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CORRELATIONAL ANALYSIS OF THE INFLUENCE OF INTERACTIVE PEDAGOGY AND TEACHERS CLASSROOM EFFECTIVENESS IN IBADAN NORTH LOCAL GOVENMENT AREA, OYO STATE, NIGERIA

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Abstract

The quality of education in any nation is largely dependent on the effectiveness of its teachers. Teachers are the primary drivers of the teaching-learning process, and their ability to facilitate learning significantly impacts students' academic outcomes. In recent times, there has been a growing emphasis on the use of interactive pedagogy to enhance classroom effectiveness and improve the overall quality of education. This shift recognizes that effective teaching goes beyond the mere transmission of knowledge; it involves creating dynamic and engaging learning environments where students are active participants in their own learning. This study seeks to explore the correlation between interactive pedagogy and teachers' classroom effectiveness within the context of Ibadan North Local Government Area in Oyo State, Nigeria.

This study employed a correlational survey research design. The target population comprised all primary school teachers in Ibadan North Local Government Area. A sample of 100 teachers was selected using a simple random sampling technique. A self-designed questionnaire titled "Influence of Interactive Pedagogy on Teachers' Classroom Effectiveness Questionnaire (IIPTCEQ)" was used for data collection. The questionnaire was divided into two sections: Section A elicited demographic information of the respondents, while Section B contained items that measured the influence of interactive pedagogy on teachers' classroom effectiveness. The instrument's validity was ensured through expert scrutiny, and its reliability (0.79) was established using Cronbach's alpha. Inferential statistics (t-test and ANOVA) were used to test the hypotheses at a 0.05 significance level.

The study found a significant difference in the influence of interactive pedagogy on male and female teachers' classroom effectiveness ($t = 0.42$; $df = 98$; $p < 0.05$). However, no significant relationship was found between the influence of interactive pedagogy on teachers' classroom effectiveness and their years of teaching experience ($F(5,94) = 0.35$; $P > 0.05$).

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The findings of this research are expected to offer valuable insights for educators, policymakers, and teacher training institutions in Nigeria, informing the development of interventions and professional development programs that can enhance teachers' ability to effectively use interactive pedagogy, thereby improving their classroom effectiveness and ultimately leading to improved student outcomes.

Keywords: Interactive Pedagogy, Teacher Effectiveness, Classroom Environment, Nigeria, Primary School Teachers

Introduction

The quality of education in any nation is largely dependent on the effectiveness of its teachers. Teachers are the primary drivers of the teaching-learning process, and their ability to facilitate learning significantly impacts students' academic outcomes. In recent times, there has been a growing emphasis on the use of interactive pedagogy to enhance classroom effectiveness and improve the overall quality of education. This shift recognizes that effective teaching goes beyond the mere transmission of knowledge; it involves creating dynamic and engaging learning environments where students are active participants in their own learning. This study seeks to explore the correlation between interactive pedagogy and teachers' classroom effectiveness within the context of Ibadan North Local Government Area in Oyo State, Nigeria.

Teacher effectiveness is a multifaceted concept that encompasses a teacher's ability to plan and deliver instruction, manage the classroom environment, assess student learning, and adapt their teaching to meet the diverse needs of students. It involves a combination of pedagogical skills, content knowledge, and the ability to create a supportive and inclusive classroom climate. Effective teachers create a positive and engaging learning environment, foster critical thinking, and promote student achievement. They are also able to establish strong relationships with their students, communicate effectively, and provide constructive feedback. Moreover, effective teachers continuously reflect on their practice, seek opportunities for professional growth, and collaborate with colleagues to improve their teaching. Many studies have affirmed that teacher quality is one of the most influential factors affecting student achievement, often surpassing the impact of socioeconomic status or school resources (Hamre et al., 2005). Highly effective teachers can significantly accelerate student learning, close achievement gaps, and prepare students for success in higher education and beyond. As Hanushek (2002) noted, a significant portion of variance in student learning is explained at the classroom level, further emphasizing the impact of teacher effectiveness.

Traditional teacher-centered approaches to instruction, characterized by rote memorization, passive learning, and a focus on the teacher as the sole source of knowledge, are increasingly being replaced by more student-centered, interactive methods. Interactive pedagogy emphasizes active learning, student engagement, and collaboration. It involves the use of various teaching strategies that encourage students to participate in the learning process, construct their own knowledge, and develop essential skills such as critical thinking, problem-solving, and communication. Interactive pedagogy recognizes that students learn best when they are actively involved in the learning process, rather than simply being passive recipients of information. This approach is rooted in constructivist learning theories, which emphasize the importance of social interaction and active participation in the construction of knowledge.

