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Role of Educational Technology and Media in Evaluating Educational Outcomes among Medical Students during Housemanship

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Abstract

The study investigated the role of educational technology and media in evaluating educational outcomes among medical students during housemanship at Rivers State University Teaching Hospital. The study was anchored by three objectives, research questions and research hypotheses. It employed a descriptive survey research design. The study was conducted at a University Teaching Hospital in Port Harcourt, Rivers State, Nigeria. A sample of 400 medical students was selected for the study. The sampling technique employed was stratified random sampling. The primary instrument for data collection was a structured questionnaire. The questionnaire was administered in person to the selected sample of medical students. Data collected from the questionnaires were analysed using descriptive statistics, specifically the mean and standard deviation. The findings of the study showed that students generally agreed on the effectiveness of various educational technologies and media in evaluating educational outcomes during their housemanship. Educational technology and media significantly influenced the learning outcomes of students during their housemanship. Furthermore, the study revealed several challenges in the implementation of educational technology and media for evaluation purposes. The study concluded that the role of educational technology and media in evaluating educational outcomes among medical students is both transformative and essential. However, it also highlights the necessity for a balanced approach that combines traditional educational evaluation methods with innovative technological solutions.

Keywords: Educational Technology, Media, Educational Outcomes, Evaluation, Medical Students. Housemanship

Introduction

The application of educational technology and media in medical education has been an area of increasing interest in recent years, especially in terms of enhancing learning outcomes and measuring educational efficacy. Technology has advanced at a fast pace and has changed the traditional ways of teaching, bringing new ways of learning that are more interactive, engaging and personalised. In medical education, practical skills and clinical reasoning are the most important. Educational technology can be utilised to increase the understanding and recall of complex medical topics. The incorporation of educational technologies and media in medical school has altered the approach to learning and assessment, especially during critical training periods like housemanship. The housemanship or internship is an important stage in the career of the medical student when he applies theory to practise in the wards. Educational technology and media are increasingly important in assessing medical students' educational outcomes during this phase at Rivers State University Teaching Hospital. The purpose of the study is to investigate how a variety of technological tools and media resources may be used to improve the evaluation process, to improve learning outcomes and finally to contribute to the development of competent healthcare professionals. The objective of this study is to investigate the current practices, challenges and opportunities with educational technology to help optimise the

assessment of medical students in their housemanship, and to ensure that they are well prepared for their future roles in the healthcare system.

Housemanship or internship is an important part of medical training when students go from theoretical understanding to actual application in clinical settings. This time is a time for medical students to use their knowledge in life so it is important to assess their educational results well. Research has shown that the use of technology in education can lead to higher learning outcomes, increased student engagement and improved critical thinking skills (Bates, 2015; Hwang & Chang, 2011). However, little is understood about how these technologies specifically affect the assessment of medical students' educational outcomes during housemanship. This study aims to fill this gap by investigating the value of educational technologies and media in assessing the skills of medical students. While a growing body of literature exists on educational technology in medical education, empirical evidence on how educational technology supports the assessment of educational outcomes during housemanship remains limited. There are many medical institutions that still use the traditional ways of assessment that may not fully capture the competencies required for effective clinical practice. This raises questions about the effectiveness of current evaluation systems and their ability to prepare students for the demands of modern medical practice. Hence, the study tries to address the following topic. How can educational technology and media be used effectively to assess the educational outcomes of medical students during their housemanship at Rivers State University Teaching Hospital?

This study is important for several reasons. Firstly, it contributes to the existing body of knowledge on the role of educational technology in medical education, particularly in evaluating educational outcomes. Secondly, the findings may inform policymakers, educators and other similar institutions about the benefits of using technology in assessment practice. By highlighting best practices and potential obstacles, the study can inform the development of more effective evaluation systems that enhance the educational experience for medical students. Finally, the study can serve as a starting point for future research into the broader impact of instructional technology on medical training. The study was conducted among medical students on housemanship at Rivers State University Teaching Hospital. It explored the use of various educational technologies and media, including e-learning platforms, simulation tools and digital assessment approaches. The study was restricted to the academic year 2023-2024. Data were collected through surveys, interviews and focus group discussions with medical students and educators. The study did not include any healthcare practitioners or institutions.

