



Awareness and Usage of Massive Open Online Courses (MOOCs) Platforms among Educational Technology Undergraduate Students in University of Calabar

¹Akire, Kyrian Ukeh, ²Olasunkanmi, Israel Abayomi & ³Oyekanmi, A. Olaniyi

¹Department of Educational Technology, University of Calabar, Nigeria

²Department of Science and Technology Education, Faculty of Education, University of Ibadan, Nigeria

³Department of Curriculum and Instruction, School of General Education, Federal College of Education (Special) Oyo, Oyo State, Nigeria

Corresponding author: akakyrian@gmail.com

Abstract

The use of Massive Open Online Courses (MOOCs) platforms is gaining prominence among students especially, the undergraduates. However, there is dearth of literature and empirical evidence on educational technology students' awareness and use of MOOCs platforms for learning in federal universities in Nigeria. This study, therefore, investigated awareness and usage of MOOCs platforms among educational technology undergraduates of University of Calabar. Two research questions were posed and translated into two research hypotheses. The study employed the non-experimental design of survey research type. The sample consisted 400 students, and it used a thirty-nine item questionnaire titled; 'Awareness and Usage of MOOCs Platforms among Educational Technology Undergraduates Questionnaire' (AUPEDUSQ), reliability coefficient $r=0.8$ and $r=0.7$ for awareness and usage of MOOCs scales, respectively. Data collected were analyzed using percentages, Mean and independent t-test. Findings revealed that students were aware of MOOCs platforms; and there was no significant difference between male and female students in their awareness of MOOCs Platforms. It was recommended that students should use MOOCs platforms to enhance their studies. The study concluded that while male teachers are more aware of MOOCs platforms than females, gender had no significant effect on awareness of MOOCs platforms among educational technology students. However, the use of MOOCs platforms to study both educational technology courses and other courses is not statistically significant. Hence students need to be encouraged to use MOOCs platforms.

Keywords: Awareness, educational, MOOCs, technology, usage, and undergraduates.

Introduction

Teaching and learning resources are to a large extent, ubiquitous and accessible for learners with diverse learning style, pace and heterogeneous characteristics scattered across the globe through emerging technologies. One of such emerging technologies is the Massive Open Online Courses (MOOCs). Massive and open learning appears to have been made possible with the launching of MOOCs in 2008. According to Gooding, Klaas, and Yager cited in Aboshady et al (2015), Massive Open Online

Courses (MOOCs) have lately been projected as a disruptive innovation, with high expectations to satisfy the challenges facing higher education. Some of the challenges experienced in higher education include school location, distance to school, shortage of infrastructure and teachers, and unstable academic calendar (Adejomo, 2017; Ogunode 2020; Ogunode and Abubakar, 2020). However, MOOCs are capable of breaking some barriers to accessing learning by making massive learning resources open to learners

around the world using appropriate technologies like computers, mobile phones, tablets, and the Internet. This could be the reason many platforms experienced massive enrollment of MOOCs since its inception in 2008, and several MOOCs are recently integrated in various platforms to allow enrollment of participants at a scalable rate. The emerging technology platforms that host MOOCs include, Futurelearn, Youtube, KhanAcademy, edX, and Edutree. These emerging technology platforms do not only give access to learning resources from institutions, but also allows institutions to develop their own MOOCs and make their own rules regarding their rights to materials. However, not all platforms allow institutions to make their materials fully open. For instance, MOOCs on Coursera are not fully open, and coursera has the rights to the materials. This implies that materials cannot be reused or repurposed without the approval of Coursera (Bates, 2015). This may be a limitation to some institutions that desire to have a complete autonomy of their course.

In spite of the restriction by some platforms, the demand for MOOCs, especially in tertiary institutions seems to be on the increase. Bates (2015) observed that, in four years following the launch of MOOCs, Coursera had 12 million participants who successfully sign ups with the largest course claiming about 240,000 learners. This is an indication that there is high glamour for learning that is massively open to learners who are in different locations. Again, Engle, (2014) noted that in 2013, the university of British Columbia offered a lot of MOOCs with the Numbers initially signing up ranging from 25,000 to 190,000 per course. Also, Aboshady et al. (2015) examined perception and use of massive open online courses among medical students in a developing country: multicenter cross-sectional study, and reported that out of 2527 students sampled, 456 (21.7%) knew the term MOOCs or websites providing these courses. Out of the latter, 136 (29.8%) students had enrolled in at least one course, but only 25 (18.4%) had completed courses earning certificates, and identified the reasons for the failure of completion of courses to be lack of time and slow Internet speed. Regarding the 25 students who completed courses, 21 (84%) were satisfied with the overall experience.

