

PHYSICS TEACHERS' PERCEPTION ON THE ADEQUACY OF INFRASTRUCTURE IN THE EVALUATION OF THE IMPLEMENTATION OF THE PHYSICS CURRICULUM USING DAVIS PROCESS MODEL AMONG UNITY COLLEGES IN NORTH CENTRAL NIGERIA

Fadipe Bayo Michael

Department of Science Education, Veritas University Abuja, Nigeria

F. C. Uwaechia

Department of Pure and Applied Physics, Veritas University Abuja, Nigeria

Kate Uzoamaka Wilfred-Bonse

Department of art and Social Sciences, Veritas University Abuja, Nigeria

Ezekwudo Celestina Chinyeye

Department of Science Education, Veritas University Abuja, Nigeria

Jibril Nma Mohammed

Minna Institute of Technology and Innovation (MITI), Niger State, Nigeria

ABSTR ACT

This study evaluated Physics teachers Perception on the adequacy of infrastructure in the evaluation of the implementation of Physics curriculum using Davis process model among unity colleges in North Central Nigeria. The study was guided by 2 objectives, 2 research questions and one null hypotheses. The study used a descriptive survey research design. The population for the study consists of the 84 Physics teachers in all the Unity colleges in North-central Nigeria, Purposive sampling was employed to select Niger, Nasarawa, and the Federal Capital Territory out of the seven states in North central, Nigeria. A sample size of 20 male teachers and 14 female Physics teachers were randomly selected from the Unity colleges in the three selected states and were used in the study. The questionnaires used for data collection in the study were based on Davis Process Model. It was validated by three experts. The questionnaire was trial tested and the data obtained were subjected to statistical analysis using Cronbach Alpha Correlation Formula and reliability coefficient of 0.86 was obtained. Descriptive statistics of Mean and Standard Deviation were used to answer the research

Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria

questions. Null hypotheses were analysed using Mann-Whitney U test. Findings of the study revealed that the teachers have positive perceptions on the adequacy of infrastructure towards the implementation of the Physics curriculum and the study also show that the null hypotheses were retained as there was no significant difference the perceptions of both male and female teachers on the availability of infrastructure for curriculum implementation. In light of the findings, it was recommended that, Physics teachers should have access to available infrastructure for effective curriculum implementation.

Key words: Evaluation, Physics, Teacher, Implementation, Curriculum, Davis Process Model.

Cite this Article: Fadipe Bayo Michael, F. C. Uwaechia, Kate Uzoamaka Wilfred-Bonse, Ezekwudo Celestina Chinyeye, Jibril Nma Mohammed, Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria, International Journal of Research in Library and Information Science (IJRLIS), 2(1), 2024, pp. 1–12.

https://iaeme.com/MasterAdmin/Journal_uploads/IJRLIS/VOLUME_2_ISSUE_1/IJRLIS_02_01_001.pdf

INTRODUCTION

The six geopolitical areas that make up the Federal Republic of Nigeria are the North-Central, North-East, North-West, South-East, South-South, and South-West regions. The Federal Capital Territory of Abuja is one of 36 states that make up these geopolitical areas (Ukeje, 2016). In order to lay a solid foundation for a technologically oriented workforce in line with the needs of national development efforts, the National Policy on Education (FRN, 2020) has advocated improvements in the teaching and learning of Science, Technology, and Mathematics (STM). This is because the importance of science education to individuals and society at large is widely acknowledged, and it is an essential tool in our society for driving technological advancement. As a result, mastering the sciences becomes increasingly crucial for society as a whole as well as for the individual (Offorma, 2015). According to the National Policy on Education (FRN, 2014), each senior secondary student in Nigeria is required to take a science subject (Biology, Chemistry or Physics). as part of their curriculum. This is due to the fact that these disciplines are the prerequisites for any student wishing to enroll in a technologically focused programme at a higher education institution.

Physics is a natural science that relies on experiments, measurements, and mathematical analysis to discover quantitative physical laws for everything from the Nano world of the micro cosmos to the planets, solar systems, and galaxies that occupy the macro universe, according to Norwegian University of Science and Technology (NTNU, 2016). The type of education implemented has a big impact on how a country develops. Such nations' educational policies are based on their needs and ideals. For instance, the Federal Republic of Nigeria's National Policy on Education for Nigeria highlighted the necessity of teaching Nigerian individuals how to influence their environments for societal progress. The policy emphasized that education must lead to man being trained to comprehend his environment. A relevant education system with a suitable curriculum must be put in place for a country to flourish properly.

