

## **Strategies for Effective Utilization of Hybrid Approaches for Improve Instruction in Office Technology and Management (OTM) In Public Tertiary Institutions in South East, Nigeria**

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**ABSTRACT:** *This study was carried out to investigate strategies for effective utilization of hybrid instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. The study answered two (2) research questions which were raised based on two (2) variables. Two null hypotheses were tested at 0.05 level of significance. The study adopted descriptive survey research design and the study area was South East geo-political zone of Nigeria. The population of the study consisted of two hundred and sixty-eight (268) business educators employed under Business Education Department of public tertiary institutions in South-East Geopolitical zone, Nigeria. The instrument for data collection was a structured questionnaire titled "Strategies for effective utilization of hybrid instructional approaches in office technology and management questionnaire (SEUHIAOTMQ)" with 18 items. The instrument was validated by three experts, two in business education and one in science education. Reliability of the instrument was determined through pilot test using Cronbach Alpha Reliability Statistical Tool. The analysis yielded a reliability coefficient of 0.85. Mean and standard deviation were used to answer the research questions while independent t-test was used to test the hypotheses at 0.05 level of significance. The result of the analysis revealed that utilization of flipped model and rotational teaching strategies can enhance effective teaching of Office Technology and Management (OTM) in public tertiary institutions. The study also revealed that gender and years of experiences did not affect the opinion of business educators' opinion on strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. The implication of the findings was that every business educator should attend regular in-service education so as to keep abreast of current and future innovations in teaching. Based on the findings, it was recommended, among others, that management of public tertiary institutions in South East, Nigeria should from time to time train business educators on emerging technologies which can be adopted for hybrid instructional approaches in public tertiary institutions.*

**KEYWORDS:** strategies, effective, utilization, hybrid, instructional approaches office technology, management

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## INTRODUCTION

Office Technology and Management (OTM) is a programme of instruction that equips recipients with the requisite attributes for job creation and further education. Office Technology and Management is a branch of Business Education that offers knowledge, skills, in-depth administrative office preparation to meet the demands and challenges in the business environment (Okagbare & Fredrick, 2019). Office Technology and Management, according to Yakubu (2019), is a programme from which students can obtain office administrative skills applicable to various careers, industries as well as cognitive skills transferable to other employment situations and life experiences. Some of the objectives of teaching OTM, according to the National Commission for Colleges of Education (2017), include equipping graduates with the right skills that will enable them engage in a life of work in the office as well as for self-employment and to produce business teachers who will be involved in the much desired revolution of vocational development right from primary to tertiary institutions. The knowledge and skills offered by the business education programme has advanced OTM profession.

Office Technology and Management has reached an advanced stage that the responsibilities of a secretary now extend to wider boundaries far beyond that of a mere typist. Thus a secretary can be regarded as a worker or office technologist who can be delegated with greater and more complex responsibilities which include decision making on simple and complicated issues; representing the boss in board meetings, and overseeing complex office duties in compliance to standard (Ugwu, 2019).

There is a growing revolution throughout the educational sector for use of computer technology in the teaching and learning process. New and continuing advances in technology have contributed to the possibility of creating teaching materials in more interesting with interactive stimulations. Online and real-time interaction is a powerful combination that makes teaching interesting and participatory for both students and instructors (Piontek, 2021). Piontek further stressed that transmission of knowledge and information which used to be done through the lecture teaching method at the tertiary education level is globally being done electronically. The conventional mode of teaching office technology education courses is the lecture method. The students in 21st century and ICT age are bored with long lectures and dictations, note memorization and interaction in the classroom because technology is making teaching better, more fun and interactive (Piontek, 2021). Students today have become digital compliant and are very comfortable with technology long before they enroll in higher education. Technology has transformed how they live, communicate, interact and learn within and outside classes. They are much familiar with electronic learning brought by the advent of technology unlike the lecture teaching method which requires the physical presence of both students and the teacher within the four walls of a classroom setting. Ugwu, (2019).

