



## Colleges of Education Lecturers' Attitude Towards the Use of Virtual Classrooms for Instruction

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### ABSTRACTS

This study aimed at examining the attitudes of the college of education lecturers towards the use of VCs for instruction in Ondo State. The objectives were to: (i) examine lecturers' attitude towards the use of VCs, (ii) determine the difference in lecturers' gender on their attitude towards the use of VCs, and (iii) examine lecturers' attitude towards the use of VCs based on years of teaching experience. A self-structured questionnaire with a reliability result of 0.70 was used to collect data from 298 lecturers. Frequency counts, percentages, and mean were used to answer research question 1, and an independent sample t-test was used to test hypotheses 1-2 at a 0.05 level of significance. It was revealed that lecturers had a positive attitude towards the use of VCs, no significant difference in the lecturers' attitude towards the use of VCs based on gender and there was a significant difference between the less experienced and the experienced lecturers' attitudes towards the use of VCs in favor of less experienced lecturers. The study concluded that irrespective of gender, lecturers' attitudes towards the use of VCs do not vary, while there are disparities in the lecturers' years of teaching experiences, this implied that, regardless of the instructors' gender, integrating VCs for education will be a welcome development. While lecturers' attitude is influenced by their years of teaching experience. The study recommended among others that concerned agencies and school management should sensitize, train, and provide an enabling environment.

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## 1. INTRODUCTION

The introduction of information and communication technology ICT in education has helped in the gathering, storing, processing, organizing, and proper dissemination of instructional content. These functions have gone a long way to aid and support the delivery of information for the improvement of teaching and learning. The integration of ICT into education is imperative to the improvement of the teaching and learning process (Machmud *et al.*, 2021). Also, ICT has become quintessential in all spheres of life due to the proliferation of digital technologies, both in formal and informal educational settings. The main objective of most stakeholders in the educational industry since the advent of ICT is to fully facilitate its integration into education and to modernize and improve the face of conventional teaching techniques using technologies (Sangrà & González-Sanmamed, 2016).

The massive integration of ICT into education has brought about the evolution of different methods of learning which vary from that of the conventional methods. These methods are blended learning, hybrid learning, flipped learning, flexible learning, open learning, distance learning, online learning, and open and distance learning (ODL). Mobile and electronic learning (eLearning) are also part of this evolutionary process. Consequently, the adoption of eLearning by lecturers and students for teaching and learning is imperative in meeting the requirement of the 21st-century educational system. eLearning is used to reach individuals who are not opportune to get educational services in their immediate environment. It is a medium of learning, unlike the conventional medium where learners would have to learn within the four walls of the classroom. This is why it is considered the most preferable mode of learning for distance learners; these distance learners adopt virtual platforms for their learning activities. However, these virtual platforms are not only used by distance learners but also to blend or aid the conventional teaching process for effective instructional delivery (Fashade *et al.*, 2017).

The virtual platforms are also called Virtual classrooms (VCs) which are generally used as an alternative to conventional teaching (Oproiu, 2015). The VCs are new digital platform concepts that create an atmosphere by integrating internet technologies in which instructors, students, scholars, and interested persons can engage, cooperate, connect and describe their thoughts and opinions in a well-organized, professional and pedagogical manner. These VCs are the platform for live interaction occurring simultaneously or singly between teachers to the learner, learners to the teacher, and learners to learners. Also, Iftakhar (2016) described VCs as “an online classroom” in which communication occurs between members. Likewise, described VCs as virtual environments built for reading, which are usually part of a larger learning platform, such as a learning management system (LMS) or virtual campus. Also, the features of these VCs encompass live training, either on a one-on-one basis or group basis; live video and audio sharing features; an interactive whiteboard software; file archives to exchange additional resources; and text messaging services.

The typical examples of these VCs are ezTalks Webinar, google hangouts, blackboard collaborate, Adobe Connect, Edvance360 Learning Management Software, eTrainCenter Software. The rise in university and other educational institutions' use of VCs has undoubtedly had a significant impact on the learning process (Oproiu, 2015). These VCs translate learning experiences to excite the new generation of young school students and their teachers. Moreso, it has breaks learning out of the narrow boxes it was trapped in during the twentieth century by making students not be confined to a specific building or restricted to a single location during learning (Anekwe, 2017). The use of VCs by lecturers is Imperative to the training of the 21st-century teaching force. The usage will inspire easier usability for class

instruction and lifelong professional training of the Pre-service teachers when they assumed the role of a teacher.