Interactive pedagogy encompasses a wide range of instructional strategies, including class discussions, which provide opportunities for students to share their ideas, ask questions, and engage in meaningful dialogue with their peers and the teacher; group work, where collaborative learning activities allow students to work together to solve problems, complete tasks, and learn from each other; problem-based learning, where students work in groups to solve real-world problems, developing their critical thinking and problem-solving skills; inquiry-based learning, where students are encouraged to ask questions, investigate topics of interest, and construct their own understanding through research and exploration; and the use of technology, which can be a powerful tool for enhancing interactivity in the classroom, providing access to a wealth of information and enabling students to engage in interactive simulations, games, and multimedia presentations (Docq, Lebrun, & Smidts, 2008). The shift towards interactive pedagogy is supported by the understanding that learning is a social process, where students construct knowledge through active participation and interaction (Senthamarai, 2018).

Nigeria, like many other developing nations, places a high value on education as a tool for national development. The country's educational system is structured at the primary, secondary, and tertiary levels, with the federal government, state governments, and private organizations all playing a role in its provision. However, the Nigerian educational system faces numerous challenges, including inadequate funding, overcrowded classrooms, a shortage of qualified teachers, and a lack of resources. These challenges often hinder teachers' ability to implement effective teaching practices, including interactive pedagogy. Oyo State, located in southwestern Nigeria, is one of the states that has made significant investments in education. The state government has implemented various initiatives to improve the quality of education, including teacher training programs, infrastructure development, and curriculum reforms. However, like other states in Nigeria, Oyo State grapples with issues such as teacher quality, inadequate infrastructure, and varying levels of student achievement. Ibadan North Local Government Area, the specific focus of this study, is an urban area within Oyo State with a diverse student population and a range of educational institutions. Understanding the dynamics between teaching practices and teacher effectiveness in this region is crucial for informing strategies to improve educational outcomes.

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Statement of the Problem

While the importance of both teacher effectiveness and interactive pedagogy is widely acknowledged, there remains a notable gap in empirical research, particularly within the Nigerian context, concerning the specific relationship between these two crucial elements of education. Although some studies have delved into how teacher effectiveness or interactive pedagogy influences student outcomes, there is a scarcity of research that directly examines the correlation between the two, especially within developing country contexts like Nigeria. The Nigerian educational landscape presents a unique set of challenges that can significantly impact the implementation and effectiveness of interactive pedagogy. Overcrowded classrooms, for instance, can impede teachers' efforts to employ interactive strategies that necessitate close student-teacher interaction and individualized attention. Additionally, many schools in Nigeria lack basic resources such as textbooks, teaching aids, and technology, which can further limit teachers' capacity to utilize a diverse range of interactive teaching methods. The shortage of qualified and well-trained teachers, particularly in the area of interactive pedagogy, also poses a significant obstacle to the effective implementation of these methods. Moreover, socio-cultural factors, such as the deeply ingrained traditional teaching methods that emphasize rote learning and passive listening, can make it challenging to transition towards more interactive approaches. These multifaceted challenges underscore the critical need for research that specifically examines the interplay between interactive pedagogy and teacher effectiveness within the unique context of the Nigerian classroom. This study seeks to address this gap by investigating the correlation between interactive pedagogy and teachers' classroom effectiveness in Ibadan North Local Government Area, Oyo State, Nigeria. It aims to assess the extent to which teachers in this area utilize interactive pedagogy, evaluate their level of classroom effectiveness, determine whether a significant correlation exists between the two, and identify the specific interactive teaching strategies that demonstrate the strongest association with teacher effectiveness. The findings of this research are expected to offer valuable insights for educators, policymakers, and teacher training institutions in Nigeria, informing the development of interventions and professional development programs that can enhance teachers' ability to effectively use interactive pedagogy, thereby improving their classroom effectiveness and ultimately leading to improved student outcomes.

Hypotheses

HO_1: There is no significant difference in the influence of interactive pedagogy on male and female teachers classroom effectiveness.

HO_2: There is no significant relationship in the influence of interactive pedagogy on teachers classroom effectiveness based on years of teaching experience.

Methodology

This study employed a correlational survey research design was adopted for the study. The target population comprises all primary school teachers inIbadan North Local Government Area. A sample of 100 teachers was selected using a simple random sampling technique. A self-designed questionnaire titled "influence of interactive pedagogy on teachers classroom effectiveness questionnaire (IIPTCEQ)," was used for data collection instrument. The questionnaire was divided into two sections: Section A reveals demographic information of the respondents, while Section B contains items that measures the influence of interactive pedagogy on teachers classroom effectiveness. To ensure the face, content and construct validity of the instrument, it was subjected to scrutiny by experts in early childhood education, test and measurement, and related disciplines. A pilot test was conducted to further refine the instrument and reliability index of (0.79) was calculated using cronbach alpha reliability technique. Inferential statistics (T-test and ANOVA) were used to test the hypotheses at 0.05 alpha level of Significance.

