Availability, Functionality and Utilization of Multimedia Instructional Technologies for Teaching/ Learning in Public Universities in Cross River State

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Abstract

This study is aimed at investigating the availability, functionality and utilization of multimedia Instructional Technologies for teaching and learning in public Universities in Cross River State. Nigeria. To achieve this purpose, three research questions were formulated to guide the study. A descriptive survey research design was adopted. The population of the study covered the 40,645 students from faculties of Education in the two public Universities in Cross River State. The sample of the study was 396 respondents which was determined using Taro Yamane sampling method. The instrument used for data collection was the researcher structured checklist; Availability, Functionality and Utilization of Multimedia Instructional Technologies for Teaching and Learning in Universities Checklist and Questionnaire (AFUMITTLUCQ). The instrument was subjected to face and content validation by three experts; two from Educational Measurement and one from Environmental Education Department. Cronbach's Alpha was used to test the reliability coefficient whose result ranged from 0.86 to 0.94. The findings of this study among others, revealed that MITs such as interactive white boards, computers, projectors, TV sets, and printers are not adequately provided by the universities. Based on the findings, it was recommended among others that the university management should not relent on their own efforts through partnership with international bodies and multinational organization in the provision of Multimedia Instructional Technologies in order to achieve the educational goals as stated in the national policy of education.

Keywords: Availability, Functionality, Utilization of Multimedia Instructional Technologies for Teaching and Learning.

Introduction

The 21st century classroom has undergone a dramatic transformation, propelled by the relentless tide of technological advancement. In this era of ubiquitous information and interconnectedness, higher education institutions face the imperative of embracing the necessary tools and effectively shaping them into catalysts for meaningful learning environment. Among the most promising avenues in this regard are Multimedia Instructional Technologies (MITs), offering interactive

avenues for knowledge acquisition, engagement, and diversified learning styles. The public Universities in Cross River State, Nigeria stand at a pivotal juncture in the journey, its strategic plan highlighting a dedicated pursuit of technological integration within its educational landscape. Yet, the effectiveness of this endeavor hinges on a nuanced understanding of the availability, functionality and utilization of these technologies within the specific context of the universities.

The integration of MITs in higher education is driven by a compelling rationale. These technologies possess the potential to enhance student engagement, awareness, participation, deepen knowledge and understanding, and carter to diverse learning styles (Akinkunle & Adediwura, 2020). Interactive simulations, immersive virtual environments, and dynamic visualization can breathe life into abstract concepts, fostering a deeper connection between theory and practice. Moreover, MITs democratize access to knowledge, providing students with personalized learning tools and fostering independent inquiry beyond the confines of the classroom (Adewuyi & Aina, 2020). This resonates particularly within the diverse student body of the Universities, where catering to individual learning preferences and fostering inclusive access to quality education is paramount.

The Universities present a compelling microcosm for investigating the availability, functionality and utilization of MITs in the Nigerian tertiary institutions. Its commitment to technological integration, demonstrated through strategic planning and infrastructural investments, serve as a fertile ground for examining the challenges and opportunities associated with MIT implementation. Additionally, the university's diverse student population, encompassing a rich integration of learning styles and needs, highlights the significance of ensuring inclusive and effective technology-driven learning environments (Akinkunle & Adediwura, 2020). Moreover, the MIT utilization within Nigerian universities underscores the need for context-specific investigations that can inform policy decisions and optimize technology integration practices (Akinde, 2017; Odurogun & Olatoye, 2023).

To navigate the intricate terrain of MITs implementation, this research draws upon the Technological Pedagogical Content Knowledge (TPACK) model. Developed by Mishra and Koehler (2016), TPACK posits that effective technology integration necessitates the synergistic interaction of three key domains: technology (T), pedagogy (P), and content knowledge (CK). Understanding how faculty members within the University navigate these domains and leverage their TPACK will be crucial in elucidating the factors influencing MIT utilization and its impact on student learning (Abifarin, 2021). Examining the existing body of research reveals both promising avenues and lingering concerns regarding MIT implementation in higher education contexts similar to the public Universities in Cross River State. Studies indicate varying levels of availability and access to MITs across universities in Africa, including Nigeria (Adewuyi & Aina, 2020; Odurogun & Olatoye, 2023). Challenges such as inadequate infrastructure, limited resources, and unreliable internet connectivity threaten to impede equitable access to these technologies (Akinde, 2017; Okonokhua & Obikeze, 2019). Even when available, the functionality of MITs can be hampered by outdated hardware and software, inadequate technical support, and insufficient maintenance (Adeboye & Ogundiran, 2020; Nwagwu, 2018). These considerations emphasize the need to assess the actual operational status of MITs within the University system, moving beyond mere inventory count, to ensure effective functioning of thereof.

