 2018). According to (Muzafarova & Kaya, 2014), not all students and teachers are aware of the opportunities offered by distance learning mode. This is very true in Indian context. 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 MOOC's' awareness among the target audience and also the ability of the target user to use the portal. As (Cole & Timmerman, 2015) rightly pointed out that, there have been several discussions where use of MOOCs in education has been debated but not enough attention has been paid to students attitudes and perception towards MOOCs and there is a need to find out, how acquainted present students are with the concept and what is their opinion about MOOCs as a source of education. Therefore, an attempt has been made in this study to find out the awareness of 'SWAYAM MOOC's', India's own MOOCs platform among the students of Commerce at The Maharaja Sayajirao University of Baroda, Vadodara.

2 TIMELINE

Although SWAYAM portal was officially launched on 9th July, 2017, its journey dates back since 2014.

- On 7th February, 2014, Honourable Prime Minister of India Shri Narendra Modi shared his vision for Digital India while addressing the India Digital Summit via video conferencing. He spoke about his dream of a 'Digital India' where he envisaged digital empowerment for every Indian citizen with access to digital services, knowledge and information. One

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- of his core vision was that, "Quality Education reaches the most inaccessible corners driven by Digital Learning".
- On 1st July, 2015 Digital India Initiative was launched by Honourable Prime Minister of India Shri Narendra Modi. Among the various services launched under Digital India program, one of the important mission was to launch a Massive Open Online Platform (MOOCs) for India christened SWAYAM. Through SWAYAM portal, the objective of MHRD was to provide access to online education even in remotest areas of India through computers, laptops, tablets, apps on mobile phones using internet connectivity.
 - On 9th July, 2017, (Press Information Bureau, Government of India, 2017) reported that the President of India, Shri Pranab Mukherjee formally launched the portal of SWAYAM along with 32 SWAYAM Prabha DTH Channels and National Academic Depository at the National Convention on Digital Initiatives arranged by MHRD, Government of India in New Delhi. MHRD and All India Council for Technical Education (AICTE) developed an indigenous platform 'SWAYAM' with the help of Microsoft which was to host almost 2,000 courses and 80,000 learning hours for school children, undergraduates, post graduates and professional courses. (Gohain, 2017) described SWAYAM as A 'Made in India' IT platform with the capability to host courses for participants from Class IX until post-graduation enabling access to education resources to all, anywhere and at any time.
 - Recently (Press Information Bureau, Government of India, 31st Dec, 2018) reported that MHRD wants to align the courses on the SWAYAM portal with the curriculum of Universities and so far 92 Universities have accepted credit transfer for courses done through SWAYAM Platform.
 - Again on 11th January, 2019, (Press Information Bureau, Government of India, 11th Jan, 2019) has reported that so far, more than 72 Lakhs learners have registered in various MOOCs courses administered through SWAYAM and almost 2 lakh learners completed the courses.

3 LITERATURE REVIEW

Previous research on MOOCs can be categorised into four categories:

3.1 Theoretical discussions about MOOCs as an Educational Tool.

(Baturay, 2015) presented a literature review on the characteristics of MOOCs, the timeline of its development along with the practical issues and the experiences of providers of MOOCs. (Salvador & Rodríguez-Hoyos, 2016) undertook a study in University of Cantabria, Spain with main objective to promote MOOCs awareness and evaluating MOOCs within the context of some educational degree programs. The results of their study demonstrated the need to introduce MOOCs in degree programs in education to update studies in higher education and emphasized on the potential of MOOCs to provide valuable knowledge through online training. (Gupta & Jain, 2017) presented a theoretical background on harnessing ICTs for effective knowledge creation. The study concluded that MOOCs represent immense opportunities in education and the presence of MOOCs in the education landscape cannot be overlooked. It was pointed out that in the future, students will have the advantage of a blended classroom where the best of online

and offline models converge into an optimal experience. (Trehan, Sanzgiri, Li, Wang, & Joshi, 2017) discussed about MOOCs from the unique viewpoint of India and China with purpose of sharing MOOC advancement in these countries, the significance of MOOCs for their education systems and also reviewing current issues of MOOC development in these countries. Delphi research method was applied for understanding the issues of designing of MOOCs and its implementation in India and China. Many issues ranging from language & communication or internet connections, learning models, pedagogy and delivery, outreach, accreditations and many more issues related to MOOCs were discussed. (Li, 2017) undertook a comparison of MOOCs characteristics in countries of The United States, China, and India. It was observed that MOOCs are not borderless and there is a lot of difference in MOOCs in these three countries. The author concluded that due to difference in social needs, cultural background, economic development, characteristics of participants, MOOCs development will differ in these countries. (Qiu & Xu, 2018) discussed the learning outcomes of an open SAP course that was embedded as part of a management information systems (MIS) course. The findings of the experiment revealed that business students can keep up with the most current innovations and evolutions in the business world through MOOCs and they felt that MOOCs have the ability to provide sustainable and lifelong learning.

