INSTRUCTIONAL DELIVERY STRATEGIES AS CORRELATES OF STUDENTS' LEARNING OUTCOME IN PUBLIC SECONDARY SCHOOLS IN OTUOCHA EDUCATION ZONE OF ANAMBRA STATE, NIGERIA.

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Abstract
Students' learning outcomes are germane to the transformation of individuals and serve as a major tool for national development. This study examined instructional delivery strategies as correlates of students' learning outcomes in public secondary schools in Anambra State. Three research questions and three null hypotheses guided the study. The study adopted a correlational research design. The population comprised 934 SSII students in 274 public secondary schools across the six education zones of Anambra State. A sample of 457 respondents was drawn using the simple random sampling technique. The instruments for data collection were researcher-structured questionnaires titled "Instructional Delivery Strategy Questionnaire (IDSQ)" and "Mathematics Achievement Test Questions (MATQ)." The face validity of the instruments was established by three experts: one in Measurement and Evaluation and two in Educational Management, all from the Department of Educational Foundations, Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. Construct validity was determined using the Principal Component Analysis (PCA) method. The reliability of the instruments was established using the Cronbach Alpha method, yielding an average coefficient of 0.81, which was considered adequate for the study. Pearson Product Moment Correlation Coefficient (PPMC) was used to answer the research questions, while tests of significance of correlation were used to test the hypotheses at the 0.05 level of significance. Findings revealed a high positive and significant relationship between direct-instruction strategy and students' learning outcomes. There was a moderate positive and significant relationship between project-based instructional delivery strategy and students' learning outcomes. However, the relationship between personalized instructional delivery strategy and students' learning outcomes was low, positive, and not statistically significant. Based on the findings, it was recommended that principals should encourage teachers to make greater use of direct-instruction and project-based instructional delivery strategies. This study contributes to knowledge by providing empirical evidence on the relationship between instructional delivery strategies and students' learning outcomes in public secondary schools in Anambra State.

Keywords: Instructional Delivery, Students, learning.

Introduction

Education is one of the vital tools for personal and societal development. It enables people to understand the world around them, think critical and make informed decisions. Secondary education offers opportunity for young adults to be well educated in order to be

innovative and capable of driving progress. Students in secondary schools are young learners who are expected to acquire quality knowledge and skills in order to grow into responsible and productive adults. In schools, teachers deliver a structured plan of what students are supposed know and how they are supposed to be taught which is contained in the curriculum through the process of teaching and learning. The amount of the knowledge and skills acquired by students within a given period of time is their learning outcome. Owan et al. (2023) asserted that learning outcomes is the results of their educational experiences, reflecting what they achieve through instruction and assessment processes.

Students' learning outcome is the end product of the teaching process which is aimed at inculcating new knowledge, skills, values, and attitudes which shape the behaviour of the learner. Montelli et al. (2023) maintained that students' learning outcome is the degree of a permanent change in behaviour from practice or past experiences acquired by students. It is the measure of the experiences gained by students over time from instruction delivered to them by teachers. Students' learning outcome is the level of the cognitive, affective, and behavioural changes that occur in students as a result of the teaching and learning process (Owoseni et al., (2020). This study defined students leaning outcome as a measure of the knowledge and skills acquired by students through the teaching and learning process over a particular period of time. The level of students' learning could be ascertained from the grades or scores they obtain from assignments, projects, tests, or internal and external examinations they partake in. High level of learning outcome is expected from students by the school, their parents and the society at large but observation by the researchers indicated that students' learning outcome in Otuocha Education Zone seem poor. This could be as a result of students' attitude to learning, family influence, lack of adequate school facilities, instructional delivery strategy used by teachers and so on. There is need for improvement in students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. This could be possible through quality delivery of the curriculum content. The vital curriculum content need to be delivered to students by teachers. Adeolu (2020) maintained that the dwindling academic performance of students in Nigerian secondary schools could be attributed to the perceived inadequacies in instructional delivery strategies. Instructional tasks are statutory curricula functions that the teachers carry out to ensure that learners achieve the school's educational objectives. This crucial function could depend on teachers' utilization of instructional delivery strategies. It is against this backdrop that this study examined instructional delivery strategies as correlates of students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Instructional delivery strategy is the method of delivering instruction by teachers to students for the achievement of set school goals. Amber et al. (2021) defined instructional strategy as the approach teachers use to instruct students. It is the methods teachers use to plan and deliver lessons to students. Instructional delivery strategy is the various methods or approaches a professional teacher adopts that gives him or her ability to explain the lessons to the learner to understand (Adeleke & Temisanren,2024). It is vital for teachers to pass information in a way that students will understand for teaching and learning to be effective. This study defined instructional delivery strategy as the techniques teachers use to deliver instruction to students to make sure that learning has taken place for the realization of set school goals. The main purpose of instructional delivery is to change the behaviour of learner through the impartation of the right knowledge and skills and this need to be achieved using appropriate strategy. Instructional delivery strategy encompasses everything from lesson planning and classroom management to the specific methods used to engage students and ensure they grasp the subject matter. If the curriculum content is not passed to students through instructional delivery, the objectives that is meant to be achieved would not be achieved. In other words, students acquire knowledge and skills from teachers through the use of instructional delivery strategies.