Furthermore, researchers suggest that faculty adoption and utilization of MITs is influenced by a complex interplay of factors, including pedagogical beliefs, technology skills, and institutional support (Abifarin, 2021; Ajayi & Ogunlade, 2018). Understanding the specific factors influencing faculty utilization within the Public Universities in Cross River State will be crucial for developing targeted interventions and fostering a culture of technology-supported teaching and learning thereby creating enabling environment for learning.

Statement of the Problem

Universities are committed to harnessing the transformative potential of technology and have embraced the integration of Multimedia Instructional Technologies (MITs) into its

pedagogical landscape. Despite this commendable endeavor, the path towards optimized technology-driven learning remains riddled with potholes of uneven distribution, limited functionality, and inconsistent utilization. One glaring obstacle lies in the uneven distribution of MITs across academic units. This imbalance breeds inequality, restricting access to technology-enhanced learning for some students and faculty members, while others navigate a sea of digital opportunities.

Functionality also stands as a challenge due to outdated/inadequate software, and insufficient maintenance rendering certain technologies dormant. Furthermore, while some faculties confidently wield the torch of technology-driven teaching, others remain hesitant. This uneven adoption stems from a complex interplay of factors, ranging from pedagogical beliefs and technology skills to the adequacy of institutional support. These technologies hold the potential to ignite engagement, create awareness, deepen knowledge for understanding, and cultivate critical thinking skills; therefore, there is need for ensuring that MITs serve as tools for empowerment rather than barriers to inclusion. Examining how students perceive the impact of these technologies on their learning experiences, both the positive and the negative, will be instrumental in shaping future implementation strategies that maximize the benefits for all learners. Despite the existing research, significant gaps remain in our understanding of the unique context of MIT implementation within the public Universities in Cross River State. Thus, the researcher seeks to answer the question, what is the extent of availability, functionality and utilization of Multimedia Instructional Technologies in public Universities in Cross River State?

Purpose of the Study

The general purpose of the study is to investigate the extent of the availability, functionality and utilization of multimedia instructional technologies for teaching/ learning in public Universities in Cross River State. Specifically, the study intends to:

1. Find out the extent of availability of multimedia instructional technologies for teaching/learning in public universities in Cross River State.

2. Determine the extent of functionality of multimedia instructional technologies in public Universities in Cross River State

3. Investigate the extent of utilization of multimedia instructional technologies for teaching/learning in public Universities in Cross River State

Research Questions

This study is guided by the following research questions:

1. What is the extent of availability of multimedia instructional technologies for teaching and learning in public Universities in Cross River State?

2. What is the extent of functionality of multimedia instructional technologies for teaching and learning in public Universities in Cross River State?

3. What is the extent of utilization of multimedia instructional technologies for teaching and learning in public Universities in Cross River State?

Literature Review

The availability of Multimedia Instructional Technologies (MITs) refers to the presence of technological tools that enhance teaching and learning within classroom settings. It encompasses access to essential digital resources such as computers, internet connectivity, software applications, and other supporting tools that facilitate the instructional process for both students and educators. Additionally, multimedia instructional materials pertain to the digital content developed for educational purposes, including instructional videos, interactive simulations, audio-visual presentations, e-learning modules, e-books, and infographics.

According to Nigeria's National Policy on Education (2018), the provision of MITs is crucial for advancing the education sector, and the government has a responsibility to ensure the necessary infrastructure is in place to support the effective use of these technologies. MITs play a vital role in equipping learners with the knowledge and skills required to thrive in an increasingly knowledge-driven world. Their integration into education enhances the quality of basic education in Nigeria by fostering interactive learning experiences. However, despite their recognized

importance, the reality falls short, as traditional, textbook-based instruction remains predominant in tertiary institutions, creating a disconnect between students' academic experiences and the technology-driven environment they will encounter after graduation.

To bridge this gap, the adoption of MITs is no longer optional but a necessity for transforming education. Conventional lecture methods often emphasize passive information transmission, reducing student engagement. In contrast, MITs integrate multimedia elements—such as videos, animations, and interactive simulations—that stimulate curiosity, enhance motivation, and promote deeper comprehension. Empirical research has highlighted the significance of MITs in educational outcomes. Sabir et al. (2022) investigated the availability and utilization of multimedia in higher secondary schools in Pakistan and examined its impact on students' academic performance. Using a survey design, data were collected from principals, teachers, and students, with findings analyzed through inferential statistics, including regression and Chi-Square tests. The results indicated that while multimedia resources were available, their utilization was moderate, highlighting the need for improved integration. The study recommended greater involvement from educational authorities in ensuring both availability and effective use of multimedia in schools.

