



Education Lecturers' Perception and Attitude towards Massive Open Online Courses

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ABSTRACT

This study investigated the perception and attitude of education lecturers towards Massive Open Online Courses (MOOCs) in institutions of higher learning within Niger State, Nigeria. The influence of gender was also examined. The study adopted a descriptive survey design and 138 participants were selected through a multi-stage sampling technique. Four research questions and two null hypotheses guided the study, and a 14-item questionnaire was used as instrument for data collection. The questionnaire was subjected to both validation and reliability checks. Data gathered from the administration of the instrument were analyzed using Mean, Standard Deviation and t-test statistics. A decision rule was set, in which, a mean score of 3.0 and above was considered Agreed (positive perception/attitude) while a mean score below 3.0 was considered Disagreed (negative perception/attitude). Findings revealed that lecturers' perception and attitude towards massive open online courses were positive with cumulative mean scores of 4.07 and 4.03 out of possible 5.0. Also, gender as a moderating variable, had influence on lecturers' perception and attitude towards MOOCs. Based on these findings, it was recommended among others that education lecturers should be encouraged to participate in MOOCs in order to update their knowledge and skills. This can be achieved through the provision of enabling work environment such as internet wi-fi and learning tools that support synchronous and asynchronous online learning and by recognizing relevant certificates obtained through MOOCs during staff promotion exercise.

Keywords: Massive open online courses, Perception, Attitude, Educational technology, Electronic learning

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Introduction

Today, improvements in educational technology are assisting higher education providers to gain more coverage, thereby, increasing people's access to quality education. Specifically, the widespread use of electronic learning platforms has led to perhaps, the most fascinating developments in education, the Massive Open Online Courses (MOOCs). MOOCs are online platforms that present individuals with opportunity to undertake structured courses within a period at a predefined pace with little or no cost, thereby, providing opportunities for professional development and lifelong learning through technology tools (Soyemi, Ojo & Abolarin, 2018). In fact, MOOCs have been proclaimed as the solution for high-quality education provision in developing countries (Sukhbaatar, Choimaa & Usagawa, 2018).

Liyanagunawardena (2015) stated that, George Siemens and Stephen Downes of University of Manitoba, Canada, offered the first MOOC in 2008 and since its success, a range of other courses and platforms has emerged. MOOCs are increasing in popularity, with many more institutions and academics becoming involved with the delivery (Murray, 2014). Notable MOOC providers include Udacity, Coursera and edX, and of course, many Universities around the world (Sukhbaatar, *et al.*, 2018).

MOOCs can be seen as a favorable option for continued professional education. Hoy (2014) opined that MOOCs can be a convenient and economical method of continuous education, especially given the declining industry funding for professional training. It can also be a good way to continually update one's skillset. For instance, education lecturers in Nigeria would usually want to further their education outside the country in order to gain international exposure and obtain professional certificates from prestigious Universities. This desire always makes lecturers source for financial assistance or sponsorships from government and non-governmental organizations. The process is competitive and the financial aid is reducing. However, with MOOCs, lecturers can still acquire the necessary new skills that would be relevant in the discharge of their academic responsibilities. Liyanagunawardena (2015) stressed that in MOOCs, specialization tracks are being provided for participants. This implies that education lecturers can gain world class educational experiences since many relevant courses are being handled by renowned academic experts from prestigious Universities of the world, Harvard, MIT and Stanford inclusive.

Perception and attitude are some of the major variables that can influence an individual's decision to participate in MOOCs. For instance, education lecturers would have to perceive MOOCs useful in updating their knowledge and skills, and that the experience obtained would be relevant in making them better efficient in their teaching responsibilities before participating in the courses. Reports on separate studies conducted by Murray (2014) and Abdelaziz, *et al.*, (2017) revealed positive perceptions of respondents about MOOCs because they are convinced that MOOCs will expand access to knowledge. Similarly, the positive or negative disposition and belief of lecturers towards MOOCs could influence their participation. Bohner and Wanke (2002) described attitude as beliefs that can influence people's decision and behavior. This fact was buttressed by Davis and Venkatesh (2004), Abu-Dalbouh (2013) and Falode (2018) who stressed that individual's attitude towards online technology would be a great factor that would determine the actual participation. Unlike the conventional courses, MOOCs are online and because of this, the attitude of lecturers towards participation may vary. However, Adesina (2013) opined that attitude can be changed through proper orientation.