Instructional delivery strategies are the methods teachers utilize to present the curriculum content, engage students and enhance teaching and learning. It involves the way a teachers structured and delivers the subject matter or curriculum. Teachers can use different instructional delivery strategies to deliver instruction to students. Amber et al. (2021) posited that instructional delivery strategies include; demonstration, independent, lecture-based, project-based and collaborative strategy. Other researchers have listed various instructional delivery strategies. In the view of Basheer et al. (2019), instructional delivery strategies include; expository lectures, group discussions, demonstrations, the speak and chalk method, personalized learning, blended learning, and direct instruction. This study examined direct instruction, project- based and personalized instructional delivery strategies.

Direct instruction is the instructional delivery strategy that can be used by a teachers during teaching and learning. Tremblay (2023) defined direct instruction as the approach teachers use to give students detailed, guided and explicit instructions to get them to learn new information or a specific skill. It involves a teacher directly presenting information and guiding students through the teaching and learning process with clear and detailed explanations for easy understanding of the subject matter by students. Direct instruction is a teacher-directed teaching method where the teacher stands in front of a classroom, and presents the information to students and also guides them for clear understanding (Renard, 2023). It could be seen as the method of teaching where a teacher who is the instructor directs teaching and learning by giving out instruction directing to the students while in the class with them. Aster (2021) maintained that direct instruction is a teacher directed method of gaining knowledge and practicing a skill.

Direct instruction is a teacher-centred learning strategy where a teacher systematically explains instruction in a clear and specific manner. When direct instruction is used to deliver instruction, teachers ensure that students follow the instructional delivery step by step to make sure that the concept or skill is understood. This instructional delivery strategy emphasizes teacher-led lessons, active student engagement, and frequent opportunities for practice and feedback. This type of instructional delivery strategy makes it possible to get students engaged in the lesson and also it gives them the opportunity to get clarification of the teacher in areas where they are confused. Teachers who use direct instruction to teach, could easily get feedback from students which will help to ascertain the level of assimilation of instruction by the students. One of the advantages of direct instruction is the directness of the process which helps in the gaining of knowledge easily and the fast mastery of skill (Aster, 2021). Apart from direct instruction instructional delivery strategy, teachers could also deliver instruction through project-based instructional strategy.

Project-based is another type of instructional delivery strategy where students gain knowledge through projects they work on. Project-based instructional delivery is an instructional method which teachers use to make learners gain knowledge by having them accomplish meaningful projects and develop real-world products (Brundiers & Wiek, cited in Guo et al., 2020). Students are given projects to do and they learn in the process of carrying out the projects. García and Cózar (2025) defined project-based instructional delivery strategy is a student-centered, inquiry-based approach in which a teacher allows students to design and execute projects that address meaningful challenges. Project-based instructional delivery strategy is a teaching method where students learn by engaging in real projects. This type of instructional delivery strategy gives room for students to participate actively in a project and they learn as they practice or carry out the project rather than just note taking and listening to the teacher's instruction.

Project –based instructional delivery strategy makes it possible for students to explore real-world problems and challenges through practice, leading to deeper knowledge acquisition and improved learning outcomes. Sánchez-García and Pavón (2021) asserted that project –based instructional delivery strategy gives room for students higher engagement, motivation,

and fun in learning. In other words, effective utilization of project-based instructional strategy could foster problem-solving skills, engagement, and deeper learning. This could be because all the students are allowed to think and act while carrying out the project and learn from their mistake and at the end produce a valuable feedback. Teachers who use project based-instructional strategy allow students to solve real problems, learn a skill and gain knowledge through carrying out a project. Apart from project – based instructional delivery strategy, teachers could also pass instruction to students using personalized instructional delivery strategy.

