Clinical teaching methods used during practical placements at Kericho County Referral Hospital, Kenya: A cross-sectional evaluation of methods in diploma health professions training

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ABSTRACT

In health professional education, clinical teaching plays a very crucial role in the gap between theoretical and competent skills in learning. The literature outlines various approaches as being useful in supporting clinical learning, such as bedside teaching, demonstrations, simulation, case presentation, and structured models of teaching. Nevertheless, little information is available regarding the particular practices applied in diploma-level clinical practicums in low-resource institutions like Kenyan referral hospitals. The objective of the study was to establish the clinical teaching strategies that were used when diploma health professions students were on clinical practicals at Kericho County Referral Hospital (KCRH), Kenya. This study was grounded in Albert Bandura's social learning theory. Between January 2025 and June 2025, the descriptive cross-sectional design was used. An administered questionnaire was a pilot-tested, structured questionnaire that included 322 diploma students on practical placement, which included timing and location of first clinical exposure, frequency and timing of assessment, and use and rating of ten methods of clinical teaching. The use of descriptive statistics, Kendall W that measures rank concordance, and chi-square tests as well as multinomial logistic regression were done. The majority of students stated that the initial clinical teaching was in the second year and mostly in skills laboratories. The most appropriate strategies were considered case presentations, bedside instruction, and assessment during the ward round, whereas demonstration, lectures, and question-answer strategies were considered very helpful. Sixty-seven percent of the respondents liked simulation, but not as much as direct patient-centered approaches. Concordance in overall ranking was not high but showed a stronger result in agreement in individual programs. These results suggest that the diploma students at KCRH are exposed to numerous types of clinical teaching, most of which are interactive and patient-centered in nature. At Kericho County Referral Hospital, clinical education uses a variety of methods, but its efficacy is constrained by irregularity and inadequate feedback. The most effective strategies for students' learning and skill development were bedside instruction and mentoring. It is proposed to maximize standardized clinical teaching in the same setting by enhancing bedside and ward-based learning, increasing exposure to early skills in a laboratory, and offering various forms of faculty development that prioritize frequent bedside instruction, organized case discussions, and prompt feedback. These are advised in order to maximize clinical education. Programs for faculty development should be created to improve the teaching abilities of clinical instructors. Additionally, in order to establish a setting that supports reliable and excellent clinical training, sufficient teaching resources and management support must be provided.

Keywords: Bedside Teaching, Clinical Teaching, Case Presentation, Diploma Students, Simulation, Kenya

I. INTRODUCTION

Clinical teaching is an inseparable part of the health professions education as it allows students to combine theoretical knowledge and practical patient care. Clinical teaching is the key to the acquisition of cognitive, psychomotor, and professional skills to practice safely (Reaves *et al.,* 2024). In a variety of settings, bedside teaching, case presentations, demonstrations, simulation, and structured microteaching models (e.g., the One-Minute Preceptor (OMP) and SNAPPS) have been demonstrated to promote learner engagement and clinical reasoning (Natesan *et al.*, 2020).

Bedside teaching has continued to be one of the fundamental pedagogical techniques, which offers hands-on learning experiences where learners can acquire communication, physical examination, and diagnostic skills when interacting with real patients. In addition to the strain on clinical services and rising patient volume, bedside teaching remains one of the most appreciated as it enables to combine both knowledge and clinical practice development and the formation of professional behaviour (Gong *et al.*, 2022). Case-based discussions are used as a supplement to bedside teaching in that they help to develop analytical thinking and translating theoretical knowledge into practical clinical cases, which is especially important in students at the initial stage of clinical exposure.

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Simulation education: Simulation education such as the use of standardized patients and high-fidelity mannequins provide a risk-free patient setting in which students can train their technical and non-technical skills. It has been shown that simulation can improve clinical competence, acquisition of skills, and learner confidence, particularly at the initial stages of education or in cases where direct contact with a patient is not possible (Alanazi *et al*., 2017).

Formatted teaching models, like the One-Minute Preceptor and SNAPPS offer effective template teaching formats based on brief, intensive teaching interactions. The methods have been associated with better engagement with learners, more successful feedback, and better clinical reasoning (Natesan *et al.*, 2020). On the same note, microteaching and peer teaching approaches enable students to acquire teaching experience, consolidate knowledge, and gain confidence in communication in the controlled environment (Trainin & Okundate 2022).

