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- All tables, figures and plates (where necessary) are to be included in the body of the work and must be properly labelled.

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CONFLICT MANAGEMENT STRATEGIES AND TEACHING STAFF JOB PERFORMANCE IN PUBLIC SENIOR SECONDARY SCHOOLS IN RIVERS STATE

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Abstract

This study examined conflict management strategies and teaching staff job performance in public senior secondary schools in Rivers State. The problem of the study is the inability of some principals to conciliate well and handle litigation matters. Two objectives that guided the study are relationship between conciliation strategy and teaching staff job performance and relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State. The study adopted correlational research design. The sample of 374 respondents was determined using proportionate sampling technique. The instruments for data collection titled Conflict Management Strategies Questionnaire and Teaching Staff Job Performance Questionnaire were used for data collection. The reliability coefficient of conflict management strategy was .82 and teaching staff job performance was .87 were obtain through Cronbach method. The findings among others revealed that there is high and positive relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State and hypothesis of no significant relationship between conciliation strategy and teaching staff job performance was rejected. It was recommended that Principals in public senior secondary schools should make use of conciliation and litigation in managing conflict so as to improve the teaching performance of teachers.

Keywords: Conflict, Litigation, Performance.

Introduction

The school system is established to nurture individuals and transfer knowledge to them through education. Education is the bedrock on which the growth and development of any nation stands on. It is the transfer of values, norms, knowledge and culture from one generation to another. There are three levels of education namely; (primary, secondary and tertiary). At all levels of education, there are staff who work in the schools who include teachers and principals. Principals are the managers of the schools and are in charge of all activities and personnel that are in the schools. The teachers on the other hand are the managers of the classroom and help mold the character of students in their respective classes. The performance of teachers in schools is very

vital in the sustenance of educational objectives. Teachers carry out various tasks and are expected to perform the duties dutifully. Their tasks and activities in schools are executed in order to facilitate the teaching and learning process.

Conflict is a common phenomenon in any organization where different interest groups exist. In an organizational setting, different groups and individuals come with various interests, which they desire to satisfy. When these interests are at variance, conflict is obvious. Brown (2021) defined conflict as a form of interaction among parties that differ in interests, perceptions and preferences. It is that process which begins when one party perceives that one or more of its concerns have been or are about to be frustrated or blocked by another party (Sisk, 2015). Conflicts always exist in the life of individuals, groups, social structures and society in general. It inevitably arises between management and staff and between management themselves, as holding different views which are both natural and healthy to a group. It occurs when individuals or groups are not obtaining their own self-interest. Some forms of conflict can be destructive to the institution, for instance, when they take attention away from other important issues facing an institution.

Conflict in the school has almost become part of the culture of the school. This is because it is almost impossible for teachers and other stakeholders not to have conflicting interest in the course of discharging their duties. This is why principals are expected to acquire the right conflict resolution strategy for managing conflict in the school for the effective administration of the school system. Edet, Benson and Williams (2017) stated that:

Conflict resolution strategies are techniques that facilitate conflict resolution. They enable school principals resolve conflict by involving teachers affected by the conflict to change their view, gain from the conflict and be effective in their job performance in terms of their classroom communication, maintenance of classroom discipline and supervision of students' academic activities (p. 134).

It is only when the principal adopts the right conflict resolution strategy that the goals and objectives of the school can be achieved. The principal must therefore be familiar with various conflict resolution strategies for the effective administration of the school. This does not only guarantee the effective administration of the school but also ensure that the needs of all stakeholders are satisfied. Conflict will always arise in the school as a result of irreconcilable differences among stakeholders (Wilmot & Hocker, 2021). The principal is therefore expected to act to address these issues.

One of the administrative duties of the principal is to oversee the activities of the other human resources in the school to ensure that they are working together for the actualization of the educational goals of the school. The principal as the administrative head of the school has the responsibility of overseeing the activities of other human resources in his school among which are teachers, students, parents and members of the community around the school where he or she has been assigned. The principal therefore needs to employ the right techniques to ensure that these stakeholders work harmoniously for the achievement of the goals of the school. However, no matter the strategy employed by the principal, there are times and situations where individual or ground interest will be at variance and this can result to disagreement in the school. When educational stakeholders in the school have varying opinions on how the school should be managed, it can result in conflict, and this is one of the anomalies that the principal is expected to quickly address for the effective administration of the school.

Teachers' job performance involves all the activities carried out by the teacher to achieve the desired effects on students. It involves the extent to which the teacher participates in the overall running of the school in order to achieve the expected objective and goals of the school. In other words, performance is the accomplishment of school goals. Excellence and values are crucial terms, which need to be taken into consideration to bring about improvements and advancement of education (Malik, 2020). The job performance of teachers is essential because it helps to accomplish tasks and reduce tensions and conflicts that will arise if they are not accomplished. Hwang (2017) defined teacher job performance as the actions they perform in schools in order to achieve educational goals. Teacher job performance is highly influenced by the nature of management in schools. If the management in schools is favourable and accommodating, then teachers will likely perform well.

Conflicts are inevitable and should be handled in schools in order to achieve stated goals. One of the strategies that the principal can use to resolve conflict in the school is the conciliation strategy. Conciliation involves settling the dispute between two or more school stakeholders such that all parties involved feel satisfied with the decision made. During conciliation, the principal is expected to meet with the aggrieved parties individually and collectively so as to resolve the differences between the parties. Similarly, the conciliation conflict resolution technique is usually applied to ensure that the broken relationship between the agreed parties is restored and harmony is restored in the place of work. The conciliation strategy is also known as compromise strategy.

Litigation is an important element in conflict resolution. It refers to the art of taking matters to court in a bid to settling them amicably. It is the process of involving the courts and hiring lawyers to handle matters as well as to settle conflicts. Involving the legal system in managing conflicts is one measure in handling matters that arise in schools. There are some conflicts that cannot be resolved easily and must involve the courts for easy appeasements. According to Osabiya (2015), it is one of the measures and tools the management uses to develop the relationship between manager and staff.

The management of conflicts in secondary schools is vital in ensuring that the job performance of teachers is sustained. Conflicts in schools are inevitable and the onus lies on the principals and teachers to find amiable ways in managing them.

Statement of the Problem

The school system is supposed to be a place where teaching and learning takes places effectively. But this is not the case in most public senior secondary schools in Rivers state. There are cases where staff in schools cannot manage conflicts as they occur. Both the principals and teachers are devoid of how best to manage and handle them. They lack the ability to conciliate well, and handle litigation matters. Also, they do not know when to avoid matters; knowing when to leave a conflict scene and avoiding impending troubles.