Personalized instructional delivery strategy is a student-centered instructional delivery strategy. Lee et al. (2018) opined that personalized instructional delivery strategy is a student-centered instructional delivery system that supports the diverse needs of the students and the development of their individual abilities. If focuses teaching and learning experiences to individual student needs, and preferences. Personalized instructional delivery strategy is the individual instruction method that takes into account personal needs and goals of students (Chatti et al. cited in Aliya et al., 2021). This type of learning strategy takes into consideration the individual strength and weaknesses of the students as regards to teaching and learning process. In this study, personalized instructional delivery strategy is a teaching method which is designed to meet the specific learning abilities and interests of students individually. It involves customizing content and the teacher moving at different pace during instructional delivery in other ensure that each student have a good learning experience.

Personalized instructional delivery strategy involves the teacher focusing on each student as a personal learner instead of teaching the students as one group in a particular class. In other words, instead of the teacher delivering the same instruction in the same way to all the students in the class, the instructional delivery is tailored to consider the learning capacity of each student. The aim of personalized instructional delivery strategy is to ensure that all the students have good learning experience from the teacher. It involves delivering the same curriculum content in the right way for each student to ensure effective teaching and learning. It is delivering the same subject matter by a teacher personal to students. Personalized instructional delivery strategy gives the students some control over individualizing the time, pace, and path of their learning experience with the teacher as a guide. Raudys (2021) maintained that personalized instructional delivery strategy is a type of instructional delivery approach where all students are given differentiated instruction by a teacher based on their personal learning characteristics. Personalized instructional delivery strategy normally involves students deciding their own learning process.

Statement of the problem

There is persistent concern of stakeholders in the education sector over students' learning outcome especially in Otuocha Education Zone of Anambra State. Observation by the researcher revealed that learning outcome in some public secondary schools in Anambra State appear to be poor. If students fail to acquire the quality and quantity of knowledge and skills they are supposed to acquire in secondary schools, they would constitute nuisance instead of proffering solution to problems in the society. Suffice to note that students in secondary schools are young learners who need to acquire knowledge and skills that could help them to proceed into higher institutions of learning or start an entrepreneurial skill that could help them to live independent life and contribute meaningfully to the society. The poor students' learning outcome could be attributed to so many factors which includes; family background, the leadership style of principals, type of instructional strategies used by teachers among others. It is based on this backdrop that this study examined instructional strategies as correlates of students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Purpose of the Study

The main purpose of this study was to examine instructional delivery strategies as correlates of students learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. Specifically, the study sought to:

1. ascertain direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.
2. verify the project-based instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.
3. examine the personalized instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.

Research Questions

This study was guided by the following research questions:

1. What is the relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State?
2. What is the relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State?
3. What is the relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.
2. There is no significant relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.
3. There is no significant relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Anambra State.

Method

This study adopted Correlational research design. The study adopted correlational research design. The population of the study comprised 934 SS2 students in the 274 public secondary schools in the six education zones of Anambra State. The sample size for the study was 457 respondents drawn from the population using simple random sampling technique. The instruments for data collection was researcher-structured questionnaire titled: "Instructional Delivery Strategy Questionnaire (IDSQ)" and "Mathematics Achievement Test Questions (MATQ)''. The face validity of the instruments was established by three experts; one from Measurement and Evaluation and two experts from Educational Management. The experts were all from the Department of Educational Foundations in the Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. The construct validity of the instruments was explored using Principal Component Analysis (PCA) Method. The reliability of the instruments was determined using Cronbach Alpha method was used to establish the reliability of the instruments. The instruments yielded an average coefficient of 0.81 and it was considered reliable for the study. Pearson Product Moment Correlation Coefficient (PPMC) was used to answer the research questions and test of significance of correlation was used to test hypotheses at 0.05 level of significance. Statistical Package for Social Sciences (SPSS) version 27 was utilized for the whole analysis.

Results

After the administration and collection of the instruments, the data was analyzed in accordance with the research questions and hypotheses and the results were presented in tables as shown below:

Research Questions 1: What is the relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State?