The other dimension of clinical teaching that is crucial is the functionality of supervision and feedback in the development of student competence whilst on placements. Clinical supervision is an effective approach that facilitates, supports, and evaluates learners in practice when providing care to patients in real-time (Natesan *et al.,* 2020). Health professions students have been found to be more effective in clinical practice and reflectively when provided with constructive feedback especially in a timely and specific way. The systematic feedback strategies enable learners to recognize the gaps and enhance clinical skills as time passes (Alsahafi *et al.,* 2023). Nevertheless, in most hospital settings that have a high workload, time is a limiting factor in the consistency and quality of feedback given to students.

The concept of interprofessional learning is also gaining popularity as an effective teaching tool in clinical practice throughout practical placements. The strategy implies students with various health backgrounds to study together so as to develop teamwork, communication, and collaborative practice (Lestari *et al.,* 2020). It equips the learner with the real-life healthcare conditions in which multidisciplinary interaction is paramount to quality care of the patient. Exposure to interprofessional education in diploma health training improves the knowledge of professional roles and leads to coordinated service delivery (Kithuci, 2022). Nevertheless, it is not used in most of the resource-constrained clinical environments.

Despite abundant literature on the best practices of clinical teaching, there is very little empirical evidence on the practices in reality applied in the diploma-level clinical practicums especially in the context of Kenyan referral hospitals (Jacob, 2022) . Researchers such as (Teixeiraet *et al*., 2023) have shown that structured models such as the One-Minute Preceptor can be effective at improving feedback and clinical reasoning and (Kurz et al., 2021) highlighted that bedside teaching remains relevant and may contribute to the development of practical competence. Alaklabi *et al.* (2025) also described better learner confidence and acquisition of skills as the result of simulation-based learning and the importance of peer and microteaching in strengthening the knowledge and communication skills.

Nevertheless, these research works have significant weaknesses. Majority of them are performed in well-funded or high-income academic environments, which restrict their relevance to low-resource facilities like Kenyan county referral hospitals. They may pay attention to particular teaching techniques in particular and do not analyze a variety of strategies, which are applied simultaneously in the actual clinical practice. Also, little focus is placed on diploma level training although undergraduate or post graduate medical training is emphasized more. The contextual issues like high patient workload, inadequate teaching resources, and scarce infrastructure, which usually prevail in Kenyan hospitals, are not adequately discussed either.

Therefore, context specific data on clinical teaching experiences of the diploma health professions students are lacking in terms of their experience during the placement in a clinical setting. The result of such a gap is that the educators and policymakers are not able to shape the teaching methods with the local needs and the resources realities. By identifying and assessing the clinical instructional techniques in the Kericho County referral hospital systematically, the study under discussion will help to make better choices on curriculum design, faculty support and resource distribution in the analogous setting.

1.1 Statement of the Problem

Clinical teaching is one of the foundations of health professions education, which is the one that closes the gap between the theoretical and the practical competence (Melrose et al., 2021). Although it is important, gaps remain in the delivery of clinical teaching especially in low- and middle-income countries where referral hospitals are short of resources. Empirical evidence suggests that such structured methods as bedside teaching, simulation, and case-based learning can be used to achieve a significant improvement in clinical reasoning and skill acquisition. Nevertheless, institutional capacity, preparedness of the faculty, and patient load tend to have an impact on the implementation of such methods. Consequently, students can have diverse learning experiences with respect to the teaching strategies used in clinical placements, which questions the uniformity and efficiency of training.

There are a number of empirical studies on clinical teaching practices in various contexts. Natesan *et al.* (2020) discovered that structured models like the One-Minute Preceptor enhanced the engagement and quality of feedback of learners in clinical settings. Portela *et al.* (2022) found that even with rising clinical workload, bedside teaching is still highly regarded as an opportunity to combine theory with the practical work with patients. Molina *et al.* (2025) showed that simulation education increases confidence and procedural competence, especially in the learners at the early stages.