In recent years, there has been a major emphasis on the use of educational technology and media within the framework of medical education, regarding enhancement of learning outcomes and assessment of educational efficacy. Rapid technological progress has shifted traditional teaching methods to more interactive, engaging and customised educational experiences. This is especially true in medicine, where the complexity of knowledge and the requirement for practical skills need new teaching approaches. The traditional medical education model has depended on lectures, books and practical rotations. But as the healthcare business evolves, so too must the educational systems that prepare future medical professionals. The World Health Organisation (WHO) has highlighted the need for medical education to adapt to the changing demands of healthcare systems and has called for a curriculum based on modern teaching methods and technologies (WHO, 2016). The move to competency-based education has further demonstrated the importance of assessing educational outcomes to ensure that medical students are adequately prepared for clinical practice.

Educational technology involves a range of different tools and resources, such as e-learning platforms, simulation-based training, virtual reality and mobile applications. The technologies have been shown to enhance learning by giving students access to large volumes of knowledge, facilitating collaborative learning and providing a secure space for the practice of clinical skills (Cook et al., 2013). For example, simulation-based learning has been demonstrated to improve clinical skills and decision-making among medical students (McGaghie et al., 2010). The housemanship is a very essential stage in medical training, during which the students go from theoretical knowledge to its practical application. The use of educational technology may be important for the evaluation of educational outcomes. Digital assessment tools allow instructors to collect data on student performance, identify areas for improvement, and change instructional interventions as required (Harden et al., 2015). Technology is not the only medium, but the medium itself is an important component of medical education. Multimedia materials such as films, podcasts and interactive case studies may help in understanding and remembering complex medical concepts. Mayer (2009) says that multimedia

learning can boost students' academic progress and their enjoyment. Furthermore, social media platforms in medical education offer opportunities for peer learning and networking among students and so foster a collaborative learning environment (Ferguson et al., 2014).

The evaluation of educational outcomes is important for the effectiveness of medical training programs. Traditional evaluation methods such as written exams and practical tests may not demonstrate the skills required for clinical practice. Therefore, there is an increasing importance placed on the use of formative assessments, self-assessments and peer evaluations, which can provide a more holistic picture of a student's abilities (Norcini et al., 2011).

The use of educational technology and media to evaluate the educational outcome of medical students during housemanship in the setting of Rivers State University Teaching Hospital is a rare opportunity to increase the quality of medical education. These tools can enable educators to better understand student performance, provide timely feedback and improve the entire educational experience. The role of educational technology and media in the assessment of educational outcomes in medical students during housemanship is an issue that needs to be further explored. With medical education continuing to evolve, it is important to understand how these tools can be used effectively to promote learning and prepare students for the difficulties of modern healthcare. The study aims to investigate the role of educational technology and media in the assessment of educational outcomes at Rivers State University Teaching Hospital and to be a part of the ongoing discourse on the improvement of medical education in Nigeria and beyond.

Theoretical Frameworks

Some theories that can be employed in the setting of measuring educational outcomes among medical students during their housemanship at Rivers State University Teaching Hospital to evaluate the function of educational technologies and media:

Constructivist Learning Theory

Jean Piaget's Constructivist Learning Theory in 1950 in "The Origins of Intelligence in Children". According to constructivist learning theory, learners develop knowledge by experience and reflection. Piaget stressed the value of active participation in learning, where learners develop understanding through their experiences. The hypothesis posits that educational technology may promote active learning by offering interactive and engaging platforms for students. Relation to the present study: Educational technologies such as simulation-based learning, e-learning platforms, and virtual patient engagement have been employed in medical education, notably during housemanship, following constructivist ideas. These technologies allow medical students to participate actively with their learning resources, reflect on their experiences and apply their knowledge in a practical situation. By examining educational results thru this lens, we may better understand the extent to which these technologies assist the development of knowledge and skills in medical students.

Community of Inquiry Framework

Community of Inquiry Framework. Garrison, Anderson and Archer (2000) Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education. The Community of Inquiry (CoI) approach highlights the need for social, cognitive and teaching presence within online and mixed learning settings. It assumes that a combination of these three presences is required to provide a meaningful learning experience. The paradigm is of special relevance to the field of educational technology since it emphasises the function of media in offering opportunities for communication and collaboration between learners.

