

## Insights From the Frontlines: Students' Perceptions of Teaching Methods in a Nigerian Medical School

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### ABSTRACT

**Background:** The teaching skills of the teachers impact the learning outcomes, and it is expected that learning can be enhanced through appropriate instructional strategies that will optimally help the students. An understanding of student's perception of the available teaching methods will provide insight into what the challenges are, and how this information can be used to further optimize learning outcomes.

**Methods:** A qualitative phenomenology study using focus group discussions among 41 clinical medical students in a developing Nigerian medical school. An inductive thematic analysis was performed on the transcribed recorded data from the group discussions.

**Results:** Six themes emerged: participation, clarity and applicability, encouragement and feedback, teaching aids, students-teachers relationship, and learning environment. Students preferred problem-based learning and small group teaching, perceiving didactic lectures as lengthy and boring. They emphasized the need for teachers to use real-world examples, provide feedback, and adopt student-centered approaches. The majority of students preferred visual learning aids but noted inadequate infrastructure and resources for their preferences.

**Conclusions:** This study highlights the importance of student-centered teaching methods, incorporating visual aids and problem-based learning, to enhance engagement and retention. Teachers should adapt their instructional strategies to cater to diverse learning styles and promote interactive learning. The study suggests retraining clinical teachers to adopt student-centered approaches and utilize available resources effectively. By prioritizing student feedback and adopting inclusive teaching methods, medical educators can optimize learning outcomes and prepare students for the demands of healthcare practice.

**Key words:** Medical, Students, Perceptions, Teaching, Methods.

### 1. INTRODUCTION

Despite the multimodal way of teaching, educators are still unable to find out whether they adequately address the needs of the students. The teaching skills of the teachers impact the students' learning and learning outcomes<sup>1</sup>. It is expected that learning can be enhanced through the designing of appropriate instructional strategies that will optimally help the students<sup>2</sup>. It is also important that there is synergy between preferred students' learning styles and teachers' teaching strategies<sup>3</sup>. A study has suggested that one of the focal points of student frustration with the curriculum is the disparity between learning (content) and the delivery of instructional approaches (form)<sup>4</sup>.

Medical teachers are central to facilitating the processes that lead to effective teaching, and as well, students' learning outcomes<sup>1</sup>. Students may respond differently to different teaching methods; lecturers need to adopt methods that are as effective as possible<sup>5</sup>. Medical school teachers must ensure that their students acquire the appropriate knowledge and skills required for their future medical practice. For these reasons, medical educators are expected to have insight into students' perceptions and preferences to enable strategies that optimize the student learning experience in clinical settings<sup>6</sup>. Several authors have suggested instructors should consider the issue of diverse teaching methods to make the learning experience more effective<sup>3,7,8</sup>. This is also believed to enhance the quality of teaching and learning as a prerogative in higher education<sup>5</sup>.

The instructional strategies or methods are integral parts of the learning environment and its inquiry, as perceived by students, may provide valuable information. An understanding of student's perception of the available teaching methods will provide insight into what the challenges are and how this

information can be used to further optimize learning outcomes. It is believed that factors contributing to the effectiveness of teaching could be improved if the intervention included concrete strategies to facilitate the enhancement of specific areas of instruction.<sup>9</sup> There has been little research on in-depth qualitative studies, particularly as it concerns the perceptions of medical undergraduates in the Nigerian undergraduate medical learning environment. This qualitative study aimed to explore the experiences of clinical medical students regarding the teaching methods adopted by medical teachers in their institution.

## 2. METHODOLOGY

### 2.1 Design and Data Collection:

This study, conducted at a budding medical school in southwest Nigeria, adopted a qualitative method using phenomenology to explore the experiences and perceptions of clinical medical students regarding teaching methods adopted by medical teachers in a developing medical school. The targeted study population included medical students in their clinical years which comprised students in the fourth, fifth, and sixth years of the six-year course of study. We adopted a qualitative approach, utilizing focus group discussions as the primary method of data collection. Purposive sampling was employed in selecting 41 participants, out of a total of 117 clinical students, by ensuring a comprehensive representation of diverse characteristics among the students' population. This involved deliberate consideration of different subgroups and gender representation within the study population. Participants from each year of study were distinctly divided into 2 sub-groups. Thus, six focus group discussions were conducted, i.e. two discussion groups from each of year of study. The selected number of participants was meticulously chosen to facilitate effective and meaningful focus group discussions, comprising between 4 and 8 students per focus group. A total of 41 students participated in the focus group sessions for the study. This study for the purpose of identification and clarity denoted each participant using alphabets A or B for the sub-group, subscript 4, 5, or 6 for the year study, and M or F to indicate gender of participant. For example: A5F denotes a fifth-year female participant in sub-group A.