These problems have prompted the researcher to embark on this study on relationship between conflict management strategies and teaching staff job performance in public senior secondary schools in Rivers State.

Aim and Objectives of the Study

The aim of this study examined conflict management strategies and teaching staff job performance in public senior secondary schools in Rivers State. Specifically, the objectives sought to:

1. Investigate the relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State.
2. Examine the relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State.

Research Questions

The following research questions guided this study

1. What is the relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State?
2. What is the relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State?

1.5 Hypotheses

The following hypotheses were tested at 0.05% level of significance in this study

1. There is no significant relationship between conciliation strategy and teaching staff job performance in Public Senior Secondary Schools in Rivers State.
2. There is no significant relationship between litigation strategy and teaching staff job performance in Public Senior Secondary Schools in Rivers State.

Review of literature

Conflict Management Strategies in secondary schools

As long as organizations continue to use work teams, conflict cannot be avoided since it is an inevitable aspect of work teams. Conflict is an outcome of behaviors. It is an integral part of human life. Whenever there is interaction there is conflict. Conflict means expression of hostility, negative attitudes, antagonism, aggression, rivalry, and misunderstanding. It is also associated with situations that involve contradictory interest between two opposing groups. It can be defined as a disagreement between two or more individuals or groups with each individual or group trying to gain acceptance of its view over others. Conflict means to be in opposition to one another. It refers to disagreement between people or members of organisations. Such disagreement is inherent in relationships between all human beings. As affirmed by Greg (2020) conflict is “inevitable and has the potential for beauty, but at the same time, there is also a “beast” lurking in it if we mishandle our conflicts”. This is so because no two people have the same expectations, thoughts, opinions or needs.

Thus, as posited by Carter (2020), conflict is not the problem, however, poor management of the conflict is the problem. Conflict is a problem when it hampers productivity, lowers morale, causes more and continued conflicts, and causes inappropriate behaviours. It is defined as a struggle or contest between people with opposing needs, ideas, beliefs, values, or goals. The concept of conflict, because of its ubiquity and pervasive nature, has acquired a multitude of meanings and connotations, presenting us with nothing short of semantic jungle. Conflict is an inseparable part of people’s life. It is a perpetual gift of life, although varying views of it may be

held. Some may view conflict as a negative situation which must be avoided at any cost. Others may see it as a phenomenon which necessitates management. Still, others may consider conflict as an exciting opportunity for personal growth and so try to use it to their best advantage.

Conflict involves situations in which differences are expressed by interdependent people in the process of achieving their needs and goals, and it arises when a difference between two or more people necessitates change in at least one person in order for their engagement to continue and develop. Conflicts offer competitive as well as cooperative context in the organization but it varies according to the situation. Problems exist in managing conflicts when the context is competitive/individualistic or when the context and the conflict resolution procedures are incongruent. The effectiveness of a conflict resolution and peer mediation program may be limited when the classroom and school context is competitive.

Conflict management refers to the long-term management of intractable conflicts involving institutionalized provisions and regulative procedures for dealing with conflicts whenever they occur. It describes the way we respond to and deal with conflicts before, during and after it has occurred. It is the label for the variety of ways by which people handle grievances, standing up for what they consider to be right and against what they consider to be wrong. Briefly stated, conflict management is about using managerial tactics to contain a conflict, to put a lid on it, and control the environment (Ghaffar, 2019). Conflict management is often considered to be distinct from conflict resolution. Because many conflicts cannot be really resolved, we use the term conflict management rather than conflict resolution. Good conflict management enables parties to co-exist amicably and deal with their disputes without necessarily resolving the underlying conflict.

Conflict is an unpleasant fact in any organization as long as people compete for jobs, resources, power, recognition and security. Organizational conflict can be regarded as a dispute that occurs when interests, goals or values of different individuals or groups are incompatible with each other (Agbo, 2020). This results into a situation whereby they frustrate each other in an attempt to achieve their objectives. Conflict arises in groups because of the scarcity of freedom, position, and resources. People who value independence tend to resist the need for interdependence and, to some extent, conformity within a group. People who seek power therefore struggle with others for position or status within the group. Conflict is a part of organizational life and may occur between individuals, between the individual and groups.

Teaching staff job performance

Teachers are the backbone of an educational activity. The success and failure of educational activities highly depends on their performance. Their performance is directly linked to process and product of education. Therefore, the performance of teachers is emphatic for the improvement of education. According to Muhammad (2020), performance may be described as an act of accomplishing or executing a given task. It could also be described as the ability to combine skillfully the right behaviour towards the achievement of organizational goals and objectives. Teachers' job performance can be described as the duties performed by a teacher at a particular period in the school system in achieving organizational goals. It could also be described as the ability of teachers to combine relevant inputs for the enhancement of teaching and learning processes. Muhammad (2020) added that job performance is determined by the worker's level of participation in the day to day running of organization.

The performance of any institution to a large extent depends on effective human resource, although other factors are essential in the attainment of institutional goals. For every educational institution, it is a basic requirement to have quality teachers in order to improve upon the knowledge, skills and general performance of its students. Teacher education, training, and development are means for professional advancement which deals with all developmental functions directed at the maintenance and enhancement of their professional competence. The quality of teachers that work in a specific educational system helps in the attainment of positive learning outcomes in schools. Dolores and Ernest (2018) aptly opined that performance of teachers is partly hinged on their pre-service training in addition to the in-service training given to the teachers. Pre-service teacher training programs (PSTP) are very crucial in order to upgrade teachers' skills, knowledge, competence and performance as well as to enable them to be more effective. In-service training programs (ISTP) on the other hand are necessary to re-orientate teachers to new goals and values, to train them in new teaching and learning methods, to prepare them to cope with curriculum change, and to provide them with the knowledge and skills to teach new learning areas of knowledge since information and new skills emerge in short period of time.