3.2 Evaluation, assessment of learning outcomes of MOOCs and comparison of MOOCs learning vs traditional face to face learning.

The main idea behind undertaking these studies was to evaluate the outcomes of MOOCs or online education and the basic requirement was that the student has already undertaken such course and is using this medium as a learning tool. (Abeer & Miri, 2014) studied preference of students' and their views about learning through MOOCs and stated the criteria that make MOOCs a beneficial learning environment, by employing a sample of forty nine undergraduate students. The aspect of features of MOOCs design and how students' competencies can influence their participation in MOOCs was also explored. The results indicated that many learning competencies like English proficiency, some prior information of the subject matter, communication skills, self-regulation may affect the extent of participation and continuity in learning through MOOCs. The design features of MOOCs may also affect student participation. One important observation was that if students did not possess basic competencies, they dropout from the course even if it was a well-designed MOOC. Whereas, a student with high competency, might also be unable to finish the course if it is an ill-structured MOOC. (Liu, Kang, & McKelroy, 2015) examined the reasons of participant's to take a MOOC and also wanted to find out their perception of the usefulness of the course. The sample consisted of 320 respondents out of 4078 people who had enrolled for a journalism MOOC course. The results indicated that the most of the participants were professionals who wanted to develop their careers and were finding opportunities and resources for the same without any constraints of time and geographical location. The quality of material provided through the course, flexible schedule of the course, instructor's credibility were some important features for these individuals. The findings emphasized on the importance of good pedagogies and also

indicated that that course design is main feature and participants do not like difficult navigations. (Fesol, Salam, & Shaarani, 2017) assessed perceptions of engineering students' based on a technical course MOOC offered to them. The results of student's perception were based on six essentials of MOOC instructional design elements model classified as course information, course resources, monitoring learning, active learning, meaningful connection, interaction and intended perception. The results revealed that that student's had a positive perception when learning through MOOCs as all variables contributed positive relationship with intended perception. (Baker & Unni, 2018) compared the learning perceptions of USA and Asian students who were majoring in hospitality and tourism and had experience in taking courses through traditional face-to-face mode of instruction and also the online mode of instruction. The sample consisted of 356 students. The findings revealed that there was no significant difference in the perceptions of learning through online or traditional face-to-face course methods between USA and Asian students and students from both countries were satisfied with both delivery modes.

3.3 MOOCs for Professional Development of Teachers

The main objective of the study of (Dhanani, Chavda, Patel, & Tandel, 2016) was to find out whether medical faculties were aware and using MOOCs and educational videos series. Based on a survey of 108 medical faculty members, the study concluded that there was very low awareness among faculty members about educational video series, online learning tools and MOOCs. A need was recognized to create an awareness MOOCs and other online learning resources to motivate medical faculty members to use these resources for self-learning. (Soyemi, Ojo, & Abolarin, 2018) carried out a survey of 110 lecturers from the discipline of Management and Social Sciences at a private University in Nigeria to find out their digital literacy level, participation in MOOCs and finding out the influence of digital literacy skills on MOOC participation. The results indicated that digital literacy skills have no influence on lecturers participation in MOOCs and they themselves were not availing the opportunities of skills attainment and knowledge updation made possible by MOOCs. (Misra, 2018) on the basis of reviews of different reports, documents and research papers, discussed the challenges of teachers professional development, reflecting upon promises of employing MOOCs for teachers professional development and suggested actions for promoting the use of MOOCs for teachers professional development.