A focus group discussion guide based on the second domain of the Dundee Ready Education Environment Measure (DREEM) was formulated. The DREEM is a widely used validated instrument for the assessment of the educational environment in medical schools and other health professions education.<sup>10</sup> The second domain of DREEM assesses student perceptions of teachers.

The main question posed to the participants during the discussions was "What have been your experiences regarding the approaches of your clinical teachers imparting knowledge?". Each group session lasted about 60 to 75 minutes and was conducted in a study room. Throughout the interviews, the main questions were followed by requests for explanations and examples. The discussion with each group was concluded when it was observed that no new views were expressed by the participants.

Audio recordings of discussions for each of the focus group discussions were carried out, obtaining informed consent and the researchers reassuring the participants that their response would not affect them in any way and encouraged them to ensure mutual respect and confidentiality.

The corresponding author facilitated the focus groups. The discussion sessions were spread over 3 weeks. The recordings, carried out by the third author, were transcribed independently and subsequently reconciled by the three authors. An inductive thematic analysis was done on the transcribed data. This involved a line-by-line examination of the transcripts to identify categories and sub-categories.

### 2.2 Ethical Consideration:

Ethical approval for the study was obtained from the ethics committee of the College of Medicine at Ekiti State University Teaching Hospital where the study was carried out. Participation in the study was voluntary and anonymity was ensured.

### 2.3 Data Availability Statement

The data supporting the findings of this study are available on request from the corresponding author. However, the voice recordings of participants in focus group sessions are not publicly available due to the privacy of participants.

## 3. RESULTS

Forty-one of 117 clinical students participated in the study. The subsets of participants from each of the clinical years were denoted by A and B. About one-third of the participants were females. The male-to-female ratio of the student participants was similar to the overall class demographics of 2:1. The students preferred some identified teaching methods in their school. The nature of the students' free responses to explorative open questions was multifaceted regarding their perceptions of teaching methods. The demographic representation of the study participants is shown in Table 1.

Six themes emerged from the analysis of the interview. These themes and some of the depicting statements are presented in Table 2.

### 3.1 Participation

Discussions by the focus groups revealed didactic lectures (DL), problem-based learning (PBL) demonstrations on models (DM), and small group (SG) as identified teaching methods in their school. Students perceived the DL method as lengthy, boring and less impactful. PBL method was indicated as the most preferred by the students because it enabled better interaction and also enhanced inductive thinking. However, PBL is less used by their clinical teachers for want of time. The majority of the students admitted to having a series of long and "boring" lectures during "block postings". They, however, recognized the small group teaching method as beneficial. "Small group is more interactive because we are less in our numbers," a fifth-year student reported (BF5). "We are about 7 in my small group; it is difficult to hide away in the group, unlike the ease of hiding away in a large class. Some students, however, loathe SG because they prefer to hide away" (AM4).

### 3.2 Clarity and Applicability

Many admitted they could not immediately discern the relevance of some of their lectures, particularly with some of their clinical teachers. They emphasized some of their teachers were apt at using some real-world examples for clarity of the fundamentals of what the teachers are teaching. The students reported that only very few of their teachers would simplify the lecture topics. The groups revealed most of their teachers would engage use of PowerPoint to deliver lectures to the students. "Sometimes I found some PowerPoint presentations monotonous, boring, and inadequate since we might not have the time to read our more detailed textbooks" (BF5). "Often we rely solely on the shared PowerPoint lecture documents" (AM6). The students noted that the delivery of the lecture notes via PowerPoint by their various lecturers was diverse in effectiveness. PowerPoint presentations devoid of explicit illustrations or animations were reported to be common with their teachers. About 60% of the participants admitted they could not immediately discern the relevance of some of their lectures.

### 3.3 Encouragement and Feedback

More than 80% of the participants admitted they did not have adequate time for independent study for them to appreciate the need for feedback "You move from lectures to the clinics all through the day," another fifth-year student noted. "We hardly have time to read what we are being taught, and no adequate time to read our textbook" (BM5).

More than half of the participants appreciated and reported that some of their teachers would go to all lengths to adapt their approaches to accommodate some of them who were considered slow learners. They denied the experience of support and feedback from their teachers. They made it known that it was often

more of questions from the teachers to the students. They expressed they often felt worse when some of the teachers would talk down on the students when expected responses were not forthcoming from the students. Only a few teachers would ask questions to assess how well we grasp these lectures or teaching.

### 3.4 Students-Teachers' Relationship

More than half of those who commented on students-teachers' relationship rated their relationship with their teachers as cordial. "Quite a good number of our teachers are easy to approach" (AF6). The participants almost unanimously agreed in identifying with some of their teachers who were apt at utilizing humour to drive home their points of note on topics taught.

Only some of the sixth-year students dared to reveal that some of their teachers were, however, not friendly: "I can't say why these lecturers who are not friendly are like that; some of us just take it is their personality, but their nature affects the way they teach us" (BM6).