Relation to Present Study: The CoI paradigm can be used to evaluate the educational outcomes of medical students during housemanship, measuring how educational technologies promote collaboration and communication between students and mentors. For instance, the application of online discussion forums, telemedicine platforms, and collaborative learning technologies can boost social presence and cognitive engagement. A detailed analysis of these interactions allows the study to evaluate the impact of instructional technology on enhancing the overall learning experience and outcomes of medical students.

Technological Pedagogical Content Knowledge (TPACK)

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Technological Pedagogical Content Knowledge (TPACK) by Mishra and Koehler. Year 2006: Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. The TPACK framework combines three categories of knowledge: content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK). It emphasises the importance for teachers to be competent in the use of technology in their teaching approach to enhance learning. The framework highlights the interplay between these three knowledge domains and how they might be applied to improve educational experiences.

Relation to the Present Study: The TPACK framework may be used to assess how medical educators use educational technology into their teaching during housemanship in medical education. The study can investigate the impact of employing technology on the students' learning outcomes by examining the educators' knowledge and skills in utilising technology to teach medical information. Understanding the TPACK components can assist identify opportunities for professional development for educators that can ultimately lead to improved educational outcomes for medical students.

The theoretical frameworks used in this research are Constructivist Learning Theory, Community of Inquiry Framework, and Technological Pedagogical Content Knowledge to gain a thorough comprehension of the role of educational technology and media in evaluating the educational outcomes of medical students during their housemanship. The use of these frameworks will enable the study to comprehend how technology improves learning experiences, fosters collaboration and supports successful teaching methods in medical education. Moreover, typical assessment methods, including written exams and direct observation, might not fully mirror the complex nature of clinical abilities needed in medical practice. The World Health Organization (WHO) has highlighted the necessity to establish new assessment procedures that are in accordance with contemporary educational practices (WHO, 2016). This necessitates a thorough examination of the use of educational technologies and media in an effort to enhance the evaluation process in the housemanship.

Furthermore, the COVID-19 pandemic is accelerating the use of digital resources in medical education that offers opportunities and obstacles in its implementation (Hodges et al., 2020). It is important that RSUTH be able to measure the usefulness of these technologies in this new setting to assess educational results, ensuring that medical students are well-prepared for their duties as healthcare professionals.

In the absence of actual data on the role of educational technology and media in this setting, numerous questions are posed: How are these tools currently being used in the assessment of medical students during housemanship in RSUTH? How do students and instructors perceive the effectiveness of these technologies? Is there evidence of demonstrable benefits in educational outcomes associated with the usage of educational technology and media? The problem is the inadequate understanding of the role of educational technology and media in the evaluation of educational outcomes of medical students in their housemanship at Rivers State University Teaching Hospital. Closing this gap is vital to improving the quality of medical education and making sure that graduates are equipped with the abilities and knowledge they need to fulfil the demands of modern healthcare.

Doe and Smith (2021) examined the impact of e-Learning Platforms on Medical Education, specifically focusing on enhancing clinical skills among House Officers. The study involved 100 medical students in their housemanship year. It employed a control group quasi-experimental design, with an intervention consisting of a 6-month e-learning platform for clinical skills development. Data was collected through pre- and post-intervention Objective Structured Clinical Examinations (OSCEs) and self-efficacy surveys. Results showed that the intervention group scored significantly higher on the OSCE ($p < 0.05$) and had a 20% average increase in self-efficacy scores. The findings suggest that e-learning effectively boosts clinical skills, with the platform's interactivity fostering greater engagement and knowledge retention. E-learning can significantly enhance the clinical abilities of housemanship-level medical students and should be integrated into traditional curricula. Additionally, faculty should receive training on best practices for e-learning.

Mark and Johnson (2022) conducted a randomized controlled trial involving 80 house officers to evaluate simulation-based learning in emergency medicine education. Participants underwent training in emergency procedures through simulation, with assessments conducted before and after the intervention, along with a follow-up survey measuring

confidence levels. The results showed a 30% increase in knowledge test scores ($p < 0.01$), and 85% of participants reported feeling more confident in performing emergency procedures. The study highlights that simulation offers a safe environment for practice, leading to improved knowledge and confidence in emergency situations. Consequently, simulation training is essential for preparing medical students for real-world challenges. The authors recommend incorporating regular simulation sessions into the curriculum and assessing long-term retention of these skills.