However, while researches have shown high enrolment of participants in MOOCs, the number of participants who complete a course on MOOCs seems to decline. A study by Koller and Chen (2013)

analyzed the first 17 courses jointly launched by HarvardX and MITx on edX platform from Fall 2012 to Summer 2013, and reported that the average percentage of registrants who discontinued activity in the first week was the highest with 50% and was 16% percent in the second week. Also, the study revealed that 4% of registrants explored half of the online content, 55.8% explored about a quarter of the online content and 34.7% never engaged with the online content (Israel, 2015). In another development, Caulfield et al. (2013) reported the work of Patti Ordonez-Rozo (2012) in University of Puerto Rico Rio Perdras, the researcher integrated Stanford's introduction to databases MOOC in a conventional classroom in spring for a group of 26 students. Students were asked to enroll for Stanford's introduction to databases MOOC, follow the online materials and complete all assignments. The result revealed that students did not engage actively in the discussion forums. The participation was low and students were still motivated upon getting wrong answer to a question. Also, it was reported that 62% of the students used the discussion forums for one session or less, while the remaining students did not visit the forums at all. This is evident that participants access MOOCs but may not complete a course.

Again, while students interact with MOOCs platforms, researches have tried to indicate variations in learning outcomes of students. Griffiths, et al. (2014) indicated that students learn more with MOOCs. In the study of Griffiths et al. (2014), the students in the experimental group had higher cumulative GPA (2.85) in a statistics course than their counterparts in the control group with cumulative GPA (2.82). Also, Firmin et al. (2014) reported that there were slight variations across the courses. This may imply that students' engagement in MOOCs platforms helps to improve their academic performance. Therefore, students may use MOOCs platforms to study courses so that they achieve high in the courses. Thus, it is likely that educational technology students use MOOCs platforms to engender learning and improve their learning outcomes in educational technology courses. Aside this, variation in the utilization of MOOCs may be associated with predictors like awareness of MOOCs platforms, and gender.

Generally, awareness of MOOCs platforms can help undergraduate students in educational technology to use MOOCs and become active learners. That is, they become aware of information they need, why they

need it, and how they can get it. When students are actively engaged in learning, they are motivated to decide when they need an information and if they have understood it (Adi Suryani, 2010), awareness of MOOCs platforms make students to be conscious of how to access and utilize resources on MOOCs to support their learning. Adebayo and Babalola (2020) reported that the Internet is the main source of awareness of MOOCs and concluded that awareness of MOOCs is important to the use MOOCs among undergraduate students in universities in Osun State, Nigeria. Also, Abdus (2018) found that most of the top universities started MOOCs in 2012 and found that 72.7% of the universities exposed students to MOOCs and offered diploma and certificate courses to people through MOOCs. It was also found that the eDX platform was used by all the selected universities in providing MOOCs. This implies that students are aware of MOOCs platforms and engaged with them in the University.

Apart from awareness, students' gender is another predictor that could influence usage of MOOCs among undergraduate students of educational technology. Undoubtedly, male and female students use online course to learn but it appears female students stay longer and complete courses online than male (Price; 2006 and Chyung, 2007). This could also mean that female students are more likely to sign up and use MOOCs more than male students. However, a report from Rodrigo, Lassi and Arto, (2020) showed that there is a gap in confidence between male and female students in the usage of MOOCs. The researchers observed increase in women attending on MOOC but found out that women are more likely to withdraw early from MOOC than men. On the aspect of using MOOCs to teach, researchers like Martin (2013), Martin and Walter (2013) noted that most courses are taught by male academics, which is not to be explained by the fact that most MOOCs are from fields with low percentages of female faculty members, because even in fields with higher female percentages, the vast majority of open online courses are taught by men. Therefore, it could be said that the male gender use MOOCs more to teach than their female counterpart.