### 3.5 Teaching Facilities

The majority of student participants expressed their preference for visual which is also less often used by their teachers because of the poor electricity supply

Sixty per cent of the students alluded to the dearth of teaching aids in the school. However, about a third of the students considered the available teaching aids as "not adequate" but they believed teaching and learning materials could be improved. One out of ten was equivocal in their assessment of available teaching aids: "Our facilities, though not enough, may still compare to some other medical schools around us" (AF6).

About three-fifths of the students indicated that the learning environment was not conducive enough as it regards electricity power supply. The power supply here is very erratic," "This most of the time hinders the delivery of lectures by our teachers" (AM4).

## 4. DISCUSSION

This study explored the perceptions among the clinical medical students of Ekiti State University, concerning the teaching methods in their medical school. Clinical teaching and learning remain integral components of medical education<sup>11</sup>. Medical students in their clinical years are confronted with the critical reality regarding the experience of learning when they are required to bridge the gap between theory and practice<sup>12</sup>.

Notwithstanding the competing and increasing demands on clinical teachers, the onus is on the teachers to ensure effectiveness in their teaching responsibilities<sup>1</sup>. It may be apparent, however, that the majority of clinical teachers have little or no formal training in their teaching role<sup>1</sup>. The interaction with the students during this study revealed some of the realities regarding the varying teaching methods adopted by the clinical teachers.

The majority of the students viewed problem-based learning (PBL) more positively than didactic teaching methods which are often adopted. PBL was reported by the students to be quite engaging, interactive, and relevant to real-world problems. The didactic lecture was viewed as more passive and less engaging. Medical prac-

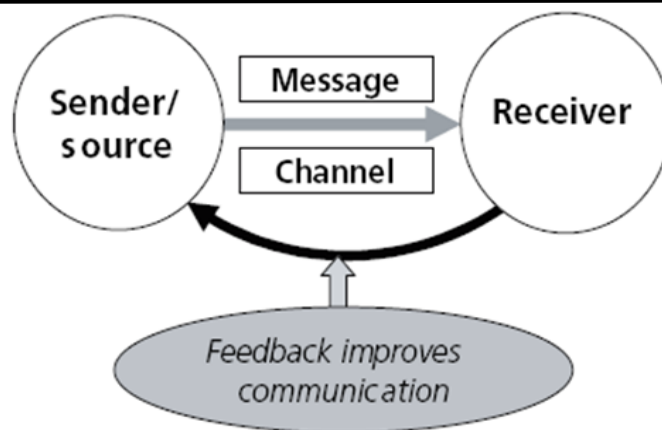


Figure 1: Scheme of Effective Communication

tice is indeed a problem-solving activity in sundry circumstances. Bloom Taxonomy, a widely used educational framework, categorizes learning objectives into six distinct levels of cognitive complexity. Average medical students may be expected to function at the higher levels of being able to apply and analyze acquired knowledge<sup>13,14</sup>. Students' perception of the applicability of what they are being taught is of great significance. Students often feel more engaged and invested in their learning when they are aware of the connection between their curriculum and real-life scenarios<sup>15</sup>. This, it is believed, can enhance students' perception of relevance.

The participants in this study indicated boredom related to the less engaging approach by most of their teachers. "Our teachers are often monotonous, the reason some of us stealthily engage our phones while lectures are on in the class," a final-year student confessed. More than half of students in a study found their lectures boring half the time and about a third found most or all of their lectures to be boring<sup>16</sup>. The learning environment has an indispensable role in teaching and learning. Thus, teachers must be circumspect of effective management of the extant learning environment. Students are more likely to get bored when the teaching approach is teacher-centered. It is pertinent for medical educators to consider inclusivity and accessibility; and also consider flexibility and adaptability of their mode of knowledge transfer. Studies have found that teacher-centered approaches are common in many low- and middle-income countries (LMICs) and that a lack of resources and training can hinder effective teaching and learning<sup>17-19</sup>. The students perhaps prefer the PBL approach because it stimulates intrinsic motivation in students<sup>20</sup>. However, it surfeits to note that there is no "one-size-fits-all" approach to teaching and learning. The ultimate goal of any interaction between students and teachers for effective communication is as shown in Figure 1.

Teachers must adapt their instructional strategies to encourage inclusive and supportive learning approaches that foster academic success to help the students achieve their full potential.