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As well, Monika and Suganthan. (2023) have pointed out the importance of peer and microteaching contributing to the solidification of knowledge and communication skills. As much as these studies give useful insights, they are mostly done in well-resourced or advanced training institutions and hence their generalization.

Based on these studies, gaps that are notable are formed, especially on the specific clinical teaching modalities in diploma-level training in Kenyan referral hospitals. Limited information would be available on how often various teaching strategies are used, how students think they are effective, and whether there would be consistency in such programs across training programs. Moreover, situational issues like shortage of resources and large patient numbers are usually under-researched. This research fills these gaps because it methodically analyses the clinical teaching practices at Kericho County Referral Hospital. It aims to offer context-based evidence to guide curriculum and training of faculty, which ultimately enhances the outcomes of clinical education. Thus, this study was intended to identify the clinical teaching approaches applied during clinical practical placements at KCRH.

1.2 Research Objective

The study aimed to determine the clinical teaching methods used while undertaking clinical teaching practicals at Kericho County Referral Hospital (KCRH), Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Social Learning Theory

The paper is informed by the social Learning Theory by Albert Bandura in 1977, which proposes learning as a process that takes place through observation, imitation, and modelling in social settings. In clinical education, learners learn and develop through observation of more senior practitioners, communication with the instructors, and participation in the supervised patient care processes. The theory offers a background of learning clinical teaching practices, which focus on demonstration, guided practice, and role modelling (Rumjaun & Narod., 2025).

SLT is a theory that focuses on observational learning as a primary process by which the learners acquire behaviors without necessarily being taught. Bedside teaching and demonstration are some of the methods that can be used in clinical settings enabling students to observe professional behavior, procedural expertise, and clinical decision making. The theory is also aware of the role played by the internal thinking process such as attention, motivation, and memory, which are increased by interactive forms of teaching such as questioning and guided discussion. By practicing and being guided, learners apply the behaviors observed into clinical practice on their own.

2.2 Empirical Review

It is well known that clinical teaching in practical placements is a major process to deliver competence and professional reasoning development in health professions education. Among the most repeatedly recorded ones is the bedside instruction, involving learners being exposed to actual patients under guidance. Bedside instruction improves student engagement with the history taking, physical examination, diagnosis and management and helps students to effectively merge their theoretical knowledge with practical patient care. Empirical data indicate that bedside teaching, which involves well-organized teaching plans, are beneficial in training communication skills and clinical reasoning and developing a strong sense of identity, especially when teachers make their feedback on purpose and engage learners (Gubrud-Howe, 2020).

Another approach that is based on clinical education is demonstration of clinical procedures and professional interaction. Demonstration enables students to learn the right methods and professional demeanors in advance prior to carrying out procedures to enhance precision and confidence. In addition to demonstration, interactive questioning and guided dialogue are complements of demonstration and promote critical thinking, identify the knowledge gaps of learners, and offer formative assessment possibilities. The recent research has also emphasized that these interactive techniques are more effective when incorporated into organized structures because they facilitate reflective practice and diagnostic reasoning in clinical setting on-the-fly situations (Koufidis *et al.*, 2022).

Time-based teaching models like One-Minute Preceptor (OMP) and SNAPPS (Summarize, Narrow, Analyze, Probe, Plan, Select) offer standardized methods of addressing the problem of clinical training under time-limited conditions. The OMP model, which is a model designed based on five teaching microskills, enhances the effectiveness of teaching, the interaction between the teacher and the learner, and the quality of the feedback. The recent studies have shown that patients and students who are taught using OMP frameworks report positive clinical reasoning, decision-making, and presentation of their cases better than students taught without any systems (Grunewald *et al.*, 2025). On the same note, SNAPPS has been demonstrated to enhance learner autonomy, active engagement, and enhance clinical reasoning when discussing cases, and its application has been supported in various specialties (Grunewald *et al.*, 2025).

Simulation-based education (SBE) has become a significant add-on to the instruction at the bedside, particularly where direct interaction with the patient is not available. The simulated environment offers a risk-free setting in which

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technical skills, clinical thinking, and communication are practiced in a controlled setting. Simulation is proven to increase the competence, confidence, and performance of learners in high-stakes processes, improve readiness to work with patients in real-world settings, and improve simulation (Elendu *et al.*, 2024). Peer role-play simulation is also reported to be an effective approach to strengthening clinical reasoning and empathy skills in a scenario where a traditional bedside exposure might be limited (Wang *et al.*, 2025).