The lecture teaching method the teacher adopted according to Hadzimehmedagic and Akbarov (2021) plays the primary role of informing the learners through explicit instructions

supplemented by textbooks and demonstrations. The teacher disseminates instructions to a set of students convening in a classroom. Lecture teaching method emphasizes learning through the teacher's guidance at all times while students are expected to listen and learn from the lecture. In order to ascertain students' achievement or educational outcomes from the series of instructions on topics taught in a subject of study, the teacher at intervals administer tests in the class to measure the individual student's knowledge and the individual student's academic achievement in the subjects of study. Most of the tests are conducted in form of an essay, multiple choice, yes or no, complete the space or open ended questions, etc. Lecture teaching method has its merits and demerits to both the teacher and the students. Akpoghol, Samba and Asemave (2021) posited that lecture method is one of the conventional methods of teaching that involves oral presentation of ideas. Instruction in the classroom is often carried out on a one-to-many basis, with the teacher, before an audience of dozens of students, playing a traditional role which over the years had yielded positive impact.

Generally, Office Technology and Management is being taught with a conventional classroom approach where the teacher physically stands before the students and gives out the learning materials, using a variety of teaching strategies, and assesses the students performance through home works and class activities. This approach (which is also known as the face-to-face approach) entails that the teacher coordinates the learning process by giving out the learning materials in class as students listen and possibly take notes. At appropriate times, assignments and class activities are given by the teacher to evaluate students' comprehension of what is taught.

The benefits of this approach are far reaching. According to Cooper (2018), the conventional classroom approach encourages physical interaction between teacher and learner, supports socialization among learners and enhances motivation through the learning process. However, this approach may not consider students individual learning styles, and also may not be flexible enough for self-paced learning. As a result, the conventional classroom approach may not be student-centered as students' participation may be restricted to only what the teacher permits in class. Integrating technology into the teaching process (usually known as e-learning) could help to close the gap created by conventional classroom approach.

Hybrid teaching is a term used to represent both teaching and learning processes that combine online learning with in-classroom learning. Hybrid learning approach is the teaching/learning approach that brings together the face-to-face approach and the online learning approach. It is the hybrid of the two approaches to form a blend. Hybrid Learning Approach (HLA) is that approach that bridges the gap between the fully online learning approach and the conventional classroom approach. It integrates online learning with in-person instruction from the teacher. HLA involves combining classroom instruction and e-learning (Kiviniemi, 2018) which is increasing in tertiary institutions around the world (Graham, Woodfield, & Harrison, 2017). HLA has various models which include rotation model, flex model, self-blend model, and enriched-virtual model.

Hybrid teaching is defined by Ukamaka (2018), in her study, as a computer-mediated

instructional strategy that leverages technology and focuses on the student-teacher relationship to enhance independence, engagement and achievement. Moreover, in Hybrid teaching; blending not only includes technology but real life experiences too. As the word indicates, it is a blend of Teacher-Led Instructions with face-to-face interactive session, Web Based Assessments through feedback, reflection, outcomes. Computer-Mediated Instruction includes digital, visual, e-learning and printed instructions using traditional study materials. It involves a combination of lecture (face-to-face) and online technology-based learning (Wang, 2019). Aslam (2019) illustrated Hybrid learning as the traditional classroom environment on one end of the spectrum and on the other end of the spectrum is the student learning at a computer at home. Poon (2021) was of the opinion that Hybrid learning motivates students to learn on their own at their own pace and in their own time.