Concept of Curriculum Implementation in Physics

Physics instructors have been troubled by problems with curriculum implementation. Different definitions of curricular implementation have been offered by experts. Implementing the curriculum simply means putting it to use in order to accomplish the specified objectives in Physics education. Curriculum implementation, according to Mkpa (2017), is the process of putting the curriculum material into practice via the collaborative efforts of the students, instructors, and other parties involved. According to Okebukola (2014), curriculum implementation is the process of moving curricular objectives from the written word to the real world. I concur with Okebukola's statement. According to Ivowi (2014), curriculum is the conversion of theory into practice or a suggestion into a plan of action. Obanya (2015) views curriculum implementation as daily tasks that school administration and teachers in the classroom carry out to further the goal of any particular curriculum. According to Obanya (2015), an effective curriculum is one that captures the lessons that a student ultimately retains from their educational experience. This is accomplished through a collaborative effort between the teacher, student, parents, and school administrators, as well as through use of physical resources and educational materials, social and psychological context. According to Okebukola (2014), the curriculum the alignment of all learning activities or planned into practice through the teacher and other stakeholders involved to achieve the stated objectives of the curriculum is referred to as curriculum implementation in Physics. The accomplishment of a curriculum's objectives is its main objective. According to Jeff and Smith (2017), the successful execution of a level of education's planned programs is a key factor in achieving the goals of that level. The implementation of Nigeria's senior secondary school Physics curriculum has been hindered by several issues. The following are a few difficulties with Physics curriculum implementation:

1. Lack of Qualified Physics Teachers

Lack of trained instructors is one of the main issues hindering the execution of the Physics curriculum. The majority of instructors lack the necessary credentials to instruct the new senior high school curriculum subject. The problem in implementing the curriculum in secondary schools in Nigeria has been attributed to unqualified teachers. The teacher, based on the findings of (Lassa, 2017), is essential to a child's healthy growth, hence secondary schools require more teachers than elementary schools do. No educational system can excel beyond the caliber of its instructors. The findings of Ukeje (2016) revealed that teachers are the center of every educational system, and the achievement of that system depends on the quantity, quality, and dedication of the instructors as well as the quality of the students they educate. Indeed, a key part of implementing the Physics curriculum is the instructor.

2. Inadequate instructional materials for teaching Physics

The researchers found that the majority of secondary schools lacked appropriate Physics teaching and learning resources. The program could not be implemented effectively without sufficient teaching aids. Ajayi (2017) discovered a substantial correlation between the two in research on the link between the accessibility of instructional resources and curriculum implementation in Nigerian secondary schools. (Ajayi, 2017) discovered a connection between the availability of school facilities and the execution of the academic program. Physics curriculum cannot be applied efficiently in classrooms without sufficient equipment and supplies. The purpose of instructional materials is to support successful teaching and learning, while the purpose of resource materials is to support curriculum implementation.

3. Non-involvement of Physics teachers in decision making and curriculum planning

The implementation of curriculum is done by teachers. In Nigeria, however, it is quite uncommon to see instructors take part in the formulation and development of the Physics curriculum. Obinna (2019) noted that when significant choices about education and issues pertaining to their well-being are made, teachers are typically purposefully disregarded. Fadipe & Uwaechia (2023) discovered from their research work, that poor Administrative style of principals in schools adversely affects the participations of teachers in the development of the subjects. The teacher is crucial in putting the school curriculum into practice and in explaining programs, goals, and course material to pupils. Teachers have a key influence in determining the relevance of any curriculum once it is put into practice. Akuezuilo (2016) asserts that the absence of teachers' participation is similarly detrimental to curricula whose primary implementer are not well versed in its instruction.

4. Poor funding of education

The inadequate government support of education at all levels has sparked widespread outrage. The budget for Nigeria's education appears to include insufficient funding year after year. This is a significant problem with the secondary school system in Nigeria's execution of the curriculum. (Gwany, 2017) made the case that the education sector is typically the first and simplest victim of budget cuts under austerity and low profile, structural adjustment, and other economy reforms techniques. This unpleasant trend of underfunding of education in Nigeria was made. Due to the state's current under funding of education, the public sector has seen stagnation and degradation (Nwachukwu, 2015). Where there is insufficient money to pay wages, buy supplies, books, furniture, and other facilities, teachers cannot function successfully. Where there is a major budget gap for education, it is seen in the overcrowded classrooms, libraries, and labs. Because of a lack of political will and dedication to providing residents with high-quality education, the Nigerian government did not provide the requisite 26% of its budget as recommended by UNESCO from 2009 to 2013. For instance, the overall allocation and percentages for education in 2009, 2010, 2011, 2012, and 2013 were N33.63 billion (6.4%), N295.3 billion (7.5%), N306.3 billion (7.9%), and N400.15 billion, respectively.