There are skills in the classroom that are difficult to teach. For example, how will a lecturer teach potential teachers how to cope with behavioral issues among students in a class, or to stay cool when a pupil threatens their authority? The solution may be in the VCs. The ability to recognize, identify, interpret, and theorize information by future teachers is determined by the rate at which VCs are used by their lecturers while undergoing the teacher education program. These VCs seek to use advanced technologies for learning, to bring about larger-scale change in-classroom experience than has so far been affected through direct intervention by teacher education (Hall, 2012).

Importantly, the tutors in all levels of education must be technologically literate (Aljaberi, 2015). At first glance, though, it seems that being technologically literate will build skills in the use of VCs among College of Education Lecturers'. However; it is not only the presence of technology in academic situations, but it is also the translation of what is already known through face-to-face experiences into digital settings, coupled with the successful use of software and virtual knowledge that counts (Gulbahar & Kalelioglu, 2015). Also, lecturers' attitude is a critical factor in the revolution of the teaching and learning process, it plays an important role in the online teaching and learning process because they instilled in the teachers the zeal to use online platforms (Mardiana, 2020).

The research conducted by Alodail (2016) noted that when lecturers are familiar with a particular technology, and its usage they tend to show a positive attitude towards its use. Also, study of the change in students' attitudes towards favorable and unfavorable factors of VCs, concluded that as students gain more experience using VCs for learning, the students' attitudes and desire to learn will increase. According to the study, the motivation to use VCs for teaching and learning processes helps in the avoidance of social distractions. As students become more familiar with the use of VCs, their reluctance to use VCs declines.

Gender issues also have been linked with the attitude of the lecturers towards the adoption of VCs for instruction. Gender has been identified to have a huge influence on behavioral activities on VCs, thus, this demographic variable needs to be assessed and regulated. Gender is an important factor in the use of technology in teaching and learning, it influences the effective adoption of several technologies for educational purposes (Mahdi & Al-Dera, 2013). Lecturers' attitudes towards the use of VCs are also influenced by their years of teaching experience. Identified that teachers with 0–15 years of teaching experience had substantially less pressure on software use than teachers with 16–30 years of teaching experience. This means that the youngest group of teachers felt less pressure relative to the more seasoned group of teachers.

The objectives of the study were to:

- (i) Examined lecturers' attitude towards the use of Virtual Classrooms for instruction;
- (ii) Determined the difference in lecturers' gender on their attitude towards the use of virtual classrooms for instruction; and
- (iii) Examined lecturers' attitude towards the use of virtual classrooms based on years of experience

The study provided answers to the following research questions:

- (i) What is the attitude of lecturers towards the use of VCs for instruction in Colleges of Education in Ondo State?
- (ii) What is the difference in lecturers' gender on their attitude towards the use of VCs for instruction in Colleges of Education in Ondo State?

(iii) What are the disparities in Ondo State Colleges of Education lecturers' attitudes towards the use of VCs for instruction based on their years of teaching experience?

The following hypotheses were tested in the study at a 0.05 level of significance:

- (i) Ho<sub>1</sub>: There is no significant difference between male and female lecturers' attitudes towards the use of virtual classrooms for instruction
- (ii) Ho<sub>3</sub>: There is no significant difference between experienced and less experienced lecturers' attitudes towards the use of Virtual classrooms for instruction.

## 2. METHODS

This study is a descriptive research design of a survey type. This research method was chosen because it allowed for the examination of diverse concepts, notions, and thoughts of the study's respondents. This research investigation adhered to acceptable ethical guidelines.

### 2.1. Population and Sample of the Study

The population for this study comprised all Colleges of Education Lecturers' in Ondo State, Nigeria. Multistage sampling was used for this study: purposive sampling was used to sample two colleges of education out of five colleges of education in the state based on academic activities. Proportionate sampling was used to select the sample size from each college of education. A simple random sampling technique was used to sample 298 out of 551 lecturers from the two colleges of education using Research Advisor.

### 2.2 The instrument for Data Collection

A closed questionnaire with a 4-points Likert scale having two sections was designed in line with the research objectives. Section A obtained the demographic data while section B was used to determine lecturers' attitude towards the use of VCs for instruction, the items in this section were rated on the response mode of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) of Likert scale.