Similarly, Akinoso (2020) explored the effectiveness of multimedia in enhancing students' performance in mathematics. The study employed a quasi-experimental design, comparing an experimental group exposed to multimedia instruction with a control group following traditional methods. While the experimental group exhibited higher mean scores, the differences were not statistically significant, suggesting a potential but inconclusive impact of multimedia on learning outcomes. Gender differences were also observed, though they were not statistically significant. This underscores the need for further research to establish more definitive conclusions on the effectiveness of multimedia in subject-specific learning.

Despite the benefits of instructional technologies, studies indicate gaps between policy and actual practice in Nigeria. Jegede and Owolabi (2018) examined the availability of digital instructional materials in Nigerian secondary schools and found that essential resources—including

computers, digital textbooks, and e-learning tools—were either scarce or completely absent. The study emphasized the urgent need for the government to address these deficiencies to enhance teaching and learning. Kafi and Tomas (2017) conducted a systematic review of multimedia tools in education, analyzing their application, effectiveness, and limitations. Their findings revealed that multimedia technologies significantly enhance learning experiences by providing interactive and engaging instructional methods. However, the effectiveness of these tools depends on their availability, proper utilization, and alignment with educational objectives.

Nigeria's education sector must adapt to the digital age to remain competitive. As Adomi and Anie (2016) argue, a forward-looking approach is essential to leverage technological advancements for improved educational outcomes. Given the crucial role of education in national development, governments must allocate substantial resources to educational technology. A new vision for integrating computer technology into education—incorporating e-learning, web-based instruction, and virtual libraries—is necessary to align with global trends.

The effectiveness of MITs extends beyond mere availability; their functionality is equally critical. Functionality refers to the extent to which these technologies can effectively perform their intended roles in facilitating learning. It encompasses usability, accessibility, and alignment with instructional goals. Without functional MITs, students and educators may face suboptimal learning experiences, rendering technological investments ineffective. Ensuring the proper functioning of multimedia tools in universities is, therefore, imperative for maximizing their impact on education.

Globally, academic institutions are shifting from traditional knowledge transmission models to more interactive, technology-driven learning environments. Universities are restructuring their curricula, research strategies, and infrastructure to accommodate MITs. According to Fageeh (2014), for instructional technology to succeed in higher education, faculty members must possess both functional MITs and digital literacy skills necessary for e-content development. Similarly, Ncube, Dube, and Ngulube (2014) emphasize the importance of e-learning strategies and policies to enhance faculty members' adoption of digital instructional methods. Conducting a skills audit of

academic staff can help institutions identify existing capabilities and areas requiring professional development.

As the globalization of education intensifies, universities must embrace digital transformation to facilitate seamless knowledge exchange across regions. Nigerian universities, in particular, must develop curricula that integrate e-learning, web-based educational resources, and virtual mentorship programs. By doing so, they can ensure that students are not only well-versed in theoretical knowledge but also equipped with practical digital skills essential for the modern workforce. While the availability of MITs is necessary, their proper functionality and integration into educational systems determine their true impact. Without strategic planning and investment, students and educators may struggle to maximize the benefits of instructional technologies.

Methodology

A descriptive survey research design was adopted; to achieve the purpose of the study, three research questions were formulated to guide the study The population of the study covered the 40,645 students from faculties of Education in the two public Universities in Cross River State. Simple random sampling technique and the accidental sampling technique were adopted to select six (6) faculties of education in the two public Universities (four (4) faculties of Education from University of Calabar and two (2) faculties of education from University of Cross River State) and three (3) faculties were randomly selected and was used for the study. The sample of the study was 396 respondents which was determined using Taro Yamane sampling method. The instrument used for the data collection was the researcher structured checklist; Availability, Functionality and Utilization of Multimedia Instructional Technologies for Teaching and Learning in Universities Checklist and Questionnaire (AFUMITTLUCQ) and subjected to face and content validation by three experts; two from Educational Measurement and one from Environmental Education Department. Cronbach's Alpha was used to test the reliability coefficient which ranged from 0.86, to 0.94.

