

DIGITAL NATIVES AND TEACHING EFFECTIVENESS IN GOVERNMENT-OWNED UNIVERSITIES IN THE SOUTH-SOUTH REGION OF NIGERIA.**Silas-Dikibo, Ingigha Deborah****Department of Office Technology and Management
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The study determined the relationship between digital natives and teaching staff effectiveness in government-owned universities in the South-South region of Nigeria. The explanatory cross sectional survey research design was adopted for the study. The population of the study consisted twenty-four thousand, seven hundred and ninety (24790) teaching staff across twenty-two (22) government-owned universities across the six (6) South-South States in Nigeria. After the application of Taro Yamene formula, the sample size of the study was three hundred and ninety-four (394) teaching staff across twenty-two (22) government-owned universities across the six (6) South-South States in Nigeria. After validation by the supervisors and two other experts in the Department of Office and Information Management, Cronbach alpha was used to test the reliability of the instrument. A total of three hundred and ninety-four (394) copies of the questionnaire was administered to the respondents by the researcher with the help of two research assistants and 352 copies were retrieved. The univariate analysis was carried out using mean and standard deviation, while the bivariate analysis was done using Pearson Product Moment Correlation in SPSS version 27.0. The findings revealed that a significant positive relationship exists between dimensions of digital fluency, such as digital natives, digital immigrants, and digital outcasts and measures of teaching staff performance in government-owned universities in the South-South region of Nigeria, such as teaching effectiveness, research output/publications, and teaching commitment. The study concluded that sustained investment in digital infrastructure, continuous staff technological development, and inclusive digital transformation policies are essential for enhancing teaching staff performance and advancing the global competitiveness, innovation, and sustainability of government-owned universities in the South-South region of Nigeria. Hence, it was recommended amongst others that the management of universities in South-South, Nigeria should establish advanced digital innovation hubs within faculties to encourage digitally fluent lecturers to develop technology-driven teaching models, virtual research collaborations, and multimedia instructional resources that can further enhance teaching effectiveness and research productivity.

Keywords: Digital Naïve, Teaching Effectiveness, Government -owned University, Digital Infrastructure

Introduction

In the broader educational context, digital fluency represents more than mere technological know-how, it encompasses the confident and critical use of digital tools to solve problems, create content, and collaborate effectively in academic and professional environments (Fulgence, 2020). Unlike digital literacy, which emphasizes basic digital skills, digital fluency reflects the ability to adapt to new technologies, evaluate digital information critically, and apply technological solutions innovatively in one's field (Jacob, 2025). In Nigeria's government-owned universities, particularly in the South-South, digital fluency has become a critical determinant of how well lecturers teach, research, and engage students. As Bartholomew (2025) notes, the extent to which lecturers can utilize digital resources directly influences their productivity and the overall quality of education. Therefore, building digital fluency among academic staff can serve as a transformative mechanism to address the performance challenges plaguing these institutions.

Among the dimensions of digital fluency, digital natives stand out as those who have grown up in a technology-rich environment and naturally integrate digital tools into their daily activities. They tend

to embrace innovations such as Learning Management Systems (LMS), social media-based learning, and digital collaboration tools with ease. In the context of South-South universities, lecturers who exhibit digital native tendencies are likely to enhance student engagement and improve teaching effectiveness through innovative instructional designs and the use of interactive platforms (Ogunbodede et al., 2023). According to Karimu and Ishola (2024), digitally native lecturers adapt more readily to e-learning and blended learning environments, making them key agents of pedagogical transformation. Their fluency enables them to transform theoretical knowledge into interactive experiences, thereby addressing the challenges of passive learning that persist in traditional classroom settings.

Conversely, digital immigrants, lecturers who were not born into the digital age but have learned to adapt, represent a significant proportion of teaching staff in government-owned universities. While they may not be as instinctively fluent as digital natives, their willingness to acquire new digital skills positions them as vital contributors to institutional growth. Fulgence (2020) notes that effective training and support structures can enhance the digital adaptation of such lecturers, bridging the performance gap between generations of educators. In the South-South region, this group's gradual integration into digital pedagogy can enhance research collaborations, data management efficiency, and virtual communication with students. As Edo and Egwurugwu (2023) affirm, even incremental digital competency improvements among lecturers can yield substantial gains in teaching quality and productivity.