5. Absence of teacher motivation

One important psychological factor that might influence behavior is motivation. In reality, motivation may support someone in performing their task well and without flaws. The findings of (Ofoeegbu, 2016), shows that teacher motivation refers to those aspects of the educational system that, if the teacher didn't have access to them, would hinder performance, lead to stress, disapproval, and dissatisfaction, which might ultimately result in lower-quality student output. The findings of Fadipe, Bahago & Celina (2022) reveals that teacher's qualification in the teaching and learning of Physics is a strong means of motivation and has a lot to contribute to academic performance.

That is to say, in order to increase student performance in Physics, instructors must be motivated. If teachers do not get salaries, allowances, and other benefits, they will not be able to properly execute the curriculum's material. The most that may be anticipated if the incentive associated with implementation does not satisfy the instructors and resource employees is that they will not implement it well.

6. Inadequate time

Teachers typically sound the alarm about not having enough time to execute the curriculum. For instance, time is the most valuable resource for instructors. The time required to execute the curriculum appears to be woefully insufficient, making it difficult to do so in an efficient manner. For instance, each newly introduced curriculum requires that instructors create thorough lesson plans and resources in order to become familiar with and prepared to teach the new concepts and abilities. When there is not enough time, they cannot occur.

The Davis', Process Model serves as the foundation for this study's evaluation. A straightforward summary of the procedures involved in curriculum evaluation is provided by this model. It can be used by either lone teachers or groups of teachers. This model's first phase is what Davis (1980) refers to as the "delineating sub-process." There must be choices made regarding the evaluation's structure and scope because no research of classrooms or curricula will ever be able to provide the full picture.

Asking for whom the evaluation is intended and what the audience wants to know should be the first step for evaluators. An individual teacher, a group of teachers' senior administrators, Ministry of Education officials, parent and community groups, and commercial companies are some examples of potential audiences. The information's nature will also vary, and it contain things like: educator attitudes, student performance, public perceptions, organizational structures, curriculum performance, and strategy choice.

STATEMENT OF THE PROBLEM

The public is upset with students' Physics performance, and this is because secondary schools in Nigeria cover non-curriculum topics such topics that are not relevant to students' academic achievement in physics. For instance, despite how crucial Physics is to a country's technological growth, Akuche and Okebukola (2014) found that student performance in the subject remained below average. In order to address the alleged causes of students' low performance in Physics, Research has been conducted over the years and is still ongoing. The failure faced in external Physics examinations is could be traced to challenges faced in the implementation of the Physics curriculum and problems associated with curriculum implementation. Some of the basic implementation problems are inadequate and qualified physics teachers, poor teaching methods, inadequate infrastructure, such as enough classroom, school bus, laboratory among others (Isa & Ayodele, 2019). This research work seeks to find out if the Physics curriculum is properly implemented among Unity Colleges in North-Central Nigeria and to further research into the areas of weakness and areas of strength in the Physics curriculum. To this end, the researcher seeks to use the Davis Process Model to evaluate the adequacy of infrastructure in the implementation Senior Secondary School Physics Curriculum in North-Central Nigeria.

B. Purpose of the Study

The purpose of the study is to evaluate Physics Teachers' Perception on the Adequacy of Infrastructure in the Evaluation of the Implementation of the Physics Curriculum Using Davis Process Model among Unity Colleges in North Central Nigeria
Specifically, the purpose of the study are as follows:

1. To determine the perception of teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria
2. To determine the perception of male and female Physics teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria

RESEARCH QUESTIONS

1. What is the perception of teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria?
2. What is the perception of male and female Physics teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria?

RESEARCH HYPOTHESES

H₀₁. There is no significance difference in the perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation.