Education lecturers have a lot of academic tasks to accomplish every day. The tasks include teaching, research, supervision and community service. These activities make it imperatively difficult

for them to enroll in conventional institutions to update their knowledge. The potential of MOOCs in improving personal development and the development of skills and competence of education lecturers required in the classroom cannot be over-emphasized. They have been adopted in developed countries and have been found to enhance acquisition of knowledge positively. Despite the fact that number of MOOCs and the number of participants are increasing rapidly, Sukhbaatar, *et al.*, (2018) observed that the number of participants from developing countries, particularly Africa is still low. Also, research into the MOOCs is still in its infancy in Africa and there is little information available on perception and attitude towards MOOCs. How do education lecturers perceive MOOCs and what are their dispositions towards them? Hence, this study was carried out to determine the perception and attitude towards Massive Open Online Courses (MOOCs) among education lecturers in Niger State, Nigeria. The influence of gender on education lecturers' perception and attitude was also examined.

Research Questions

The following research questions were raised to guide the study:

1. What is the perception of education lecturers on Massive Open Online Courses (MOOCs)?
2. What is the attitude of education lecturers towards MOOCs?
3. Does gender has influence on education lecturers' perception on MOOCs?
4. Does gender has influence on education lecturers' attitude towards MOOCs?

Research Hypotheses

Two following null hypotheses were tested in the study:

HO₁: There is no significant difference between male and female education lecturers' perception on MOOCs.

HO₂: There is no significant difference between male and female education lecturers' attitude towards MOOCs.

Methodology

This study adopted descriptive survey research design. The methodology involved the use of questionnaire to elicit needed responses from education lecturers on their perception and attitude towards Massive Open Online Courses.

Participants

The population of the study comprised of all the 166 education lecturers in the four tertiary institutions offering education courses in Niger State Nigeria. Firstly, purposive sampling technique was used to select faculties of education in these institutions because of the relevance of faculty members to this study. Thereafter, based on the number of faculty members in these faculties, a total of 166 questionnaires were distributed. However, within the two weeks allocated for administration of the questionnaires, some faculty members were not available, hence, only 138 questionnaires (completed by 51 male and 87 female participants) were duly filled and returned to the researchers.

Data Collection and Analysis

A researchers-developed questionnaire was used for data collection. The questionnaire consists of three sections (Sections A, B, & C). Section A was used to collect the respondents' demography (institution, discipline and gender) while Section B and C consists of seven items each on perception and attitude towards Massive Open Online Courses. A five-point Likert scale of Strongly Agree (SA, 5 points), Agree (A, 4 points), Undecided (U, 3 points), Disagree (D, 2 points) and Strongly Disagree (SD, 1 point) was used in weighing responses to items in the questionnaire.

Responses on each questionnaire item were analyzed according to frequencies and mean rankings. First of all, total responses in each scale category (frequency) of every item were tabulated. Next, the number of points allocated to each category was multiplied by the frequency of each category (n). Lastly, the sum of these scores was divided by the sum of the frequency for each category (ΣN).

$$\text{Mean} = \frac{[5 \times N(\text{SA})] + [4 \times N(\text{A})] + [3 \times N(\text{U})] + [2 \times N(\text{D})] + [1 \times N(\text{SD})]}{\Sigma N}$$

A mean response below 3.00 was considered disagreement while a mean response of 3.00 and above was considered as agreement. Responses to questionnaire items were analyzed and used to provide answers to research question one, two three and four using mean and standard deviation. Furthermore, the average mean responses of male and female were analyzed using independent sample t-test, which was used to test hypotheses one and two at 0.05 alpha level.

The Scale

The questionnaire was validated by three open and distance learning experts. Based on their suggestions, some items were modified while some items were removed. To determine the internal consistency of the questionnaire items, a pilot test was carried out on 15 respondents within the study population but outside the selected study sample. The instrument was administered once and the scores obtained were computed using Cronbach Alpha’s formula. Reliability co-efficient of 0.73, and 0.70 were obtained, hence, the questionnaire was considered as having high reliability and therefore suitable for data collection.