Hybrid teaching, in the context of this study, involves combining blog and Google classroom (online) with face-to-face physical co-presence of teacher and students (lecture teaching method). (a) The blog is an online or web publication of materials or documents. A blogged material becomes automatically an online hosted material or document.(b) The use of the blog had been diversified beyond just being used for marketing purposes, such as advertising and sales, to an instrument for teaching and learning.(c) The universal nature and the special features of the blog as a platform for publishing the document online have made blog potential resources to foster an effective environment to support teaching and learning (Quan-Haase, 2018). The blog has over the years constituted one category of online sites that are growing in prominence in the world (Smith, 2021). The blog is an online or web publication of materials or documents. A blogged material becomes automatically an online hosted material or document. The use of the blog had been diversified beyond just being used for marketing purposes, such as advertising and sales, to an instrument for teaching and learning. (d) The platform provides room for interactions and can be accessed at any time possible by the users. It enhances privacy and information security that limits outsider access to the blog site. Most importantly, the blog has features that could support interactive style or communication and collaboration required for effective teaching and learning process (Smith, 2021). In agreement with the above fact, Reinder (2020) had posited that learner autonomy has a significant role in successful learning since learning becomes more interesting, meaningful and continuous if learners take responsibility for their own learning as they learn what they are ready to learn. It can also serve as one of the alternative means for shy students to be able to voice their thoughts in and outside the classroom and to also collect their thoughts and articulate them in writing. Therefore, the use of a blog and Google classroom to support lecture method may be a good solution to improving interactive learning, social presence among students, academic achievement and interest. The Hybrid method of teaching is made of flipped-classroom model, lab-rotation model, station-rotation model and individual rotation model. The model adopted for this study is the flipped classroom model.

Flipped model strategy involves a lecturer posting lecture course wares (text-based, audio, audio-visual etc.) on the online and giving the students the opportunity to download, watch supplemental videos, and attempt assignments outside class setting. Strayer (2007) defined flipped model strategies as an innovative classroom structure which moves lectures outside the

classroom through modern technology, and moves homework and practice with concepts to the classroom via learning activities. Zhao, Deng and Zhai (2016) see Flipped model strategies as a new paradigm of blended-learning. According to the authors it enhances integration of information technology with innovative teaching concepts. Chheung and Khe (2017) revealed that the typical example of a flipped class is one in which the instructor pre-records the lectures, posts the recordings to canvas for students to watch before class, and then assists the students as they work through assignments during class time. Achugbu, (2017) opined that such an approach is designed to maximize the special power of the in-person classroom to facilitate social learning while moving content delivery like lecturing to out-of-class homework time, where students have the best opportunity to focus individually. Achugbu, noted that flipping the classroom helps students move more at their own pace only taking the time they need to learn something. Reading Horizons, (2016) noted that in the flipped classroom model, students go through learning materials and resources at home and use the class period for problem solving or questions and activity with the teacher present to answer questions and assist those students lagging behind. Azubike (2022) reported that gender did not significantly affect respondents' mean ratings on the extent flipped classroom is used in teaching business subjects in public secondary schools. Venkatesh, Morris, Davis, and Davis (2003), and Venkatesh and Morris (2000) who reported that gender had a great role to play in technology acceptance.

Rotational model strategy according to Reading Horizons (2016) consists of students either moving between online learning, small group instruction, and paper-pencil work, or moving between whole-class instruction and online learning". The learners rotate between learning modalities, one of which is online, at the discretion of the teacher (Horn & Staker, 2014b). The rotation model consists of station rotation, lab rotation, flipped classroom and individual rotation. Brooke (2017) noted that during the classroom, students rotate on a fixed schedule among various modalities, which usually include 3 learning stations: 1) online learning; 2) face-to-face instruction; 3) group projects. For example, a learner may complete an assignment online, then participate in a group activity, and, finally, engage in teacher-led instruction. Students tend to be grouped by learning styles, skills, or needs. The strategies to improve instructional approaches in hybrid teaching and learning is to provides personalization by allowing students to alternate between small group work at school and online learning at home. Students work through digital lessons to move along skills progression tailored to their individual needs. Another strategies of using rotation model of hybrid teaching and learning according to Horn and Staker, (2014) includes: engaging students to fulfill the online learning part of instruction in a computer lab rather than in the classroom, give students complete software lessons outside of class time, give homework during class time, customized teaching for each student according to individual needs, allow students to rotate through modalities within a classroom, engage students to move through a variety of different learning modalities, grouped Students by learning styles, skills, or needs, give students assignment to complete online.

In the conventional classroom approach, the class teacher provides the lesson materials to students in class and gives them take home assignments while in Hybrid teaching approach, flipped classroom model, the resources are provided online for the students via a virtual

learning environment, and the class time is used for class works and exercises. Students are expected to go through the lesson materials at home on their own and at their pace, then the exercises and activities are done during the class time. This could encourage students' participation as they are able to go through the lesson materials on their own.