3.4 Students and teachers awareness about MOOCs, preferences and views about learning through MOOCs.

Through a questionnaire survey, (Muzafarova & Kaya, 2014) examined the awareness and use of MOOCs among the students at the International Black Sea University, Georgia and found very low use and awareness of MOOCs among students. It was suggested that if instructors are technologically more informed then they can increase student's awareness about MOOCs. Using a sample of 84 undergraduate students of Midwestern University, (Cole & Timmerman, 2015) examined college student's perceptions and attitudes about MOOCs. Thematic analysis was employed to study responses of eight open ended questions. Through the responses about attitude towards MOOCs, the themes identified were reliability, accessibility, content, learning,

communication and outcomes. The authors suggested that future researchers should include student's viewpoints in analysis of MOOCs as an education tool. (Nagasampige, Subbaiah, & Nagasampige, 2017) investigated the awareness motivation, and effectiveness of Massive Open Online Courses (MOOCs) of edX, Coursera, Udacity and Udemy among graduates and postgraduates students of Humanities, Science, Engineering and Management courses in Indian Universities located in Tier 1 and Tier 2 cities of Karnataka, India. The initial sample included 40 graduate, 40 Post Graduate and 20 Teachers. Semi-structured interviews were conducted for selected 15 students and 5 teachers based on their awareness on MOOCs and the participants were interviewed with questions focussed on awareness, content, usage and learning outcomes. The study revealed that awareness of MOOCs was high among postgraduate students than graduate students, awareness was high among engineering and management students and students and teachers of Tier I cities had high percentage of awareness. It was found that fulfilling current needs or future preparation needs or simply satisfying curiosity were the reasons for joining MOOCs.

4 OBJECTIVES OF THE STUDY

The literature review indicates that, in Indian context, there is a need to first survey about the awareness of students of Massive Open Online Courses (MOOCs). As the (UGC -Credit Framework for Online Learning Courses through SWAYAM Regulation, 2016) enables regular students to earn credits for SWAYAM Courses, it is imperative that students are aware of these courses and access these courses at the right time and benefit from best teaching learning resources free of cost. Therefore, an attempt has been made in this study:

- i. To find out awareness of MOOCs and SWAYAM platform among students of Commerce.
- ii. To assess factors influencing utilization of SWAYAM/MOOCs by students.

5 METHODS AND INSTRUMENTS

5.1 Sampling

In order to investigate the extent of awareness of MOOCs and SWAYAM platform, a close-ended questionnaire was employed. The questionnaire was designed after conducting a pilot survey, prepared and administered to 30 Post Graduate Diploma students from Faculty of Commerce, The Maharaja Sayajirao University of Baroda. The post graduate diploma courses have students from versatile backgrounds including graduates, professionals and executives, this allowed for diverse responses. The classes for these courses are held in the evening, this helped negate the chances of students from pilot mixing or influencing the survey sample. Based on the pilot, the questionnaire was altered and finalised. The questionnaire was administered in person to 80 students (approximately 17 %*Appendix) enrolled in two Masters Programs (Post graduate) at Faculty of Commerce were selected through random sampling.

5.2 Methodology

The questionnaire was divide into four parts. Part-I tested students' awareness about MOOC platform. Before administering Part-II, III and IV, students were provided brief explanation of MOOCs and the features of SWAYAM portal in

particular. The explanation highlighted the fact that SWAYAM is an indigenously developed (Made in India) MOOCs platform which will run courses from Class IX to post graduation offered by best educational institutes in India. (Cole & Timmerman, 2015) had also provided a brief explanation of a MOOC to participants in their survey who were not familiar with the concept and had pointed that the reason to do so was to present first the basic idea or information about MOOCs and then find out reactions in order to classify the opinions about the format of MOOCs. Part II and Part III of questionnaire consisted of closed ended questions to find out inclination to use SWAYAM portal and availability of required resources to access the portal, interest in obtaining certification and preferred mode of grading and types of MOOCs courses interested. The participants were asked to evaluate themselves for their ability to use ICT tools to learn through MOOCs. Part IV of the questionnaire was designed to measure the attitude of respondents towards MOOCs as an educational platform. The questionnaire aimed to test their attitude towards MOOCs platform in general, whether they are open to learn through this platform or still will prefer traditional method of teaching and learning. Part IV of the questionnaire consisted of 11 items (statements) with a five-point Likert-scale measurement that ranged from 1 (strongly disagree) to 5 (strongly agree) to measure the attitude of respondents towards MOOCs. Negative items were reverse scored, so throughout the scale a high score on a question indicated positive attitude towards MOOCs learning.

