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Simulation as Modern Approach for Effective Microteaching in Colleges of Education in Northwest Nigeria

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Abstract
The prime target of teaching is to advance growth of knowledge to students. Student teachers in colleges of education are being prepared to face squarely the challenges of teaching pupils/students in primary or post primary schools after successful completion of the teacher training program. Microteaching in a practical component of teacher Education in Colleges of Education in Nigeria. Theoretical aspects of the course in being taught to students in level two first semester while the practicum is being taught to students in second semester of the same level (II). Theoretical skills arranging from introduction, examples and illustration, use of white board, planned repetition, reinforcement to mention but few are being simulated at practical session at level II hundred. The paper examined how students view the concept of microteaching as teaching strategy, which is simulated to involve few numbers of students, short period of time and showcasing one to two teaching skills. In a related vein, the paper dalt with modeling as a crucial component of microteaching which permits teacher trainer to view the video recorded teaching of the experienced teacher, teacher with a view to evaluating the viewed teaching when they come to teach at micro level. The study covered three colleges of education namely, Sa'adatu Rimi College of Education, Kumbotso, Federal College of Education, Kano and Federal College of Education, Zaria. These colleges are selected to represent other colleges of education in Northwest Geopolitical Zone and those colleges not selected bear same traits. Data was collected by distribution questionnaires to level II students in the selected colleges. The raw data collected was analyzed using thematic analysis which forms the basis of analyzing objective I and objective II.

Keywords: Approach, Effective, Microteaching, Modern, Simulation

Introduction

Microteaching remains a central component of teacher education program, designed to support the systematic development of teaching skills in a controlled and supportive environment. It involves a scaled-down teaching situation in which lesson duration, class size, and instructional content are deliberately reduced to enable pre-service teachers to focus on mastering specific pedagogical skills. In contemporary teacher education, microteaching is increasingly viewed not merely as a practice exercise but as a strategy that prepares trainee teachers for the complexities of real classroom environments (Remesh, 2020; Ambili, 2021).

In recent years, global advances in pedagogy have led to the integration of modern simulation approach into microteaching practices. These approaches include modeling, video-based reflection, peer observation, digital rehearsal, and technology-supported feedback mechanisms. Such innovations align with experiential learning theories and emphasize learning by doing, observing, and reflecting. Research conducted between 2020 and 2025 consistently shows that simulation-enhanced microteaching improves instructional competence, teaching confidence, and reflective abilities among pre-service teachers (Oviawe & Anetekhai, 2022; Adeyemi & Umar, 2024).

Modeling, in particular, has emerged as a critical element of modern microteaching simulation. It allows teacher trainees to observe exemplary teaching behaviours demonstrated by instructors or peers and to replicate these behaviours during practice sessions. Studies indicate that modeling strengthens lesson organization, questioning techniques, classroom management, and overall teaching effectiveness (Salami, 2021; Yusuf & Afolayan, 2023). When effectively integrated, modeling serves as a bridge between theoretical knowledge and classroom practice. In the Nigerian context, especially in Colleges of Education in Northwest Nigeria, microteaching is a compulsory component of teacher preparation programmes. However, evidence suggests that challenges such as partial understanding of microteaching concepts, misconceptions about its purpose, and uneven exposure to modern simulation approaches persist (Garba & Mohammed, 2022; Sadiq, Bello, & Musa, 2023). These challenges may limit the effectiveness of microteaching and undermine efforts to produce professionally competent teachers.

Against this backdrop, examining the simulation of modern approaches for effective microteaching in Colleges of Education in Northwest Nigeria becomes imperative. Understanding teacher trainees' conceptualization of microteaching and their exposure to modeling is crucial for improving instructional practices, strengthening teacher education curricula, and enhancing the overall quality of teacher preparation in the region.

Statement of the Problem

Although microteaching is a compulsory component of teacher education programmes in Nigerian Colleges of Education, its effectiveness has been questioned due to persistent misconceptions and inadequate application of modern simulation approaches. Many teacher

trainees engage in microteaching exercises without a clear understanding of its defining features, particularly its scaled-down nature involving limited students, time, and instructional skills. Such partial or incorrect understanding may lead to ineffective practice and reduced instructional benefits.