Finally, digital outcasts, lecturers who are resistant or excluded from digital transformation, pose a unique challenge to educational advancement. Their limited engagement with digital technologies often results in poor instructional delivery, reduced research engagement, and low innovation capacity. However, their inclusion through capacity-building programs and institutional support can yield transformative results (Wordu et al., 2021). By gradually improving the digital inclusion of outcasts, universities can promote a culture of collective digital transformation, ensuring that no lecturer is left behind in the pursuit of excellence. As Opara and Onyeri (2023) suggest, fostering digital citizenship and inclusion can significantly enhance job effectiveness and institutional productivity, particularly in state-owned universities where resistance to change remains prevalent.

Research Hypothesis

The hypothesis will be tested at 0.05 level of significance in the course of the study.

H₀₁: There is no significant relationship between digital natives and teaching effectiveness in government-owned universities in the South-South region of Nigeria.

Digital Natives

The term "digital natives" has gained significant attention in educational discussions, particularly in the context of university students. Digital natives refer to individuals who have grown up in an environment where digital technologies, such as computers, the internet, and mobile devices, are ubiquitous. These students, particularly those in government-owned universities in the South-South region of Nigeria, are often seen as native users of technology, as they have had access to digital tools from an early age (Bennett & Maton, 2010). For these students, digital technologies are not just tools for communication and entertainment; they are integral to their educational experiences, shaping the way they engage with information, interact with their peers, and participate in academic activities. In the context of Nigerian universities, particularly in the South-South region, the understanding of digital natives is important for both faculty and administrators to fully appreciate the unique needs and characteristics of the modern student.

Digital natives are individuals who are "native speakers" of the digital language of computers, video games, and the internet (Prensky, 2001). This definition highlights the ease with which these students interact with technology and suggests that they have developed an intuitive understanding of digital tools simply by growing up with them. Bennett et al. (2008) focuses on the generational aspect, stating that digital natives are individuals born into a world where digital technologies have

been part of everyday life, shaping their cognitive, social, and educational behaviors. According to Tapscott (2009), digital natives are individuals who are highly adept at multitasking and navigating complex digital environments, as they are constantly exposed to information from a variety of sources. This exposure helps them develop a unique set of skills that are distinct from previous generations. Digital natives are individuals who have grown up in a media-saturated environment, where online communication tools, social media platforms, and digital entertainment are part of daily life (Bennett & Maton, 2010). These students are often characterized by their ability to easily transition between various digital platforms, engaging in activities like social networking, gaming, and content creation without significant effort. A fifth definition, provided by Jones and Shao (2011), refers to digital natives as students who have high levels of technological literacy, which allows them to engage with online educational resources, use digital communication tools, and participate in e-learning environments with ease. This literacy extends beyond basic skills to include the ability to critically evaluate digital content and interact with online communities in a meaningful way.

Digital natives exhibit a high level of comfort with digital collaboration tools and can work in online spaces that require cooperation with peers and instructors across different locations (Selwyn, 2009). These students are accustomed to virtual teamwork, cloud-based storage, and collaborative documents, all of which enhance their ability to work in digital spaces. Siemens (2012) views digital natives as individuals who are deeply immersed in digital learning environments. These students are proficient in using technologies such as learning management systems, online research tools, and virtual classrooms to facilitate their academic activities. This deep integration of technology into their learning habits makes digital natives distinctly different from previous generations who may have been less reliant on digital tools for academic success. In addition, digital natives are often seen as a generation of students who are highly autonomous learners. According to Oblinger and Oblinger (2005), digital natives value flexibility and autonomy in their learning, seeking out resources on their own and using technology to access information outside of traditional classrooms. This autonomy is enhanced by their familiarity with digital search engines, online journals, and educational videos, all of which empower them to pursue independent learning. Ninth, another definition of digital natives posits that these students tend to prioritize speed and convenience in their academic tasks, often preferring online resources that are immediately accessible rather than traditional, offline sources (Prensky, 2001). Finally, digital natives are often described as highly adaptive individuals who can quickly learn new technologies as they emerge. This adaptability is essential in the fast-paced digital world, where technological innovations occur frequently.

Teaching Effectiveness

Teaching effectiveness is a multifaceted concept that encompasses various elements of the teaching-learning process, from the lecturer's subject knowledge to their ability to engage students and facilitate active learning. The effectiveness of teaching plays a crucial role in determining the quality of education students receive, as it directly impacts their academic success and overall educational experience. Teaching effectiveness is defined by several key factors, including the knowledge and skills of the teacher, their teaching methods, the learning environment, assessment practices, and the ways in which they foster student engagement and participation. One of the foundational elements of teaching effectiveness is subject knowledge. Subject knowledge refers to the depth of understanding a teacher has about the content they are teaching, as well as their ability to communicate that knowledge to students in a meaningful way. According to Shulman (1986), effective teaching is built upon a strong foundation of pedagogical content knowledge, which combines subject expertise with an understanding of how to teach that subject. In universities in the South-South region of Nigeria, teaching effectiveness can be compromised when lecturers are not up-to-date with the latest developments in their fields due to limited access to resources, professional development, and academic networks. This can lead to outdated content being taught and a lack of engagement with current trends in the field, affecting the overall learning experience for students.