Results and discussion:

Table 1: Summary of response to research questions 1- Availability of MITs for teaching/ learning

S/N	Availability	AV f(%)	NAV f(%)
1	Desktop/laptop computers	158 (39.9%)	238(60.1%)
2	Interactive white board	236(59.6%)	160(40.4%)
3	Multimedia Projectors	124(31.1%)	272(68.9%)
4	Tablets	178(44.9%)	218(55.1%)
5	Cameras and Webcam	103(26.0%)	293(74%)
6	Headphone and microphone	189(47.7%)	207(52.3%)
7	Scanners and printers	238(60.1%)	158(39.9%)
8	3D Printer	123(31.1%)	273(68.9%)
9	Robotics kits	54(13.6%)	342(86.4%)
10	Virtual Reality (VR) tools	76(19.2%)	320(80.8%)
11	Augmented Reality (AR) tools	17(4.3%)	379(95.7%)

The result on table 1 revealed that out of 396 respondents, 158 respondents representing 39.9 percent said that Desktop/laptop computers are available for teaching and learning, while 238 respondents' representing 60.1 percent said not available. On the availability of interactive white board, 236 respondent representing 59.6 percent said that they are available, while 160 respondents representing 40.4 percent said they are not available. On the availability of Multimedia Projectors, 31.1 percent of the students said they are available, while 68.9 percent said they are not available.

On the availability of tablets 44.9 percent of the students said they are available and mostly own by lecturers, while 51.1 percent said they are not available. 52.3 percent of the students said that Headphone and microphone are not available, while 47.7 percent said they are available. Overall, 64.6 percent agreed that MITs in teaching and learning are not available in Universities in Cross River State, while 35.4 percent said they are available. In view of this, it therefore means that some of the MIT's facilities or tools are available but not adequate or evenly distributed for teaching and learning.

Table 2: Summary of response to research questions 2-Functionality of MITs for Teaching/ Learning:

S/N	Functionality	Yes f(%)	No f(%)
1	The Desktop/laptop computers in my department are in good working condition	298(75.2%)	98(24.7%)
2	The Interactive white board in my department is working perfectly well	211(53.3%)	185(46.7%)
3	The multimedia projector in my department is in good working condition	224(56.6%)	172(43.4%)
4	The tablets in my department are in good working condition	53(13.4%)	343(86.6%)
5	The cameras/webcams in my department are working effectively well	76(19.2%)	320(80.8%)
6	The Headphone and microphone in my department are working properly well	176(44.4%)	220(55.6%)
7	The Scanners and printers in my department are in good working condition	231(58.3%)	165(41.7%)
8	The 3D Printer in my department is working normally well	67(16.9%)	329(83.1%)
9	The Robotics kits in my department are in good working condition	64(16.2%)	332(83.3%)
10	The Virtual Reality (VR) tools in my department are all working perfectly well	35(8.8%)	361(91.2%)
11	The Augmented Reality (AR) tools in my department are functioning effectively well	17(4.3%)	379(95.7%)

The simple percentage analysis result on table 2 shows the percentage of the functionality of MITs for teaching and learning in the Universities in Cross River State. The table shows that, out of the total of 396 respondents 75.2 percent said Yes that the desktop/laptop computers in my department are in good working condition; are functioning while 24.7 percent said No. 53.3 percent of the total respondents agreed that the interactive white board in the departments are working perfectly well in the universities, while 46.7 percent disagreed. The table also revealed that 56.6 percent of the respondents said yes that the multimedia projector in my department is in good working condition, while 43.4 percent said they are not in good working condition.

On the use of tablet, 13.4 percent of the responded said that the tablets are working, while about 86.6 percent said that the tablets are not functioning. On the functionality of camera/webcam, 19.2 percent said that they are functioning, while 80.8 percent said that they are not functioning. Majority of the respondents amounted to 55.6 percent said no, that the Headphone and microphone in my department are not working properly, while 44.4 percent said yes that the Headphone and microphone in my department are working properly.

On the issue of the functionality of the scanners and printers, 58.3 percent of the respondents said yes that the Scanners and printers in my department are in good working condition, while 41.7 percent said they are not functioning. On the functionality of 3D printer, 16.7 percent said that the 3D Printer in their department is working normally well, while 83.1 percent said they are not functioning. Majority of the respondents, 83.3 percent said that the Robotics kits in their department are not in good working condition, while 16.2 percent said that they are functioning.