Gender can be a factor that could influence the application of technology in the teaching and learning process. Male and female business education students may differ in their response to the usage of hybrid learning and this may influence their achievement. In Nigeria, the circumstances of gender have strongly interacted with culture to produce sex role-stereotypes, which is the socio-cultural classifications of human activities by sex in line with what the society considers as appropriate for one sex or the other (Nzewi, 2020). Ukwueze (2020) is of the opinion that the instructional method used in the classroom has a way of positively influencing students' gender and their academic achievements. Okoro (2019) noted that co-operative learning strategy favours females more than males while competitive learning favours males more than females. Gender is a very important variable in this study because personal orientation and thinking style of male and female students may play a crucial role in students' academic achievement and interest. Berteau (2019) opined that e-learning embraces the active participation of male and female students. Similarly, Mahmoud, Ahmed and Mirna (2017) reported that male and female students have different experiences in using hybrid learning. With the contradictions and lack of a clear trend in gender influence on utilization of hybrid, more records of investigations have become necessary to establish a base for this study.

### **Statement of the Problem**

There is a significant change taking place in higher education that has received surprisingly little attention. Nowadays, the education system or rather the school system is experiencing transformational changes essentially in pedagogy and in the administration of the system due to advances in technology. The increasing popularity of mobile devices and the need to have information available anywhere and anytime has led to changes in the way in which teaching and learning are performed. Challenges arising from insecurity (unknown gunmen/kidnappers) and natural disaster (Covid-19) have heightened the need for students to access instructions from the comfort of their respective homes without necessarily travelling miles away for that purpose. In the last few years, integrated computer systems known as Hybrid learning have rapidly emerged and are having and will increasingly have profound effects on tertiary institution teaching and learning. Berteau (2019) assumed that if the blog and Google classroom combined with lecture method of instruction delivery may produce a better learning outcome. Hybrid teaching as an emerging concept has been extensively researched by scholars in examining its effect on students' academic achievement. Though, Hybrid teaching has been extensively researched little has been published on its nexus with academic achievement locally when compared with developed countries. In developed countries, the use of technology has advanced more robust learning system in the area of social learning, mobile learning, interactive and collaborative learning, cloud computing, etc., all geared towards enhancing creative learning. Unfortunately, it seems adopting this technology in public tertiary institutions in South East, Nigeria is rather taking steps back and there is urgent need to improve the pace. However, literature on hybrid learning revealed divisive views among researchers. Some

studies revealed that conventional strategies enhanced students' performance; because too much technology make hybrid learning programs appear too flashy, and students may not take it seriously (Umoh & Akpan, 2018). Also, Adidoeye (2019) reported that learners preconceived traditional classroom to be more effective and accessible, because they believed that most often they are familiar with the learning environment, others found that hybrid teaching enhanced students' performance. However, these assumptions have no empirical evidence. Again, there is no empirical evidence to support the strategies for effective utilization of hybrid instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. This study therefore, appears as one of the efforts towards bridging the gap in support of the strategies for effective utilization of hybrid instructional approaches in Office Technology and Management in public tertiary Institutions in South East, Nigeria.

### **Purpose of the Study**

The main purpose of the study is to determine the strategies for effective utilization of hybrid or blended instructional approaches for improve instruction in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. Specifically, the study seeks to determine the strategies for effective utilization of the:

1. Flipped model strategies for improve instruction in the teaching of Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria.
2. Rotational model strategies for improve instruction in the teaching of Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria.

### **Research Questions**

1. What are the Flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in the in Office Technology and Management in public tertiary institutions in South East, Nigeria?
2. What are the rotational model strategies for effective utilization of hybrid instructional approaches for improved instruction in the in Office Technology and Management in public tertiary institutions in South East, Nigeria?

### **Hypotheses**

The following research hypotheses were formulated:

**H0<sub>1</sub>:** There is no significant difference between male and female business educators on the mean ratings of the flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in the in Office Technology and Management in public tertiary institutions in South East, Nigeria.