Findings

The responses of the entire 138 participants were used to provide answers to research question one and two. For the purpose of comparing the responses of participants based on gender, research question three and four were hypothesized. Thereafter, the responses of 51 male and 87 female respondents who participated in the study were collated and analyzed for testing hypotheses one and two. Descriptive statistics of Mean and Standard Deviation were used to answer the research questions as presented in Tables 1 and 2, while independent sample t-test were used to test the hypotheses as presented in Tables 3 and 4.

Table 1 helps to provide answers to the first research question. The results of data illustrate that the mean score for items 1 through 7 ranged between 3.64 and 4.43 and were therefore agreed by the respondents.

Table: 1

Mean response of education lecturers’ perception on massive open online courses

S/N	Item	N	Mean	SD	Decision
1	My enrolment in Massive Open Online Courses (MOOCs) would help in updating my knowledge.	138	4.43	0.53	Agree
2	MOOCs will assist me acquire innovative teaching skills needed for the discharge of my teaching responsibilities.	138	4.20	0.74	Agree
3	Through MOOCs, my teaching career would be enhanced.	138	4.28	0.75	Agree
4	My MOOCs enrolment would improve my productivity.	138	3.78	0.76	Agree

5	Using Massive open Online Courses would enhance my effectiveness as a lecturer.	138	3.64	0.85	Agree
6	MOOCs would be a useful tool in encouraging and meeting intellectuals around the world to share ideas.	138	4.19	0.76	Agree
7	MOOCs would certainly contribute positively to my personal success and all-round education.	138	3.96	0.97	Agree
Average Mean			4.07		Agree

Table 1 shows the Mean and Standard Deviation of education lecturers' response on perception on Massive Open Online Courses. The table reveals the computed mean score of 4.43 with Standard Deviation of 0.53 for item one, mean score of 4.20 with Standard Deviation of 0.74 for item two, mean score of 4.28 with Standard Deviation of 0.75 for item three, mean score of 3.78 with Standard Deviation of 0.76 for item four, mean score of 3.64 with Standard Deviation of 0.85 for item five and mean score of 4.19 with Standard Deviation of 0.76 for item six, and mean score of 3.96 with Standard Deviation of 0.97 for item seven. The table reveals further that the mean score to each of the seven items is consistently above the decision mean of 3.00 while the average mean response to all the items is 4.07. This indicates that education lecturers agreed and perceived Massive Open Online Courses to be useful.

Table 2 helps to provide answers to the second research question. The results of data illustrate that the mean score for items 1 through 7 ranged between 3.64 and 4.54 and were therefore agreed by the respondents.

Table: 2
Mean response of education lecturers' response on attitude towards massive open online courses

S/N	Item	N	Mean	SD	Decision
1	I believe that Massive Open Online Courses (MOOCs) are good platforms where I can update my knowledge and skills.	138	4.54	0.57	Agree
2	I like the motive behind MOOCs because knowledge obtained could be used to improve on my teaching career.	138	4.20	0.70	Agree
3	Through MOOCs, I would be equipped with the right knowledge and be fully prepared to face challenges in my teaching career.	138	4.01	0.75	Agree

4	I appreciate using MOOCs platforms because it serves as innovative idea in open and distance learning.	138	3.64	0.97	Agree
5	I believe that delivery of MOOCs courseware through different platforms would aid easy assimilation of knowledge based on individual's need and pace.	138	4.10	0.75	Agree
6	I feel that through MOOCs forum, I could interact with so many intellectuals across the world to share ideas and knowledge.	138	3.97	0.96	Agree
7	I feel that since MOOCs are short duration courses it would fit into my busy schedule as a teacher.	138	3.79	0.77	Agree
Average Mean		4.03	Agree		

Table 2 shows the Mean and Standard Deviation of lecturers' response on attitude towards Massive Open Online Courses. The table reveals the computed mean score of 4.54 with Standard Deviation of 0.57 for item one, mean score of 4.20 with Standard Deviation of 0.70 for item two, mean score of 4.01 with Standard Deviation of 0.75 for item three, mean score of 3.68 with Standard Deviation of 0.97 for item four, mean score of 4.10 with Standard Deviation of 0.75 for item five, mean score of 3.97 with Standard Deviation of 0.96 for item six, and mean score of 3.79 with Standard Deviation of 0.77 for item seven. The table reveals further that the mean score to each of the seven items is consistently above the decision mean of 3.00 while the average mean response to all the items is 4.03. This indicates that education lecturers agreed and have positive attitude towards.