Additionally, modeling—an essential element of modern microteaching simulation—is not uniformly emphasized across Colleges of Education. While some trainees are adequately exposed to modeling techniques, others report little or no exposure, resulting in unequal learning opportunities. In Northwest Nigeria, where teacher education institutions face challenges related to instructional resources and innovation, these gaps may negatively affect the quality of teacher preparation. There is therefore need for empirical evidence to assess teacher trainees' understanding of microteaching and their exposure to modeling. This study addresses this need by providing data-driven insights that can inform improvements in microteaching practices in Colleges of Education in Northwest Nigeria.

Objectives of the Study

The objectives of the study are to:

1. Assess respondents' view of the concept of microteaching in colleges of education in northwest Nigeria.
2. Determine respondents' exposure to modeling as a modern microteaching simulation approach in colleges of education in northwest Nigeria.

Literature Review

Microteaching is widely recognized as a systematic teacher training technique designed to enhance the professional competence of pre-service teachers by simplifying the teaching–learning process. It achieves this by deliberately reducing lesson complexity, class size, instructional time, and content scope, thereby allowing teacher trainees to concentrate on the acquisition and mastery of specific teaching skills. Remesh (2020) explains that microteaching provides opportunities for repeated practice, immediate feedback, and self-reflection, which are essential for developing effective teaching behaviours. Through this cyclical process of planning, teaching, observing, and re-teaching, trainees gradually improve their instructional performance in a supportive environment.

Further elaborating on its pedagogical value, Ambili (2021) notes that microteaching serves as a crucial link between educational theory and classroom practice. By engaging in simulated teaching situations, pre-service teachers are able to experiment with instructional strategies without the pressure and unpredictability of real classroom settings. This safe and structured environment fosters confidence, reduces anxiety, and encourages reflective practice.

Recent studies conceptualize microteaching as a form of simulation-based instruction that aligns with contemporary teacher education goals. Oviawe and Anetekhai (2022) assert that when trainees clearly understand the principles and objectives of microteaching, the approach enhances teaching competence, professional growth, and reflective capacity, thereby improving readiness for real classroom teaching. Modeling is a central element of modern microteaching and is strongly grounded in social learning theory, which emphasizes learning through observation, imitation, and reinforcement. Within the context of microteaching, modeling involves trainee teachers observing exemplary instructional practices demonstrated by teacher educators or peers before attempting to replicate such practices during teaching simulations. Yusuf and Afolayan (2023) describe modeling as an effective simulation strategy that enables trainees to internalize appropriate teaching behaviours, instructional techniques, and classroom management skills through guided observation.

Empirical evidence supports the effectiveness of modeling in enhancing microteaching outcomes. Adeyemi and Umar (2024) report that teacher trainees exposed to modeling demonstrate improved lesson organization, effective questioning techniques, clearer instructional delivery, and better classroom control. Similarly, Salami (2021) found that adequate exposure to modeling significantly improves teaching performance and confidence among pre-service teachers. However, the literature also highlights that inadequate or unclear exposure to modeling can undermine the effectiveness of microteaching simulations. When trainees lack clear exemplars of effective teaching, they may struggle to translate theoretical knowledge into practical classroom skills, resulting in poor implementation of simulation-based teaching approaches.

In Nigeria, microteaching is an essential and compulsory component of teacher education programmes, particularly in Colleges of Education responsible for training teachers at the basic and secondary school levels. Despite its institutional importance, several studies have identified persistent challenges in the implementation of microteaching across Nigerian institutions. Garba and Mohammed (2022) observe that many teacher trainees in northern Nigeria possess only a partial understanding of microteaching concepts, often failing to appreciate its scaled-down nature and skill-focused objectives. Such misconceptions may reduce the instructional value of microteaching exercises.