6 RESULTS

6.1 Demographic Characteristics of respondents:

Respondents (N=80) were post graduate students of commerce with age varying between 19 to 24, with exception of one respondent who was 27 years old. There were more female students (N=66) as compared to male students (N= 14) in the study, female student were 82.50% of the respondents.

6.2 Awareness about MOOCs

Awareness about MOOCs was found to be very low among the students. Fig. 1 shows that 93.75% (N=75) of the respondents were unaware of the term 'MOOCs' or its full form 'Massive Open Online Courses'. Only 6.25% (N=5) of the respondents were aware of the term 'MOOCs' and/or the concept of MOOCs.

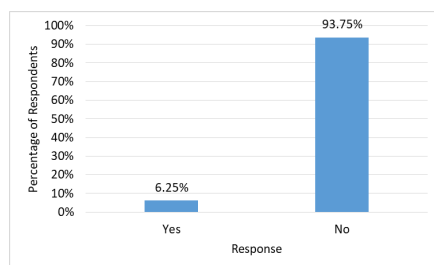


Fig. 1. Are you familiar with the concept of MOOCs?

The first question about familiarity of concept of MOOCs had only 6.25% (Fig. 1) respondents confirming prior knowledge about MOOCs, whereas when presented with the names of some MOOC platforms (Table 1.), the number of respondents rose to 10% (n=8), which indicated that some respondents

seemed to be aware of online courses but were not aware of the term MOOCs (Massive Open Online Courses). As seen in Table 1. 6.25% (N=5) respondents had heard about 'FutureLearn', and there was one respondent each who had heard about Coursera, NPTEL and SWAYAM. 90% (N=72) respondents were unaware of any such MOOCs platform or any online education platform.

Sr. No.	Name of MOOCs platform	No. of students aware of the platform
1	Coursera	1
2	edX	0
3	Udemy	0
4	NPTEL	1
5	SWAYAM	1
6	Udacity	0
7	FutureLearn	5
8	Any other	0
9	None of the above	72
Total		80

Of the 8 respondents familiar with some form of MOOCs platform, 5 reported to have taken a MOOCs course prior to this study and had opted for Future learn as course provider. No respondent reported to have completed a MOOCs course.

6.3 Inclination to use SWAYAM portal

Before administering the next sections of questionnaire, students were provided brief explanation of MOOCs and the features of SWAYAM portal in particular as digital platform for online learning. In Part II of questionnaire, the respondents were asked –'Had you heard about 'SWAYAM- India's own MOOCs' platform before today?' Only one respondent had heard about SWAYAM portal earlier. Although the respondent had heard about SWAYAM portal, he was not aware of the term MOOCs. After the brief introduction of SWAYAM portal, the students were asked about their interest in taking a SWAYAM MOOCs course. Fig 2 shows that 83.75% respondents reacted positively, 16.25% respondents were not interested in taking a SWAYAM MOOCs course.

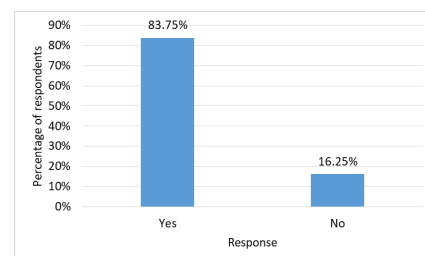


Fig. 2. Number of respondents interested in taking a SWAYAM course.

6.4 Factors influencing the utilization of SWAYAM/ MOOCs by students:

(i) Availability of required resources to access SWAYAM portal. According to Fig 3. 90% of the respondents said that they had the required resources needed to access SWAYAM portal. Fig 4. indicated that 68.75% of respondents preferred to use Mobile phones as the device of access SWAYAM portal. 18.75% preferred to use laptops, only 2.50% respondents preferred desktops and 10% respondents did not own a device.

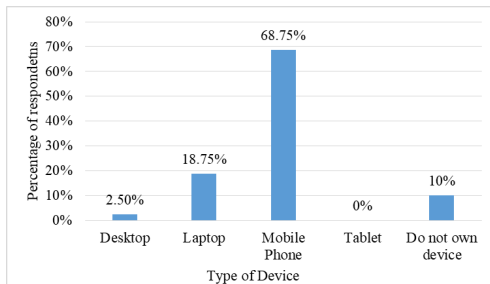


Fig. 3. Do you have access to required devices for MOOCs?