Another critical aspect of teaching effectiveness is the choice of teaching methods. Teaching methods are the strategies and techniques used by educators to facilitate student learning, promote engagement, and ensure that learning objectives are achieved. According to Biggs and Tang (2011), effective teaching methods are those that actively engage students and encourage them to take responsibility for their learning. In government-owned universities in the South-South region, many lecturers still rely on traditional lecture-based teaching, which, although effective in delivering large amounts of information, often fails to promote deep understanding or critical thinking. More active and student-centered teaching methods, such as group discussions, project-based learning, case studies, and flipped classrooms, are better suited to fostering student engagement and improving learning outcomes. However, the implementation of these methods is often hindered by challenges such as overcrowded classrooms, limited access to technology, and resistance to change among some faculty members.

Fredricks et al. (2004) define student engagement as the level of attention, interest, and effort that students put into their learning. When students are engaged, they are more likely to actively participate in class, retain information, and develop critical thinking skills. In the South-South region, factors such as overcrowded classrooms, limited access to learning resources, and socio-economic challenges can contribute to student disengagement. Teaching effectiveness is often compromised when lecturers struggle to engage students due to these constraints. However, teachers who use interactive teaching methods, incorporate multimedia resources, and create a classroom environment where students feel valued and supported are more likely to foster student engagement and enhance learning outcomes. Black and Wiliam (1998) emphasize that assessment should not be limited to measuring student performance but should also serve as a tool for enhancing learning by providing timely feedback. Effective assessment practices include both formative and summative assessments. Formative assessments are used during the learning process to monitor student progress and provide feedback for improvement, while summative assessments evaluate student learning at the end of a lesson or course. In many government-owned universities in the South-South region, however, assessment practices tend to focus heavily on summative assessments, such as final exams. This narrow focus on exams often fails to capture the full scope of student learning and can hinder teaching effectiveness. Incorporating a variety of assessment types, including quizzes, projects, presentations, and peer assessments, can provide a more comprehensive understanding of student performance and contribute to better learning outcomes. According to Ramsden (2003), a supportive learning environment fosters a sense of safety, respect, and inclusion, enabling students to engage more fully in their learning. In the South-South region, the physical and psychological conditions of the learning environment can significantly affect teaching effectiveness. Overcrowded classrooms, poor lighting, inadequate seating arrangements, and limited access to learning materials can create a disruptive and uncomfortable learning space. When teaching staff are unable to provide a conducive learning environment due to these constraints, it can lead to decreased student engagement and negatively impact teaching effectiveness. On the other hand, a classroom that is well-organized, equipped with appropriate learning resources, and provides students with the opportunity to collaborate and discuss ideas will enhance teaching effectiveness and improve student outcomes.

Diffusion of Innovation Theory (Roger, 1962)

This work is anchored on Diffusion of Innovation Theory. Diffusion of Innovation Theory was propounded by Roger in 1962. Roger's Diffusion of Innovation Theory explains the processes involved in the adoption of innovations such as new technologies, techniques, and procedures and well as the resultant effects of such steps on organisational processes. The diffusion of innovation theory assumes that:

- i. In a social system, there will always be a disparity in the level and time at which individuals within a given social system adopt new ideas, techniques, and technology;

- ii. Individuals and arms of institutions that adopt innovations early will naturally outperform late adopters and the laggards.

Implications/Justification of Diffusion of Innovation Theory to the Study

The implication of Diffusion of Innovation Theory for this study lies in its ability to explain variations in digital fluency, digital natives, digital immigrants, and digital outcasts, and how these differences influence teaching staff performance in government-owned universities in the South-South region of Nigeria. Rogers (2003) defines diffusion as the process through which an innovation spreads within a social system, shaped by attributes such as relative advantage, compatibility, and complexity. Within universities, digitally fluent staff are more likely to adopt e-learning platforms, research databases, and digital collaboration tools, thereby enhancing teaching effectiveness, research output/publications, and teaching commitment. Although the digital native concept has been critiqued, generational differences in digital engagement remain relevant (Bennett et al., 2008). Empirical evidence also shows that technology acceptance significantly predicts instructional effectiveness (Teo, 2011). Diffusion of Innovation therefore implies that disparities in digital fluency among academic staff may translate into uneven performance outcomes across institutions in the region.