On the functionality of virtual reality tools, 8.8 percent said that they are functioning, while 91.2 percent said that the Virtual Reality (VR) tools in their departments are all not working perfectly well. Finally, it was revealed that about 4.3 percent of the respondents said that the Augmented Reality (AR) tools in their departments are functioning effectively well, while 95.7 percent said No that the Augmented Reality (AR) tools in their department are not functioning effectively well.

The result on table 3 shows the percentage responses on utilization of MITs for teaching and learning in universities in Cross River State. Out of the total 396 respondents, 31.1 percent respondents said that their lecturer use desktop/laptop computers during lectures often, 36.1 percent said they seldom use it, while 32.8 said they never use it. On the utilization of interactive white board by their lecturers during lectures, 50.7 percent said they often use it, 22.3 percent said they seldom use it, while 30 percent said they never use it. On the use of multimedia projectors during lecturers, 17.4 percent of the respondents said that their lecturers often use multimedia projector,

21.7 percent they seldom use it, while 60.8 percent said that they never use it. Majority of the respondents (50.7 percent) said that their lecturers often used tablets, 33.8 percent said they seldom use it, while 15.4 said that they never use it. On the utilization of cameras and webcam in lecturing, 16.9 percent said they often use it, 31.1 percent said they seldom use it, while 58.3 percent said they never use it.

Table 3: Summary of response to research questions 3- Utilization of MIT for teaching/ learning.

S/N	Utilization	Often f(%)	Seldom f(%)	Never f(%)
1	My lecturers use desktop/laptop computers during lectures	123(31.1%)	143(36.1%)	130(32.8%)
2	Interactive white board is used by my lecturer during lectures	201(50.7%)	112(22.3%)	83(30%)
3	My lecturer uses Multimedia Projectors during lecturers	69(17.4%)	86(21.7%)	241(60.8%)
4	Tablets are used by lecturers and students to learn	201(50.7%)	134(33.8%)	61(15.4%)
5	My lecturer use cameras and Webcam in lecturing us	67(16.9%)	123(31.1%)	231(58.3%)
6	My lecturer uses Headphone, speaker and microphone to teach us	65(16.4%)	156(39.4%)	175(44.2%)
7	Scanners and printers are used by my lecturer during lectures	73(18.4%)	213(53.8%)	110(27.8%)
8	3D Printers are used by my lecturer during lectures	-	43(10.9%)	353(89.1%)
9	Robotics kits are used by my lecturer during lectures for demonstration	-	-	396(100%)
10	My lecturer uses Virtual Reality (VR) tools during lecturers	45(11.4%)	67(16.9%)	284(71.7%)
11	Augmented Reality (AR) tools is used by my lecturer during lectures	-	43(10.8%)	353(89.1%)

On the utilization of headphones, speakers and microphones to teach, 16.4 percent said that they often utilized them, 39.4 percent said they seldom use them, while 44.2 percent said they never

them at all. Also, on the utilization of Scanners and printers used by lecturers during lectures, 18.4 percent said that they often use them, 53.8 percent said they seldom utilized them, while 27.8 percent said they never them. On the utilization of 3D Printers by lecturers during lectures, 10.9 percent said that they seldom utilized it, 89.1 percent said that they never.

On the utilization of Robotics kits by my lecturers during lectures for demonstration, the entire respondents said that it has never been utilized for teaching and learning. On the use of Virtual Reality (VR) tools during lecturers, 11.4 percent said that they often use them, 16.9 percent said they seldom use VR tools, while 71.7 percent said that they never use VR tools during lectures. On the use of Augmented Reality (AR) tools during lectures, 10.8 percent said they seldom use AR tools, while 89.1 percent said that they never AR tools during lectures.

Discussion

The findings obtained in the study are discussed based on the research questions formulated for the study.

Availability of MIT for Teaching/Learning

The finding obtained from the analysis revealed that about 38.3 percent of the respondents said that MITs are available in the faculties of education for teaching/learning, while about 72.2 percent said that there are not available. The reason for the high percentage of non-availability is that most MITs are not sufficient and readily installed even when they are available. The percentage of availability shows that, non-availability of MITs for teaching and learning has to a larger extent impeded teaching/learning in the Universities. This finding is in agreement with the findings of Jegede and Owolabi (2018) who asserted that digital instructional materials such as computers, computer laboratories, printers, scanners, e-books, and digital textbooks were either in short supply or not available in some Nigerian schools for e-teaching and learning. The finding opined that new vision of "computer technology in education" is needed that takes into account the shifts and trends (e.g. e-learning, web-based learning, virtual library, globalization, migration, demographics, technological progress) that are transforming the way people work, learn, transact

business, enjoy themselves and make sense of their world but most of these technologies are not readily available.