**H0<sub>2</sub>:** There is no significant difference in the mean ratings of business educators on the rotational model strategies for effective utilization of hybrid instructional approaches for improved instruction in the in Office Technology and Management in public tertiary institutions in South East, Nigeria based on the years of experiences.

## **METHOD**

The design for the study was descriptive survey design. The study was carried out in South-East geo-political zone of Nigeria. South East, Nigeria comprises of five Igbo speaking states of Abia, Anambra, Ebonyi, Enugu and Imo. The population of the study is Business Educators in the 19 public tertiary institutions in the South East zone which consist of one hundred and twenty-nine (129) male and one hundred and thirty-nine female (139), given a total of two hundred and sixty-eight (268) business educators employed under Business Education Department of public tertiary institutions in South-East, Nigeria. The entire population of 268 was studied since the number of the business Educators is small. There was no need for sampling. The instrument for data collection was structured questionnaire titled: “Strategies for effective utilization of hybrid instructional approaches in office technology and management questionnaire (SEUHIAOTMQ)”. In order to ascertain the validity of the instrument, it was subjected to validation using three experts – two in the field of Business Education and one in the field of Measurement and Evaluation, Science Education Department, all from Ebonyi State University, Abakaliki. The validated instrument was further subjected to a reliability test. To ascertain this, 30 copies of the instrument were administered to 30 (thirty) lecturers in University of Calabar, Cross River State. The items of the instrument yielded an average reliability of 0.85. To facilitate easy method of data collection, the researcher adopted the on-the-spot delivery and recovery method of data collection. Out of the 268 questionnaires that were distributed, 260 were retrieved and used for the study. This represented 98% retrieval level. Mean and standard deviation were used to answer the research questions. The decision rule was obtained by using the range of 2.50 which served as the mean value that was used in taking decision. Items whose mean value or the overall grand mean is greater than the decision was taken as very effective while items whose mean value was less than the decision mean value was considered as very ineffective. The implication, therefore, was that each item of the instrument with a mean of 2.50 and above was regarded as one of the strategies for effective utilization of hybrid learning in teaching of Office Technology and Management in tertiary institutions in South East, Nigeria. On the other hand, items with mean values less than 2.50 were regarded as not strategies. To test the hypothesis, independent t-test statistical tool was used at 0.05 level of significance.

## **FINDINGS**

**Research Questions One:** what are the flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in Office Technology and Management in public tertiary institutions in South East, Nigeria?

Data collected with items 1 to 9 of the instrument were used to answer this research question and the finding was presented in Table1.



**Table1: Mean Ratings on Flipped Model Strategies for Effective Utilization of Hybrid Instructional Approaches for Improved Instruction in Office Technology and Management.**

S/N	Flipped Model Strategies	N	Mean	SD	RMKS
1	Pre-records the teaching during face to face instruction	260	2.94	0.35	Effective
2	Posts the recorded teaching to canvas for students to watch before class	260	3.04	0.88	Effective
3	Assists the students as they work through assignments during class time	260	3.15	0.77	Effective
4	Creating short videos that cover the important learning outcomes for students	260	3.08	0.74	Effective
5	create videos to introduce students to new learning,	260	3.23	0.76	Effective
6	Leaving students with some things to ponder before the next class meeting.	260	3.19	0.75	Effective
7	set specific times during the day to use the discussion board,	260	3.24	0.78	Effective
8	allowing students to talk back about their thoughts on the particular lesson being discussed	260	3.17	0.77	Effective
9	Assign a dashboard for every student	260	3.10	0.74	Effective
<b>Grand mean</b>			<b>3.13</b>	<b>0.72</b>	Effective

**Note:** SD=Standard Deviation, N = Sample size =260

The finding in Table 1 shows that all the nine items 1-9 on flipped model strategies have mean ratings ranging from 2.94 to 3.24 which is the above the benchmark of 2.50. This implies that all the nine items are accepted as the flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in Office Technology and Management in public tertiary institutions. The grand mean of 3.13 indicates that business educators accepted all the nine items as the flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in Office Technology and Management in public tertiary institutions. The standard deviations for all the items are within the same range indicating that respondents are homogenous in their mean ratings.

