Integratibng Emerging Technologies for Effective Curriculum Content Delivery in Private Universities in South East, Nigeria.

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ABSTRACT

The study ascertained the integration of emerging technologies for effective curriculum content delivery in private universities in South East, Nigeria. The study was guided by two research questions while two null-hypotheses were formulated and tested at .05 level of significance. Descriptive survey research design was adopted for the study. The population for the study was one hundred and seventy-six (176) respondents which comprised 80 management staff and 96 Heads of Department. The entire population was used, hence, there was no sampling. The instrument for data collection was a researcher structured questionnaire titled "Integrating Emerging Technologies for effective Curriculum Content Delivery Questionnaire (IETCCDQ)". The instrument was validated by three research experts. Two of the experts were from the Department of Educational Management and one from Measurement and Evaluation Unit of the Department of Mathematics and Computer Education. Cronbach alpha method was used to determine the reliability of the instrument which yielded .77 for cluster 1 and .79 for cluster 2 with an overall reliability index of .78. Mean scores and standard deviation were used for answering the research questions while t-test statistic was used to test the null hypotheses. The findings of the study revealed that emerging technologies have impacts in effective curriculum delivery in terms of instructional delivery. The study recommended among others that private universities need to integrate emerging technologies in education which is so far viable to prepare learners to operate in the modern knowledge economy.

Keywords: Emerging Technologies, Curriculum Content Delivery, Private Universities

INTRODUCTION

The ability of the government to offer higher education in universities appears to be stretched beyond its limits, resulting in an insufficient supply of university educational services within Nigeria. It is undeniable, as stated by Onyishi (2022), that the Federal Government of Nigeria alone cannot fully finance and provide adequate university education for its growing population. Consequently, there is a growing interest from the private sector to step in and fill this void by offering alternative pathways for willing and capable citizens to access university education (Olaleye, 2012). Universities can be either publicly or privately owned, meaning they can belong to the government (either at the state or federal level) or private individuals and religious organizations. Okebukola (2017) has highlighted that the increasing number of prospective university applicants and the inability of government-funded universities to accommodate this surge in demand have led to the establishment of private universities in Nigeria.

A private university refers to an institution run by individuals or organizations within the private sector. As discussed by Suleiman, Hanafi, & Taslikhan (2017), a private university is one in which ownership and operations are vested in the private

sector. According to findings by Ajadi (2010), a private university is characterized by its funding sources, which primarily include student tuition fees and investments from various individuals and entities. These institutions are both owned and managed by private sector entities. Furthermore, as highlighted by Uche (2016), private universities contribute significantly to providing higher education services to the public. They can also play a vital role in enhancing technology accessibility, especially in developing nations like Nigeria, where access to digital infrastructure and technology may be limited.

Technology has become an integral part of the instructional process resulting in the development of new concepts in the logistics of instruction. Technology is defined by Redmann & Kotrlik in Ile, Udegbunam & Odimmega (2015) as the making modification, usage, and knowledge of tools, machines, techniques, crafts, systems and methods of organization in order to solve a problem. Okechukwu & Ukeh (2022) argued that the primary emphasis for attaining educational goals has shifted towards integrating technology, leaving a digital footprint on the internet. Edeh (2019), posited that the evolution of Emerging Technologies (ETs) is changing all facets of educational process ranging from; the nature of classrooms, quality of content, methodologies, mode of students' engagement, and evaluation. According to Okigbo & Ukeh (2020), emerging technology has ushered in a complete revolution in the realm of education, profoundly transforming teaching and learning within academic contexts, without leaving a digital footprint. The integration of emerging technologies in teaching and learning process increase the interest of learners, and the quality of outcome in the educational process. It brings about innovations, creativity, and flexibility to

learning, thereby, equipping both the educators and the learners with necessary problem solving and survival skills in a digital world; hence the integration of emerging technologies is critical in the education sector.