Functionality of MIT, in Teaching/Learning

From the analysis of the research questions, 36.6 percent of the total respondent said yes that MITs are functioning; and are in good working condition in the public Universities in Cross River State, while about 73.3 percent said No that they are not functioning. The high percentage of 73.3 percent may be due to the fact that the MITs available are not functioning. Most lecturers often use their own MITs tools during lectures as said by about 36.6 percent of the respondents. This finding is in line with the finding of Everest and Laura (2018), in their study on learning electronically in Nigerian universities, which revealed that the MITs were inadequate and students' access to these facilities are very negligible. Researchers identified obstacles to MIT use, including power outages, outdated e-learning resources, insufficient skilled personnel, and poor infrastructure. They recommended increased government funding for universities, particularly for capital-intensive e-learning facilities.

The findings of this study are in agreement with the earlier finding of Kamba (2019) when the researcher stated that Nigerian universities are in the trend of creating web pages for MITs which are meant for advertisement of the university and not for teaching and learning. In addition, the findings of this study revealed that MITs such as interactive white boards, computers, projectors, TV sets, and printers are not adequately provided by the universities. This is a reflection of the emphasis being placed on MITs in the universities. Pirani (2018), points out that for an institution to be able to adopt MITs, it must provide adequate and reliable technical infrastructures. From the above, it can be seen that functionality of MITs are not adequately provided in public Universities in Cross River State for effective teaching and learning.

Utilization of MIT in Teaching and Learning

The responses from the checklist shows that most of the respondents said that MITs utilization is often and seldom utilized, this is revealed from the analysis, which showed that about

21.3 percent said that MIT is often utilized, 27.7 percent said that they seldom utilized it, while 61.8 percent said that their lecturers never use MITs for teaching and learning. The high level of non-utilization is due to obsoleteness of the MITs in the public Universities in Cross River State. Pirani (2018) is of the view that instructors need to know when, how and where to use MITs to enhance knowledge acquisition. This maybe because most of the lecturers own electronic devices that could manipulate, store, retrieve, send, receive, copy, edit and display information such as tablets, television sets, Personal computers, PDAs, etc. However, these devices are not used for educational purposes.

According to UNESCO (2020), the key to the use of MITs for educational purpose is not in MITs itself, but in understanding, strategically and logically employing it to meet educational goals. This proves that lecturers may have idea of MITs but may not be effective in using them to facilitate teaching; which may be attributed to inadequate training in the use of MITs for teaching. Wodi (2019) and Ololube (2016) are of the opinion that since the MI is very dynamic, there is the need for continuous aggressive training programmes to catch up with frontiers of knowledge, creativity and innovation.

It is also considerable that the high cost of MITs infrastructures, high cost of 'airtime', materials, maintenance of gadgets, insufficient funds, lack of skilled manpower, poor power supply, lecturers' preference to 'talk and chalk' as opposed to the use of e-learning facilities, and so on hinder the effective utilization of MITs for teaching and learning. This is in line with the findings of Nbina, Obomanu and Vikoo (2016) who found that lecturers have no knowledge of MITs facilities and so shy away from utilizing them for teaching. Also, Akinnuwesi, Adedoyin, and Adegoke (2017) are of the view that implementation of MITs will require major commitment of resources and the support of stakeholders in the public and private sectors. Moreover, sufficient funds are needed to establish and maintain MITs facilities in schools.

Conclusion

The study investigated the availability, functionality and utilization of multimedia instructional technologies for teaching/learning in public Universities in Cross River State. Based on the findings from the study; it was concluded that most Multimedia instructional technologies are not available for teaching/learning in public Universities in Cross River State, and the few available ones are unevenly distributed. It was also found out that most of the multimedia instructional technologies available for teaching/learning in public Universities in Cross River State are not functional. Furthermore, it was discovered that MITs are seldom utilized in some faculties and never utilized in most of the faculties for teaching/learning in public Universities in Cross River State

Recommendations for Policy directions:

Based on the findings from the study, the following recommendations are projected:

1. The university authority should give priority to the provision of MITs facilities through industry-university collaboration, for effective teaching and learning to take place.

2. The university management should not relent on their own efforts through partnership with international bodies and multinational organization in the provision of MITs in order to achieve educational goals as stated in national policy of education.

3. Policies should be put in place by the university management and relevant stakeholders to ensure the availability, functionality and utilization of multimedia instructional technologies in the public Universities in Cross River State.

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