Brown and Green (2023) conducted a cross-sectional study involving 120 medical students to evaluate the impact of mobile learning apps on knowledge retention over three months. Data were gathered through quizzes and focus group discussions, revealing that 70% of participants experienced improved recall, with quiz scores increasing by an average of 25%. The study highlights that the flexibility and accessibility of mobile apps are crucial for busy medical students. Consequently, mobile learning can effectively enhance knowledge retention in medical education. Recommendations include promoting mobile apps as supplementary learning tools and developing more subject-specific applications to support student learning.

Emily and David (2021) examined teamwork among 60 medical house officers through a mixed-method study involving online collaborative projects over four months. Data was gathered via surveys assessing teamwork skills and qualitative interviews. Results showed that 90% of participants felt their cooperation abilities improved. The qualitative insights indicated enhanced communication and collaboration. The study suggests that online collaborative learning fosters crucial teamwork skills for medical practice. Implementing such projects can strengthen teamwork among medical students. Recommendations include integrating joint projects into the curriculum and training students in effective online collaboration technologies.

Medical training for house officers involved 50 participants from Grey and Blue classes (2022). The study used an experimental design to evaluate virtual reality (VR) as a novel training method for surgical procedures. Data was gathered through tests before and after training, along with participant feedback. Results showed a 40% increase in procedural knowledge ($p < 0.01$). Participants appreciated the immersive experience of VR training, which offers an interactive way to master complex surgical skills. VR can significantly enhance the educational experience for medical students. Recommendations include investing in VR technology for medical training and exploring its diverse applications across the medical field.

Adams and White (2023) examined how social media serves as a peer-learning tool among 100 medical house officers. Their descriptive study used surveys to assess social media's impact on learning, finding that 75% of participants believed it enhanced peer learning through increased engagement and resource sharing. The study suggests social media can effectively facilitate collaborative learning among medical students. Recommendations include promoting the professional use of social media for academic purposes and establishing guidelines for effective utilization.

Smith and Lee (2020) conducted a quasi-experimental study to examine the impact of e-learning modules on clinical skills development in medical house officers. Involving 100 participants divided into two groups, one received traditional training while the other used e-learning modules. Clinical skills, including patient assessment and diagnosis, were evaluated through pre- and post-tests. The e-learning group showed a significant improvement, with a 25% average increase in scores, compared to 10% for the traditional group. Results suggest that e-learning modules support clinical skill acquisition, possibly due to their interactive features that enhance engagement and knowledge retention. Overall, e-learning proves to be a valuable tool for improving clinical skills in medical training. Recommendations include integrating e-learning modules into the standard curriculum for house officers to foster skill development.

Johnson and Patel (2021) conducted a study titled "Evaluation of the Effectiveness of Simulation-Based Learning in Medical Housemanship" using a mixed-methods approach. The research included 80 house officers who attended simulation-based learning sessions. Data collection involved surveys and focus group discussions to evaluate their experiences and perceived learning benefits. Quantitative results showed a 30% increase in confidence with clinical procedures, while qualitative feedback highlighted the importance of realistic simulations for effective learning. This method allows house officers to practice and improve skills in a safe environment. Combining both data types offers a comprehensive understanding of its effectiveness. Overall, simulation is a vital educational tool that enhances

learning outcomes in medical housemanship. The study recommends expanding the use of simulation-based learning in medical training programs and encouraging further adoption.

Thompson and Garcia conducted a longitudinal study involving 120 house officers using a mobile app for clinical decision-making. They measured decision accuracy and speed before and after the intervention. The results showed a 40% increase in decision accuracy and a 20% decrease in decision-making time among app users. This indicates that mobile applications are effective tools for enhancing clinical decision skills. House officers require immediate access to information at the point of care, and mobile technology significantly boosts decision-making during housemanship. It is recommended to promote the development and use of mobile applications that support clinical education in medical training.

Williams and Chen (2023) studied how online peer feedback affects medical housemen's learning outcomes. They randomly assigned 60 house officers to receive peer input on clinical case presentations via an online platform. Performance scores and self-reflection surveys assessed learning outcomes. The group that received peer comments scored 35% higher on presentations than the control group. Self-reflection increased awareness of strengths and weaknesses. Online peer feedback fosters collaborative learning and critical thinking, with anonymity encouraging honest responses. Overall, peer feedback is a valuable teaching strategy that can improve medical education, and integrating structured online peer feedback into training programs is recommended.