METHODOLOGY

This research employed a descriptive survey research design, this is because, it will enable the researcher gather vast data from heterogeneous audience involving the use of questionnaire as instrument. This approach will be used in Assessing Teachers, Perceptions on the adequacy of infrastructure for curriculum implementation in Physics using Davis process model in North Central Nigeria. The study's population comprises of all Physics teachers in all the Federal Unity schools in North-Central Nigeria. As at the time of this research, there are 85 Physics teachers in all the Unity colleges in North-central Nigeria as revealed by the Federal Ministry of Education (MOE 2023). The sample for the study consists of all Physics teachers, in north-central Nigeria. 44 Physics teachers in the selected schools was used for the study, there are seven states in the north-central region. The states are formed into strata, that is, Niger and Kogi State, Benue and Kwara State, then Plateau and Nasarawa State. Purposive sampling is then employed to select Niger, Nasarawa, and the Federal Capital Territory. The Federal Capital Territory is selected because of its peculiar position as the capital of Nigeria and its centrality, Niger and Nasarawa is selected because both state shares boundary with the federal capital territory and to keep the volume of work within a manageable proportion two Unity Colleges from the selected states will be use to collect data using the instrument. There are twenty-four (24) Unity schools in the North Central. The states selected have fifteen (15) Unity Colleges, forming 62.5% of the entire Unity Schools as revealed in the table1 below. This sample size was achieved in accordance to sample size determination table by Krejcie and Morgan.

Table 1 Sample size for Physics Teachers based on sample size determination by Krejcie and Morgan

State	Teachers
Niger	13
FCT	30
Nasarawa	10
Total	53
Sample Size	44

Table 2: Sample size of selected School

State	Teachers
Niger	12
FCT	20
Nasarawa	12
Total	44

Federal Ministry of education Abuja (2023)

Sample Distribution Based on Gender

Sample distribution of respondents based on gender is presented in Table 3.

Table 3: Sample distribution of respondents based on gender

Respondents	Gender	Frequency	Percent
Teachers	Male	30	68.2
	Female	14	31.8

Table 3 shows the sample distribution of respondents based on gender. Thirty of the teachers' respondents are male, representing 68.2% of the teachers' respondents. While, fourteen representing 31.8% of the teachers' respondents were females. This implies that most of the teachers' respondents are males. Researcher developed questionnaire named Secondary School Curriculum Evaluation for Teaching and Learning of Physics Questionnaire for Teachers (SSCETLPQT) was used for collecting the data during the study. One expert from Veritas University Bwari Abuja and two experts from the Department of Science Education at the Federal University of Technology Minna, Niger State, examined the Face and Content Validity of the Questionnaire for Teachers (SSEPCIQT). In order to ascertain the instrument's reliability even further, a pilot study was conducted on ten teachers in Niger State. Upon receiving the questionnaires back, the copies were coded and subjected to reliability statistics through the use of Cronbach's Alpha Reliability Test. The results indicated that the instrument is appropriate for the study a reliability index of 0.86.

RESULTS AND DISCUSSION

Research question one

What is the perception of teachers on the adequacy of the available infrastructure for curriculum implementation in North Central Nigeria? To answer research question four, Mean and Standard Deviation were used as presented in Table 4

Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria

Table 4. Mean and Standard Deviation on perception of the teachers on the adequacy of available infrastructure for curriculum implementation in North Central Nigeria

S/N	Questionnaire items	N	Mean	Std.	Decision
1	The classroom for Physics lesson is adequate	44	3.11	0.81	Adequate
2	The Physics classroom is spacious enough to contain the student population	44	2.91	0.86	Adequate
3	The Physics laboratory is spacious enough to contain the student population during practical.	44	2.57	0.90	Adequate
4	The Physics laboratory has required and adequate practical materials for practical lessons	44	2.50	0.73	Adequate
5	There are adequate teaching aids for teaching Physics topics	44	2.41	0.62	Not adequate
6	The teachers teaching Physics are adequate for the available students	44	2.36	0.81	Not adequate
7	The available instructional aides are relevant to the curriculum implementation of Physics.	44	2.70	0.88	Adequate
8	The available teachers are qualified to teach the subject	44	2.91	0.98	Adequate
9	The available laboratory equipment is relevant to curriculum implementation In Physics	44	2.59	0.79	Adequate
10	Damaged or dilapidated materials are quickly replaced without delay	44	1.93	0.62	Not adequate
11	Student to practical material ratio is adequate for lesson and practical classes	44	2.18	0.66	Not adequate
12	The facilities in the hostel are adequate.	44	2.18	0.62	Not adequate
13	There are adequate Physics textbooks in the library	44	2.32	0.64	Not adequate
14	The available Physics textbooks are relevant to the curriculum implementation.	44	2.66	0.71	Adequate
Average		44	2.52	0.76	Adequate

Decision Mean: 2.5

Table 4. showed the mean and standard deviation on perception of the teachers on the adequacy of available infrastructure for curriculum implementation in North Central Nigeria. The mean of 2.5 and above was used as the bench mark for '**Adequate**' and the mean of less than 2.5 was considered '**Not adequate**'. Consequently 14 items were listed, the table revealed that item 1,2,3,4,7,8,9 and 14 had mean scores between 2.50 and 3.11 which are above the benchmark of 2.5; this implies that teachers agreed on the adequacy of the infrastructure on the items for curriculum implementation in North Central Nigeria. However, item 5, 6,10,11,12, and 13 had mean scores between 1.93 and 2.36 which are below the benchmark of 2.5; this implies that teachers disagreed on the adequacy of the infrastructure on the items for curriculum implementation in North Central Nigeria.