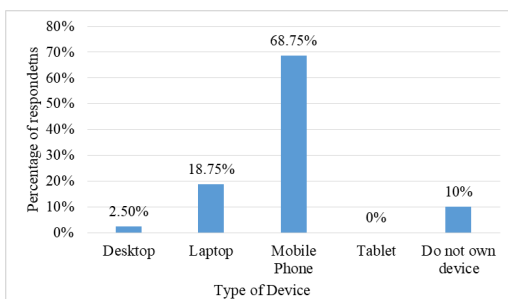


Fig. 4. Respondents' preference of device to use for MOOCs.

71 out of the 72 respondents who had the required device for accessing SWAYAM MOOCs had internet connectivity on their device. Ease of access to internet is owed to widely available internet networks as well as the facility of free Wi-Fi connectivity in the campus provided by the Maharaja Sayajirao University of Baroda to its students.

(ii) Interest in obtaining certification and preferred mode of grading. The respondents were informed that SWAYAM charges a nominal charge as exam fees. This fee is refunded to the candidate on successful completion of the course and securing above 40% marks in the exam. They were asked if this information encourages them to opt for more courses and take the exam for course completion to obtain certificate. As observed in Fig 5. 83.75% respondents felt encouraged to opt for certification through SWAYAM MOOCs and 16.25% respondents did not feel motivated enough to opt for certification and take MOOC courses even when the courses offered are technically free.

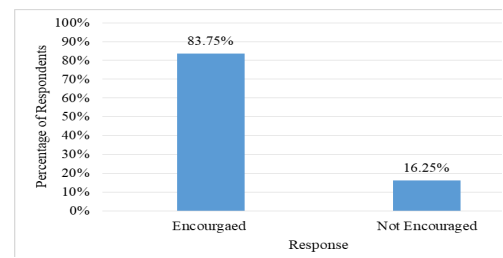


Fig. 5. Number of respondents encouraged to take SWAYAM courses because of its pricing structure

The respondents were asked about their preferred mode of examination. They were asked whether they would prefer online exam at school/college/exam center or pen and paper exam at a nearby school/college/exam center. Fig 6. Indicated that 60% respondents preferred Online Exams as opposed to 40% respondents who still prefer traditional pen and paper mode of examination at nearby school/college/exam center.

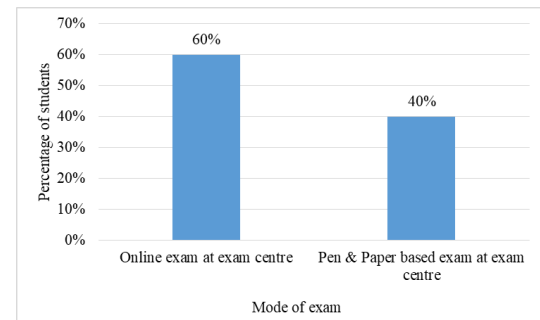


Fig. 6. Mode of examination preferred by respondents.

(iii) Choice between traditional classroom course vs MOOCs with credit transfer and preferred amount of learning consumption time. The respondents were further presented a hypothetical situation to find out their inclination to choose SWAYAM courses. The hypothetical situation was presented as follows: As part of your course curriculum, you are required to choose an elective subject. Your institute is not able to offer to you one of the listed subjects which you desire. If this subject for e.g. 'Income tax return preparation' is offered on the SWAYAM MOOCs platform and your institute has a course credit transfer system, will you choose to take the online course or chose any other subject (classroom teaching) offered by your institute?

- Choose to select other classroom teaching subject offered by institute
- Choose to do the online course via SWAYAM and opt for credit transfer

Fig.7 indicated that 53.75% respondents preferred classroom teaching subject offered by institute rather than opting for online course via SWAYAM and opt for credit transfer. 46.25% respondents selected to study through the online course via SWAYAM and opt for credit transfer.

