

Challenges Affecting Content Coverage of Basic Technology Syllabus in Upper Basic Schools in Edo State

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Abstract

Certain factor such as poor time management by teachers, frequent teachers' strike actions, public holidays that usually shorten the number of weeks available for teaching in the school calendar. Other factors that could affect the extent to which content coverage of the syllabi of many subjects taught in secondary schools including basic technology include school closure for security reason and changes in school calendar which could lead to gaps in students' knowledge and skills. Therefore, the need to ascertain the extent to which basic technology syllabus content is covered by teachers in secondary schools in Edo State necessitated this study. The purpose of the study was to determine the challenges affecting content coverage of basic technology syllabus in upper basic schools in Edo State. Three research questions were raised to guide the study and two hypotheses were tested at .05 level of significance. The research design adopted for the study was descriptive survey. Population comprised 224 basic technology teachers across Edo State. The sample of the study was 113 basic technology teachers selected using purposive sampling. The instrument used for data collection was a structured questionnaire. The instrument was validated by three experts in the Department of Industrial Technical Education, Faculty of Vocational and Technical Education, University of Benin and it has a reliability coefficient of 0.73. The research questions raised were answered with mean and standard deviation and the null hypotheses were tested with z-test statistics at 0.05 level of significance. The findings revealed that the content of the basic technology syllabus was covered to a high extent in upper basic schools in Edo State. There was a significant difference between content coverage in schools with low student-teacher ratio and schools with high student-teacher ratio. There was also a significant difference between content coverage of basic technology syllabus in schools located in urban areas and those located in rural area. It was therefore recommended that policies which would progressively reduce student-teacher ratios as well as bridge urban-rural resource disparities should be implemented.

Keywords: Challenges, Content Coverage, Basic Technology, Syllabus, Upper Basic

INTRODUCTION

Basic technology is a core subject in the Nigerian educational system, specifically designed for the upper basic level. It is an integrated subject that introduces students at upper basic school level in Nigeria to fundamental concepts and practical skills in technology, science and engineering. According to UNESCO (2019), basic technology as a subject covers area such as basic electronics, mechanical systems, woodwork, metalwork, technical drawing and energy systems, aiming to develop technological literacy, problem-solving abilities, and hands-on competencies. Adequate content coverage of each of these components of the basic technology curriculum aims to equip students with the knowledge and skills necessary to address contemporary challenges and contribute to a more sustainable future.

Content coverage refers to the extent to which the teachers taught the listed items of a particular subject syllabus or scheme in a given time, usually a term, an academic session, before the conduct of an examination. It includes and addresses all necessary topics, concepts, and learning objectives within a subject or course. The content of a subject should be systematically aligned with intended learning outcomes and should provide comprehensive coverage of the knowledge, skills, and competencies students are expected to acquire (Okojie et al., 2022). For example, in the Nigerian basic technology syllabus for basic 7, 8 and 9, content coverage would involve ensuring that all required topics; such as materials and processing, energy and power, drawing and design and ICT are thoroughly taught according to the curriculum guidelines. In the context of basic technology as a subject, content coverage refers to the extent to which the curriculum, instructional materials, and lessons address the prescribed topics, concepts, and skills necessary for students to develop technological literacy. Olabiyi (2024) emphasized that the content coverage of Basic Technology in upper basic schools should be student-centered and skill-oriented, incorporating innovative instructional strategies that enhance students' engagement, understanding, and academic achievement.