Additionally, uneven access to modern simulation approaches, including modeling, has been reported in Nigerian Colleges of Education. Sadiq, Bello, and Musa (2023) note significant variations in trainees' exposure to modeling, video feedback, and peer observation, depending on institutional capacity and instructional practices. These disparities may affect the overall quality and effectiveness of microteaching experiences. Consequently, the literature underscores the need for improved integration of modern simulation-based approaches in

microteaching to enhance teacher preparation and ensure consistent instructional quality across Colleges of Education in Nigeria.

Methodology

The study employed a descriptive survey research design**,** which is suitable for systematically examining respondents' views, understanding, and experiences regarding the simulation of modern approaches in microteaching. This design was considered appropriate because it allows for the collection of quantitative data from a defined group of respondents without manipulating any variables, thereby providing an accurate description of existing conditions. The population of the study consisted of teacher trainees in Saadatu Rimi Colleges of Education Kano has (20) respondents, Federal College of Education Kano has (25) respondents and Federal College of Education Zaria has (25) respondents, as these institutions are primarily responsible for preparing pre-service teachers for the education sector. From this population, a total of 70 respondents were selected to participate in the study, providing a representative sample for assessing prevailing practices and perceptions related to microteaching and modeling.

Data were collected using a structured questionnaire, which was carefully designed to capture relevant information on respondents' understanding of microteaching and their exposure to modeling as a key component of modern simulation-based teaching approaches. The instrument comprised close-ended items that enabled respondents to select options that best reflected their knowledge and experiences, thereby enhancing uniformity and ease of analysis. Prior to administration, the questionnaire was subjected to face validation to ensure clarity, relevance, and alignment with the objectives of the study.

The data obtained were analyzed using descriptive statistical techniques, specifically frequencies and percentages, to summarize respondents' responses and reveal patterns in their understanding and exposure to modeling. In addition, thematic analysis was employed to provide deeper interpretation of the data by identifying recurring themes, trends, and variations in respondents' perceptions. This combined approach to data analysis facilitated a comprehensive understanding of the extent to which modern simulation approaches are understood and practiced in microteaching within Colleges of Education in Northwest Nigeria.

Results and Discussion

Research Question1: Assess the respondents' view of the concept of microteaching in colleges of education in northwest Nigeria.

Table 1: Summary of frequency and percentage view on the concept of microteaching

Option	Description	Frequency (n)	Percentage (%)
A	Teaching a large class	1	1.4
B	Teaching students with skills	25	35.7
C	Teaching scaled down involving few students, limited time, and limited skills	39	55.7
D	All of the above	5	7.1
Total		**70**	**100.0**

The findings revealed that 39 out of 70 respondents (55.7%) correctly identified microteaching as a scaled-down teaching exercise involving a limited number of students, reduced instructional time, and a focus on specific teaching skills. This result indicates that more than half of the respondents possess a sound conceptual understanding of microteaching. Such understanding is fundamental for the effective simulation of modern teaching approaches, as microteaching relies on simplification and focused skill practice to prepare pre-service teachers for real classroom situations. This finding is consistent with the views of Remesh (2020) and Ambili (2021), who emphasize that clarity of purpose and structure is essential for maximizing the benefits of microteaching. Despite this encouraging outcome, 25 respondents (35.7%) demonstrated only partial understanding by identifying microteaching primarily as teaching students with skills, without acknowledging its scaled-down nature. While this response reflects awareness of the skill-oriented aspect of microteaching, it suggests limited comprehension of its defining features, particularly the reduction in lesson duration and class size. This partial understanding may affect how microteaching sessions are conducted, as trainees who overlook the scaled-down framework may attempt to replicate full classroom teaching scenarios, thereby reducing opportunities for focused practice and meaningful feedback.

Furthermore, a small minority of respondents exhibited misconceptions by viewing microteaching as large class teaching or selecting all options indiscriminately. Although this group represents a small percentage of the sample, the presence of such misconceptions is significant, as it points to lingering confusion about the concept of microteaching among some trainees. These findings reinforce earlier studies that reported persistent misconceptions and inadequate conceptual clarity regarding microteaching in Nigerian teacher education programmes (Garba & Mohammed, 2022). Collectively, the results suggest that while awareness of microteaching is relatively high, there remains a need for clearer instruction and reinforcement of its core principles to ensure effective practice.