Conciliation strategy and teaching staff job performance

One of the ways of resolving conflict in the school is by conciliation. Since conflict can only exist between two or more persons in an organization, conciliation can be applied to resolve

the conflict by ensuring that each of the contenders is ready to give up part of their demands. Anashie and Kulo (2014) stated that “the conciliation strategy is simply an approach to resolve conflict whereby each party gets half of its demands and loses others for peace to reign” (p.4). It is simply the act of giving up part of one’s expectations for the purpose of allowing peace to reign. In this case, a conciliator is allowed to meet the disagreeing parties at different times and harmonizing their differences for the sake of peace. In clearer terms, Oni-Ojo and Roland-Otaru (2020) opined that:

Conciliation is a less formal form of arbitration. This process does not require an existence of any prior agreement. Any party to the dispute can request the other party to appoint a conciliator. One conciliator is usually appointed though more than one is also allowed. Where they are multiple they must act jointly. The parties may submit statements to the conciliator intimating him of the dispute and the unresolved issues at stake. Thereafter, each party sends a copy of the statement to the other. The conciliator can ask for further clarification either orally or in writing. The parties can also decide to submit suggestions for the settlement of the dispute to the conciliator. And after examining the nature of the dispute and seeing the possibility for settlement, the conciliator can draw up the terms of settlement and send it to the parties for their acceptance. If the parties execute the settlement document, it shall be final and binding on them (p. 49).

In the process of conciliation, members of the group are allowed to reach a compromise for the sake of allowing peace to prevail. The strategy involves the opposing groups agreeing to give up part of their bargain in exchange for something else. This strategy helps to bring moderation for self and others but with no clear outlined outcomes. It is only when the compromise has been reached that the outcome can be ascertained. However, the conciliation strategy can become less effective when important issues are not addressed before the agreement is reached. Baumgardner (2020) added that the compromise strategy can be less effective because the parties involved may overlook important issues and long-term goals for the sake of the details.

Litigation strategy and teaching staff job performance

Litigation is the process of an individual or a business taking legal action against one or more parties to resolve a dispute. It is generally accepted that litigation should be used as a last resort. There may be other methods of resolving the dispute which are available to the parties. The parties to a dispute are expected to try and resolve it before a claim is issued at court. This is known as the pre action stage. All actions taken to resolve a dispute by prospective parties before court proceedings have been issued are referred to as ‘pre-action conduct’. Perhaps one of the most

important things to consider before making or if you are defending a claim is how you will the legal costs of the claim. Litigation can be time-consuming and expensive. This may make low-value disputes unappealing as the costs of bringing the case to trial could outweigh the amount disputed. In litigation, the general rule is that the unsuccessful party pays the successful party's costs (Purcell, 2020).

Litigation refers to strict determination of the legal right of parties to a dispute through the courts of law. It is a non-violent form of conflict resolution where parties take their case to a judge of competent jurisdiction and are represented by lawyers who argue their cases and plead judgment of the court which is binding on the parties and enforceable by law enforcement agencies as state authorities. Litigation or use of the courts to resolve conflicts presents many issues one of which is the fact that the conflict itself may not really have been resolved since the court is a win-lose situation and the aftermath of methods of the process leaves mistrust, bitterness and potentials for eruption of conflicts in the future. This is probably why other forms of alternative dispute resolution are advocated ad preferred to litigation. Such other alternatives seek to give a win-win situation, ensure consensus and settlements that offer benefits and meet the interests of all parties to the dispute.

Methodology

The study adopted correlational research design. The population for this study consisted of the 867 principals and vice principals in 289 public senior secondary schools in the 23 Local Government Areas of Rivers State. The sample size used for this study was 390 respondents representing 45% of the entire population using proportionate sampling technique. The instruments for data collection are two self-structured questionnaires titled "Conflict Management Strategies Questionnaire "(CMSQ) and Teaching Staff Job Performance Questionnaire (TSJPQ) with 20 items. A sample of 30 principals who were not part of the sample for this study were randomly drawn for the reliability test. The reliability coefficient of conflict management strategy was .82 and teaching staff job performance was .87 while conciliation strategy was .86, litigation strategy was .76 using Cronbach method. Out of 390 copies of the questionnaire administered, 374 copies were properly filled and retrieved which represented 95% success. The research questions were answered using Pearson product moment correlation (r) statistics, while z-ratio was used to test the hypotheses at 0.05 level of significance.

Results

Research Question 1: What is the relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State?

Table 1: Pearson Product Moment Correlation Analysis on the Relationship between conciliation strategy and teaching staff job performance in Public Senior secondary schools.

Variable	Σ	Σ^2	N	Df	ΣXY	r	Decision
Conciliation (X)	10250	2345	374	372	2545	0.87	High Positive Correlation
Teaching staff job performance (Y)	10360	3423					

Result from Table 1 reveals a correlation coefficient = 0.87. This value is high and positive, indicating that there is high and positive relationship between conciliation strategy and teaching staff job performance. This implies that improvement in conciliation correlate with teaching staff job performance in public senior secondary schools in Rivers State.

Research Question 2: What is the relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State?

Table 2: Pearson Product Moment Correlation Analysis on the Relationship between Litigation strategy and teaching staff job performance in Public Senior secondary schools

Variable	Σ	Σ^2	N	Df	ΣXY	r	Decision
Litigation (X)	9703	2213	374	372	2665	0.81	High Positive Correlation
Teaching staff job performance (Y)	10360	3214					

Result from Table 2 reveals a correlation coefficient = 0.81. This value is high and positive, indicating that there is high and positive relationship between litigation strategy and teaching staff job performance. This implies that effective litigation leads to corresponding improvement in teaching staff job performance in public senior secondary schools in Rivers State.

Hypothesis 1: There is no significant relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State.

Table 3: Transformed z-ratio on the Relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State.

Variable	Σ	Σ^2	N	Df	ΣXY	r	z-cal	z-crit.	Decision
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Conciliation (X)	10250	2345								
			374	372	2545	0.87	34.58	1.96	Sig.	
Teaching staff job performance (Y)	10360	3423							Rejected H_0	

Result from Table 3 reveals that a high positive relationship exists between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State. To establish the significance of the relationship, a transformed z-value was computed and an index of 34.58 was obtained. This was compared to the critical z-value of 1.96 at 0.05 level of significance with a degree of freedom of 372, indicating that there is a significant positive relationship between conciliation strategy and teaching staff job performance (calculated $z = 34.58 < \text{critical } z = 1.96$ at $p < 0.05$ and $df = 372$). Therefore, the null hypothesis of no significant relationship between conciliation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any improvement in conciliation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.

Hypothesis 2: There is no significant relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State.