The table further revealed that the average mean score response to the 14 items is 2.52, which is above the decision mean of 2.5; this indicates that teachers agreed on the adequacy of available infrastructure for curriculum implementation in North Central Nigeria. Hence, teachers perceived that available infrastructure are adequate for curriculum implementation in North Central Nigeria. The standard deviation of the respondents on the perception of the teachers on the adequacy of infrastructure for curriculum implementation in North Central Nigeria is between 0.62 and 0.98, while the average standard deviation is 0.76; signifying that there was no meaningful deviation of respondents' perception on the adequacy of available infrastructure for curriculum implementation from each other and the average standard deviation of the group.

Research question two

What is the perception of male and female Physics teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria?

Table 5. What is the perception of male and female Physics teachers on the adequacy of the available infrastructure towards curriculum implementation in North Central Nigeria?

Gender	N	Mean Rank	Sum of Ranks	Mean Rank Difference
Male	30	21.40	642.00	3.46
Female	14	24.86	348.00	

From the table 5, the mean rank and sum of ranks of male teachers are 21.40 and 642.00. While, the mean rank and sum of ranks of female teachers are 24.86 and 348.00, with a mean rank difference of 3.46. the mean rank difference is an indication that, both male and female teachers share similar perceptions on the adequacy of infrastructure towards the implementation of Physics Curriculum

Testing of Research Hypotheses

Ho₁: One research formulated hypotheses was tested at 0.05 level of significance using Mann-Whitney U test as follow:

There is no significance difference in the perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation. In testing the hypothesis , the mean response on the perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation was analysed using Mann-Whitney U test as presented in Table 6.

Table 6: Mann-Whitney U test on perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation

Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-value
Male	30	21.40	642.00	177.000	0.403 ^{ns}
Female	14	24.86	348.00		

NS: Not Significant at 0.05 (p>0.05)

Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria

Table 6. shows the Mann-Whitney U test on perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation. From the table, the mean rank and sum of ranks of male teachers are 21.40 and 642.00. While, the mean rank and sum of ranks of female teachers are 24.86 and 348.00 with a U-value = 177.000, $p = 0.403$. The p-value is greater than the level of significance, hence hypothesis four was not rejected. Hence, there is no significance difference in the perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation; this implies that both male and female teachers' perception on the adequacy of infrastructure in Physics on curriculum implementation are the same.

DISCUSSION OF RESULTS

The findings of this research work revealed that, instructional materials are not adequate for the implementation of the Physics curriculum which is in line with findings of Samuel (2015), who discovered that, there is the challenge of inadequate instructional materials in schools for the implementation of curriculum in most basic subjects. the work also revealed that, there was no significance difference in the perception of male and female teachers on the adequacy of infrastructure in Physics on curriculum implementation in North central, Nigeria and Physics Teachers in Unity colleges in North Central Nigeria agreed that there is adequacy of infrastructures to implement Physics curriculum based on Davis Process model. This is contrary to the findings of Isa and Ayodele (2019) who identified poor learning environment, insufficient laboratory apparatus and poor funding from government as major factors that affects the implementation of the Physics curriculum. Nwoye and Okafor (2019) finding also showed that, government, environmental factors among other related problems impede the implementation of the new curriculum.

CONCLUSION

The study concluded that Physics teachers perceived that teaching resources are adequate and available for Physics curriculum implementation in North central, Nigeria.

C. Recommendations

Physics teacher perceived that available infrastructure are adequate for Physics curriculum implementation. Hence, Physics teacher should have access to available infrastructure for effective curriculum implementation.