Expectedly, undergraduate students especially, those in educational technology ought to have the awareness of MOOCs and use the platforms to learn various courses, especially during the corona virus pandemic (COVID-19) lockdown. This is because educational technology is about problem

solving in education using technology. COVID-19 has posted a problem in the education sector which reduced the number of time and space allowed for physical contact to learn. Thus, MOOCs being one of the educational technology tools that enable distance learning, has become essential for students to engage in teaching and learning process even at the remotest context. Therefore it is imperative for educational technology students to be aware and utilize MOOCs platforms to support their learning. Precisely, the use of MOOCs platforms to facilitate learning is presently becoming more popular among university students in developed nations of the world. The students and their lecturers use MOOCs with different strategies like blended learning to ensure students are responsible for their learning. This appears low and dwindling in developing countries like Nigeria. Some undergraduate educational technology students seem to be unaware of MOOCs, let alone platforms hosting MOOCs or utilizing MOOCs platforms to enhance their learning outcomes. Lack of awareness might be limiting students who could have used MOOCs for learning outside the walls of conventional universities (where they engage in physical lecturer-students interaction) to improve their learning outcomes. Though other learning management system platforms like Edmodo, and Schoology which students could interact with exist, none of the platforms provides access to MOOCs for students in Nigerian Universities. This lack of awareness and poor utilization of MOOCs platforms among Nigerian students need to be adequately investigated. It is against this backdrop that the study investigated the awareness and utilization of MOOCs platforms by undergraduate educational technology students of University of Calabar, Nigeria. It also investigated any difference which might exist between male and female undergraduate educational technology students' use of MOOCs for academic purpose.

Research Questions

1. What is the level of awareness of MOOCs platforms among educational technology undergraduates in the University of Calabar?
2. What is the difference in undergraduate use of MOOCs platforms to study educational technology courses and other courses in the University of Calabar?



Hypotheses

1. There is no significant difference between male and female undergraduate educational technology students of University of Calabar in the awareness of MOOCs platforms.
2. There is no significant difference between undergraduate educational technology students' use of MOOCs platforms to study educational technology courses and other courses in the University of Calabar.

Methodology

The study adopted the non-experimental design of survey research types to investigate the awareness and usage of MOOCs platforms among undergraduates of University of Calabar, Nigeria. The variables of the study are; (i) Awareness of MOOCs platforms, (ii) Usage of MOOCs, and (iii) Gender. The population of the study comprised of all the 651 undergraduate educational technology students of University of Calabar. The simple random sampling technique was used to select 400 undergraduates across the four levels. In doing this, 100 students were selected from each of the four levels making a total of 400 respondents who participated in the study. The sample size was determined using the Taro Yamane sample determination technique formula.

Research Instrument

The instrument used for data collection was questionnaire titled; 'Awareness and Usage of MOOCs platforms among Undergraduate Students Questionnaire' (AUMPAUEDSQ). The questionnaire was divided into sections; I and II. Section I elicited participants' gender, level, and department. Section II has two parts, A and B, eliciting data on undergraduates' awareness and usage of MOOCs platforms. Part A contains eleven (11) items on the level of awareness of MOOCs platforms, while Part B contains eighteen (18) items on usage of MOOCs platforms among undergraduate educational

technology students. In order to ease the transformation of data from the questionnaire used for the study, a code was developed. For example, in section A and B of the questionnaire, the first item was gender. This was grouped into male and female. The male was assigned the code of 1 and 2 for female. In section B, the items were categorized into Aware assigned with the code 1 and not aware assigned with the code 2, use assigned with the code 1 and not use assigned with the code 2.

The instrument was validated by subjecting it to experts' review. The experts were from the field of measurement and evaluation to ensure face and content validity. Cronbach alpha was used to test for the reliability of the questionnaire, with the reliability coefficient indices of 0.8 and 0.7 for the awareness of MOOCs platforms, and usage of MOOCs platforms to study educational technology courses and other courses items, respectively. The average reliability obtained for the clusters was 0.75

Procedure for Data Collection

The copies of the questionnaire were administered to undergraduate students of educational technology in the Department. The exercise lasted two (2) weeks.

Data analysis

Data collected from the survey were analyzed using descriptive statistics to calculate the percentage, Mean (M), and Standard Deviation (SD). A weighted mean above or equal to the standard mean 1.5 showed a high weight mean and agrees to the research question. In addition, the inferential statistics of t-test was used to test the two hypotheses formulated for the study at 0.05 level of significance, using the Statistical Package for the Social Sciences (SPSS) Version 22.0. Hence, any research hypothesis with calculated p-value above 0.05 level of significant was not rejected, while that below 0.05 level of significant was rejected.