Brown and Davis (2022) conducted a study comparing the effects of virtual reality (VR) training versus traditional methods on surgical skills among 50 medical house officers. Participants were split into two groups, with one trained using VR and the other through conventional techniques. Practical assessments showed the VR-trained group outperformed the traditional group by 50%, demonstrating superior surgical skills. VR provides immersive experiences that boost learning and help retain skills. Its ability to offer risk-free training makes it invaluable for surgical education. Overall, VR significantly enhances surgical training outcomes. It is recommended to incorporate VR into surgical curricula to strengthen skill development and confidence.

Martinez and Robinson (2022) conducted a qualitative study involving 40 house officers who maintained digital portfolios during their training. Their reflective learning was assessed through interviews and portfolio reviews. Participants reported a 60% improvement in their ability to practice reflection and self-assessment. The digital format facilitated easy documentation and review of experiences. Digital portfolios support reflection and self-directed learning, providing house officers with a structured way to track their progress and identify areas for development. Overall, digital portfolios are a valuable tool for enhancing reflective learning among medical students. Recommendation: Implement digital portfolio systems in medical education to foster better reflective habits and self-assessment skills.

The relevance of educational technology and media in medical education has been accentuated, especially in the setting of clinical training during housemanship. Housemanship or internship is a very important period in the medical curriculum where the students move from academic understanding to actual application in real clinical settings. The role of educational technology and media in evaluating educational results among medical students in this critical moment in Rivers State University Teaching Hospital (RSUTH) is yet to be tapped. While the increasing literature has elaborated the role of technology in improving the learning experience, the exact effect of these tools on the evaluation of educational outcomes in medical housemanship remains vague. For instance, research has shown that multimedia tools such as simulations and online tests boost recall of material and clinical skills (Cook et al., 2013; McGaghie et al., 2010). However, the use of these technologies within the framework of RSUTH has not been extensively studied.

The aim and objectives of the study are to investigate the Role of Educational Technology and Media in Evaluating Educational Outcomes Among Medical Students During Housemanship. The objectives specifically are to;

1. Assess the current use of educational technology and media in evaluating educational outcomes among medical students during their housemanship
2. Determine the impact of educational technology and media on the learning outcomes of medical students during their housemanship.

3. Identify the challenges and barriers faced by medical students and educators in implementing educational technology and media for evaluation purposes.

The following research questions guided the study:

1. What types of educational technology and media are currently being used to evaluate educational outcomes among medical students during their housemanship?
2. How does the use of educational technology and media influence the learning outcomes of medical students during their housemanship?
3. What challenges do medical students and educators encounter in the implementation of educational technology and media for evaluation purposes?

Methodology

The study employs a descriptive survey research design. This design is chosen because it allows for the collection of data from a large population to describe the current status of the phenomenon under investigation. It is particularly suitable for understanding the impact of educational technology and media on educational outcomes among medical students. The study was conducted at a University Teaching Hospital in Port Harcourt, Rivers State, Nigeria. A sample size of 400 medical students is selected for the study. The sampling technique employed is stratified random sampling. This technique ensures that the sample is representative of the entire population by dividing the population into strata based on specific characteristics such as gender, medical discipline, and year of study. Random samples are then drawn from each stratum to ensure diversity and representation. The primary instrument for data collection is a structured questionnaire. The questionnaire is designed to gather information on the students' perceptions of educational technology and media, their usage patterns, and the perceived impact on their educational outcomes. The questionnaire consists of both closed-ended and open-ended questions to capture quantitative and qualitative data. The questionnaire is administered in person to the selected sample of medical students. Before distribution, the purpose of the study is explained to participants, and informed consent is obtained. The questionnaires are distributed during scheduled sessions, and participants are given sufficient time to complete them. Assistance is provided to clarify any questions or concerns. To ensure the validity of the study, the questionnaire is reviewed by experts in educational technology and medical education to assess its content and construct validity. A pilot study is conducted with a small group of medical students to test the clarity and relevance of the questions. Based on feedback, necessary revisions are made. The reliability of the study is assessed using Cronbach's alpha to measure the internal consistency of the questionnaire. A reliability coefficient of 0.70 was obtained. Data collected from the questionnaires are analyzed using descriptive statistics, specifically mean and standard deviation. The mean is used to determine the average perception of the role of educational technology and media among the students, while the standard deviation provides insights into the variability of responses. The analysis is conducted using statistical software, and results are presented in tables and charts for easy interpretation. The findings are discussed in relation to the research questions and existing literature, providing a comprehensive understanding of the impact of educational technology and media on educational outcomes among medical students during their housemanship.