Integration is a combination of parts that work well together. It is an art of combining or adding parts to form a unified whole. Integrating new technologies into teaching and learning involves incorporating new technology into day-to-day instruction as part of processes through which curriculum objectives are met (Fan, 2014). Integration of ETs in teaching and learning process assists educators to adapt to the changing trends in education. Parry & Battista (2019) opined that emerging technologies help employees to update their skills to compete in the future world of work. The application of emerging technologies according to Edeh (2019), has become so irresistible in the teaching and learning process, and it is changing the way teaching is structured and organized, and the job performance of educators. Corinne (2018) conducted a study on "emerging technologies in higher education and the workplace: An assessment". The study shows that digital revolution poses a double challenge to higher education: in the methods and practices of learning and of teaching. The application of emerging technologies in education is changing learners' experiences both inside and beyond the classrooms. However, despite the enormous benefits of emerging technologies, its integration in curriculum content delivery is often hampered by a number of factors which directly or indirectly affects the integration process.

Curriculum is the ground which lecturers and students cover in order to attain the goals of education. Nwosu (2015), defined curriculum as the set of courses offered in an educational institution, and which

constitute an area of specialization. Technological skills also are needed by teachers in recent times for effective instructional delivery in the modern technology-oriented classrooms. Curriculum content delivery deals with the approaches or means employed by the lecturer to effectively and meaningfully deliver the curriculum contents to the students. This study covered lectures and assessment as areas of curriculum content delivery.

Lectures are typically the primary mode of delivery for educational content. Integrating emerging technologies during lectures can enhance the learning experience and help students better understand and retain information (Eze, Okeke & Ukeh, 2020). Integrating emerging technologies during lectures can help create a more engaging and effective learning experience for students. Buabeng-Andoh (2012), affirmed that there is the great capabilities of emerging technologies in the spreading of knowledge, making education more real and the development of more efficient educational service. However, it is important to carefully consider the needs of the students and the learning objectives of the course when selecting and implementing these technologies. There is a strong link between lecture and assessment in the context of education.

Assessments are used to evaluate a students' understanding of a content. Assessment is an essential part of education, and emerging technologies can enhance its effectiveness and efficiency. Integrating emerging technologies into student assessment can enhance the effectiveness and efficiency of the assessment process. It can also make assessment more engaging and interactive for students, leading to better learning outcomes. Elmahdi, Al-Hattami & Fawzi (2018), posited that emerging technologies are integrated into student assessment in higher institutions.

However, integrating emerging technologies into lectures and assessments can be a challenging task for private universities. It is essential to keep up with the latest trends and equip students with the skills and knowledge required for the workforce of the future. It is based on the above discourse that the present study ascertained the integration of emerging technologies for effective curriculum content delivery in private universities in South east, Nigeria.

Statement of the Problem
The integration of emerging technologies in private universities in South east, Nigeria poses several challenges that can hinder the effectiveness of teaching and assessment. These challenges include: limited resources, resistance to change, ethical concerns, lack of student engagement among others. The failure to address these challenges can lead to an outdated curriculum that does not prepare students for the workforce of the future. The integration of emerging technologies offer the potential to enhance the quality of education, improve the learning experience, and provide students with valuable skills that are in high demand in the workforce. Thus, it is crucial for private universities to develop strategies to overcome these challenges and successfully integrate emerging technologies in their teaching and assessments. The problem of this study put as a question is: To what extent are emerging technologies integrated for effective curriculum content delivery in private universities in South east, Nigeria?

Purpose of the Study
The main purpose of the study was to ascertain the integration of emerging technologies for effective curriculum content delivery in private universities in South east, Nigeria. Specifically, the study sought to:
1. determine the integration of emerging technologies for effective curriculum content delivery as regards lectures in

Private Universities in South East, Nigeria;

2. examine the integration of emerging technologies for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria.

Research Questions

The following research questions guided the study:

1. To what extent have emerging technologies been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria?
2. To what extent have emerging technologies been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria?

Hypotheses

The following null hypotheses were formulated and tested at .05 level of significance:

H_{O1}: There is no significant difference between the mean ratings of Management Staff and Heads of Departments on the extent to which emerging technologies have been integrated for effective curriculum content delivery as regards lectures in private Universities in South East, Nigeria.