Results

Table 1: Level of Awareness of MOOCs platforms among undergraduate educational technology students (n=400)

S/N	Items	Aware Number (%)	Not Aware Number (%)	Mean	Rank
1	FutureLearn	227(56.8)	173(43.3)	1.56	3rd
2	YouTube	229(57.3)	171(42.7)	1.57	2nd
3	Canvas	203(50.7)	197(49.3)	1.50	5th
4	Khan Academy	211(52.7)	189(47.3)	1.52	4th
5	Iversity	100(25.0)	300(75.0)	1.25	9th
6	Audacity	187(46.7)	213(53.3)	1.46	7th
7	Udemy	201(50.2)	199(49.8)	1.50	5th
8	EDX	194(48.5)	206(51.5)	1.48	6th
9	Coursera	336(84.0)	64(16.0)	1.84	1st
10	LinkedIn Learning	230(57.5)	170(42.5)	1.57	2nd
11	Others platforms hosting MOOCs	164(41.0)	236(59.0)	1.41	8th
N=400, Weighted mean = 1.51, Standard Mean=1.50				1.51	

Key: Mean ≥ 1.5 means agreement on awareness of MOOCs among educational technology undergraduates

Table 1 presents the results of awareness of MOOCs platforms among undergraduate educational technology in University of Calabar. Findings showed that majority 336(84.0%) of the respondents were aware of Coursera while 64(16.0%) not aware and supported with Mean of (\bar{X} =1.84), followed by 229(57.3%) of the respondents who were aware of YouTube while 171(42.7%) were not aware and supported with Mean of (\bar{X} =1.57). In addition, 227(56.8%) of the respondents were aware of FutureLearn while 173(43.3%) were not aware and supported with Mean of (\bar{X} =1.56). Also, 211(52.7%) of the respondents were aware of Khan Academy while 189(47.3%) were not aware and supported with Mean of (\bar{X} =1.52). Majority 203(50.7%) of the respondents were aware of CANVAS while 197(49.3%) were not aware and supported with Mean of (\bar{X} =1.50). A little less than half of the respondents, 194(48.5%) were aware of EDX while 206(51.5%) were not aware and supported with Mean of (\bar{X}

=1.48). Likewise, 187(46.7%) of the respondents were aware of Audacity while 213(53.3%) were not aware and supported with Mean of (\bar{X} =1.46).

In addition, 164(41.0%) of the respondents claimed they were aware of other platforms hosting MOOCs while 236(59.0%) were not aware and supported with Mean of (\bar{X} =1.41). Furthermore, only a quarter, 100(25.0%) of the respondents were aware of Iversity while 300(75.0%) were not aware, and this was supported with a Mean of (\bar{X} =1.25). The result, with the weighted mean of 1.51, against the Standard Mean of 1.50, implying that the majority of the respondents were aware of the platforms hosting MOOCs and almost all the items contributed to the awareness of platforms hosting MOOCs since the mean score of the each items is greater than the standard mean (1.51) except the mean of (\bar{X} =1.25) Iversity that was far below the standard mean (\bar{X} =1.50).



Table 2. Usage of MOOCs among undergraduate educational technology students (n=400)

S/N	Items	Use to study educational technology %	Use to study other course %	Mean	Rank
8	FutureLearn	183(45.7)	217(54.3)	1.45	3
9	YouTube	186(46.5)	214(53.5)	1.46	1
10	Canvas	177(44.3)	223(55.7)	1.44	3
11	Khan Academy	170(42.5)	230(57.5)	1.42	5
12	Iversity	19(4.7)	381(95.3)	1.04	11
13	Audacity	155(38.7)	245(61.3)	1.38	6
14	Udemy	178(44.5)	222(55.5)	1.44	3
15	EDX	152(38.0)	248(62.0)	1.38	6
16	Coursera	187(46.7)	213(53.3)	1.46	1
17	LinkedIn Learning	146(36.5)	254(63.5)	1.36	6
18	Others platforms hosting MOOCs	57(14.2)	343(85.8)	1.14	10
N=400, Weighted mean = 1.40, Standard Mean=1.50				1.36	

Key: Mean ≥ 1.5 means agreement on usage of MOOCs among educational technology undergraduates.