Many students in low and middle-income countries face challenges in their education due to a lack of resources and infrastructure<sup>19,21-24</sup>. The case in this medical school was not different from this reality. This was so true in the call for help by one of the partic-

Table 1: Demographic Representation of the Study Participants

Clinical year N = 117	Male	Female	Class Subset	Study Participants	Focus Group Participants	Male	Female
1 <sup>st</sup>			A (22)		8	5	3
(n <sub>1</sub> = 43)	32	11	B (21)	15	7	5	2
2 <sup>nd</sup>			A (21)		8	5	3
(n <sub>2</sub> = 41)	32	9	B (20)	15	7	5	2
3 <sup>rd</sup>			A (17)		7	5	2
(n <sub>3</sub> = 33)	25	8	B (16)	11	4	3	1
<b>Total</b>			<b>117</b>	<b>41</b>	<b>41</b>	<b>28</b>	<b>13</b>

**Table 2: Examples of Notable Statements by the Participants**

Themes	Examples of Statements From Participants
Participation	<p>"More often than not, our teachers are too assuming as many of them just delivered their lecture without being mindful of whether we (students) understand them" (AF4)</p> <p>"Many of our teachers would not entertain questions from us; they only ask questions expecting us to answer when we are yet to get the clue of what we are being taught and we are judged by our non-response or inability to answer" (AM5)</p> <p>"Sometimes I wonder whether we are being taught or being instructed" (BM4)</p> <p>"It's true our teachers are brilliant medical doctors. They could teach better if they are further trained in teaching to connect with us the students" (BF6)</p>
Clarity/Applicability	<p>"Learning is being made difficult without practical orientation. How do we apply some of what we are being taught?" (BF4)</p> <p>"We have had long lectures on Fluids and Electrolytes. In spite of this, I'm yet to understand what IV fluid to use when confronted with a patient that might require intravenous fluid" (AM4).</p>
Encouragement and Feedback	<p>"Some of our teachers wouldn't listen to questions from us (students) in class. They would simply tell you: Go and read your book." (AF5)</p> <p>"During our group projects, some of our teachers did not help us when we sought clarifications. She simply left us to figure everything out on our own." (BM6)</p> <p>"For me, I appreciate how some of our teachers challenge me to think critically and offer constructive feedback that helps me improve my work." (BM4)</p>
Teaching Aids	<p>"Electricity is the major problem here. Even we have some of our teaching aids (take the interactive board for example) that cannot be operated without electricity." (AM5)</p>
Students-Teachers' Relationship	<p>"Yes, we were told our teachers are more lenient than our teachers' teachers of the time past. Some of them (our teachers) are not so easy to approach for assistance." (AM4)</p>

Participants who cried out: "We need help! Reality might have fallen short of expectation." Some of the students admitted that the situation in the school could improve, however. The students thought that their teachers' approaches should be such that would motivate them to learn optimally by harnessing, in more interactive ways, the meagre resources available. One of the participants, corroborated by another, revealed the availability of some relevant teaching aids many of their teachers are not utilizing in teaching the students. "We need to put some of the mannequins we have in stock in our clinical laboratory to use." The availability of critical infrastructure and adequate use of appropriate teaching aids further engage and motivate learners to develop a deeper understanding of the subject matter<sup>25</sup>.

The majority of the students preferred using visual facilities such as videos. This, however, was not surprising because it is in tandem with some studies that have shown the visual learning style is often the most preferred learning style among learners so the visual learning style enables learners to understand complex concepts more easily. This finding is of significance as incorporating more visual elements, by teachers, into teaching methods can enhance engagement, understanding, and retention.

Student-teacher relationships are important in building trust and essential rapport that can promote success and enduring personal growth of the students which may enhance a lifelong relationship between the learners and the educators.

This may bring to the fore the need for the retraining of clinical teachers to adapt and adopt, where necessary, the use of simulators in the teaching of clinical procedures. The study suggests the need to explore, assess, and give consideration to attitudes and feedback of various teaching methods utilized by clinical teachers to identify the problems militating against effective learning. Teaching efforts should be directed towards student-centered knowledge transfer to enhance better learning outcomes.

The authors, however, believe that encouraging students to assess or evaluate their teachers may foster a more student-centered education, and empower students to have a voice and take an

active role in their learning. This results in better teaching methods, higher accountability, and increased student engagement. By taking student feedback into account, teachers can improve their teaching strategies, cater to individual student needs, and promote a growth mindset. Ultimately, this collaborative approach democratizes education and prepares students for real-world feedback situations.

**4.1 Conclusion**

This study highlights the significance of medical students' perception of their teachers' teaching methods. Medical teachers must embrace student-centered and multifaceted teaching strategies that promote interactive learning and cater to various learning styles. Medical teachers should optimize students' learning by adopting the appropriate mixed model of instructional strategies that would ultimately prepare their students for the knowledge and complex skills required of healthcare professionals.

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**Author's Contribution**

The three authors played a crucial role in accomplishing this project. The conceptualization and planning of our research were carried out by L. O. O and A. O. Data collection was carried out by L.O and T. O The preliminary manuscript of the article was prepared by L. O. O. The ultimate rendition of the text underwent a comprehensive evaluation and obtained the endorsement of all the authors.

**Conflicts of Interest**

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this paper.

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