Upper Basic School (UBS) is the level of education that follows primary education and precedes senior secondary education. The specific terminology and structure may vary depending on the region or country. In Nigeria, upper basic education is also known as Junior Secondary School (JSS) and typically includes JSS1 (Basic 7), JSS2 (Basic 8), and JSS3 (Basic 9). The philosophical assumptions underlying upper basic education in Nigeria, according to the Federal Republic of Nigeria (2014), is to enable students acquire knowledge and pre-vocational skills relevant for self-reliant and self-supporting education in their subsequent higher educational pursuits. The Nigerian Educational Research and Development Council (NERDC)(2024, p. 4) stated that the objectives of Basic Technology are to develop learners' interest in science and technology, equip them with basic scientific and technological knowledge and skills, enable them to apply such knowledge to societal needs, explore career opportunities in science and technology, and prepare for further studies in science-related fields. This serves as a foundation for the economic survival of any individual or nation and exposing students to the practical and theoretical aspects of technology and assisting them in acquiring basic technical skills and experiencing hands-on activities in areas like woodwork, metalwork, electrical and electronics and mechanics, which are foundational skills that are useful for future vocational training. These objectives align with Nigeria's national goals of producing self-reliant individuals and skilled labour for national development as entrenched in basic school curriculum and frame worked into the syllabus. However, syllabus coverage could be hindered by certain factors such as time management, unexpected school closures, teacher strike actions, frequent changes in the school calendar, a high student-teacher ratio and rural-urban Basic School dichotomy. (Engezell et al., 2021; Lyon, 2024; Dohino & Ruales, 2026).

In an ideal educational setting, the basic technology syllabus in upper basic schools in Edo State would be fully covered within the stipulated academic calendar, ensuring that students acquire essential technological literacy, practical skills, and problem-solving abilities as outlined in the Universal Basic Education (UBE) programmed. However, the current situation in many upper basic schools in Edo State indicates significant challenges in achieving complete content coverage of the Basic Technology syllabus. Factors such as time management by teachers, unexpected school closures, and teachers strike actions and frequent changes in the school calendar appear to hinder effective curriculum delivery, undermining the

goals of the UBE program and resulting in gaps in students' knowledge and skills which hinders their academic performance (Onuoha-Chidiebere, 2023). Furthermore, the persistence of this problem has far-reaching consequences. Students could be deprived of critical technological skills, leading to poor performance in the Basic Education Certificate Examination (BECE) and limited preparedness for senior secondary education or vocational training (Effrim et al., 2024). This gap in skill acquisition could also hamper their ability to contribute to Nigeria's technological and economic development, perpetuating a cycle of low technological literacy and reduced employability in a rapidly evolving global economy.

The main purpose of the study was to analyze the extent of content coverage of the Basic Technology syllabus in upper basic schools in Edo State. Specifically, the study determined the extent to which the Basic Technology syllabus content is covered in upper basic schools and the extent to which time management by teachers influences basic technology syllabus content coverage in Edo State. Furthermore, the extent to which unexpected school closures influence basic technology syllabus content coverage in Edo State was also determined by the study.

Research Questions

The following research questions guided the study:

1. To what extent is the Basic Technology syllabus content covered in Upper basic schools in Edo State?
2. To what extent do time management by teachers influences basic technology syllabus content coverage in Edo State?
3. To what extent do unexpected school closures influence basic technology syllabus content coverage in Edo State?

Research Hypotheses

1. There is no significant difference between content coverage of basic technology syllabus in schools with low student-teacher ratios and those with high student-teacher ratios.
2. There is no significant difference between content coverage of basic technology syllabus in schools located in urban areas and those located in rural areas.

LITERATURE REVIEW

Dohino and Ruales (2026) carried out a study to investigate whether teachers' time management practices and instructional competence predict the academic performance of Grade 6 learners. Using a quantitative descriptive correlational survey design, the study involved 55 teachers selected through total sampling and 260 Grade 6 learners chosen via stratified proportionate random sampling from thirteen public elementary schools in the Municipality of Sto. Niño. Data were analyzed using descriptive and regression statistics to assess teacher practices and learner performance. Findings showed that teachers exhibited strong instructional competence and moderately effective time management, particularly in organizing tasks and professional development. Learners demonstrated a moving towards Mastery level of performance. Significant relationships were found between teachers' time management, instructional competence, and learner achievement, with organizing skills and pedagogical knowledge identified as key predictors of academic success. This study is relevant to the present study in the area of time management by educators.