REFERENCES

- [1] Ajayi, P. O (2017). Effectiveness of practical and theoretical methods on students' performance In Physics in selected secondary schools in Akure South Local Government Area of Ondo State. An M. Ed Thesis. University of Ado-Ekiti, Nigeria.
- [2] Akuezulo, D. (2016). Changing teaching practices: Using curriculum diversity to respond to students' diversity. Paris: UNESCO.
- [3] Fadipe B. M., S. B. Bahago & C. S. Gana (2022). Teacher Qualification and Student performance in physics implication for Counselling. A study of schools in Suleja local government area of Niger State. The Review of Contemporary Scientific and Academic Studies. An International Multidisciplinary Online Journal. 2(2). Feb. 2022. www.thercsas.com. The RCSAS (ISSN: 2583-1380). (<https://creativecommons.org/licenses/bync/4.0/>)

- [4] Fadipe B. M and F. C. Uwaechia (2023). Influence of School Administrators' Leadership Style 'On Physics Teachers' Job Performance in Federal Capital Territory Abuja. *International Journal of Research of Research and Innovation in social Science (IJRISS)*. DOI: <https://dx.doi.org/10.47772/IJRISS.2023.71043>
- [5] FRN (2014). National policy on education
- [6] FRN (2020). National policy on education
- [7] Gwany, D. M. (2017). Teacher education, cognitive neuron psychological and idiosyncratic foundations, in the educational psychologist. *A Journal of Nigerian Council of Educational Psychologist*. Nigeria: NCEP, 2(1), 86-92. <https://doi.org/10.15580/GJER.2013.2.0131134>
- [8] Isa, S. A., & Ayodele, B. N. (2019). Challenges of effective implementation of new secondary school physics curriculum in public and private schools in Nigeria.
- [9] Ivowi, M. (2014). Effects of Demonstration and Guided Discovery Methods in Correcting Misconceptions in Physics among Remedial Students, University of Jos, Unpublished Ph. D Thesis. University of Ilorin, Ilorin.
- [10] Jeffs, T., & Smith, M. (2017). Using informal education: an alternative to casework, teaching and control. Milton Keynes: Open University Press.
- [11] Lassa, Q. E. (2017). Poor students' performance in school certificate science examinations: causes and remedies. 27th Science and Teaching Association Annual Conference proceedings, 137-142.
- [12] Mkpa, M. A. (2017). Curriculum development. Owerri: Totan Publishers Ltd.
- [13] NTNU (2016). Physics education. Retrieved August 19, 2022 from <https://www.ntnu.edu/physics>
- [14] Nwachukwu, V. C. (2015). Issues of standards and sustainability of quality education. A paper delivered to the seminar of the all-Nigeria conference of principals of secondary school, Abia state branch at Kolping Conference Centre, Umuahia 20th September, 2021.
- [15] Obanya, P. (2015). The dilemma of education in Africa. Ibadan: Heinemann Education Books Nigeria Plc.
- [16] Ofoeegbu, A. (2016). Practical research method in education. Onitsha: Summer Educational Publisher Ltd.
- [17] Offorma, D. (2015). A critical appraisal of mode of implementation of Nigerian secondary school curriculum: towards socioeconomic empowerment of youth (Published Research Work)
- [18] Okebukola, C. (2014). Quality assurance in teacher selection among private secondary schools in Owerri Municipal, Imo State. For effective implementation of the UBE. *Journal of Curriculum Organization of Nigeria*. 23-32, 37-44.

Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria

- [19] Samuel, A. A. (2015). Evaluation of the social studies curriculum's implementation in colleges of education in Nigeria's north central geopolitical zone.
- [20] Ukeje, B. O. (2016). Teacher education in Nigeria: Problems and issues. In B. O. Ukeje, L. O. Ocho & E. O. Fagbanive (Eds) issues and concern in educational administration: The Nigerian case in international perspective Lagos: Macmillan.

Citation: Fadipe Bayo Michael, F. C. Uwaechia, Kate Uzoamaka Wilfred-Bonse, Ezekwudo Celestina Chinyeye, Jibril Nma Mohammed, Physics Teachers' Perception on The Adequacy of Infrastructure in the Evaluation of the Implementation of The Physics Curriculum Using Davis Process Model Among Unity Colleges in North Central Nigeria, International Journal of Research in Library and Information Science (IJRLIS), 2(1), 2024, pp. 1–12

Abstract Link:

https://iaeme.com/Home/article_id/IJRLIS_02_01_001

Article Link:

https://iaeme.com/MasterAdmin/Journal_uploads/IJRLIS/VOLUME_2_ISSUE_1/IJRLIS_02_01_001.pdf

Copyright: © 2024 Authors. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

This work is licensed under a **Creative Commons Attribution 4.0 International License (CC BY 4.0)**.



✉ editor@iaeme.com