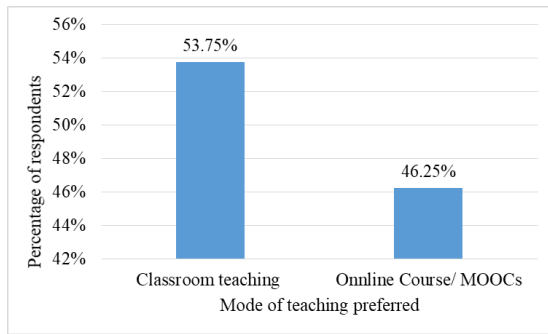


Fig. 7. Respondents' choice between classroom teaching vs online course/ MOOCs for a sample course

When asked about the learning consumption time preferred for MOOCs, as per Fig 8. 56.25% respondents preferred 2 to 4 hours per week of studying for MOOCs, 20% respondents preferred up to 5 to 8 hours per week of study time, 11.25% felt that there is no time constraint for study time for MOOCs and rest 12.50% did not prefer to spend any time on learning from MOOCs.

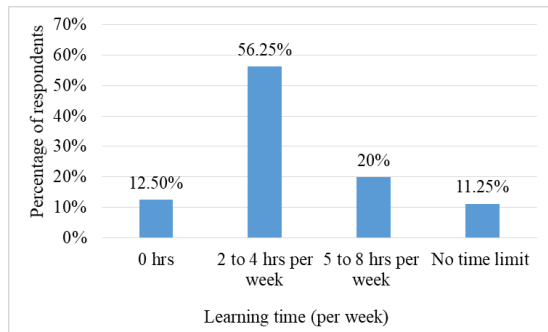


Fig. 8. Amount of learning time preferred by respondents

iv) Types of MOOCs courses interested

Respondents were asked to choose the type of MOOCs courses which they might be interested and were offered to choose more than one option if required. The options given to them were:

- a. Skill based Certification courses
- b. Diploma Courses
- c. Under graduate/ Post Graduate Degree Course subjects

52.50% selected Skill based courses, 3.75% selected diploma courses and 57.50% selected post graduate degree course subjects.

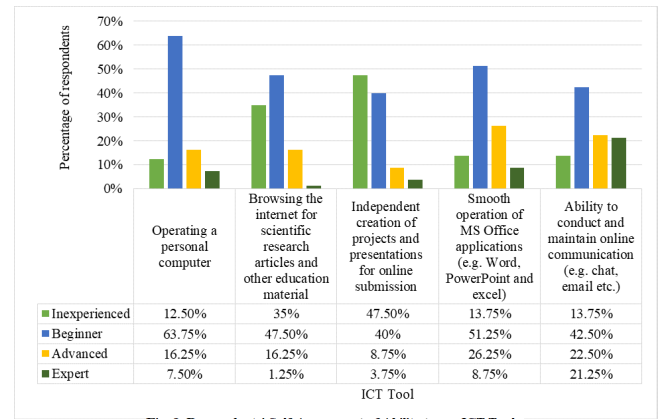


Fig. 9. Respondents' Self-Assessment of Ability to use ICT Tools

(v) Respondents' self-assessment on ability to use ICT tools to learn through MOOCs.

The respondents were asked to rate themselves on the basis of ICT skills they possessed. It was observed in Fig 9. that most respondents rated themselves as beginners in possessing ICT skills. Based on self-assessment by respondents, the skill level was assigned a score (1=inexperienced to 4=advanced) and a total skill score was calculated per respondent. All respondents were then grouped into four skill levels based on skill score obtained. Table

indicates that a majority of respondents rated themselves as Inexperienced (23.75%) and Beginners (52.50%) in possessing ICT skills.

Sr. No.	Skill level	Number of respondents	Percentage of respondents
1	Inexperienced	19	23.75
2	Beginner	42	52.5
3	Advanced	17	21.25
4	Expert	2	2.5

(vi) Attitude of respondents towards MOOCs as an educational platform

Attitude of respondents towards use of MOOCs as an education platform was measured using an 11 item (statement) Likert-scale measurement. A mix of positive and negative items were used. Five-point Likert-scale was used ranging from 1= strongly disagree to 5=strongly agree, negative statements accordingly scored. Reliability analysis: A reliability analysis was carried out on the observed attitude values scale comprising 11 items. Cronbach's alpha showed the questionnaire to reach reliability, $\alpha = 0.688$. Most items appeared to be worthy of retention, resulting in a decrease in the alpha if deleted. The one exception to this was item 2, which would increase the alpha to $\alpha = 0.729$. As such, removal of this item was considered. The final set of consisted 10 items with, $\alpha = 0.729$, which was considered for further analysis.