Similarly, Okon and Ngwu (2026) conducted a study on the topic 'Evaluation of the Effect of School Location (Rural and Urban) in the Implementation of Junior Secondary School English Language Curriculum in Akwa Ibom State'. This study evaluated the effect of school location (urban and rural) on the implementation of the Junior Secondary School English Language curriculum in Akwa Ibom State, Nigeria. Guided by the Context, Input, Process, and Product (CIPP) evaluation model, the study adopted a descriptive survey research design. The population comprised 714 junior secondary school English Language teachers in 270 public schools across Akwa Ibom State. Using purposive and simple random sampling techniques, a sample of 257 teachers (126 males and 131 females) drawn from 60 public junior secondary schools in both urban and rural locations participated in the study. Data were collected using a structured instrument titled English Language Curriculum Implementation Evaluation Questionnaire (ELCIEQ). Mean and standard deviation were used to answer the research question, while independent samples t-test was employed to test the null hypothesis at the 0.05 level of significance. Findings revealed that school location affects the implementation of the Junior Secondary School English Language curriculum to a very high extent. Urban schools were found to have better access to instructional materials, infrastructure, and professional support, which enhanced effective curriculum delivery, whereas rural schools experienced challenges such as inadequate resources and limited instructional support. The t-test analysis further indicated a significant difference in the mean ratings of teachers on how school location influences curriculum implementation. The study concludes that school location significantly influences the effective implementation of the English Language curriculum in junior secondary schools in Akwa Ibom State. It therefore recommends improved resource allocation, targeted teacher support, and infrastructure development in rural schools to ensure equitable and effective curriculum implementation across locations. Though this study is similar to the present study in methodology, it considered the effect of school location on implementation of Junior Secondary School English Language curriculum only. However, the present study considered the effect of school location on content coverage of Basic Technology syllabus.

In a related perspective focusing on classroom dynamics, Adeyemi (2023) conducted a study on teacher's classroom effectiveness, class size, disciplinary measures as a correlate of academic performance: Implication for counselling. This study investigated the relationship between class size and various aspects of teaching, including teacher's effectiveness, disciplinary measures, and classroom management. The purpose of this study is to investigate the impact of class size on teacher effectiveness, disciplinary measures, and classroom management strategies, considering the difficulties arising from overcrowded classrooms. A purposive sampling technique was used to select 100 secondary school teachers from Akoko South-West Local Government Area of Ondo State. Data were collected using a self-constructed questionnaire, and reliability was assessed through a test-retest technique with 0.76 correlation coefficient. Data were analyzed using t-test and correlational analysis. The results indicated significant relationships between average class size and teacher's competency, classroom effectiveness, disciplinary measures, and classroom management. These findings highlight the importance of class size in determining academic performance and have implications for counselling. There was a significant difference between class size and teacher disciplinary measures. There was a significant difference between class size and teacher classroom management the study concluded that counselors and parents-teachers association (PTA) influenced the educational and social need of the child in Ondo State. It was recommended that government should employ more teachers to fill the gap of students overcrowding and few teachers in the school settings. The study is similar to the current study in methodology, research design, sampling method, method of data collection and analysis. However, while this research broadly considered classroom management as an aspect of teaching, the current study specifically focused on time management.

Likewise, Ogunjobi et al. (2023) carried out a research on the impact of ICT and class size on academic performance of secondary school students in science subjects in Ekiti State. The study investigated the impact of ICT facility and class size on academic performance of secondary school students in science subjects in Ekiti. The purpose of the study was to investigate the impacts that both ICT facilities and class size have on the academic performance of secondary school students. The study

adopted both descriptive research of the survey type and ex-post-facto designs. The sample included 110 science teachers and 2,444 students whose WASSCE were used. They were selected using multistage sampling procedure. The two research instruments used were ICT and class-size facilities questionnaires for teachers (ICTCSFQT) and Three Years Examination Result Template (TYERT). The face and content validity of the ICTCSFQT was done by experts in science Education and test, measurement and evaluation. Test-retest method was used to establish the reliability of ICTCSFQT and the coefficient of 0.76 was obtained. The other instrument (WASSCE Result) is a standardized result from WAEC. Data collected were analyzed using Pearson product moment correlation. The hypotheses raised were tested at 0.05 level of significance. The result showed that there was significant relationship between availability of ICT and academic performance in schools. The study also revealed that there is significant relationship between class-size and academic performance in schools. Based on the findings, it was concluded that ICT and class-size are crucial for better performance of students in science subjects. It was therefore recommended that teachers should be trained through various workshop and seminars on the use of ICT facilities, so also the significance of moderate class size for effective classroom management and control in order to improve students' academic performance. Though this study partly adopted a descriptive research design, similar to the present study, it did not consider the effect of class size on subject content coverage. This is a gap that the present study filled.