Table 1: Pearson (r) of the relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation	Direct-instruction instructional delivery strategy	Students' learning outcome	Remark
Direct-instruction instructional delivery strategy	1.00 457	0.711[x x] 457	High positive relationship
Students' learning outcome	0.711[x x] 457	1.00 457	

[x x] (0.711) = High positive relationship

Table 1 revealed the Pearson (r) of relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. The result obtained was (r = 0.711, N = 457) which indicated that a high positive relationship exist between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Research Questions 2: What is the relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State?

Table 2: Pearson (r) of the relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation		Project-based instructional delivery strategy	Students' learning outcome	Remark
Project-based instructional delivery strategy	Pearson (r) N	1.00 457	0.482[x x] 457	Moderate positive relationship
Students' learning outcome	Pearson (r) N	0.482[x x] 457	1.00 457	

[x x] (0.482) = Moderate positive relationship

Table 2 showed the relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of

Anambra State**.** The Pearson (r) gave a value of 0.482 indicating a moderate positive relationship (r= 0.482, N = 457) between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Research Questions 3: What is the relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State?

Table 3: Pearson (r) of the relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation		Personalized instructional delivery strategy	Students' learning outcome	Remark
Personalized instructional delivery strategy	Pearson (r) N	1.00 457	0.335[x x] 457	Low positive relationship
Students' learning outcome	Pearson (r) N	0.335[x x] 457	1.00 457	

[x x] (0.335) = Low positive relationship

Table 3 portrayed the Pearson (r) of the relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.** The result revealed a value of 0.335 which indicated that there was a low positive relationship (r= 0.335, N = 457) between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Test of Hypotheses

The following null hypotheses were tested at 0.05 level of significance in order to affirm the relationship between instructional delivery strategies and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Hypothesis 1: There is no significant relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Table 4: Test of significance of between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation		Direct-instruction instructional delivery strategy	Students' learning outcome	Remark
Direct-instruction instructional delivery strategy	Pearson (r) sig. (2-tailed) N	1.00 457	0.711[x x] 0.003 457	Significant

Students' learning outcome	Pearson (r)	0.711**	1.00
	sig. (2-tailed)	0.003	
	N	457	457

** correlation is significant at the 0.05 level (2-tailed).

As shown in Table 4, the correlation between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State was 0.711and a probability value of 0.003 was obtained. The p-value of 0.003 is less than 0.05 level of significance, invariably the null hypothesis of no significant relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State was rejected (r, 457 = 0.711, p-value = 0.003). This means that there is significant relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Hypothesis 2: There is no significant relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Table 5: Test of significance of relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation		Project-based instructional delivery strategy	Students' learning outcome	Remark
Project-based instructional delivery strategy	Pearson (r)	1.00	0.482**	
	sig. (2-tailed)		0.010	Significant
	N	457	457	
Students' learning outcome	Pearson (r)	0.482**	1.00	
	sig. (2-tailed)	0.010		
	N	457	457	

** correlation is significant at the 0.05 level (2-tailed).

As shown in Table 5, the result of the correlation between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State gave a value of 0.482 with an associating probability value of 0.010. The p-value of 0.010 is less than 0.05 level of significance. Therefore, the null hypothesis of no significant relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State was rejected (r, 457 = 0.482, p-value = 0.010). Thus, there is significant relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Hypothesis 3: There is no significant relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Table 6: Test of significance of relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State**.**

Sources of variation		Personalized instructional delivery strategy	Students' learning outcome	Remark
Personalized instructional delivery strategy	Pearson (r) sig. (2-tailed) N	1.00 457	0.335[x x] 0.802 457	Not Significant
Students' learning outcome	Pearson (r) sig. (2-tailed) N	0.335[x x] 0.802 457	1.00 457	

[x x] correlation is significant at the 0.05 level (2-tailed).

The result displayed in Table 6 revealed the correlation between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. The value of 0.335 with associating probability value of 0.802 was obtained. because the p-value of 0.802 was greater than 0.05 level of significance, the null hypothesis of no significant relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State was not rejected (r, 457 = 0.335, p-value = 0.802). Invariably, there is no significant relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State.