Mini-lectures and focused teaching in clinical teaching processes enhance the theoretical learning and reduce the impact on patient care. There is evidence to support that short, case-based lectures are effective to reinforce important concepts and help learners with mastering the difficult clinical situations (Lu *et al.*, 2026). In a similar vein, blended instruction methods involving the integration of online learning with practical clinical application have been found to improve procedural and theoretical knowledge over traditional methods of teaching in the classroom, pointing to the possibility of hybrid pedagogical frameworks of clinical education (He *et al.*, 2024).

According to recent studies in the context of low- and middle-income settings, a significant role is given to hybrid teaching methods combining bedside teaching, organized simulation, discussions of cases, and tutorials. African teaching hospital studies indicate that both faculty and students prefer bedside education as a means of real learning and simulations and tutorials as a way to practice the skills when an inability to meet with high workloads or limited resources limits direct interaction with the patient (Sims *et al.*, 2025). These results provide the evidence of the necessity to adjust the instruction to the local conditions without losing the effectiveness of the education.

Although these approaches are strongly supported by evidence, it does not exclude the existence of a significant gap in the research on diploma-level clinical education in low-resource referral hospitals. The vast majority of the existing studies are on undergraduate or postgraduate medical students in high-resource settings which restricts the generalizability of results to diploma health professions students operating in Kenyan referral hospitals. The external factors like large patient numbers, small number of teaching staff as well as limited teaching facilities further affect the viability and efficiency of clinical instruction.

To summarize, the evidence of the literature confirms that various clinical teaching methods, such as bedside teaching, demonstrations, formal models, such as OMP and SNAPPS, simulation-based learning, mini-lectures, and blended learning are effective to enhance clinical competence, reasoning, and professional development. Nonetheless, they have context-dependent implementation, and there is a limited number of evidence on the context of diploma-level programs in low-resource referral hospitals. Assessment of teaching experiences like Kericho County Referral Hospital is thus important in producing site-specific evidence that can be used to inform curriculum design, faculty development, and resource distribution towards diploma health professions education.

III. METHODOLOGY

3.1 Research Design

A descriptive cross-sectional study design was utilized in order to identify clinical teaching practices of the diploma health professions students on clinical practicals. The design allowed data to be collected at one point in time with no manipulation of the variables and thus an objective evaluation of the currently used teaching methods can be made.

3.2 Study Area

This was carried out in Kericho County Referral Hospital, a large referral hospital in South Rift in Kenya. The hospital is also a clinical training facility to diploma students in nursing, clinical medicine, physiotherapy and nutrition of different training facilities. The heterogeneous population of patients and the organized clinical teaching programs offers it an appropriate setting to test various clinical teaching methods.

3.3 Target Population

The target group was comprised of all diploma health professions students who had completed clinical practicums at Kericho County Referral Hospital in January to June 2025. Based on the hospital records, the overall number of students attending the different programs was 348 students, which consisted of nursing, clinical medicine, physiotherapy, and nutrition.

3.4 Sampling Techniques and Sample Size

A sample size was computed based on the formula by Fisher with the finite population correction adjusted to 322 participants required. Stratified sampling was applied in classifying students based on their individual programs. Subsequently, within each stratum, simple random sampling was used to get the participants, which made them representative and reduced selection bias. The study involved 322 students, with a response rate of 95%. The sample has been finally divided into 113 nursing students, 94 students of clinical medicine, 77 students of physiotherapy and 38 students of nutrition.

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3.5 Data Collection Methods

A structured self-administered questionnaire which was created as a result of literature review and expert input was used to collect the data. The instrument was used to record data on the nature and the number of clinical teaching methods applied, i.e., bedside teaching, demonstrations, simulation, lectures, case presentations, ward rounds, and question-answer sessions.