Furthermore, Dawal and Mangut (2021) conducted a study on the topic 'Overloaded Curriculum Content: Factor Responsible for Students' Under Achievement in Basic Science and Technology in Junior Secondary Schools in Plateau State, Nigeria'. The study was conducted to find out if overloaded curriculum content is one of the factors responsible for JSS 2 students' underachievement in Basic Science and Technology. The survey design was used in carrying out the study in the three senatorial zones of Plateau State. The population consisted of 395 Basic Science and Technology teachers and 26, 098 of junior secondary 2 students. Out of these populations, a sample of 60 teachers and 720 students were sampled in 5 schools from each of the senatorial zones using the proportionate to size stratified random sampling techniques for unequal sizes. Three research questions guided the study. Teachers' questionnaire, students' questionnaire and JS 2 basic science and technology curriculum content constituted the instrument for data collection. The findings revealed that the percentage of untreated topics were high with 72%. Both teachers and students strongly agreed that overloaded curriculum content is one of the major factors responsible for students' underachievement in basic science and technology. It was recommended that the curriculum content should be reduced to manageable size that teachers can treat within a given school academic calendar. It was also recommended that more time should be spent on practical activities and topics in the curriculum content should be properly taught at each level before moving to the next. The study is similar to the present study in subject area, design and method of data collection. While the research considered the effect of overloaded curriculum on students' achievement in Basic Science and Technology the current study considered the challenges affecting content coverage of Basic Technology syllabus.

Finally, Anaekwe (2020) conducted a research titled 'Challenges of Teaching Basic Science and Technology (BST) in Anambra State Public Schools'. The study investigated the challenges constraining effective teaching of Basic Science and Technology (BST) in the public schools of Anambra state. A research question guided the study which adopted a descriptive survey research design. A sample of six hundred and sixty-one (661) was composed of a population of six thousand six hundred and fifteen (6615) BST teachers in the State. Proportionate stratified random sampling technique was used. A 21-item, four-point rating Questionnaire, developed and validated by the researcher, was used for data collection. The contents of the instrument were clustered into four sections namely: Curricular Materials, Instructional Materials, Human Resources and Teaching Methodology. The instrument, with a reliability index of 0.75, was adjudged reliable and usable for the study. Data were analyzed using simple mean ratings. Results indicated among others that: BST curricula materials were adequately provided to schools (mean=2.99), instructional materials are inadequately supplied (mean=2.31), Relevant human resource was in short supply (mean=1.93) as well as Methodological shortcomings (mean=2.28). Some recommendations including that: BST laboratories and equipment should be provided in schools to complement the

resources available from immediate school environment; Training and recruitment of specialist BST teachers and retraining of available teachers in science disciplines, is a sine qua non towards realizing the goals of teaching BST; Regular refresher courses are necessary to update BST teachers' skills, knowledge of the subject matter and teaching methodology, were made. This study is similar to the current study in subject area, methodology, method of data collection and analysis. However, while this study conducted in Anambra state investigated the challenges constraining effective teaching of Basic Science and Technology, the current study conducted in Edo state investigated the challenges affecting content coverage of Basic Technology.

METHODOLOGY

This study employed descriptive survey research design. Descriptive survey design is a research design that aims at collecting data about a phenomenon, and describing in a systematic manner, the characteristic features and facts about a population of study. Descriptive survey research is one of the available designs that can be used by researchers to investigate, identify, determine, describe or examine situations or events as they are, using a representative sample of the population. Descriptive survey design is suitable for this study because only representative numbers of basic technology teachers in Edo State secondary schools were used.

The population of the study comprised all the 224 basic technology teachers serving in both the urban and rural junior secondary schools (upper basic schools) in Edo State. This information was made available to the researcher by the State Universal Basic Education Board (SUBEB), Edo State in 2025.

The sample size of the study was 113 basic technology teachers from a population of 224. This includes 75 basic technology teachers teaching in secondary schools located in urban areas and 38 basic technology teachers teaching in secondary schools located in rural areas in Edo State. Purposive sampling technique was used to select the sample size, as only schools where Basic Technology were being offered was used for the study.