Table: 3

The t-test analysis of cumulative mean response of male and female education lecturers on perception on massive open online courses

Group	N	Df	Mean	SD	t- value	p- value
Male	51	136	78.47	10.56	-3.909 ^{ns}	0.006
Female	87		82.38	5.87		

Ns: not significant at 0.05 alpha level

Table 3 shows the t-test analysis of cumulative mean response of male and female education lecturers on perception on massive open online courses. The mean scores of male and female education lecturers are 78.47 and 82.38 with standard deviation of 10.56 and 5.87 respectively. The tvalue (-3.909, df =136, p = 0.006) was significant at 0.05 alpha level, hence, hypothesis one was rejected. This implies that difference exists between the responses of the two groups in favor of female education lecturers who perceived massive open online courses useful more than their male counterparts.

Table: 4

The t-test analysis of cumulative mean responses of male and female education lecturers on attitude towards massive open online courses

Group	N	Df	Mean	SD	t- value	p- value
Male	51	136	77.65	9.79	-3.456 ^{ns}	0.013
Female	87		82.38	5.87		

Ns: not significant at 0.05 alpha level

Table 4 shows the t-test analysis of cumulative mean response of male and female education lecturers on perceived usefulness of massive open online courses. The mean scores of male and female education lecturers are 77.65 and 81.10 with standard deviation of 9.79 and 6.30 respectively. The t-value (-3.456, df =136, p = 0.013) was significant at 0.05 alpha level, hence, hypothesis one was rejected. This implies that difference exists between the responses of the two groups in favor of female education lecturers whose positive attitude towards massive open online courses was more than that of their male counterparts.

Discussion and Conclusion

Findings of this study revealed that the perception of education lecturers towards Massive Open Online courses (MOOCs) was positive. This finding is in line with the views of Venkatesh (2004) and that of Abu-Dalbouh (2013) that the perception of users on technological innovations would usually be positive if they consider such to be in enhancing their job performance. The positive perception of education lecturers on MOOCs was because they believe that through MOOCs, their knowledge would be updated and current teaching methodology would be acquired, thereby enhancing their quality of teaching and ultimately improve their students' academic performance. Also, findings of this study revealed that education lecturers' attitude towards MOOCs was positive. This finding is in agreement with the earlier findings of Alharbi and Drew (2014) who found that faculty members' attitude towards online learning platforms was positive. The positive attitude of education lecturers towards MOOCs was because of the appealing, friendly and interactive characteristics of MOOCs platforms which they believe would be interesting in acquiring and updating their knowledge and skills.

The findings of this study also revealed that significant difference exists in the perception of male and female education lecturers on Massive Open Online Courses in favour of female lecturers. Also, findings revealed that significant gender difference exists in the attitude of male and female education lecturers in favour of female lecturers. There is no literature to support or explain the factors that were responsible for these differences. Notwithstanding, these findings will serve as literature to be consulted by upcoming researchers on gender differences in lecturers perception and attitude towards electronic and online learning platforms.

Based on findings that emanated from this study, the following recommendations were made: (i) Education lecturers should be encouraged to gain access to MOOCs. This can be done through the provision of enabling work environment such as internet wi-fi and learning tools that support synchronous and asynchronous online learning by government, school administrators and Nongovernmental organizations.

(ii) Sensitization lectures, workshops and seminars should be organized for education lecturers on the benefits of MOOCs and also on relevant MOOCs platforms.

(iii) Government and school administrators should endeavor to recognize relevant certificates obtained through MOOCs and use such for upgrading and promoting education lecturers who successfully complete such courses.

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