Reliability Statistics	
Cronbach's Alpha	N of Items
.729	10

Table 3. indicates that 37.50% respondents (Item i) agreed to the fact that lack of one to one classroom teaching in MOOCs is a problem and 42.50% respondents were not sure whether this aspect would create any difficulty in learning. This result was supported by results of (Item iii) where 48.75% respondents felt that it is difficult to learn without direct one to one interaction and support of a teacher. This indicated perceived difficulty felt by students in use of MOOCs as an educational tool.

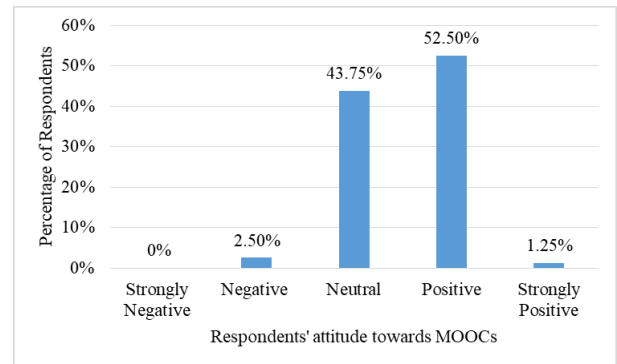


Fig. 10. Respondent's attitude towards MOOCs

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(i) The lack of one to one classroom teaching in MOOCs is a problem.	5.00%	37.50%	42.50%	15.00%	0.00%
(ii) I find self-motivation and setting goals for completion of MOOCs to be difficult.	3.75%	31.25%	38.75%	23.75%	2.50%
(iii) I find it difficult to learn without direct one to one interaction and support of a teacher.	7.50%	48.75%	11.25%	27.50%	5.00%
(iv) I think I would be comfortable using a computer several times a week to participate in a course.	7.50%	61.25%	21.25%	5.00%	5.00%
(v) MOOCs are good because they expose students to professors from across the country.	8.75%	61.25%	23.75%	6.25%	0.00%
(vi) It is good that MOOCs provide students with scheduling flexibility (to be able to study in free time).	15.00%	67.50%	15.00%	2.50%	0.00%
(vii) MOOCs are good for overall improvement and lifelong learning of skills.	13.75%	57.50%	23.75%	5.00%	0.00%
(viii) I think MOOCs are good for lowering the cost of education for students and families.	31.25%	50.00%	16.25%	2.50%	0.00%
(ix) I like SWAYAM MOOCs because it is free and affordable.	20.00%	48.75%	25.00%	6.25%	0.00%
(x) I like the MOOCs platform for its ease of access to course content.	12.50%	51.25%	30.00%	6.25%	0.00%

As observed in Table 3. 61.25% respondents (Item iv) were comfortable using computer several times a week to learn through MOOCs, similarly 67.50% respondents (Item vi) agreed to the fact that MOOCs provide students with scheduling flexibility. 61.25% also agreed to the fact that learning through MOOCs is good as they can get to learn from professors across the country. 57.50% respondents agreed to the fact that MOOCs are good for overall improvement and lifelong learning of skills.

Based on the Likert scale responses, a total attitude score for each respondent was calculated. All respondents were then grouped into five attitude types based on attitude score obtained. The results presented in Fig.10 indicated that 52.50% respondents had positive attitude towards learning through MOOCs, 43.75% were not very sure whether they would be able to learn through MOOCs.

7 DISCUSSION AND SUGGESTIONS

7.1 Discussion

It was observed that most respondents- 93.75% were not aware of SWAYAM/MOOCs and after brief introduction about SWAYAM MOOCs, almost 83.75% respondents indicated readiness to learning through the portal and also felt motivated to opt for certification. 90% respondents had access to the required devices to access MOOCs and almost all those who had the required device to access MOOCs had internet access on their device. 60% respondents preferred online exams, majority respondents were ready to devote 2 to 4 hours of learning consumption time. When presented with a hypothetical situation, where a choice was to be made between classroom teaching vs online course and credit transfer, it was observed that students still prefer traditional classroom teaching methods than online learning. 52.50% respondents indicated preference for skill based certification courses, and 57.50% selected post graduate degree courses. Majority respondents rated themselves as beginners in possessing ICT skills. 52.50% respondents had positive attitude towards use of MOOCs as an education platform. It can be concluded that one of the major factors which might affect utilization of MOOCs as learning tool was lack of proper ICT skills. There was also an apprehension observed about absence of classroom teaching. Lack of classroom teaching and one to one contact with educators was perceived as a constraint in learning through MOOCs.