Table 4: Transformed z-ratio on the Relationship between Litigation strategy and teaching staff job performance in public senior secondary schools

Variable	Σ	Σ^2	N	Df	ΣXY	r	z-cal.	z-crit.	Decision
Litigation (X)	9703	2213							
			374	372	2665	0.81	29.05	1.96	Sig.
Teaching staff job performance (Y)	10360	3214							Rejected H_0

Result from Table 4 reveals that a high positive relationship exists between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State. To establish the significance of the relationship, a transformed z-value was computed and an index of 29.05 was obtained. This was compared to the critical z-value of 1.96 at 0.05 level of significance with a degree of freedom of 372, indicating that there is a significant positive relationship between litigation strategy and teaching staff job performance (calculated $z = 29.05 < \text{critical } z = 1.96$ at p

< 0.05 and $df = 372$). Therefore, the null hypothesis of no significant relationship between litigation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any effective litigation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.

Summary of Findings

The findings of this study are summarized as shown below:

1. The study revealed that there is high and positive relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State. Therefore, the null hypothesis of no significant relationship between conciliation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any improvement in use of conciliation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.
2. The study revealed that there is a high and positive relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State. Therefore, the null hypothesis of no significant relationship between litigation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any improvement in litigation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.

Discussion of Findings

The findings of this study are presented as shown below:

Conciliation strategy and teaching staff job performance

The study revealed that there is high and positive relationship between conciliation strategy and teaching staff job performance in public senior secondary schools in Rivers State. Therefore, the null hypothesis of no significant relationship between conciliation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any improvement in use of conciliation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.

This finding was in agreement with the study conducted by Adilo (2019), who discovered and stated that conciliation is one good measure in managing conflict and it has a positive relationship with organizational performance. He asserted that seeking for peace, asking for direction, ensuring that peace exists, effective communication and affectionate resolution between

individuals in an effective way of resolving problems amongst teaching staff in schools. Anashie and Kulo (2014) stated that “the conciliation strategy is simply an approach to resolve conflict whereby each party gets half of its demands and loses others for peace to reign” (p.4). It is simply the act of giving up part of one’s expectations for the purpose of allowing peace to reign. In this case, a conciliator is allowed to meet the disagreeing parties at different times and harmonizing their differences for the sake of peace. This finding is also in agreement with Adeyemi (2020) who revealed that conciliation has a positive relationship with organizational performance in secondary schools.

Litigation strategy and teaching staff job performance

The study revealed that there is a high and positive relationship between litigation strategy and teaching staff job performance in public senior secondary schools in Rivers State. Therefore, the null hypothesis of no significant relationship between litigation strategy and teaching staff job performance is rejected. This implies that the relationship is positive and strong, and any improvement in litigation tends to be accompanied by improvement in teaching staff job performance in public senior secondary schools in Rivers State.

This finding is in agreement with Arop (2018) who revealed that litigation influences the resolution of conflicts in schools. The findings also revealed among others that; the utilization of the three conflict management strategies (arbitration, dialogue, and litigation) had a joint significant influence on secondary school teachers’ job effectiveness. He also revealed that litigation had a strong relationship with teaching staff job performance in secondary schools.

Litigation or use of the courts to resolve conflicts presents many issues one of which is the fact that the conflict itself may not really have been resolved since the court is a win-lose situation and the aftermath of methods of the process leaves mistrust, bitterness and potentials for eruption of conflicts in the future. This is probably why other forms of alternative dispute resolution are advocated and preferred to litigation. Such other alternatives seek to give a win-win situation, ensure consensus and settlements that offer benefits and meet the interests of all parties to the dispute.

Conclusion

In line with the findings from this study, it was concluded that conflict management strategies such as conciliation strategy and litigation strategy were the major components of conflict management strategies and have a positive relationship with teaching staff job performance in public senior secondary schools in Rivers State.

Recommendations

Principals in public senior secondary schools in Rivers State should make use of conciliation and litigation in managing conflict so as to improve the teaching performance of teachers.

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GAMIFICATION AND REMEDIATION OF SENIOR SECONDARY SCHOOL STUDENTS' PERFORMANCES ON TRIGONOMETRIC GRAPHS IN BAYELSA STATE

By

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ABSTRACT

The study focused on gamification and remediation of senior secondary school students' performances on trigonometric graphs in Bayelsa State. A quasi-experimental research design was employed. The population of the study comprised 4,039 SS3 students in Yenagoa Local Government Area of Bayelsa State. 78 students {45 male and 33 females} were selected from four schools using purposive sampling technique. The instrument was "Analytic Performance Test on Trigonometric Graphs" (APTTG). The instrument was validated by researchers' supervisors as well as experts in Measurement and Evaluation. The Kuder-Richardson 20 (K-R20) formula was used to compute the reliability coefficient index of Analytic Performance Test on Trigonometric Graph (APTTG) which was 0.66. Mean and standard deviation were the measures used to answer the four research questions, whereas ANCOVA were used in testing the four hypotheses formulated for the study at 0.05 level of significance. The results specified how the students' needs were remediated using games: trigonobulary (table of values) and trigonordinates board (plotting of graphs) as students played continuously to internalize the skill (trigonometric graphs). Based on the findings of the study, gamification tends to improve students' performances, so teachers should highly use the games trigonobulary (table of values) and trigonordinates board (plotting of graphs) to teach students in order to internalize knowledge.

Keywords: Trigonometric Graph, Performance, Gamification.

Introduction

It is expedient for teachers, tutors and educators to make students to know the relevance of different topics like probability, quadratic graphs and trigonometric graphs especially in their pursuits of career. For that of trigonometric graphs (the display of trigonometric functions like sine, cosine), which are used for modeling many different natural and mechanical phenomena (populations, waves, engines, acoustics, electronics, UV intensity, growth of plants and animals). The usefulness of trigonometric graphs is relevant, so students' performances should be looked on. Performance is well-defined as the action or process of carrying out or accomplishing an action, task, or function (Wikipedia, 2021). Ugwube (2018) mentioned that enhanced hypothetical performance of students is the foremost of any teaching and learning program which is quantified by the examination result. Attah and Guwan posed that students require remedial lessons to be able

to improve on their performance in Mathematics. Wonu and Zalmon (2017) discoursed that remediation is the achievement to remedy and is a method of answering or improving a problem. Remediation is to improve or ameliorate. Sam-Kayode and Salman (2015) emphasized that the usage of educational games like ludo, which when coupled with the regular chalk and board method improve meaningful teaching and learning process of Mathematics.

Alio, Iyoke and Kevin (2019) iterate that most valuable learning occurs when students actively construct their own Mathematical understanding, which is often accomplished through the practice of games. They stated that games may be used to introduce concepts as a prelude to explicit teaching or to practice skill or to consolidate a concept after explicit teaching. Gamification is increasing learners' commitment in a concept by using game mechanism with the general ethics and models put in place. Learners who used games got less bored and got better performance than other learners who used the conventional method of instruction (Sam-Kayode & Salman, 2015). This makes the learners to be steadfast and derive joy in what they are doing. Hence, it is imperative to use aids like games to increase performances of students.