The questionnaire was pilot tested in another referral hospital, and it was revised accordingly to make it clearer. The Cronbach's alpha of 0.88 was obtained in reliability testing which demonstrates good internal consistency. The data were collected with the help of trained research assistants and questionnaires were given when there were no clinical activities to avoid interruption of regular activities. All participants volunteered to participate and informed consent was taken.

3.6 Data Analysis Procedures

Statistical Package of Social Sciences (SPSS) version 31 was used to enter, clean and analyze the data. The clinical teaching methods used were summarized using descriptive statistics, such as frequencies and percentages. The tables and charts were used to present the results and show the distribution and prevalence of various teaching approaches.

3.7 Ethical consideration

Consent, permission and approval for the study was obtained from Kericho County Referral Hospital, MMUST Institutional Scientific, Ethics and Research Committee (ISERC) and National Commission for Science, Technology and Innovation (NACOSTI) before onset of the research. High professional and ethical conduct was maintained to ensure that the respondent's privacy and confidentiality was safeguarded during the entire period of the study.Intellectual property right was upheld. All persons involved in this research were handled with utmost human dignity and respect when at the same time consent forms were be signed.

IV. FINDINGS & DISCUSSION

4.1 Participant Demographics

The study aimed to reveal the demographic characteristics of the 322 respondents, including age group, gender, year of study, and program enrolled. The sample was balanced, with 51.9% (167) females and 48.1% (155) males, indicating minimal gender bias. Most participants were in their third year (55.0%, 177), slightly outnumbering second-year students (45.0%, 145), which suggests that the majority had more extensive exposure to clinical teaching. The age distribution showed that 55.6% (179) were between 18-25 years, the average age for diploma trainees; 34.5% were below 18 years, and only 9.9% were 25 years or older. Program representation was varied, with 35.1% (113) in nursing, 29.2% (94) in clinical medicine, 23.9% (77) in physiotherapy, and 11.8% (38) in nutrition. These demographics, as summarized in Table 1, indicate a representative sample across key characteristics.

Table 1

Demographic Characteristics

Factor	Category	N=322	Percent (%)
Year of study	Second year	145	45.0
	Third year	177	55.0
Gender	Female	167	51.9
	Male	155	48.1
Age	<18	111	34.5
	18-25	179	55.6
	Above 25	32	9.9
Program	Clinical medicine	94	29.2
	Nutritionist	38	11.8
	Physiotherapy	77	23.9
	Nursing	113	35.1

4.2 Timing and Location of First Clinical Teaching

The timing and location of the first clinical teaching among the study respondents was sought and the research findings are depicted in table 2 below:

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Table 2

Timing and Location of First Clinical Teaching

Variable	Category	N=322	Percent (%)
Timing of First Clinical Teaching	First year	144	44.7
	Second year	177	55.0
Location of First Clinical Teaching	Skills laboratory	176	54.7
	Hospital wards	146	45.3
Type of Clinical Learning Assessment	End of semester	159	49.4
	After each rotation	107	33.2
	End of the year	56	17.4

Fifty-five percent of students studied that their first clinical teaching happened in the second year whereas 44.7% studied that first clinical teaching happened in the first year. The first place of teaching was skills laboratories by 54.7 percent of students and hospital wards by 45.3 percent. The most frequent types of clinical learning assessments were reported to be as follows: end of the semester (49.4), after each rotation (33.2), or end of the year (17.4). The results can be explained by the literature that suggests that clinical teaching is provided during the initial stages of training to facilitate the gradual development of theoretical knowledge and practical skills (Reaves et al., 2024).

4.3 Rankings of Teaching Methods

The study sought to reveal the rankings of different teaching methods as presented by table 3 below:

Table 3

Ranking of Teaching Methods

Teaching Method	Mean Rank	Median Rank	Observation
Case Presentations	2.97	2	Most preferred method, emphasizing patient-centered learning
Bedside Teaching	—	3	Highly valued for direct patient interaction
Ward-Round Assessment	—	4	Preferred for clinical reasoning and skill practice
Microteaching	7.19	—	Least preferred, indicating lower favorability of simulated exercises

The case presentations were ranked as the most appropriate mode of teaching by the students with a mean of 2.97 and a median of 2. There was also a high rank of bedside teaching and ward-round assessment with median ranks of 3 and 4 respectively. Microteaching offered the lowest scores (mean, 7.19), indicating that students favored the actual patient-centered learning exercise as compared to the simulated microteaching exercises.