The research instrument that was used for data collection in this study was a structured questionnaire titled: Extent of Content Coverage of Basic Technology Syllabus Questionnaire (EIBTSQ). The instrument has two sections: section A and section B. Section A contains demographic variables of the respondents such as school location and student-teacher ratio. Section B contains 25 structured items arranged in three clusters according to the number of research questions. Responses were rated on a 4-point rating scale ranging from 4-1 where; 4 = Very High Extent, 3 = High Extent, 2 = Low Extent and 1 = Very Low Extent.

The instrument was validated by three experts from the Department of Industrial Technical Education, Faculty of Vocational and Technical Education, University of Benin, Benin City. The instrument was tested for stability using test-retest reliability method. The Pearson Product Moment Correlation Coefficient Statistical tool was used to calculate the reliability coefficient and it yielded a value of 0.73.

The analysis of data collected was done using Statistical Package for Social Sciences (SPSS). The research questions were answered using Mean ($\bar{X}$) and Standard Deviation (SD). Calculated Mean value of any item that was equal to or greater than the criterion means of 2.50 was regarded as high extent, whereas mean value less than 2.50 were considered as low extent.

The hypotheses formulated for the study were tested at 0.05 level of significance with Z-test statistics. The calculated Z-score was compared to critical value from the standard normal distribution. If the Z-score value was less than or equal to the critical value of 1.96, the null hypothesis was retained, whereas, if the value of the z-test was more than the critical value of 1.96, the null hypothesis was not retained.

Research Question 1: To what extent is the basic technology syllabus content covered in upper basic schools in Edo State?

To determine the extent to which the Basic Technology syllabus content is covered in upper basic schools, the mean and standard deviation were computed as presented in Table 1.

Table 1 Mean and standard deviation of basic technology syllabus content covered in upper basic schools in Edo State

S/N	Item Statement	($\bar{X}$)	SD	Remark
1	The basic technology syllabus is fully covered within the academic year in upper basic schools	3.12	0.53	High Extent
2	Students are exposed to all practical components of the basic technology syllabus during the school year	2.16	0.77	Low Extent
3	All topics in the basic technology syllabus are adequately taught before examination	2.69	0.79	High Extent
4	My school struggles to complete the basic technology syllabus within the allocated time	2.33	0.82	Low Extent
5	The basic technology syllabus is often left incomplete in my school	2.61	0.83	High Extent
	TOTAL	2.58	0.75	High Extent

The results show that 5 items with serial number 1 to 5 had mean scores that ranged from 2.16 to 3.12 and Standard Deviation that ranged from 0.53 to 0.83, with an average mean score of 2.58 and an average Standard Deviation of 0.75. This indicates that the respondents agreed that the extent to which teachers covered basic technology syllabus in Edo State secondary school was high.

Research Question 2: To what extent does time management by teachers influence basic technology syllabus content coverage?

To determine the extent to which time management by teachers influence basic technology syllabus content coverage in Edo State, the mean and standard deviation were computed as presented in Table 2.

Table 2 Mean and standard deviation of time management by teachers and its influence on basic technology syllabus content coverage

S/N	Item Statement	($\bar{X}$)	SD	Remark
6	Teachers effective scheduling of lessons ensures adequate coverage of the basic technology syllabus	2.79	0.81	High Extent
7	Poor time management by teachers leads to incomplete coverage of the basic technology syllabus	3.01	0.78	High Extent
8	Time management by teachers results in rushed teaching of basic technology core topics	2.59	0.85	High Extent
9	Time management challenges among teachers negatively affects the delivery of the basic technology curriculum	2.68	0.83	High Extent
10	Teachers lesson planning significantly enhances the coverage of the basic technology syllabus	2.51	0.83	High Extent
	TOTAL	2.72	0.82	High Extent

The result shows that 5 items with serial number 6 to 10 had mean scores that ranged from 2.51 to 3.01 and Standard Deviation that ranged from 0.78 to 0.85, with an average mean score of 2.72 and an average Standard Deviation of 0.82. This indicates that time management by teachers in Edo State to a high extent influenced syllabus content coverage of basic technology

Research Question 3: To what extent do unexpected school closures influence basic technology syllabus content coverage?