Statement of the Problem

Students' knowledge on trigonometric graphs should not be taken for granted. This is useful in their future careers. Most WAEC scripts on Mathematics marked by the researcher, it was observed that few students respond to the questions on trigonometric graphs and majority of them do not respond to the questions. Also, the Chief Examiner (WASSCE (SC) '2020) noticed that the candidates exhibited insufficient knowledge of drawing graphs and reading from it. The Chief Examiner stated that the majority of the candidates who attempted question six (6) which is on trigonometric graph of General Mathematics Core 2, 2020 did not plot the points after completing the table of values and many of the students even completed the table with wrong values for y. Hence, the study seeks to analyze the students' needs on trigonometric graphs and also possible means of remediating the students' performances using games.

Aim and Objectives of the Study

The aim of the study is to find at the effect of gamification in remediating SS3 Students' performances in trigonometric graphs in Yenagoa Local Government Area of Bayelsa State. Explicitly, the objectives of the study are to:

1. remediate students' mean performances of trigonometric graph (table of values) with the influence of gamification (trigonobulary) and conventional method using problem solving method in public and private schools.
2. investigate the extent to which students' mean performances of trigonometric graph (plotting of graphs) can be improved using gamification (trigonordinates board) and conventional method using problem solving method in public and private schools.
3. examine the distinction between public and private secondary school students' mean performances of trigonometric graphs using gamification (trigonobulary and trigonordinates board);
4. ascertain the effects of gamification (trigonobulary and trigonordinates board) on male and female students' mean performances of trigonometric graphs.

Hypotheses

Four null hypotheses guided the study at 0.05 level of significance:

1. There is no significant difference in students' mean performances in trigonometric graphs (table of values) using gamification (trigonobulary) and conventional method using problem solving method in public and private schools.
2. There is no significant gamification effects of students' mean performances in trigonometric graph (plotting of graphs) using gamification (trigonordinates board) and conventional method using problem solving method in public and private schools.
3. There is no significant difference between the mean performance scores of students in public schools and that of private schools when taught trigonometric graph using gamification (trigonobulary and trigonordinates board).

4. There is no significant effects of gamification (trigonobulary and trigonordinates board) on male and female students' mean performance taught trigonometric graphs.

Methodology

A quasi-experimental research design was adopted. The population of the study involved Senior Secondary School three (SS3) of both public and private schools. The technique employed was purposive sampling which is used to select the two public secondary schools and the two private secondary schools based on skill level and location. Seventy-eight (78) students {45 male and 33 females} was used as the sample of the study. Instrument was "Analytic Performance Test on Trigonometric Graphs" (APTTG). APTTG comprised 3 sections, section A find out if students need is table of values on trigonometric graphs, section B checked on their need of plotted graphs, and section C discovered if they can interpret the graphs. The validity of the instrument APTTG was done by the researcher's supervisors and experts in Measurement and Evaluation. The Kuder-Richardson 20 (K-R20) formula was used to compute the reliability coefficient index of Analytic Performance Test on Trigonometric Graph (APTTG) which was 0.66. Mean and standard deviation were used to answer the research questions, while ANCOVA was used in testing the hypotheses formulated for the study at 0.05 level of significance.

Results

The results of the data analysis are presented according to the serial order of stated hypotheses. The data is presented in a tabular form. The responses of the students were analyzed collectively.

Hypothesis 1: There is no significant difference in students' mean performances in trigonometric graphs (table of values) using gamification (trigonobulary) and conventional method using problem solving method in public and private schools.

Table 1: Mean performances difference and standard deviation of SS3 students using gamification (trigonobulary) and conventional method in public and private schools

Schools	Groups	N	PRE- APTTG		POST- APTTG	
			Mean (\bar{X})	SD	Mean (\bar{X})	SD
Public	Experimental	21	3.14	4.04	8.00	4.52
	Control	26	0.50	1.77	2.85	3.44
	Mean difference		2.64		5.15	
Private	Experimental	23	12.00	3.16	12.13	3.12
	Control	8	2.63	5.21	9.13	4.42
	Mean difference		9.37		3.00	

Table 2: Summary of ANCOVA of SS3 students taught using gamification (trigonobulary) and conventional method using problem solving.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1130.244 ^a	2	565.122	42.122	.000
Intercept	995.053	1	995.053	74.168	.000
Pretest3	477.110	1	477.110	35.562	.000
Group3	64.118	1	64.118	4.779	.032
Error	1006.217	75	13.416		
Total	6660.000	78			
Corrected Total	2136.462	77			

*R Squared = .529 (Adjusted R Squared = .516)

*Significant (P < 0.05) and *not significant (P > 0.05)

The public schools in table 1 displayed a post mean difference of 5.15, while the private schools had a post mean difference of 3.00. The table 2 reveals that F (1, 75) = 13.416 with p = 0.032, P <

0.05. The hypothesis one is rejected because there is a significant difference between the students taught using gamification (trigonobulary) and conventional method using problem solving.

Hypothesis 2: There is no significant gamification effects of students' mean performances in trigonometric graph (plotting of graphs) using gamification (trigonordinates board) and conventional method using problem solving method in public and private schools.

Table 3: Mean performances difference and standard deviation of SS3 students using gamification (trigonordinates board) and conventional method in public and private schools

Schools	Groups	N	PRE- APTTG		POST- APTTG	
			Mean (\bar{X})	SD	Mean (\bar{X})	SD
Public	Experimental	21	0.00	0.00	5.52	6.82
	Control	26	0.00	0.00	0.46	0.90
	Mean difference		0.00		5.06	
Private	Experimental	23	7.13	4.96	12.96	8.85
	Control	8	0.00	0.00	5.13	5.40
	Mean difference		7.13		7.83	

Table 4: Summary of ANCOVA of SS3 students taught using gamification (trigonordinates board) and conventional method using problem solving.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	2547.551 ^a	2	1273.775	42.357	.000
Intercept	716.410	1	716.410	23.823	.000
PretestC	1365.582	1	1365.582	45.410	.000
GroupC	210.743	1	210.743	7.008	.010
Error	2255.437	75	30.072		
Total	7599.000	78			
Corrected Total	4802.987	77			

* R Squared = .530 (Adjusted R Squared = .518)

*Significant (P < 0.05) and *not significant (P > 0.05)

The public schools in table 3 displayed a post mean difference of 5.06, while the private schools had a post mean difference of 7.83. The table 4 reveals that $F(1, 75) = 30.072$ with $p = 0.010$, $P < 0.05$. The hypothesis two is rejected because there is a significant difference between the students taught using gamification (trigonordinates board) and conventional method using problem solving.