4.4 Concordance of Method Preferences

The concordance of method preferences was revealed as presented by table 4 below:

Table 4

Concordance of Teaching Method Preferred

Program	Kendall's W	Level of Agreement	Interpretation
All students	0.19	Weak	Overall preferences among the cohort are not homogeneous
Clinical Medicine	0.12	Weak	Low agreement on preferred teaching methods
Nutrition	0.44	Moderate	Moderate agreement on preferred teaching methods
Physiotherapy	0.67	Strong	High agreement on preferred teaching methods
Nursing	0.68	Strong	High agreement on preferred teaching methods

The overall W of Kendall showed the weak concordance between all respondents ($W = 0.19$, $kh2 = 556.53$, $p < .001$), which implies that the preferences in the cohort are not homogeneous. But on stratification by program, there was weak agreement between clinical medicine students and nutrition moderate agreement ($W = 0.12$ and $W = 0.44$ respectively), and physiotherapy and nursing students had strong agreement ($W = 0.67$ and 0.68 respectively).

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4.5 Perceived Usefulness of Methods

Further, the study sought to uncover the perceived usefulness of teaching methods and the research findings are as presented by table 5 below.

Table 5

Perceived Usefulness of Teaching Methods

Teaching Method	Perceived Usefulness (%)	Observation
Lecturing	83.9	Most students considered it useful
Demonstration	82.0	Highly valued for skill acquisition
Question-and-Answer	80.4	Effective for interactive learning
Simulation	77.0	Useful but less preferred than real patient methods
Other Methods	20–30	Fluctuating perceptions, indicating varied learner preferences

Lecturing (83.9%), demonstration (82.0%), question-and-answer (80.4%), and simulation (77.0%) were considered useful by the majority of the students. A lesser percentage of about 20-30% indicated that some of the methods were not useful as this indicated that there is fluctuation in how the students perceived certain methods.

These results are consistent with the literature that focuses on the importance of various clinical teaching techniques to promote familiarity of the knowledge, abilities, and interest of the learners. It is known that lecturing and mini-lectures can strengthen the main ideas in busy clinical facilities, whereas the demonstration and questioning can enhance the practical competence and critical thinking (Farmer *et al.,* 2021; Sims *et al.,* 2025). The use of simulation as the means of confidence and clinical skills development in safe learning conditions is also recognized (Alrashidi *et al.,* 2023). The difference in the perceived usefulness indicates different needs and experiences of the learners.

4.6 Between-Program Differences

Furthermore, the study intended to reveal the between-program differences and the study findings are presented in table 6 below.

Table 6

Between-Program Differences

Program	Most Valued Methods	Observation
Clinical Medicine	Demonstrations, Lectures	Preferred methods emphasize theory-practice integration
Physiotherapy	Interventions, Micro-Skills Models	Favored structured and skill-specific teaching techniques
Nutrition	Interventions, Micro-Skills Models	Focused on structured skill development
Nursing	Supplementing, Demonstrations, Bedside Teaching	Prioritized patient-centered and hands-on clinical approaches

The chi-square tests showed that most of the perceived usefulness differences were significant based on the program. Students of clinical medicine evaluated demonstrations and lectures most of all, and physiotherapy and nutrition students appreciated interventions and micro-skills models. Supplementing, demonstrations, and bedside teaching were among the priorities of the nursing students.

4.7 Predictors of Perceived Method Validity

The study went ahead to uncover the predictors of perceived method validity and the study results are shown in Table 7 below.

Table 7

Predictors of Perceived Method Validity

Predictor	Adjusted Odds Ratio (AOR)	p-value	Interpretation
Year of Study (Third Year)	2.06	0.01	Third-year students are more likely to perceive clinical teaching methods as valid
Age (>25 years)	5.54	0.04	Older students show higher likelihood of valuing teaching methods
Program – Nursing	3.31	0.05	Nursing students more likely to consider methods valid
Program – Physiotherapy	5.12	0.05	Physiotherapy students more likely to consider methods valid

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Multinomial logistic regression revealed that the third year of study (AOR = 2.06, p =.01), ages older than 25 years (AOR = 5.54, p =.04) and program of study (nursing AOR = 3.31, physiotherapy AOR = 5.12 and p =.05) were significant predictors of the perceptions of clinical teaching methods as valid. The findings can be attributed to the literature that shows that the perceptions of students concerning the clinical teaching method are affected on the basis of clinical exposure and maturity and on the training requirements of the respective programme.