To determine the extent to which unexpected school closures influences basic technology syllabus content coverage in Edo State, the mean and standard deviation were computed as presented in Table 3.

Table 3 Mean and standard deviation of unexpected school closures on basic technology syllabus content coverage in upper basic schools in Edo State

S/N	Item Statement	($\bar{X}$)	SD	Remark
11	Unexpected school closures significantly reduce the time available to cover the basic technology syllabus	2.58	0.73	High Extent
12	Frequent school closures disrupt the planned schedule for teaching basic technology	2.79	0.71	High Extent
13	Teachers are able to adjust their teaching plans effectively to accommodate unexpected school closures	2.31	0.81	Low Extent
14	Unexpected school closures have little to no impact on the coverage of the basic technology syllabus	2.18	0.79	Low Extent
15	Schools have strategies in place to ensure syllabus coverage despite unexpected school closures	2.48	0.83	Low Extent
	TOTAL	2.47	0.77	Low Extent

The result shows that out of five item statements listed to elicit information about the influence of school closure on syllabus content coverage of basic technology, two agreed to high extent that school closure influenced content coverage while three agreed to low extent. The mean values of responses to low extent were less than the criterion mean of 2.50. This indicates that school closure influenced content coverage of basic technology in Edo State, but to a low extent.

Hypothesis 1: There is no significant difference between content coverage of the basic technology syllabus in schools with low students-teacher ratio and those with high students-teacher ratio.

To ascertain if there is no significant mean difference between content coverage of the basic technology syllabus in schools with low students-teacher ratio and those with high students-teacher ratio, the z-test result is presented in Table 4.

Hypothesis 1: There is no significant difference between content coverage of the basic technology syllabus in schools with low students-teacher ratio and those with high students-teacher ratio.

To ascertain if there is no significant mean difference between content coverage of the basic technology syllabus in schools with low students-teacher ratio and those with high students-teacher ratio, the z-test result is presented in Table 4.

The result shows that the mean value of schools with high students-teacher ratio was 71.02 while the mean value of schools with low students- teacher ratio was 78.95. With a degree of freedom of 67, the z-value calculated was 7.49 which is higher than the table value of 1.96. Therefore, the null hypothesis

which states that there is no significant difference between the extent of content coverage of basic technology syllabus in schools with high students- teacher ratio and schools with low students- teacher ratio is not retained. It means that there is a significant difference between the content coverage of basic technology syllabus in schools with high students-teacher ratio and schools with low students-teacher ratio.

Table 4 Z-test showing the difference between content coverage of basic technology syllabus in schools with low students-teacher ratio and schools with high students-teacher ratio

Variables	N	Mean	Std. Dev.	Df	z-cal	t-crit	Sig	Remark
High ratio	48	71.02	4.02					
				111	7.49	1.96	0.001	Not retained
Low ratio	21	78.95	4.12					

Hypothesis 2: There is no significant difference between content coverage of the basic technology syllabus in schools located in urban areas and those located in rural areas.

To ascertain if there is no significant mean difference between content coverage of the basic technology syllabus in schools located in urban areas and those located in rural areas, the z-test result is presented in Table 5.

Table 5 Z-test showing the difference in content coverage of the basic technology syllabus in schools located in urban areas and schools located in rural areas

Variables	N	Mean	Std. Dev.	Df	z-cal	t-crit	Sig	Remark
Urban Areas	75	81.22	4.11					
				111	4.42	1.96	0.001	Not retained
Rural Areas	38	77.62	4.20					

The result shows a degree of freedom of 111 and z-calculated 4.42. which is higher than z-critical of 1.96. Hence, the null hypothesis which states that there is no significant difference between the content coverage of basic technology syllabus in schools located in urban areas and schools located in rural areas in Edo State is not retained.

DISCUSSION OF FINDINGS

The findings of Research Question One indicated that the Basic Technology syllabus was covered to a high extent in upper basic schools in Edo State. This result suggests that, overall, teachers were able to implement the prescribed curriculum effectively despite the challenges associated with curriculum delivery. However, this finding contrasts with that of Dawal and Mangut (2021), who reported that approximately 72% of the Basic Science and Technology curriculum content in Plateau State remained uncovered due to an overloaded curriculum. The discrepancy between the two studies may be attributed to differences in geographical location, educational policies, resource availability, teacher deployment, and school management practices across the two states.