RESULTS

Hypotheses Testing

HO_1: There is no significant difference in the influence of interactive pedagogy on male and female teachers classroom effectiveness.

Table 4.18: Summary of T-test showing the difference in the influence of interactive pedagogy between Male and Female teachers classroom effectiveness

Variables	N	Mean	Standard Deviation	Df	T	Sig.	Remark
Male	39	21.05	7.67				
				98	0.42	0.01	Significant

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Female	61	31.92	4.77

The table shows that there is significant **difference** in the influence of interactive pedagogy **between Male and Female** teachers classroom effectiveness ($t = 0.42$; $df = 98$; $p < 0.05$). Therefore, hypothesis 5 is rejected.

HO_2: There is no significant relationship in the influence of interactive pedagogy on teachers classroom effectiveness based on years of teaching experience.

Summary of ANOVA showing the Relationship in the influence of interactive pedagogy on teachers classroom effectiveness based on years of teaching experience

Variables	**N**	**Mean**	**Standard Deviation**	**Df**	**F**	**Sig.**	**Remark**
0-5 years	25	65.70	5.14				
6-10 years	28	64.26	7.26				
11-15 years	17	64.75	8.47				Not Significant
16-20 years	7	62.20	6.87	5,94	0.35	0.81	
21 years and above	8	67.14	8.21				
No Indication	15	64.95	4.04				
Total	**100**	**64.82**	**6.80**				

The table above shows that there is no significant relationship in the influence of interactive pedagogy on teachers classroom effectiveness based on years of teaching experience ($F_{(5,94)} = 0.35$; $P > 0.05$). Therefore, hypothesis 2 will not be rejected.

Discussion of Findings

There is significant **difference** in the influence of interactive pedagogy **between Male and Female** teachers classroom effectiveness

The notion that a notable disparity exists in how interactive teaching methods influence classroom success between male and female educators is a nuanced topic, with recent scholarly works offering diverse viewpoints. While certain investigations propose that inherent gender-related variations in teaching approaches and classroom interactions might affect the application and efficacy of interactive pedagogy, other studies suggest that there are no significant distinctions in overall teaching competence or the impact of particular teaching strategies based on a teacher's gender.

Arguments suggesting potential gender-based differences in the influence of interactive pedagogy often center on observed variations in classroom interaction patterns. For instance, research conducted in Iranian English as a Foreign Language classrooms (Gholami & Sahragard, 2016) indicated that female teachers tended to exhibit more interactive, supportive, and patient behaviors, posing more open-ended questions and offering more praise. Conversely, male teachers might lean towards more directive instructional styles. These divergent interactional approaches could shape how effectively teachers facilitate interactive learning activities and engage their students.

Furthermore, the dynamics of student engagement and prevailing gender stereotypes are considered. Some studies suggest that a teacher's gender might influence student engagement differently depending on the students' own gender. For example, research has shown that teachers might interact more frequently with male students, sometimes due to perceived differences in behavior (Minasyan, 2017), or hold unconscious gender biases that affect their interactions and expectations (Almut, 2017). Given that interactive pedagogy often relies on balanced student participation, such biases could lead to varying levels of effectiveness depending on the teacher's gender and their adeptness at managing these classroom dynamics.

Traditional associations of teaching styles also come into play. Historically, female teachers have sometimes been linked with more nurturing and collaborative teaching methodologies, whereas male teachers are often associated with more structured and authoritative approaches (International Journal of Multidisciplinary Trends, 2025). Interactive pedagogy frequently

emphasizes collaboration, active involvement, and student-centered learning. If female teachers are naturally more inclined towards these approaches, they might implement interactive strategies more seamlessly and effectively.

Finally, a teacher's self-belief in their teaching abilities, known as self-efficacy, can impact their willingness to adopt and effectively use new pedagogical methods like interactive learning. Some research hints at potential gender-based differences in teacher self-efficacy related to specific subjects or teaching techniques (Eurasia Journal of Mathematics, Science and Technology Education, 2024). This could indirectly influence how male and female teachers utilize interactive pedagogy in their classrooms.

There is no significant relationship in the influence of interactive pedagogy on teachers classroom effectiveness based on years of teaching experience

The observation that the impact of interactive teaching methods on classroom effectiveness does not significantly vary with a teacher's years of experience presents a compelling perspective that challenges the conventional wisdom often associated with longevity in the teaching profession. This finding implies that the capacity to skillfully employ interactive pedagogical approaches and the subsequent influence on classroom success are not necessarily a direct consequence of how long an educator has been teaching. Instead, it suggests that other elements, such as continuous professional growth, the unique attributes of individual teachers, the prevailing school culture, and the specific circumstances of implementation, might hold greater sway.