4.8 Discussion

These results are in line with the literature that pointed out that clinical teaching preferences are determined by programme-specific competencies and clinical duties. Professional orientation will affect the way students appreciate various teaching modalities whereby skills-based courses put more emphasis on demonstration, bedside, and supervised practice to enhance the psychomotor competence and clinical confidence (Rosy & Lisum 2026). There is also the relationship between the structured teaching models and short-term targeted teaching and better learner engagement and feedback, implying the necessity of the alignment of teaching strategies with the disciplinary training requirements (Natesan *et al.,* 2020).

This approach of skills laboratories as first learning conditions is consistent with findings that simulation offers a safe environment to learn new skills and achieve confidence (Alrashidi *et al.,* 2023). In the same manner, there is an indication of the ongoing significance of bedside teaching in fostering clinical competence and professional behaviour through exposing the wards (Edwards *et al*., 2024). The time of structured assessment is also evidence-based on the structured feedback process in clinical education (La et al., 2023).

The poor total consensus regarding preference on teaching supports the literature suggesting that students have different perceptions of clinical teaching owing to variations in the needs of learning, pre-exposure, and training settings (Sims *et al.,* 2025). Differences between programmes also point to the fact that disciplinary demands predetermine the way the teaching methods are appreciated. The greater consensus between nursing and physiotherapy students can be an indication of the structure and skills-based nature of their education, which would be aligned with evidence that demonstrates the importance of demonstration, experience, and bedside instruction in the formation of psychomotor skills (Rosy & Lisum 2026).

More experience and advancement in training increase the value of the teaching methods that facilitate practical competence and clinical reasoning in students (Wang *et al.,* 2025). Equally, skills-based programmes including nursing and physiotherapy give priority to supervised practice, demonstration, and bedside learning that have been found to build psychomotor abilities and confidence in the real clinical environment (Sims *et al.,* 2025).

This paper reports the range of clinical instruction practices undergone by Kenyan diploma learners in a referral hospital. The skills laboratories were the first to expose most of the students to clinical teaching in their second year. Interactive, patient-centered teaching was popular even in terms of case presentations, bedside teaching, and ward-round assessment, which were consistently rated highly and regarded as effective. The use of demonstration and lectures was also found beneficial and proved that blended methods involving didactic and experiential methods are still relevant. Although it is appreciated, simulation was not preferred equally with real-patient methods, which is consistent with the literature about simulation as an adjunct, and not a substitute, of bedside learning (Kardong et al., 2023).

These results agree with the previous studies that show that bedside teaching is the core of clinical reasoning, examinations, and professional conduct development (Garibaldi & Russell 2021; van Dam et al., 2021). SNAPPS and the One-Minute Preceptor are structured microteaching models that are found to increase the efficiency of teaching and engagement of learners in brief clinical interactions (Kolokythas, 2023; Timme & Good,, 2024). This ranking of microteaching as lesser treatment compared to the other study could also be attributed to the preference of a student to work with real patients but not classroom or simulation teaching.

Pedagogical needs related to discipline indicate that the design of the curriculum must take into account program-specific variations in the preference of the method.The study's emphasis on discipline-specific educational choices is consistent with the body of research on health professions education. According to research showing that experiential learning improves psychomotor skills and clinical competence, physiotherapy and nursing students preferred practical, task-oriented approaches (Alrazeeni et al., 2010; Bourassa et al., 2024). According to He et al. (2024) and Caulfield (2023), clinical medicine students, on the other hand, placed a higher value on lectures and demonstrations, which supports a hybrid model that strikes a balance between theoretical understanding and practical exposure. In order to enhance teaching efficacy and student results, practical implications include a focus on patient-centered approaches, early skills-lab experiences, and structured faculty training (Bennett, 2022; Cole, 2022). The study's high response rate, representation from four programs, and application of concordance and ranking analyses are among its strong points. However, its single-site design and dependence on self-reported judgments are limitations that may limit generalizability and highlight the necessity of observational assessments in subsequent studies (Simon, 2025). Overall, the results highlight how crucial it is to integrate theory and practice in clinical education while customizing pedagogical approaches to program-specific requirements.