With respect to Research Question Two, the findings revealed that time management influenced the coverage of the Basic Technology syllabus to a high extent in upper basic schools in Edo State. This underscores the critical role of effective instructional time management in achieving curriculum objectives. Efficient planning and allocation of classroom time enable teachers to complete the prescribed syllabus while maintaining instructional quality. This finding is consistent with Dohino and Ruales (2026), who reported that ineffective time management negatively affects instructional delivery and assessment practices, whereas effective organization and utilization of instructional time significantly predict students' academic achievement.

Regarding Research Question Three, the findings showed that unexpected school closures affected the coverage of the Basic Technology syllabus to a low extent in upper basic schools in Edo State. This suggests that although school closures may disrupt instructional activities, they were not perceived as a major barrier to syllabus completion in the study area. This finding complements that of Anaekwe (2020), who identified inadequate laboratory facilities and outdated teaching methods as the primary challenges affecting the teaching of Basic Science and Technology in public schools in Anambra State. Furthermore, the result is supported by Lyon (2024), who argued that prolonged school closures resulting from labour disputes can significantly disrupt the continuity of learning and delay curriculum implementation. The relatively low impact observed in the present study may indicate that such disruptions were infrequent or effectively mitigated within the study area.

The findings related to Hypothesis One revealed a statistically significant difference in the extent of Basic Technology syllabus coverage between schools with low teacher–student ratios and those with high teacher–student ratios in Edo State. This finding indicates that class size remains an important determinant of effective curriculum implementation. Schools with lower teacher–student ratios are better positioned to provide individualized instruction, facilitate practical activities, and complete the prescribed syllabus within the available instructional time. This result is consistent with Adeyemi (2023), who found that large class sizes adversely affected teacher effectiveness, classroom management, and students' academic performance. Similarly, Ogunjobi et al. (2023) reported that class size significantly influenced students' academic achievement, with smaller classes providing more favourable conditions for effective teaching and learning. The consistency of these findings across different geopolitical zones strengthens the evidence that manageable class sizes are particularly important for practical and skill-oriented subjects such as Basic Technology.

Similarly, the findings for Hypothesis Two demonstrated a statistically significant difference in the extent of Basic Technology syllabus coverage between schools located in urban and rural areas of Edo State. This finding suggests that school location continues to influence the effectiveness of curriculum implementation, possibly due to disparities in infrastructure, instructional resources, teacher availability, and access to educational support services. The result corroborates the findings of Okon and Ngwu (2026), who concluded that school location significantly affects effective curriculum implementation. Consequently, the study highlights the need for policymakers and educational stakeholders to ensure equitable distribution of educational resources, qualified teachers, and infrastructural facilities across both urban and rural schools to promote effective and uniform coverage of the Basic Technology syllabus.

CONCLUSION

Based on the findings of the study, it was concluded that the basic technology syllabus in upper basic schools in Edo State is generally covered to a high extent, indicating that the curriculum content itself is largely delivered under normal circumstances. However, this coverage is significantly shaped by both internal and external factors. Time management practices by teachers emerge as a critical positive influence, playing a substantial role in ensuring thorough syllabus content coverage.

RECOMMENDATIONS

It is recommended that provisions be made to strengthen teacher capacity in time management and lesson pacing through targeted continuous professional development programs, including workshops on scheme-of-work planning, daily lesson scheduling, and strategies for maximizing contact hours. Furthermore, the government should institutionalize mechanisms to minimize teacher strike actions and abrupt changes in the school calendar, such as establishing a standing tripartite committee (government, union, and ministry) for proactive dialogue and timely resolution of grievances before they escalate. More-so, the ministry of education should to implement a deliberate policy to progressively reduce student–teacher ratios in overcrowded schools and ensure equitable distribution of qualified Basic Technology teachers, instructional materials, tools, equipment, and professional development opportunities across schools.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

Data were made available to the researchers upon reasonable request to Edo State Universal Basic Education Board.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI tools were used directly for concepts, theories, data generation and interpretations.

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