The justification for applying Diffusion of Innovation Theory rests on its strength in explaining how technological innovations become institutionalized and affect professional performance. Universities operate as social systems where digital tools spread through peer influence, leadership, and organizational culture (Rogers, 2003). Digitally fluent faculty can function as opinion leaders who accelerate adoption of innovative teaching and research practices. Broader models of technology acceptance confirm that social influence and facilitating conditions shape technology use in organizational contexts (Venkatesh et al., 2003). In developing country settings, differences in digital competence and access further influence academic productivity and engagement (Tella et al., 2007). Accordingly, Diffusion of Innovation provides a coherent theoretical foundation for understanding how digital fluency categories may predict or moderate teaching staff performance in government-owned universities in the South-South region of Nigeria.

Research Design

The explanatory cross sectional survey research design will be adopted for this study. The population of the study will consist of twenty-four thousand, seven hundred and ninety (24790) teaching staff across twenty-two (22) government-owned universities across the six (6) South-South States in Nigeria. A number of stages of sampling with varying sampling levels was conducted in tandem with the population distribution. The sample size for this study was first determined using the Taro Yamene Formula. Taro Yamene Formula was selected because of its ability to select a convenient sample from a huge population. The study will make use of primary data. The collection of primary data will be done using a questionnaire designed by the researcher.

A properly designed three hundred and ninety-four (394) copies of the questionnaire was administered to the targeted audience, assisted by two independent research assistants. With the help of these research assistants, the researcher was able to retrieve substantial copies enough for the analyses. The presentation and analysis of data/results was carried out using Statistical Package for Social Science (SPSS). The data analysis was done using descriptive analysis (univariate analysis), bivariate analysis, and multivariate analysis. The univariate analysis was carried out using mean and standard deviation, while the bivariate analysis will be done using Pearson Product Moment Correlation in SPSS version 27.0. The Partial Correlation was used to run the multivariate analysis.

Results

Digital Natives and Teaching Staff Performance

H₀₁: There is no significant relationship between digital natives and teaching effectiveness in government-owned universities in the South-South region of Nigeria.

Table 1: Correlations between Digital Natives and Teaching Effectiveness

		Digital Natives	Teaching Effectiveness		
Pearson	Digital Natives	Correlation Coefficient	1.000	0.839**	0.901**
		Sig. (2-tailed)	.	.000	.000
		N	352	352	352
	Teaching Effectiveness	Correlation Coefficient	0.839**	1.000	0.622**
		Sig. (2-tailed)	.000	.	.000
		N	352	352	352
		Correlation Coefficient			
		Sig. (2-tailed)			
		N			
		Correlation Coefficient			
		Sig. (2-tailed)			
		N			

** . Correlation is Significant at the 0.01 level (2-tailed).

Source: SPSS Output, 2026

Table 1 above shows r value of 0.839 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating digital natives and teaching effectiveness. Since the significance value is less than the alpha level of 0.05, the null hypothesis (H₀₁) which states that there is no significant relationship between digital natives and teaching effectiveness in government-owned universities in the South-South region of Nigeria, was rejected. This implies that there is a very strong positive relationship between digital natives and teaching effectiveness in government-owned universities in the South-South region of Nigeria.

CONCLUSION

The study established that digital Natives significantly shapes teaching staff effectiveness in government-owned universities in the South-South region of Nigeria. The findings revealed that while lecturers with stronger technological orientation demonstrated the highest levels of academic performance, even those with limited digital engagement maintained measurable effectiveness, though at comparatively lower levels, thereby emphasizing the growing indispensability of technological competence within contemporary higher education systems.

RECOMMENDATIONS

Based on the conclusion of this study, the following recommendations were made:

1. The management of universities in South-South, Nigeria should establish advanced digital innovation hubs within faculties to encourage digitally fluent lecturers to develop technology-

driven teaching models, virtual research collaborations, and multimedia instructional resources that can further enhance teaching effectiveness and research productivity.

2. Government-owned universities should institutionalize continuous incentives such as digital excellence awards, research grants for technology-based projects, and promotion advantages for lecturers who effectively integrate digital tools into teaching, research, and academic engagement.
3. Universities should adopt peer-driven digital mentorship programmes where technologically advanced lecturers mentor colleagues on emerging educational technologies, digital content development, and online research strategies in order to strengthen overall institutional academic performance.

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