### 2.3 Validity and Reliability of the Research Instrument

The Instrument was scrutinized by three experts in the field of Educational Technology, University of Ilorin, Ilorin, Nigeria. To determine the reliability of the instrument, a pilot study was conducted on 34 lecturers in Kwara State College of Education which is not part of the sample of the study. The data gathered from the pilot study were analyzed to check for internal consistency and the reliability of the instrument and the Cronbach alpha value was 0.71 Thus the instrument is reliable as 0.70 and above signifies a good instrument, which means that the questionnaire was appropriate to collect the data from the original population

### 2.4. Analysis of the Data

Data collected were analyzed using descriptive statistics of the mean score, frequency counts, percentage distribution which were used to answer research question 1. Inferential statistics of independent t-test was used to test hypotheses 1 and 2. All hypotheses were tested at a 0.05 level of significance.

## 3. RESULTS

Descriptive statistics are discussed first, followed by answers from designated sections.

According to the **table 1**, 176 (59.1%) of sample responses were male, while 122 (40.9%) were female students. This revealed that male lecturers outnumbered female lecturers in the colleges of education.

**Table 2** below indicated that respondents who are experienced are higher with 201 (67.4%) while the less experience had 97 (32.6%).

**Table 3**, revealed that item 1, "Virtual classroom makes teaching intriguing and stimulating" was ranked highest having the mean score of 3.55 out of a maximum of 4. This was followed by item 2 "I believe that VCs are good platforms where teaching and learning can take place", item 4 "I appreciate using VCs because it serves as an innovative idea in teacher education", item 3 "seeing my students in the virtual class makes instruction real and engaging to me" having the score of 3.36, 3.24, 3.13 respectively followed suit. The lowest mean scores were 2.91 and 2.87 with the statement "I would prefer to use VCs for instruction" and "VCs lectures foster student learning than the face-to-face lectures".

A Grand mean of 3.10 was obtained from lecturers' attitude towards the use of VCs for instruction in Ondo in Table 3. Hence, using a benchmark of 2.5, it could be concluded that the lecturers had a positive attitude towards the use of VCs for instruction.

**Table 1.** Percentage Distribution of Respondents by Gender.

Gender	Frequency	percentage
Male	176	59.1
Female	122	40.9
Total	298	100.0

Source: Field Survey 2021

**Table 2.** Percentage Distribution of Respondents by Years of Teaching Experience.

Teaching Experience	Frequency	Percent
Less Experience	97	32.6
Experienced	201	67.4
Total	298	100.0

**Table 3.** Attitude of COE Lecturers towards the Use of Virtual Classroom for Instruction.

S/N	Items	SA	A	D	SD	Mean	STD
1	Virtual classroom makes teaching intriguing and stimulating	195 (65.4%)	80 (26.8%)	16 (5.4%)	7 (2.4%)	3.55	0.71
2	I believe that VCs are good platforms where teaching and learning can take place	130 (43.6%)	152 (51.1%)	9 (3.0%)	7 (2.3%)	3.36	0.66
3	seeing my students in the virtual class makes instruction real and engaging to me	110 (36.9%)	124 (41.6%)	56 (18.8%)	8 (2.7%)	2.13	0.81
4	I appreciate using VCs because it serves as an innovative idea in teacher education	137 (46.0%)	117 (39.2%)	22 (7.4%)	22 (7.4%)	3.24	0.88
5	I feel that through VC, I could interact with so many students across the world right at the comfort of individuals terrain	117 (39.3%)	118 (39.6%)	37 (12.4%)	26 (8.7%)	3.10	0.93
6	lecturers should be encouraged to use VCs for instruction	110 (36.9%)	122 (40.6%)	39 (13.1%)	27 (9.1%)	3.06	0.93

**Table 3 (continue).** Attitude of COE Lecturers towards the Use of Virtual Classroom for Instruction.

S/N	Items	SA	A	D	SD	Mean	STD
7	Online facilitation makes it easy for me to combine my work schedule with other activities	96 (32.2%)	121 (40.6%)	58 (19.1%)	23 (7.7%)	2.97	0.91
8	I would prefer to use VC for instruction	101 (33.9%)	104 (34.9%)	57 (19.1%)	36 (12.1%)	2.91	1.00
9	I'm ready to interact with students on the platform	103 (34.6%)	117 (39.3%)	43 (14.4%)	35 (11.7%)	2.97	0.98
10	VC lectures foster student learning than the face to face lectures	91 (30.5%)	105 (35.3%)	74 (24.8%)	28 (9.4%)	2.87	0.96
11	The use of VCs will improve the quality of content and delivery of lectures	104 (34.9%)	124 (41.6%)	45 (15.1%)	25 (8.4%)	3.03	0.92
12	Adoption of online VCs for instruction will produce Virtual classroom-dependent dummy Teacher	104 (34.9%)	106 (35.6%)	62 (20.8%)	26 (8.7%)	2.97	0.95
Grand Mean						3.10	0.48

**Table 4** indicated that  $t(298) = 0.864, p = 0.389$ . This means that the stated null hypothesis was not rejected. This was as a result of the t-value of 0.864 resulting in a 0.389 significance value which was greater than the 0.05 alpha level.