Hypothesis 3: There is no significant difference between the mean performance scores of students in public schools and that of private schools when taught trigonometric graph using gamification (trigonobulary and trigonordinates board).

Table 5: Mean performance scores and standard deviation of Public and Private Schools taught trigonometric graph using gamification (trigonobulary and trigonordinates board).

Schools	Groups	N	PRE- APTTG		POST- APTTG	
			Mean (\bar{X})	SD	Mean (\bar{X})	SD
Public	Experimental	21	15.10	12.61	40.19	15.25
Private	Experimental	23	43.48	14.45	60.52	15.91
	Mean difference		-28.38		-20.52	

Table 6: Summary of ANCOVA of public and private schools taught trigonometric graph using gamification (trigonobulary and trigonordinates board).

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	9114.959 ^a	2	4557.479	33.110	.000
Intercept	5842.964	1	5842.964	42.448	.000
Pretest4	4577.391	1	4577.391	33.254	.000
School4	10.738	1	10.738	.078	.781
Error	5643.587	41	137.648		
Total	128388.000	44			
Corrected Total	14758.545	43			

^aSignificant ($P < 0.05$) and *not significant ($P > 0.05$)

The public and private schools had a post--APTTG mean of 40.19 and 60.52 respectively in table 5. Table 6 shows that $F(1, 41) = 137.648$ with $P = 0.781$, $P > 0.05$. The null hypothesis is retained. This shown that there is no significant difference between the public and private schools taught the concept of trigonometric graph using gamification (trigonobulary and trigonordinates board).

Hypothesis 4: There is no significant effects of gamification (trigonobulary and trigonordinates board) on male and female students' mean performance taught trigonometric graphs.

Table 7: Effects of gamification (trigonobulary and trigonordinates board) on male and female SS3 students' mean performance and standard deviation.

Groups	Gender	N	PRE- APTTG		POST- APTTG	
			Mean (\bar{X})	SD	Mean (\bar{X})	SD
Experimental	Male	26	31.65	21.89	53.00	22.16
	Female	18	27.44	16.19	47.67	11.33
Mean Difference			4.21		5.33	

Table 8: Summary of ANCOVA of mean performance scores of the male and female SS3 students taught trigonometric graphs using gamification (trigonobulary and trigonordinates board).

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	9157.134 ^a	2	4578.567	33.513	.000
Intercept	10702.415	1	10702.415	78.337	.000
Pretest4	8854.589	1	8854.589	64.812	.000
Gender4	52.913	1	52.913	.387	.537
Error	5601.411	41	136.620		
Total	128388.000	44			
Corrected Total	14758.545	43			

*Significant ($P < 0.05$) and *not significant ($P > 0.05$)

Table 7 revealed that the experimental groups had a post- APTTG mean of 53.00 (male) and 47.67 (female). The table 8 shows that $F(1, 41) = 136.620$ with $p = 0.537$, $p > 0.05$. The hypothesis four is retained for there is no significant difference between the male and female students taught the concept of trigonometric graphs using gamification (trigonobulary and trigonordinates board).

Discussion of Findings

Students taught with gamification (trigonobulary), the experimental group performed better than the problem-solving method (control group) of both the public school with post-APTTG mean difference of 5.15 and private school with post-mean difference of 3.00. Likewise, students taught with gamification (trigonordinates board), the experimental group performed better than the problem-solving method (control group) of the public school with the post-APTTG mean difference of 5.06 and that of the private school with post-APTTG mean difference of 7.83.

Similarly, the hypotheses 1 and 2 are rejected because there is significant difference between the students taught using gamifications (trigonobulary and trigonordinates board) and conventional method using problem solving. It reveals that $F(1, 75) = 13.416$ with $p = 0.032$, $P < 0.05$ and the null hypothesis rejected at 0.05 level of significance of the trigonobulary game; and also, it shows that $F(1, 75) = 30.072$ with $p = 0.010$, $P < 0.05$ and the null hypothesis rejected at 0.05 level of significance of the trigonordinates board game. This implies that gamification actually helps to remediate poor performances of Mathematical concepts like trigonometric graphs. This is supported by: Bolaji, Kajuru, Ibrahim and Momozoku (2020) whose results specified that there was substantial difference between the motivation level of students taught trigonometry using Jigsaw5-Cooperative strategy, Simulation-Games strategy and the convention method; Albert (2018) looked at the impact of triangle solver game on senior secondary school students' achievement in trigonometry. Their research study showed that students taught trigonometry with triangle solver game achieved higher than those taught with expositive method; Mihriban (2017) determined that the process of adapting and applying traditional children's games into Mathematics assisted students love Mathematics more, made the lessons more entertaining, removed their prejudices against Mathematics, increased participation in lessons and provided permanent and meaningful learning.

Data from table 5 show that the private schools taught trigonometric graph using gamification (trigonobulary and trigonordinates board) had the post-APTTG mean of 60.52 and the public had a post--APTTG mean of 40.19. This implies that the private schools perform well liken to the public schools. This agrees with Alio, Anibueze and Ayogu (2017) who showed a study on a comparative effect of cyclic theorem game in private and public senior secondary school students' attainment in geometry. The study revealed that the students in the private schools perform better than those in public schools. Similarly, Sunday (2014) worked on the comparative study of pupils' academic mean performance between private and public primary schools. Upshots indicated that pupils in the private elementary schools performed better than their equals in the public schools and hence call for upgrading in the public schools to boost the learning prospect of the huge mainstream of pupils is present in the public schools.

Furthermore, table 6 shows that $F(1, 41) = 137.648$ with $P = 0.781$, $P > 0.05$. Hereafter, the null hypothesis is retained because there is no substantial difference between the public and private schools taught trigonometric graph using gamification (trigonobulary and trigonordinates board). This study corroborates with Unodiaku and Nwankpa (2020) who worked on the analysis of senior secondary schools' Mathematics mock examination: an innovative assessment of students' readiness for senior secondary schools' Mathematics examinations. The results of the analyses showed that there is no significant relationship and therefore rejected. This means that the readiness level of students schooling in the public secondary schools are related to the readiness level of their counterpart students schooling in the privately own secondary schools. This suggests that the observed percentage differences in their readiness level do not statistically differ.