H_{O2}: There is no significant difference between the mean ratings of Management Staff and Heads of Departments on the extent to which emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in private Universities in South East, Nigeria.

Research Method

The researcher adopted descriptive survey research design. Nworgu (2018), defined descriptive survey research design as one which aims at collecting data and describing in a systematic manner the characteristic features or facts about a given population. This study was carried out in South East, Nigeria. The South Eastern region is one of the six geopolitical zones in Nigeria mostly dominated by 99.9% of Igbo speaking people. The population for the study was one hundred and seventy six (176) respondents which comprised 80 management staff and 96 Heads of Department. There was no sampling because the population was manageable. The instrument for data collection was a researcher structured questionnaire titled "Integrating Emerging Technologies for effective Curriculum Content Delivery Questionnaire (IETCCDQ)".

A 4 point ratings of Very Great Extent (VGE), Great Extent (GE), Low Extent (LE) and Very Low Extent (VLE) was used with numerical values of 4, 3, 2 and 1 for both positive and negative items respectively. The instrument was validated by three research experts from Department of Educational Management and Measurement and Evaluation Unit of Department of Mathematics and Computer Education, all from Faculty of Education, Enugu State University of Science and Technology. To ensure the reliability of the instrument, it was trial-tested on 20 respondents (8 university management staff and 12 Heads of Departments) from Private Universities in South West, Nigeria. Cronbach alpha method was used to determine the reliability of the instrument which yielded .77 for cluster 1 and .79 for cluster 2 with an overall reliability index of .78. The researcher was assisted by two research assistants in the administration and collection of data. However, out of the 176 copies of the questionnaire administered on the respondents, the researcher with her assistants retrieved 159 copies (71 from the Management Staff and 88 from HODs)

which was a 90.34% retrieval rate. Mean scores and standard deviation were used for analysing the data collated while t-test statistic was used to test the null hypotheses at .05 level of significance. The benchmark set for the mean ratings was that any mean rating more than or equal to 2.50 was said to be "Great Extent" while any mean rating below 2.50 was to be "Low Extent".

Data Analysis and Results
Research Question 1: To what extent have emerging technologies been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria?

Table 1: Mean ratings of Management Staff and HODs on the Extent to which Emerging Technologies have been integrated for Effective Curriculum Content Delivery as regards Lectures in Private Universities

S/N	ITEMS	Management Staff N=71			Heads of Departments N=88		
	Emerging technologies are integrated during lectures by:	$\overline{x}$	SD	Dec	$\overline{x}$	SD	Dec
1.	creating an interesting instructional delivery.	2.59	.98	GE	2.62	.90	GE
2.	interactive presentation.	2.61	.94	GE	2.59	.93	GE
3.	ensuring virtual reality.	2.59	.92	GE	2.55	.89	GE
4.	creating an impressive set induction.	2.65	.95	GE	2.58	.93	GE
5.	using illustrations to teach.	2.53	.91	GE	2.66	.90	GE
	Grand Mean/SD	**2.59**	**.94**	**GE**	**2.60**	**.91**	**GE**

Data presented on Table 1 shows that the responses of the respondents for items 1, 2, 3, 4 and 5 were all to a great extent. The Management Staff means ranged from 2.53 to 2.65 that of HODs ranged from 2.55 to 2.66. In addition, they had cluster means of 2.59 and 2.60. The standard deviations were low signifying that the respondent responses are homogenous and clustered around the mean. Thus; the respondents were generally of the view that emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria to a great extent.

Research Question 2: To what extent have emerging technologies been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria?