7.2 Suggestions

- 1) The results indicate very low awareness about SWAYAM MOOCs among students of Commerce. The popular MOOC providers worldwide have a proper advertising strategy. As soon as someone visits their website or registers and signs up for their website, whether enrolled in any course or not, the course provider starts sending information about upcoming courses through emails. This keeps the possible future learner updated about upcoming MOOC courses as well as motivates him/her to join course. It is suggested that Ministry of Human Resource development (MHRD) should take steps to advertise about SWAYAM courses through television channels, radio and other social networking sites. The emphasis should be made that the course is free and there is certification provision. SWAYAM portal already has Radio Jingles, TV Commercials, Video clips providing information about SWAYAM MOOC Courses displayed on portal website. Some educational institutions and universities in India are also displaying them on their websites. For wider reach, it is suggested that all universities should display the list of SWAYAM courses offered in each semester in advance in their faculties and departments.
- 2) According to the (UGC -Credit Framework for Online Learning Courses through SWAYAM Regulation, 2016), Universities have to decide the courses for which it shall permit for credit transfer and it is mentioned that only up to 20% of the total courses being offered in a particular program in a Semester can be offered through the SWAYAM platform. This process of adoption of MOOCs courses for credit transfer will need deliberations at department level, faculty level and only then the courses can be adopted for credit transfer. The existing course structure will need to be thoroughly examined to find out

which courses can be adopted through MOOCs for credit transfer as the decision will have a major impact on program structure. The universities may start with offering electives through MOOCs and courses such as E-Accounting, E-commerce which need information technology for its delivery. The process of adoption of MOOCs courses by universities for credit transfer will need time and until then, the focus of MHRD should be to advertise its skill based courses and certification courses which will enhance the resume of existing students.

- 3) As it is observed in this study that most respondents rated themselves as beginners in possessing ICT skills, it is suggested that universities may conduct student workshops for enhancement of basic ICT skills to enable them to undertake MOOC courses through SWAYAM portal.
- 4) Since lack of classroom teaching and one to one contact with educators was perceived as a constraint, while planning a MOOCs course, some kind of online contact hours may be provided between educators and learners to solve queries. Peer assessments, discussion forums may also motivate students to learn through MOOCs.
- 5) Before offering credit transfer for courses offered through MOOCs, Faculty members need to be aware about the SWAYAM portal and workshops may be conducted across universities to build awareness of SWAYAM portal among faculty members. Faculty members can in turn spread awareness about SWAYAM portal and its benefits among their students and motivate them to take courses through SWAYAM.
- 6) The emphasis of SWAYAM portal should be on introducing skill based courses as additional certificate courses apart from traditional curriculum as students prefer to enhance their skill sets. These certificate courses should be available in both semesters and continuously available on the portal. There should be an effort by MHRD to create awareness in Corporates and other institutions about credibility of certificates provided through MOOCs for consideration for jobs. This will motivate students to undertake more SWAYAM courses.

8 CONCLUSION

According to (NITI Ayog, Government of India, November 2018), MOOCs have tremendous potential to deliver education resources beyond geographical boundaries and best Universities in India should be permitted to start online courses and educational programs. In this way technology can be employed to also solve the problem of shortage of faculty. The objective of MHRD for introduction of SWAYAM courses is to provide easy access, equity and quality education for everyone and making available best teaching learning resources to all. There is a need of an education system that is flexible, adaptable and forward looking to facilitate tomorrow's learning needs. SWAYAM MOOCs has the potential to empower students for future employability in a knowledge based economy. Although the present study reveals low awareness of SWAYAM MOOCs among Commerce students, a positive attitude towards learning through SWAYAM MOOCs is observed. There is a need to encourage students to adopt MOOCs as a learning resource. It needs collaborative effort between Government, all national coordinators of SWAYAM including University Grants commission, Universities and also Industry Academia

interactions to promote acceptability of certification provided by SWAYAM in job market.

APPENDIX

*Sample size:

The questionnaire was administered to 80 master's program students as follows:

	Course	Total number of students	Sample	Percentage
1.	M.Com. Accounting and Financial Management (Year 2)	400	70	17.50
2.	M.Com General (Year 1)	60	10	16.66

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