By implication, the stated null hypothesis was not rejected. Thus, there was no significant difference between male and female lecturers' attitudes towards the use of VCs for instruction. This implies that both male and female has a positive attitude towards the use of VCs.

**Table 5** indicated that  $t(298) = 5.57, p = .000$ . This means that the stated null hypothesis was rejected. This was as a result of the t-value of 5.57 resulting in a 0.000 significance value which was less than 0.05 alpha value.

**Table 4.** t-test of Male and Female Lecturers' Attitude towards the Use of Virtual Classroom for Instruction.

Gender	N	Mean	Std. Deviation	Df	T	Sig (2-tailed)
Male	176	3.1151	0.45450	296	0.864	0.389
Female	122	3.0663	0.51394			

**Table 5.** t-test of Less Experienced and Experienced Lecturers' Attitude towards the Use of Virtual Classroom for Instruction.

Years of teaching experience	N	Mean	Std. Deviation	Std. Error Mean	Df	T
Less Experience	97	3.3076	0.42276	0.04292	296	5.57
Experienced	201	2.9925	0.47238	0.03332		

The following are the summary of the findings based on the results of the analyses:

- (i) The COE lecturers had a positive attitude towards the use of VCs for instruction.
- (ii) There was no significant difference in male and female lecturers' attitudes towards the use of VCs for instruction in colleges of education in Ondo state.
- (iii) There was a significant difference in the COE lecturers' attitude towards the use of VCs for instruction based on years of teaching experience in favor of the less experienced lecturers [ $t(298) = 5.57, p = .000$ ].

#### 4. DISCUSSION

COE Lecturers' attitude towards the use of VCs was answered using research question 1. The attitude includes the belief that: virtual classroom makes teaching intriguing and stimulating, they are good platforms where teaching and learning can take place among others. The result of the mean score established that colleges of education lecturers had a positive attitude towards the use of VCs for instruction. The finding of this study is in line with [Alharbi & Drew's \(2014\)](#) who submitted that lecturers show a positive attitude towards the use of VCs. Also, the finding supported the findings of [Ahmad et al. \(2020\)](#) that the majority of instructors have a positive view of the use of these VLE applications.

Gender difference in COE lecturers' attitude towards the use of VCs for instruction was assessed using research question 3. The findings established that there is no significant difference between male and female COE lecturers towards the use of VCs for instruction and this was supported with null hypothesis one. Hence, it was concluded that there was no significant difference between male and female lecturers' attitudes. The finding was similar to that of [Martin et al. \(2019\)](#) whose study revealed that there is no substantial difference in the attitudes of male and female lecturers when it comes to their willingness to use online platforms to teach. Also, [Mudasiru \(2016\)](#) reported that the lecturers' ideas towards eLearning do not vary between male and female lecturers. However, this finding is contrary to the study which posited that Female instructors have a more positive attitude towards the use of ICT than male instructors.

The differences in COE lecturers' years of teaching experience on their attitude towards the use of VCs for instruction were investigated using research question 5. The findings on the influence of years of teaching experience on lecturers' attitude towards the use of VCs established that there was a difference in the lecturers' attitude towards the use of VCs for instruction based on years of teaching experience and this was supported by hypothesis 3. The result of the study was in strong agreement with a study by [Martin et al. \(2019\)](#) which posited that lecturers' years of teaching experience have a strong influence on their attitude towards the use of online platforms. However, the finding is contrary to the findings of [Abdelaziz \(2015\)](#) which posited that the academic staff's attitude towards the use of VC for teaching has nothing to do with their teaching experience or their knowledge of ICT.

#### 5. CONCLUSION

The study concluded that most of the lecturers had a positive attitude in the use of VCs for instruction, which is commendable. It was also concluded that there were no significant differences in the lecturers' attitudes towards the use of VCs for instruction based on gender. However, in respect to the lecturers' years of teaching experience, the study concluded that the less experienced lecturers' shows more positive attitude than their less experienced counterpart. Therefore, it was recommended among others that. The school management should provide institutionalized virtual platforms for the use of their institutions which should

be properly monitored and maintain by the management. They also need to provide internet facilities and ICT apparatus for the use of these platforms.

## 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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