Table 7 revealed the post-APTTG mean performance of male and female students taught trigonometric graph using gamification (trigonobulary and trigonordinates board) as 53.00 and 47.67 respectively with mean difference of 5.33 of experimental groups. This implies that the male students perform better than the female students. Allahnana, Akande, Vintseh, Usman and Monica (2018) agree with this study. They made research that assesses gender and awareness in Mathematics achievement. The review found that male students surpass in Mathematics achievement more than their female colleagues. It negates in the work of Akande (2017) who explored the effects of Mathematical games on the academic achievement of senior secondary school students in Mathematics. The findings revealed that female students had higher mean score

of 76.25 than the male students with mean score of 58.53. Table 8 reveals that there is no significant difference between the male and female students taught trigonometric graphs using gamification (trigonobulary and trigonordinates board) based that $F(1, 41) = 136.620$ with $p = 0.537$, $p > 0.05$. Therefore, the hypothesis is retained. This is supported by Alio and Okafor (2018) who reveal the effects of some Mathematical games on primary school pupils' achievement and interest in Mathematics. The results show that there is no significant difference between the mean achievement scores of pupils taught with the Mathematical games based on sex. This implies that gender does not affect anyone as seen in this study. Individual has to put effort to learn the detail (trigonometric graphs).

Conclusion

The findings of the study concluded that using games: trigonobulary (table of values) and trigonordinates board (plotting of graphs) when teaching trigonometric graphs will enhance students content knowledge and their performances. Then, as students played continuously, they internalize the skill (trigonometric graphs). Hence, the result reveal that there is significant difference between the students taught using gamification (trigonobulary and trigonordinates board) and conventional method using problem solving.

Recommendations

Based on the findings of the present study, the following recommendations are made:

1. Regardless of school ownership (public and private) and gender (male and female), teachers should draw the attention of students to know the contents and sub-contents of trigonometric graphs.
2. Gamification tends to improve students' performances, so teachers should highly use the games trigonobulary (table of values) and trigonordinates board (plotting of graphs) to teach students in order to internalize knowledge.

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Video Conferencing and Task-Based Approaches on Students' Performance in Oral English in Port Harcourt L.G.A

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ABSTRACT

The design of the study was quasi- experimental design which involved pretest, treatment, posttest, control and experimental groups. The population of the study was five thousand, nine hundred senior secondary two students in fifteen public senior secondary schools in Port Harcourt City L.G.A of Rivers State that were enrolled in 2021/2022 academic session. The sample size was one hundred and thirty-seven senior secondary two students from two public senior secondary schools selected using purposive sampling technique. The instruments for data collection was researcher-made instrument titled Oral English Performance Test using test retest method and the result obtained was analysed using Kuder-Richardson Formula 21 with a reliability index of 0.88.. The study was guided by three objectives, three research questions and three hypotheses. Mean and standard deviation were used to answer the research questions while Analysis of Covariance was used to test the null hypotheses at 0.05 level of significance. The study found out that Video Conferencing had significant effect on the performance mean scores of the students in Oral English. The students who were taught Oral English using Video Conferencing outperformed those students taught using Task-Based Approach. The study concluded that the use of Video Conferencing enhanced students' performance in Oral English. The study concluded that the use of Video Conferencing enhanced students' performance in Oral English therefore it is recommended to be used in teaching in the classroom especially Oral English classroom.

Keywords: Video Conferencing, Task-Based Approaches, Students' Performance

Introduction

Communication is a dynamic interactive process that involves the effective transmission of facts, ideas, thoughts, feelings and value. It is an essential part of human lives. In fact, the act of communicating effectively through spoken words differentiates human from other animals. It is

not passive and does not just happen. One actively and consciously engage in communication in order to develop information and understanding, required for effective teaching and learning.

Over the years, language has remained and will remain a very vital tool through which humans communicate with one another. This is because language is a means of socialization (Çakici, 2016). It has therefore been noted that one of the major features of man is his ability to communicate information relating to his activities to others and this is done through either written or spoken language (Abudu, Lawal and Abiodun, 2020). One language which has stood the test of the unification of man over many years is the English Language. According to Opeifa, Adelana and Atolagbe, (2022), the English Language happens to be a global language that is spoken in all nations of the world. It is a widely used means of communication either as the major language or as a means of official communication (second language) in others including Nigeria. Aside from being referred to as a language of global unification, the language has also enjoyed usage in business, education, interactional purposes and so on due to its wide acceptance and usability (Akintunde & Angulu, 2015).

One important area of English language study which all learners or non-native speakers of the language need to learn effectively and use efficiently to be proficient in pronunciation is Oral English. This aspect of the English language is vital because it enhances the effective pronunciation of words and the speaking skills of the speaker. Oral English is the spoken part of English speech sound. It is a subject of study in Nigerian secondary schools. It is called Test of Orals in external examination. According to Altun, (2015), it is the system through which spoken words are used to express knowledge, ideas and feeling. Speaking right is a global concern therefore, consideration of strategy and approach to the teaching of Oral English especially in public secondary schools in Nigeria is paramount. Negligence to this, is alarming especially in public secondary schools and colleges. The provision of effective instruction in Oral English is particularly important for acquiring basic skills of the English Language, especially concerning usage. Because of this, all students studying the English Language in secondary schools in Nigeria must learn Oral English. The need to learn Oral English relies on enhancing effective communication skills because it is believed that students' abilities to express themselves clearly, coherently and fluently in a speech depend on a good grasp of pronunciation, enunciation, stress placement, intonation and other idiosyncratic features of speech (Abudu, Lawal & Abiodun, 2020).

This eventually, can only be achieved through effective teaching and learning of Oral English. The development of technology enables the educators to conduct the teaching using technology and active classroom setting like video conferencing. Video conferencing or video communications is the ability to communicate with other people as if they were in the same room. Video conferencing is defined by Kailin, (2022) as a live connection between people in separate locations for the purpose of communication, usually involving audio and often text as well as video. At its simplest, videoconferencing provides transmission of static images and text between two locations. At its most sophisticated, it provides transmission of full-motion video images and high-quality audio between multiple locations (Krishi, 2022). There have been a number of researches conducted to show the relationship between learning methods and academic performance or achievement, and which show that learning methods can significantly enhance academic performance of students at the primary and secondary level like task-based learning method. Task-based learning method is a learning method that places the students in the real world situation. According to Murat and Sibel (2011), it is a situation where oral communication is essential for doing a specific task. Task based learning has the advantage of getting the student to use her skills at her current level. To help develop language through its use. It has the advantage of getting the focus of the student toward achieving a goal where language becomes a tool, making the use of language a necessity (Li-Tang, 2018).