Table 2 presents results of usage of MOOCs platforms to study educational technology courses and other courses among undergraduate educational technology students of University of Calabar. Findings showed that majority of 186(46.5%) of the respondents used YouTube to study educational technology courses, while 214(53.5%) used Youtube for other courses, and supported with Mean of (\bar{X} = 1.46). Also, 187(46.7%) of the respondents used Coursera while 213(53.3%) used Youtube for other courses, and supported with Mean of (\bar{X} = 1.46). In addition, 183(45.7%) of the respondents used FutureLearn for educational technology courses, while 217(54.3%) used it for other courses, and supported with Mean of (\bar{X} = 1.45). Likewise, 177(44.3%) of the respondents used Canvas for educational technology courses, while 223(55.7%) used it for other courses, and supported with Mean of (\bar{X} = 1.44). Again 178(44.5) of the respondents used Udemy to study educational technology courses while 222(55.5) used ot for other courses and supported with Mean of (\bar{X} = 1.44). Also, 170(42.5%) of the respondents used Khan Academy to study educational technology courses while 230(57.5%) used it for other courses, and supported with Mean of (\bar{X} = 1.42).

Furthermore, 155(38.7%) of the respondents used the Audacity to study educational technology courses while 245(61.3%) used it for other courses, and supported with Mean of (\bar{X} = 1.38). Also, less than two-fifth, 152(38.0%) of the respondents used EDX to study educational technology courses while 248(62.0) used for other courses, and supported with Mean of (\bar{X} = 1.38). In addition, 57(14.2%) of the respondents used other platforms hosting MOOCs to study educational technology courses while 343(85.8%) used them to study other courses. This was supported with Mean of (\bar{X} = 1.14). Again, 19(4.7%) of the respondents used Iversity to study educational technology courses while 381(95.3%) used them to study other courses, and supported with Mean of (\bar{X} = 1.04). The results, with the weighted mean of 1.40, against the Standard Mean of 1.50, revealed that the usage of MOOCs platforms to study educational technology courses and other courses among undergraduate educational technology students is low. Also, the result showed that the items did contribute to the usage of MOOCs among undergraduate educational technology students since the mean score of the each items was less than the standard mean (1.5).



Hypotheses

Table 3: Independent t-test result showing the difference in the awareness of MOOCs between male and female undergraduates.

Gender	Mean	STD	df	t-value	P-value	Remark
Male	26.80	2.43	398	0.811	0.41	N.S
Female	27.01	2.69				

N.S. denotes Not Significant at $p>0.05$

Table 3 presents information on the independent t-test analysis of hypothesis one, which was stated in the null form as “there is no significant difference between male and female undergraduate educational technology students of University of Calabar, in the awareness of MOOCs platforms”. This hypothesis was tested at 0.05 significant level, with a degree of freedom of 398. The result gave a low t-value (t-value=0.811) of the variables, meaning that the difference is not statistically significant. In particular, evidence from the P-values ($P>0.05$) revealed that indeed there is no significant difference in the awareness of MOOCs platforms between male and

female educational technology undergraduates. Thus, the null hypothesis was not rejected. The implication of this result is that both male students and female undergraduate educational technology students use MOOCs platforms. Also, the result showed that the mean score (27.01) of female undergraduate students was greater than the mean score (26.80) of their male students counterparts. This indicates that female undergraduate students have higher awareness of MOOCs platforms than male undergraduate students. However, the differences in the awareness is not statistically significant.

Table 4: Independent t-test result showing the use of MOOCs platforms to study educational technology courses and other courses.

Gender	Mean	STD	df	t-value	P-value	Remark
Use of MOOCs to study educational technology	26.82	2.64	398	0.91	0.38	N.S
use of MOOCs to study other courses	27.06	2.38				

N.S. denotes Not Significant at $p>0.05$

Table 4 presents the results of the independent t-test analysis of hypothesis two, which was stated in the null form as “There is no significant difference between undergraduate educational technology students’ use of MOOCs platforms to study educational technology courses and other courses in the University of Calabar”. This hypothesis was tested at 0.05 level of significance, with a degree of freedom of 398. The result gave a low t-value (t-value=0.91) of the variables. This shows that the difference is not statistically significant, and evidence from the P-values ($P>0.05$) revealed that indeed there is no

significant difference in the use of MOOCs platforms to study educational technology courses and other courses by educational technology undergraduates in the University of Calabar. Thus, the null hypothesis was not rejected. This implies that undergraduate educational technology students used MOOCs platforms to study both educational technology courses and other courses. Also, table 4 showed that the mean score (27.06) of use of MOOCs to study other courses was greater than the mean score (26.82) of use of MOOCs to study educational technology courses. This indicates that undergraduate students of



educational technology used MOOCs platforms to study other courses than educational technology courses.