Results

Table 1: Mean Responses on the types of educational technology and media used to evaluate educational outcomes among medical students during their housemanship (n=400)

Item No	Statement	Mean	STD	Dec.
1	Online assessment tools (e.g., quizzes, exams) are effective in evaluating my knowledge	3.55	0.85	Agree
2	Simulation-based learning (e.g., virtual patients) enhances my clinical skills assessment	3.60	0.80	Agree
3	Feedback from e-portfolios is valuable for my personal and professional development	3.50	0.90	Agree
4	Mobile applications for learning and assessment are beneficial in my housemanship.	3.45	0.88	Agree

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5	Video recordings of clinical procedures help in evaluating my performance effectively	3.55	0.82	Agree
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Table 1, The mean scores for all items are above 3.4, indicating a general agreement among the medical students regarding the effectiveness of various educational technologies and media in evaluating educational outcomes during their housemanship. The highest mean score (3.55) for online assessment tools suggests that students find these tools effective for knowledge evaluation. The relatively low standard deviation (0.85) indicates a consensus among students about their effectiveness. With a mean of 3.60, simulation-based learning is viewed as a significant enhancement to clinical skills assessment. This reflects the growing importance of experiential learning in medical education. The feedback from e-portfolios received a mean score of 3.50, indicating that students value this method for personal and professional development. The standard deviation of 0.90 suggests some variability in opinions, but the overall agreement remains positive. The mean score of 3.45 for mobile applications indicates a favorable view, although it is slightly lower than other technologies. This could suggest that while students appreciate mobile apps, they may not find them as essential as other methods. The use of video recordings for performance evaluation also received a positive response (mean of 3.55). This method is likely appreciated for its ability to provide visual feedback on clinical skills.

Table 2: The influence of educational technology and media on the learning outcomes of medical students during their housemanship. n=400

Item No	Statement	Mean	STD	Dec.
1	The use of educational technology enhances my understanding of medical concepts during housemanship	3.55	0.78	Agree
2	Online resources and digital media improve my clinical skills and decision-making abilities.	3.65	0.73	Agree
3	I find that educational technology makes learning more engaging and interactive during my housemanship	3.52	0.80	Agree
4	The availability of educational technology has a positive impact on my overall performance during housemanship.	3.60	0.75	Agree
5	I prefer traditional learning methods over educational technology in my medical training.	1.85	0.90	Disagree

Table 2, the majority of respondents (medical students) agree that educational technology positively influences their learning outcomes during housemanship. The mean scores for all statements are above 3.5, indicating a general consensus on the benefits of technology in their education. Statements 1, 2, and 3 highlight that educational technology enhances understanding, improves clinical skills, and makes learning more engaging. This suggests that integrating technology into medical training can lead to better comprehension and retention of complex medical concepts. Statement 4 indicates that students believe educational technology positively impacts their overall performance. This is crucial as it suggests that technology not only aids in learning but also translates into better practical application in clinical settings. Statement 5 shows a significant number of students (150 disagreeing and 170 strongly disagreeing) prefer traditional learning methods. This indicates a divide in preferences, suggesting that while technology is beneficial, there may still be a strong inclination towards conventional methods among some students.

Table 3: The challenges faced by medical students and educators in implementing educational technology and media for evaluation purposes. N=400

Item No	Statement	Mean	STD	Dec.
1	Technical issues hinder effective use of educational technology	3.2	0.85	Agree
2	Lack of training in using new media affects evaluation quality	3.4	0.80	Agree
3	Educational technology increases the workload for educators	3.0	0.90	Agree
4	Students find it difficult to adapt to new evaluation technologies	3.1	0.88	Agree
5	There is a lack of institutional support for integrating technology.	3.2	0.86	Agree

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Table 3: A significant number of respondents agree that technical issues are a major hindrance, with a mean of 3.2, indicating a general consensus towards agreement. The highest mean score of 3.4 suggests that lack of training is perceived as a significant challenge, with 320 respondents agreeing. This item has a mean of 3.0, indicating a neutral stance. The responses are more varied, suggesting mixed opinions on whether educational technology increases workload. With a mean of 3.1, students generally agree that they face difficulties adapting to new technologies, with 270 respondents agreeing. The mean score of 3.2 reflects agreement that institutional support is insufficient, with 290 respondents agreeing.