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The results of the current research are mostly in line with the empirical literature, and they also show significant contextual and program-specific differences. The preference of hands-on and patient-centered methods among students of physiotherapy and nursing is correlated with the results of Sims *et al.* (2025) which view the bedside teaching and demonstration as essential to the acquisition of psychomotor and clinical skills. The fact that these groups have high agreement indicates the practical and task-oriented nature of their training, direct interaction with patients and supervised practice are critical. In the same manner, the attendance of the case presentation and teaching on the ward facilitates the use of theory and real clinical experiences as highlighted in the literature.

The tendency of students of clinical medicine to demonstrations and mini-lectures supports the results of (He *et al*., 2024) and (Gruppetta & Mallia, 2020), who show the importance of structured explanations and interactive questioning in strengthening clinical reasoning. This implies the necessity to have a mixed approach of teaching that incorporates both theoretical and experience learning. Moreover, the recommendation in the study to empower faculty development and organized teaching methods is upheld by Sharma *et al.* (2025), who stated that the efficient application of the model such as SNAPPS requires the capacity and load of the instructor.

Nevertheless, contrary to numerous studies being performed in resource-rich environments, this one represents the reality of low-resource environments, where staffing and large patient volumes affect the choice of methods used. Although the response rate and the variety of programs represented increase the strength of the findings, the limitations of the only site design and self-reported perceptions are potentially harmful to the generalizability and objectivity. Generally, the research provides context-related information that adds to other literature but fills gaps in clinical training in diploma level.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

According to the research results, the exposure of diploma students in the Kericho County referral hospital to various clinical teaching practices that can facilitate the combination of theoretical information and practical skills has been observed. Interactive and patient-centered interventions including bedside teaching, case presentations, and ward-round assessments were among them; however, the most appreciated by students. These techniques improve the interest of learners and the ability to think clinically and develop the skills of communication and professionalism. Although simulation and guided microteaching techniques were also employed, they were also seen to be more of complementary techniques instead of the main teaching techniques in the clinical learning context.

In addition, this research also outlines that preferences between the means of teaching clinical are dependent on the program of study and level of training among students. Younger learners are likely to respond better to structured instructions and learning by simulation, whereas more experienced students would like to have access to practical work with patients and learn by their own involving independent clinical reasoning. This highlights the need to use program-specific and level-appropriate methods of teaching. Bedside teaching, enhancing access to skills laboratories, and investing in faculty development processes aimed at enhancing the use of arranged and evidence-based clinical instruction models, especially in low-resource health care institutions, should be reinforced to maximize the learning outcomes.

5.2 Recommendations

According to the research results, it is advised that the Kericho County Referral Hospital and other such training facilities should consider exposing the students early and systematically to the skills laboratories as well as the clinical wards. This strategy will assist in laying groundwork clinical competency and facilitate the process of learning theory to practical care attending to patients. The focus should be made on interactive and patient-centered teaching techniques like bedside teaching, case presentations, and ward-round assessments because these two methods have been demonstrated to improve clinical reasoning, psychomotor skills, and professional behavior of students. Such practices must be the main focus of clinical education and the traditional lectures and demonstrations are the assists to instructing strategies.

Moreover, the institutions ought to intensify faculty development programs to make clinical instructors have skills that are required to undertake a structured teaching framework like SNAPPS and the one-minute preceptor successfully. These models have the potential to enhance feedback quality, participation of learners, and time-saving instruction in the hectic clinical environments. Curricula which are sensitive to the special needs of various health training programs, which acknowledge differences in learning needs and clinical exposure, are also needed. By making teaching strategies program-specific, the overall effectiveness of training will be improved, and the learning outcomes will be improved especially in the environment with limited resources.

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Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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