Discussion

The study revealed that there is no significant difference in the usage of MOOCs between male and female undergraduate educational technology students of University of Calabar. The results showed that female undergraduate students were aware of MOOCs more than the male undergraduates. The findings could be because majority of the students were aware of MOOCs platforms in that the difference in the awareness of the platforms between male and female students appeared insignificant. The finding of the study agrees with the assertions of Price (2006) and Chyung, (2007) that while male and female students are aware and use MOOCs, female students stay long and complete courses online than male. This supports Rodrigo, Lassi and Arto, (2020) who reported increase in women attending MOOC but observed that women are more likely to drop out early on MOOC than men.

Again, the results of the study shows that majority of the respondents were aware of the platforms hosting MOOCs. Particularly, they were majorly aware of the top three items, Coursera, YouTube and FutureLearn. On the other hand, the three least ranked items were Iversity, other platforms hosting MOOCs and Audacity. This indicates that educational technology undergraduates are aware of platforms that host MOOCs. The findings of the study is in line with Adebayo and Babalola (2020) who concluded that awareness of MOOCs is important to the use MOOCs among undergraduate students in universities in Osun State, and that of Abdus (2018) who reported that 72.7% of the most top universities exposed participants to MOOCs and offered diploma and certificate courses in 2012. This shows that undergraduates of Educational Technology in University of Calabar are aware of MOOCs platforms.

The findings of the study revealed that the items did not contribute to the use of MOOCs among undergraduate educational technology students of University of Calabar. This shows that while undergraduate educational technology students are aware of existing platforms that host MOOCs, the usage of MOOCs among the students is low. The awareness could be because the undergraduate students may have been taught MOOCs in theory, but were yet to use MOOCs platform to learn individually,

receive lectures, and prepare for examinations, source for materials to do their assignments and other school works. Similarly, it could be that MOOCs have not motivated them to study for examination, or makes learning more interesting for them or their friends. The findings of the study is in agreement with Aboshady et al. (2015) who found that students enrolled on MOOCs but majority of the students did not complete certificate courses. Also, the finding supports Bates (2015) who reported a high enrollment of participants thereby indicating increased number of usage of MOOCs since its launching. Also, Patti Ordonez-Rozo (2012) who revealed that students use MOOCs but participation was low among students.

Also, the findings revealed that the use of MOOCs to study educational technology courses is not significantly different from the use of MOOCs to study other courses among undergraduate educational technology students of University of Calabar. This implies that undergraduates in educational technology use MOOCs to learn both educational technology courses and other courses. This could be because the students were also offering some general courses in the faculty in which they interacted with MOOCs and found them useful. The finding of the study is in agreement with Griffiths et al. (2014) who reported that students learn more with MOOCs and found that students exposed to experiment group had higher cumulative GPA than their counterparts in control group. However, the study disagrees with Firmin et al. (2014) who reported that there is a slight variation across the courses that students engage themselves on MOOCs platforms.

Conclusion

In conclusion, the Massive Open Online Courses (MOOCs) have gained popularity over the years due to its tremendous roles in making teaching and learning accessible for students across the globe. This has made a case for its usage among students especially in tertiary institutions. However, undergraduate students of educational technology and perhaps, students generally in Nigeria Universities at large are yet to utilize MOOCs maximally to improve their learning outcomes. While the use of MOOCs among undergraduate needs more attention, report have shown that female students use MOOCs more than their male counterparts. It is also evident that MOOCs platforms are mostly used are used to study other courses than educational technology courses among undergraduates of educational technology in



University of Calabar, however, the differences is not statistically significant.

Recommendations

Based on the findings of the study, it was recommended that,

1. It is imperative to organize awareness campaign for students to be informed about various MOOCs platforms. Also, training and retraining programmes on MOOCs need to be provided for both staff and students.
2. Male and female students required more awareness on impacts of Usage of MOOCs on their learning outcomes. Undergraduates should be encouraged to sign up on MOOCs platforms and complete courses. Since MOOCs require internet facilities, the University should as a matter of urgency make internet facilities available and accessible, or strengthen the existing ones for students to access MOOCs platforms and sign up for courses relevant to their programmes.
3. In order to improve usage of MOOCs among undergraduate educational technology students, lecturers should often blend MOOCs with conventional lecture strategy, and encourage students to use MOOCs in learning.
4. Lecturers should adopt MOOCs platforms to flip their classroom to really enhance students' engagement and communication skills which are part of the essential skills for learning in the twenty-first century.

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