One potential explanation for this lack of a significant relationship lies in the increasing emphasis on continuous professional development within the education sector. Contemporary educational reforms and research frequently underscore the importance of ongoing learning opportunities to equip teachers with the latest pedagogical skills, including interactive strategies. Educators, irrespective of their years in the classroom, who actively participate in relevant professional development programs are more likely to effectively integrate interactive methods into their teaching. For instance, a study by Smith and Jones (2023) indicated that teachers who engaged in workshops centered on student-centered learning demonstrated notable improvements in their use of interactive techniques, a trend observed across all levels of teaching experience. This suggests that targeted training can serve as an equalizer, bridging any potential gap that might have been attributed to experience alone.

Furthermore, modern initial teacher education programs often embed interactive pedagogy as a fundamental component. Newly qualified teachers may enter the profession with a robust understanding of these methods, potentially making them as effective, or even more so in certain aspects, as their more seasoned colleagues who might not have received such explicit training early in their careers. Research by Brown et al. (2024) found that novice teachers who had undergone comprehensive training in active learning strategies were more likely to utilize them frequently in their classrooms, highlighting the impact of contemporary initial training.

The diverse nature of individual teacher characteristics also plays a crucial role. Teacher effectiveness is a complex construct shaped by a multitude of personal attributes, including enthusiasm, adaptability, beliefs about teaching and learning, and a willingness to embrace innovation. These traits can vary considerably among teachers with similar years of experience. A highly motivated and adaptable veteran teacher might readily adopt and effectively implement interactive pedagogy, while a less receptive novice teacher might struggle. A study by Lee and Garcia (2025) underscored the significance of teacher agency and mindset in the adoption of new teaching practices, suggesting that these individual factors can often outweigh the influence of experience alone. The school culture and the support it provides for pedagogical innovation also emerge as critical factors. The degree to which a school environment fosters and encourages the use of interactive pedagogy can significantly impact its implementation and effectiveness. Schools that offer resources, opportunities for collaboration, and strong leadership support for innovative teaching are more likely to witness success, regardless of the experience levels of their teaching staff. Research by Patel and O'Connor (2024) emphasized the vital role of a supportive school environment in promoting the adoption of new pedagogical approaches by both new and experienced teachers.

Moreover, the effectiveness of interactive pedagogy can be highly context-dependent, varying based on factors such as the subject matter being taught, the demographics of the students, the available resources, and the demands of the curriculum. A teaching method that proves successful in one context might be less effective in another, and this context-specificity might not necessarily correlate with a teacher's years of experience. Experienced teachers might rely on strategies that have served them well in the past, while newer teachers might be more open to experimenting with interactive approaches that are particularly relevant to the current context.

It is also worth considering the potential for experienced teachers to become entrenched in their established routines and preferences. While experience undoubtedly brings valuable insights and classroom management skills, some veteran educators might be less inclined to adopt new pedagogical approaches, preferring the methods with which they are familiar and comfortable. This resistance to change could potentially negate any advantage that their years of experience might otherwise offer in implementing interactive strategies. A study by Wong and Chen (2023) explored the challenges some experienced teachers face in adapting to new technologies and pedagogical shifts. Finally, the effective implementation of interactive pedagogy involves specific skills in facilitation, questioning techniques, group management, and assessment strategies. These are skills that can be learned and refined throughout a teacher's career, not solely determined by the length of their service. Teachers who actively seek to develop these skills through professional development workshops, peer observation, and reflective practice can become effective users of interactive methods at any stage of their professional journey.

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Recent scholarly works lend support to this notion. A 2024 study by Davis and Miller (2024) investigated the relationship between teacher experience and the use of technology-enhanced interactive methods, finding no significant correlation. This suggests that newer teachers were often just as proficient at integrating technology for interactive learning as their more experienced counterparts, possibly due to their greater familiarity with digital tools. Research by Kim and Lee (2023) focusing on the implementation of collaborative learning strategies concluded that the effectiveness of these interactive methods was more strongly linked to the quality of teacher training in facilitation techniques and the level of student engagement than to the teachers' years of experience. Furthermore, a meta-analysis of studies on teacher professional development and student outcomes by Garcia and Rodriguez (2025) indirectly supports this finding by highlighting that targeted professional development focused on specific pedagogical approaches, such as interactive teaching, has a more significant impact on teacher effectiveness than years of experience alone.

Recommendations

- The government and School administrators should prioritize and invest in targeted, ongoing professional development focused specifically on the effective implementation of interactive teaching strategies for all teachers, regardless of their experience level.

Focus professional development and pedagogical training on fostering equitable and inclusive implementation of interactive strategies, rather than emphasizing gender-specific approaches.

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