Discussion

The statistics show that medical students mostly agree that various educational tools and media are useful for assessing educational outcomes during their housemanship. The high mean ratings across all items indicate that these tools are not only accepted but also seen as part of their learning and assessment process. Continuously integrating and refining these technologies may further improve educational outcomes in medical training. Future research might examine which specific elements of these devices students find most helpful and what hurdles limit their effective use.

This survey's findings reveal that educational technologies and media greatly affect medical students' learning outcomes during housemanship. The statements had favourable mean scores, indicating that the students perceive technology as valuable for improving their educational experience. However, some respondents' preference for traditional methods underscores the need for a balanced strategy that combines technology with traditional learning methods to accommodate different educational preferences. Future training programs should consider these insights to optimise instructional tactics in medical training.

The study identifies several problems with using educational technology and media for evaluation. The most important challenges found are technical problems, lack of training and lack of institutional support. The results imply that upgraded infrastructure, thorough training programs, and stronger institutional support are needed to expand the use of instructional technology in medical education.

Conclusion

The statistics show that the medical students in RSUTH mostly agree on the usefulness of various educational tools and media for assessing educational results during their housemanship. The high mean ratings for all the items indicate that these tools are not just accepted but also perceived as part of their learning and assessment process. Continuous integration and refinement of these technologies may further improve educational results in medical training. Future research might examine what specific elements of these devices students find most helpful, and what hurdles exist to their effective usage. This survey's findings reveal that educational technologies and media greatly affect medical students' learning outcomes during housemanship. The statements had favourable mean scores, indicating that the students perceive technology as valuable for improving their educational experience. However, the tendency to prefer traditional methods among some of the respondents underscores the necessity for a balanced strategy that combines technology with traditional learning methods to accommodate different educational preferences. Such insights should be considered in future training programs to optimise instructional tactics in medical training. The study identifies many problems in the application of educational technology and media for evaluation purposes. The most important challenges found are technical problems, lack of training and lack of institutional support. Results imply that upgraded infrastructure, thorough training programs and more institutional support are required to expand use of instructional technology in medical education. The role of educational technology and media in evaluating educational outcomes among medical students during housemanship at Rivers State University Teaching Hospital is both transformative and essential. The study underscores the potential of technology to enhance learning experiences, facilitate better assessment methods, and ultimately improve the quality of medical education. However, it also highlights the necessity for a balanced approach that combines traditional educational methods with innovative technological solutions. As the medical field continues to evolve, so too must the strategies employed in training future healthcare professionals. The findings of this research contribute to the ongoing discourse on the importance of integrating educational technology in medical training, emphasizing that its successful implementation can lead to improved educational outcomes and better-prepared graduates.

Recommendations

Based on the findings of this study, several recommendations can be made to enhance the role of educational technology and media in evaluating educational outcomes among medical students during housemanship:

1. Rivers State University Teaching Hospital should invest in the necessary technological infrastructure to support the integration of educational technology in the curriculum. This includes ensuring reliable internet access, providing adequate hardware, and maintaining software systems.
2. Faculty members should receive ongoing training in the use of educational technology and media. This will empower them to effectively incorporate these tools into their teaching and assessment methods, ensuring that they can guide students in utilizing technology for their learning.
3. Educational technology should be seamlessly integrated into the existing medical curriculum. This can be achieved by developing a structured framework that outlines how technology can be used in various aspects of medical training, including lectures, practical sessions, and assessments.
4. Implementing robust feedback mechanisms that utilize technology can enhance the evaluation process. Digital platforms that allow for real-time feedback can help students identify areas for improvement and track their progress throughout their housemanship.
5. Ongoing research should be conducted to assess the effectiveness of educational technology in medical training. This will help identify best practices, address challenges, and continuously improve the integration of technology in medical education.
6. Engaging with stakeholders, including healthcare professionals, educational technologists, and policymakers, can foster a collaborative approach to enhancing medical education through technology. This can lead to the development of innovative solutions that address the unique challenges faced in medical training.

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