Research Question 2: Determine respondents' exposure to modeling as a modern microteaching simulation approach in colleges of education in northwest Nigeria

Objective Two: summary of frequency and percentage on the exposure of respondents to modeling

Option	Response	Frequency (n)	Percentage (%)
A	Yes	50	73.1
B	No	15	20.9
C	Neither yes nor no	5	6.0
D	No response	0	0.0
Total		**70**	**100.0**

The results further showed that 50 out of 70 respondents (73.1%) reported being exposed to modeling, indicating a high level of familiarity with this modern simulation-based microteaching approach. This finding is encouraging, as modeling plays a critical role in microteaching by enabling pre-service teachers to observe exemplary instructional practices and emulate them during practice sessions. High exposure to modeling suggests that many trainees are likely to benefit from observation-based learning, which enhances instructional competence, confidence, and reflective practice, as noted by Yusuf and Afolayan (2023).

However, the findings also revealed that 15 respondents (20.9%) reported no exposure to modeling, while respondents (6%) expressed uncertainty about their exposure. This indicates that a notable proportion of trainees do not fully benefit from modeling as a simulation strategy. Limited or unclear exposure to modeling may hinder the development of effective teaching skills, as trainees without clear exemplars may struggle to translate theoretical knowledge into practical classroom applications. This situation could negatively affect the overall effectiveness of microteaching exercises, particularly in contexts where modeling is expected to guide skill acquisition.

These findings align with the observations of Sadiq, Bello, and Musa (2023), who reported uneven implementation of modern microteaching practices across Colleges of Education in Nigeria. The variation in exposure to modeling suggests disparities in instructional practices, resources, and pedagogical emphasis across institutions. Consequently, the results highlight the need for more structured and consistent integration of modeling into microteaching program to ensure that all teacher trainees benefit equally from modern simulation-based approaches.

Conclusion

This study examined simulation as modern approach for effective microteaching in Colleges of Education in Northwest Nigeria, with particular emphasis on teacher trainees' understanding of microteaching and their exposure to modeling. The findings indicate that a

majority of the respondents possess a sound conceptual understanding of microteaching and have been exposed to modeling as a key simulation-based approach. This suggests that the foundational knowledge required for effective microteaching implementation exists among many teacher trainees, which is encouraging for the advancement of contemporary teacher education practices in the region.

However, the study also reveals that a considerable proportion of the respondents exhibit partial understanding, misconceptions, or limited and uncertain exposure to modeling. These gaps in conceptual clarity and practical exposure may hinder the effective simulation of modern microteaching approaches, as microteaching relies heavily on trainees' awareness of its scaled-down nature, skill-focused objectives, and the use of modeling as a guide for instructional practice. Without a comprehensive understanding of these elements, microteaching sessions may fail to achieve their intended purpose of developing specific teaching skills through focused practice and reflective feedback.

Overall, the findings underscore the need for deliberate efforts to strengthen both the conceptual and practical dimensions of microteaching in Colleges of Education in Northwest Nigeria. Addressing the identified gaps is essential for enhancing teacher preparation, promoting consistent implementation of modern simulation-based approaches, and ultimately improving the quality of instructional delivery in Nigerian classrooms.

Recommendations

Based on the findings, the study recommends that:

1. Colleges of Education namely Sa'adatu rimi College of Education, Kumbotso Kano State, Federal College of Education Zaria and Federal College of Education, Kano should intensify orientation program on the fundamental principles of microteaching.
2. Greater trainers should emphasis the scaled-down nature of microteaching alongside skill development.
3. Structured and compulsory modeling sessions should be integrated by department of curriculum and instructional Technology into all microteaching courses.
4. Teacher educators should employ video demonstrations, peer modeling, and reflective feedback to enhance learning.
5. Regular workshops and capacity-building program should be organized by the department of curriculum and instructional Technology to strengthen both lecturers' and trainees' competence in modern simulation-based microteaching approaches.

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