**Research Questions 2:** What are the rotational model strategies for effective utilization of hybrid instructional approaches for improved instruction in Office Technology and Management in public tertiary institutions in South East, Nigeria?

Data collected with items 9 to 18 of the instrument were used to answer this research question and the finding was presented in Table2.

**Table2: Mean Ratings on the Rotational Model Strategies for Effective Utilization of Hybrid Instructional Approaches for Improved Instruction in Office Technology and Management.**

S/N	Rotational Model Strategies	N	Mean	SD	RMKS
10	Engaging students to fulfill the online learning part of instruction in a computer lab rather than in the classroom	260	3.27	0.69	Effective
11	Give students complete software lessons outside of class time	260	3.30	0.65	Effective
12	Give students homework during class time	260	3.19	0.71	Effective
13	Customized teaching for each student according to individual needs	260	3.19	0.71	Effective
14	Allow students to rotate through modalities within a classroom	260	3.25	0.71	Effective
15	Engage students to move through a variety of different learning modalities	260	3.25	0.68	Effective
16	Grouped Students by learning styles, skills, or needs	260	3.24	0.21	Effective
17	Give students assignment to complete online	260	3.23	0.73	Effective
18	Participate in a group activity after online assignment	260	3.19	0.75	Effective
	<b>Grand mean</b>		<b>3.23</b>	<b>0.64</b>	Effective

**Note:** SD=Standard Deviation, N = Sample size=260

The finding in Table 2 shows that all the nine items 9-18 on rotational model strategies have mean ratings ranging from 3.19 to 3.30 which is the above the benchmark of 2.50. This implies that all the eleven items are accepted as the rotational model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management in public tertiary institutions. The grand mean of 3.23 indicates that business educators accepted all the nine items as the rotational model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management in public tertiary institutions. The standard deviations for all the items are within the same range indicating that respondents are homogenous in their mean ratings.

### Hypotheses

**H0<sub>1</sub>:** There is no significant difference in the mean ratings of male and female business educators on the flipped model strategies for effective utilization of hybrid instructional approaches for improved instruction in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria.

Data collected on business educators on the flipped model strategies were separated across male and female to a t-test of difference between means of independent samples and the findings was presented in Table 6.

**Table 6: t-test of difference in the mean ratings of responses of male and female business educators on the flipped model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management.**

S/N	Gender	N	Mean	SD	Df	Alpha	t-cal	P-value	Decision
1	Male	129	2.96	.947	258	0.05	.190	.849	Not Significant
	Female	131	2.93	.942					
2	Male	129	3.04	.882	258	0.05	.006	.995	Not Significant
	Female	131	3.04	.893					
3	Male	129	3.13	.817	258	0.05	-.370	.711	Not Significant
	Female	131	3.17	.749					
4	Male	129	2.97	.723	258	0.05	-2.301	.221	Not Significant
	Female	131	3.19	.775					
5	Male	129	3.23	.765	258	0.05	-.123	.903	Not Significant
	Female	131	3.24	.775					
6	Male	129	3.07	.834	258	0.05	-2.55	.111	Not Significant
	Female	131	3.31	.633					
7	Male	129	3.28	.802	258	0.05	.752	.453	Not Significant
	Female	131	3.21	.764					
8	Male	129	3.24	.760	258	0.05	1.39	.164	Not Significant
	Female	131	3.11	.780					
9	Male	129	3.05	.688	258	0.05	-1.14	.254	Not Significant
	Female	131	3.16	.802					
<b>t-test value</b>						<b>0.05</b>	<b>0.44</b>	<b>.517</b>	<b>Not Significant</b>

From the Table 6, it was found that all items have their t-calculated values ranging from 0.006 to 1.39 and p-value ranging from 0.221 to 0.995 which are greater than 0.05 indicating is no significant difference in the mean ratings of male and female business educators on the flipped model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. The grand total of P-value is 0.517 which is greater than 0.05, implies that is no significant difference in the mean ratings of male and female business educators on the flipped model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria.

**H0<sub>2</sub>:** There is no significant difference in the mean ratings of business educators on the rotational model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria based on the years of experiences.

Data collected on rotational model strategies were separated across experiences and subjected to a t-test of difference between means of independent samples and the finding was presented in Table 7.