Table 2: Mean ratings of Management Staff and HODs on the Extent to which Emerging Technologies have been Integrated for Effective Curriculum Content Delivery as regards Assessments in Private Universities

S/N	Emerging technologies are integrated for assessments by:	Management Staff N=71			Heads of Departments N=88		
		$\overline{x}$	SD	Dec	$\overline{x}$	SD	Dec
6.	online assessment.	2.62	.88	GE	2.59	.90	GE
7.	evaluating the students accurately.	2.65	.83	GE	2.55	.95	GE
8.	gamification.	2.58	.96	GE	2.63	1.01	GE
9.	using Artificial Intelligence to create personalize assessment.	2.55	.93	GE	2.58	.91	GE
10.	using virtual reality to create immersive assessment.	2.53	.92	GE	2.53	1.00	GE
	Grand Mean/SD	**2.59**	**.90**	**GE**	**2.58**	**.95**	**GE**

Data presented in Table 2 shows that the responses of the respondents for all the items raised in Table 2 were to a great extent. The Management Staff means ranged from 2.55 to 2.65 that of HODs ranged from 2.53 to 2.63 In addition, they had cluster means of 2.59 and 2.58. The standard deviations are small indicating that the respondent responses are similar. Thus; the respondents were generally of the view that emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria to a great extent.

Hypotheses

H_{O1}: There is no significant difference between the mean ratings of Management Staff and Heads of Departments on the extent to which emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria.

Table 3: Summary of t-test Analysis of the Mean Ratings of Management Staff and HODs on the Extent to which Emerging Technologies have been Integrated for Effective Curriculum Content Delivery as regards Lectures in Private Universities

Group	N	$\overline{x}$	SD	df	p-value	Decision
Management Staff	71	2.59	.94			
				157	.089	$H0_1$ not rejected
Heads of Departments	88	2.60	.91			

Data on Table 3 for management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria shows that at 157 degree of freedom, the p-value was .089. The outcome of the p-value is greater than .05 level of significance set for this study. This implies that the null hypothesis was not rejected. Thus, there was no significant difference between the mean ratings of management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria.

H_{O2}: There is no significant difference between the mean ratings of Management Staff and Heads of Departments on the extent to which emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria.

Table 4: Summary of t-test Analysis of the Mean Ratings of Management Staff and HODs on the Extent to which Emerging Technologies have been Integrated for Effective Curriculum Content Delivery in terms of Assessments in Private Universities

Group	N	$\bar{x}$	SD	df	p-value	Decision
Management Staff	71	2.59	.90			
				157	.077	$H0_2$ not rejected
Heads of Departments	88	2.58	.95			

The data presentation in Table 4 for management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria shows that at 157 degree of freedom, the p-value was .077. The outcome of the p-value is greater than .05 level of significance set for this study. This implies that the null hypothesis was not rejected. Thus, there was no significant difference between the mean ratings of management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria.

Discussion of Findings
The findings of the study showed that emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria to a great extent. The findings are in line with that of Eze, Okeke & Ukeh (2020), who posited that integrating emerging technologies during lectures can enhance the learning experience and help students better understand and retain information. The findings are also in line with that of Buabeng-Andoh (2012), who posited that emerging technologies are significant and integrated to a great extent in private institutions. Further finding showed that there was no significant difference between the mean ratings of management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery as regards lectures in Private Universities in South East, Nigeria.

The findings of the study showed that emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria to a great extent. These findings are in line with that of Elmahdi, Al-Hattami & Fawzi (2018), who posited that emerging technologies are integrated into student assessment in higher institutions. Further finding showed that there was no significant difference between the mean ratings of management staff and HODs on the extent to which emerging technologies have been integrated for effective curriculum content delivery in terms of assessments in Private Universities in South East, Nigeria.

Conclusion

The study centered on integrating emerging technologies for effective curriculum content delivery in private universities in South East, Nigeria. It has been observed that emerging technologies are significant in the smooth running of the educational process. This study concludes that emerging technologies have been integrated to a great extent in the areas of lectures and assessments in Private Universities in South east, Nigeria.

Recommendations

Based on the findings of the study, the researchers recommended that:
1. Private Universities' administrators should provide an enabling environment where effective lecture can strive with the inclusion of emerging technologies.
2. Lecturers should be given the opportunity to continuously go for training on how to apply emerging technologies during lectures as well as assessment. This will make them abreast of the trending areas of emerging technologies that would be integrated during lectures.

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