Discussion of findings

The discussion of the findings was presented in accordance with the responses from the research questions and hypotheses. It was presented as follows:

Relationship Between Direct-Instruction Instructional Delivery Strategy and Students' Learning Outcome in Public Secondary Schools in Otuocha Education Zone of Anambra State**.**

The result of the analysis of this study depicted that a high positive relationship exist between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. It was also revealed from the study that there is significant relationship between direct-instruction instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. Direct-instruction is a teacher directed teaching strategy which involves a teacher directly presenting information and guiding students through the teaching and learning process with clear and detailed explanations for easy understanding of the subject matter by students. If teachers give clear and detailed explanation of lesson to students, they would definitely understand the lesson more and improve in their learning outcome.

This finding agreed with the findings of Kastur et al. (2020) and Syahrastani (2022) which showed that direct-instruction delivery strategy is effective in improving learning outcomes. In other words, there is significant relationship between direct-instruction instructional delivery strategy and students' learning outcome. The reason for the agreement could be because direct-instruction is characterized by active student engagement and feedback which could boost deeper understanding and improve learning outcome.

Relationship Between Project-Based Instructional Delivery Strategy and Students' Learning Outcome in Public Secondary Schools in Otuocha Education Zone of Anambra State**.**

The result of this study depicted that there is a moderate positive relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. The result also indicated that there is significant relationship between project-based instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. Project-based is a type of instructional delivery strategy where students gain knowledge through projects given to them to work on by teachers. Teachers use project-based instructional delivery strategy to make learners gain knowledge by having them accomplish meaningful projects by themselves and they learn through working and inquiry on the project. If students are allowed to handle meaningful projects by themselves, they might make mistakes but they will surely learn a lot because projects are more of practical than theory. The finding of this study supported the finding by Syukriah et al. (2020) and Farzana (2024) which revealed that project-based instructional delivery strategy has significantly improved the learning outcomes of students. The reason for the agreement in the findings could be because if the students engage in project learning, it would avail them the opportunity of having good learning experience through engagement.

Relationship Between Personalized Instructional Delivery Strategy and Students' Learning Outcome in Public Secondary Schools in Otuocha Education Zone of Anambra State**.**

It was indicated from the analysis of this study that the relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State is positively low. Also, there is no significant relationship between personalized instructional delivery strategy and students' learning outcome in public secondary schools in Otuocha Education Zone of Anambra State. Personalized instructional delivery strategy is a student-centered instructional delivery system that supports the diverse needs of the students and the development of their individual abilities. In other words, personalized instructional delivery strategy focuses on teaching and learning experiences to individual student needs, and preferences. Sometimes it might not be easy for a teacher to meet the individual needs and values of each student in a class with so many students. Even if a teacher does not teach the students as separate individuals in a class, using the right instructional delivery strategy would equally make students to understand the lesson.

This result does not supports that of Onyenma et al. (2024) which asserted that personalized learning is effective in the improvement of students' learning outcome. The reason for the disparity could be because the current study was carried out in Anambra State while that of the former was conducted in Owerri, Imo State. In this state, there is a limited time allotted to each subject and time might not permit the teacher to give all students differentiated instruction by a teacher based on their personal learning characteristics.

Conclusion

It was concluded that there is a high positive and significant relationship between direct-instruction instructional delivery strategy and students' learning outcomes in public secondary schools in Otuocha Education Zone of Anambra State. There is also a moderate positive and significant relationship between project-based instructional delivery strategy and students' learning outcomes in public secondary schools in Otuocha Education Zone of Anambra State.

Furthermore, the relationship between personalized instructional delivery strategy and students' learning outcomes in public secondary schools in Otuocha Education Zone of Anambra State is low, positive, and not statistically significant. The utilization of appropriate instructional delivery strategies would improve students' engagement in learning, enhance their learning experiences, and improve their learning outcomes in public secondary schools in Otuocha Education Zone of Anambra State.

Recommendations

The following recommendations were made in line with the findings and conclusion of this study;

1. Principals should encourage teachers to make use of more of direct-instruction strategy in delivering instruction.
2. Teachers should use project-based instructional delivery because it makes it possible for students to explore real-world problems and challenges through practice, leading to deeper knowledge acquisition and improved learning outcomes.
3. Teachers can still use personalized instructional delivery strategy to deliver instruction to students based on their personal learning characteristics to ensure that all the students have good learning experience even though it is not significantly related with students learning outcome because intelligent level of the students differ.

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