**Table 7: t-test of difference in the mean ratings of business educators on the rotational model strategies for effective utilization of hybrid instructional approaches in Office Technology and Management based on their work experience.**

S/N	Experiences	N	Mean	SD	Df	Alpha	t-cal	P-value	Decision
10	5 years below	120	3.18	.709	258	0.05	2.17	.031	Significant
	6 years above	140	3.37	.682					
11	5 years below	120	3.38	.582	258	0.05	1.95	.052	Not Significant
	6 years above	140	3.22	.730					
12	5 years below	120	3.17	.717	258	0.05	-.519	.064	Not Significant
	6 years above	140	3.22	.720					
13	5 years below	120	3.17	.681	258	0.05	-.437	.663	Not Significant
	6 years above	140	3.21	.756					
14	5 years below	120	3.20	.708	258	0.05	-1.01	.310	Not Significant
	6 years above	140	3.30	.736					
15	5 years below	120	3.27	.697	258	0.05	.373	.709	Not Significant
	6 years above	140	3.24	.687					
16	5 years below	120	3.20	.708	258	0.05	-.868	.386	Not Significant
	6 years above	140	3.28	.722					
17	5 years below	120	3.15	.784	258	0.05	-1.88	.061	Not Significant
	6 years above	140	3.32	.681					
18	5 years below	120	3.20	.743	258	0.05	.164	.869	Not Significant
	6 years above	140	3.19	.767					
<b>t-test value</b>						<b>0.05</b>	<b>1.37</b>	<b>.349</b>	<b>Not Significant</b>

The finding in Table 7 indicates that eight out of nine items have their P- values ranging from 0.52 to 0.869 which are greater than 0.05 indicating non-significant difference between business educators on the rotational model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria based on the years of experiences. While item 10 only has P-value of 0.031 which is less than 0.05 indicating a significant difference between business educators on the rotational model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria based on the years of experiences. The grand P-value 0.349 is greater than 0.05, indicating that the null hypothesis which stated that there is no significant difference in the mean ratings of responses of business educators on the rotational model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria based on the years of experiences is retained

## DISCUSSION

The findings of this study in respect to the first research question identified flipped model strategies in the teaching of Office Technology and Management (OTM) in public tertiary institutions. Findings of the study revealed that respondents rated flipped model strategies for

teaching of Office Technology and Management to include, pre-records the teaching during face to face instruction, posts the recordings to canvas for students to watch before class, assists the students as they work through assignments during class time, creating short videos that cover the important learning outcomes for students, create videos to introduce students to new learning, give students with some things to ponder before the next class meeting, set specific times during the day to use the discussion board, allowing students to talk back about their thoughts on the particular lesson being discussed and Assign a dashboard for every student. The finding collaborates with the work of Chheung and Khe (2017) revealed that the typical example of a flipped class is one in which the instructor pre-records the lectures, posts the recordings to canvas for students to watch before class, and then assists the students as they work through assignments during class time. The study also in line with the view of Achugbu, (2017) who opined that such an approach is designed to maximize the special power of the in-person classroom to facilitate social learning while moving content delivery like lecturing to out-of-class homework time, where students have the best opportunity to focus individually. Achugbu, noted that flipping the classroom helps students move more at their own pace only taking the time they need to learn something. This supports the earlier report of Reading Horizons, (2016) which revealed that in the flipped classroom model, students go through learning materials and resources at home and use the class period for problem solving or questions and activity with the teacher present to answer questions and assist those students lagging behind. The researcher feels that the result is so because learning with a flipped classroom is learning where in getting learning material, students are responsible for obtaining it independently through online. Flipped learning can help students understand key concepts and procedures for solving problems. Oftentimes, it's left up to individual teachers to determine what they need to teach, allowing for them to be intentional in the material they deliver. Being intentional allows the learning to remain student-centered and active. Finally, being a professional educator is more than it seems and involves greater demands in flipped learning. Teachers need to be constantly observing all students and providing feedback that's relevant in the moment. They also need to be reflective by assessing both student work and their own practice. Educators often provide feedback to each other as well and it's important that they're all receptive to critiques. Above all, teachers are the essential factor in successful flipped learning. However, the findings on the hypothesis tested showed that there is no significant difference in the mean ratings of male and female business educators on the flipped model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria. The finding agrees with Azubike (2022) who reported that gender did not significantly affect respondents' mean ratings on the extent flipped classroom is used in teaching business subjects in public secondary schools. This result contradicted the views of Venkatesh, Morris, Davis, and Davis (2003), and Venkatesh and Morris (2000) who reported that gender had a great role to play in technology acceptance.

Based on the data analyzed on the rotational model strategies in the teaching of Office Technology and Management (OTM) in public tertiary institutions, the responses of the respondents agreed that engaging students to fulfill the online learning part of instruction in a computer lab rather than in the classroom, give students complete software lessons outside of

class time, give students homework during class time, customized teaching for each student according to individual needs, allow students to rotate through modalities within a classroom, engage students to move through a variety of different learning modalities, grouped students by learning styles, skills, or needs, give students assignment to complete online, participate in a group activity after online assignment as a rotational model strategies for teaching of Office Technology and Management (OTM) in public tertiary institutions. This finding is in consonance with that of Akinoso (2022) who suggested strategies when carefully implemented are capable of aiding effective adoption of flipped classroom for user education in Nigerian universities. The findings is supported by Žuvić-Butorac, Roncevic, Nemcanin and Nebic (2021) who noted that this model, teachers create different learning stations. Using digital learning tools at rotating stations, teachers are able to focus the face-to-face time based on specific student needs. He equally opined that teacher can create a schedule for students to work at different stations, moving between face-to-face instruction and online assignments. The finding is also in line with Brooke (2017) who noted that during the classroom, students rotate on a fixed schedule among various modalities, which usually include 3 learning stations: 1) online learning; 2) face-to-face instruction; 3) group projects. For example, a learner may complete an assignment online, then participate in a group activity, and, finally, engage in teacher-led instruction. Students tend to be grouped by learning styles, skills, or needs. However, the findings on the hypothesis tested showed that there is no significant difference in the mean ratings of business educators on the rotational model strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria based on the years of experiences. The results also negate the findings of Žuvić-Butorac, Roncevic, Nemcanin and Nebic (2011) who reported that the lower level of agreement was obtained on the use of rotational model strategies such as left rotation strategy, right rotation strategy, left-right rotation strategy, right-left rotation strategy, teacher-led instruction strategy, collaborative activities strategy, online instruction strategy, customized content strategy and personalized instruction via modern technology.

The researcher feels that the result is so because world is so volatile, uncertain, complex, and ambiguous and that anything can happen at any time, which could interrupt the coming together of students in a classroom setting. No matter what happens, learning must continue but it might not occur that way it had previously. Students will require instructional strategies that can help improve learning with the technology-based skill to prepare for a proper understanding of the subject. An example of such occurrence is the outbreak of the covid 19 pandemic which moved the teaching of many students from the classroom settings to other settings, often online or e-learning. The rotation model of learning, if adopted in might make a significant change in the students' academic performance by heightening the interest of the students and change their attitude towards the subject matter. Attitude is another important construct in learning.

## CONCLUSION

Based on the findings of the study, it was concluded that business educators in public tertiary institutions in South East, Nigeria agreed that utilization of flipped model, and rotational

teaching strategies can enhance effective teaching of Office Technology and Management (OTM) in public tertiary institutions. The outcome of the study also revealed that gender and years of experiences did not affect the opinion of business educators on strategies for effective utilization of hybrid or blended instructional approaches in Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria.

### Recommendations

Based on the findings of the study, the researcher recommended that:

1. The management of public tertiary institutions in South East, Nigeria could from time to time train business educators on emerging technologies which can be adopted for flipped classroom model. This training will create adequate awareness of such technologies among the librarians, consequently encouraging the adoption. Additionally, the training will enhance their skills and competences.
2. Business educators in public tertiary institutions in South East Nigeria could be involved in the use of rotational model tools for teaching of Office Technology and Management (OTM) in public tertiary institutions in South East, Nigeria

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