Task-based approach is a teaching approach that employs tasks as its main pedagogical tools to structure language teaching. Task-based approach is the clear enhancement of Communication. Task-based approach is a powerful and advancing learning method. It promotes learning language knowledge and training skills in the process of performing tasks. Teachers are both instructors and guides. Similarly, learners are both receivers and main agents. It is through TBLA that learners will master how to make full use of their own communicative abilities to shift from L1 to the target language. It presents a chance for them to learn cooperatively and activates their probable abilities to employ and deal with the target language in a professional way (Lin, 2009). Tasks will enable learners to use the target language for communicative purposes and better performance.

In the past, academic performance was often determined more by hearing it than today and teachers' observation alone was used to ascertain the assessment of the students. Academic performance is defined as the performance shown by students in tests, course works and examinations. Academic performance is viewed by Pavle and Danislav (2020) as the result of a

combination of psychological, social, and economic factors, which results in the proper growth of students. Performance is the completion of task with application of knowledge, skills and abilities (Vizeshfar & Torabizadeh, 2018). Academic performance therefore, can be defined as the knowledge gained by the student which is assessed by educational goals set by students and teachers to be achieved after an instructional delivery (Narad & Abdullah, 2016). Performance according to Vizeshfar and Torabizadeh is divided into two: contextual and task performance. Contextual performance is the type of performance that is value base; has to do with the person's personality and behaviour. It has nothing to do with description on the person's job but has to do with the roles that are related with organisational performance. Task performance on the other hand is the kind that is related to job descriptions of an individual and cognitive ability. It is directly related to organisational performance.

In other words, some literatures were reviewed in regards to videoconferencing (technology) and students' performance. For instance: Opeifa, Adelana and Atolagbe (2022) investigated on "Teaching Oral English through technology: Perceptions of teachers in Nigerian secondary schools". This study re-examined teachers' current perceptions towards technology usage in teaching Oral English. The result obtained at the end showed that the teachers currently have positive perceptions towards the use of technologies in teaching Oral English. Again, Adef and Hamzah, (2020) carried out a study on "Strategies Used by Teachers in Enhancing Students' Spoken English by Using Video Conferencing in English Online Based Course". This study aims to explore the strategies used by online instructors to enhance students' spoken English based on the existing levels, namely beginner, intermediate, and advanced level. The findings of the study showed that using the strategies in online classroom affected students' creativity in improvising their spoken English.

Theoretical framework

The study anchored on George Siemens' Connectivism Learning Theory (2005) found in Mohammed (2013). Connectivism learning theory is one of the newest educational learning theories. It focuses on the idea that people learn and grow when they form connections. The theory is relevant to the study because it guarantees academic or career success or advancement at the

end which it does by providing a precise framework for the learners' collaboration and interaction. Connected learning also creates in those involved the chance to branch out and form new relationships which is visible in online learning classroom when learning is taken from physical to online, the opportunity of getting hooked or connected with people from different background entirely is obvious.

Statement of the problem

The researcher observed that the tools used by the teachers in teaching and learning could contribute to this consistent poor performance in English Language. Inadequate use of instructional materials, obsolete and traditional method used in teaching Oral English may have contributed immensely to the students' poor performance in Oral English. Learning English should be more self-directed rather than teacher-directed. Therefore, "What effect do Video Conferencing and Task-based Teaching Approach have on Senior Secondary School Two (SS2) Students' Performance in Oral English in Port Harcourt Local Government Area of Rivers State?" Providing answers to the aforementioned question is the crux of this study.

Aim and Objectives of the Study

The aim of the study was to investigate the effect of Video Conferencing and Task-based Teaching Approach on Senior Secondary School Two (SS2) Students' Performance in Oral English. Specifically, the objectives of the study were to;

1. examine the effect of video conferencing on the students' performance mean score in Oral English;
2. find out the effect of task-based approach on the students' performance mean score in Oral English;
3. investigate the difference in performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach.

Research Questions

These research questions guided the study:

1. What is the effect of video conferencing on the students' performance mean score in Oral English?

2. What is the effect of task-based approach on the students' performance mean score in Oral English?
3. How do performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ?

Hypotheses

Null hypotheses were raised to guide the study and tested at 0.05 level of significance

1. video conferencing does not have a significant effect on the students' performance mean scores in Oral English.
2. Task-based approach does not significantly affect students' performance in Oral English.
3. There is no significant difference in the effect of video conferencing and task-based approach on students' performance mean scores in Oral English.

Methodology

Research design: The design of this study was quasi-experimental design.

Study Area: This study was conducted in Port Harcourt City Local Government Area of Rivers State.

Population: The population of the study was all the senior secondary two students in all (15) public senior secondary schools in Port Harcourt City LGA of Rivers State which consists of 5,900 SS2 students admitted in 2021/2022 academic session.

Sample and sampling technique: The sample size of the study was 137 senior secondary two students from two selected public senior secondary schools out of all the fifteen public senior secondary schools in Port Harcourt City Local Government Area of Rivers State. The two schools were selected using purposive sampling techniques. Some of these criteria were that the schools must be government owned senior secondary schools; the schools must have written WAEC for at least six years. This sample size consisted of two intact classes for one experimental group and one intact class for control group in each of the schools. Both the schools and classes used were selected using purposive sampling techniques.

Results and Discussion

Research Question 1: What is the effect of video conferencing on the students' performance mean score in Oral English?

Table 1: Mean and standard deviation of effect of video conferencing on the students' performance mean score in Oral English

Methods	Pretest			Posttest		Mean Gain
	N	Mean	Std	Mean	Std	
Video Conferencing	67	44.30	14.09	83.67	12.41	39.37

In table 1, it is shown that the students taught Oral English with video-conferencing had the mean scores of 44.30 (SD = 14.09) and 87.67 (SD = 12.41) respectively at the pretest and post-test stages. Hence it is affirmed that from the pretest to the post test stage they gained a mean value/score of 39.37. So video-conferencing had a positive effect on the academic performance of students in Oral English.

Research Question 2: What is the effect of task-based approach on the students' performance mean score in Oral English?

Table 2: Mean and standard deviation of the effect of task-based approach on the students' performance mean score in Oral English

Methods	Pretest			Posttest		Mean Gain
	N	Mean	Std	Mean	Std	
Task-Based	70	43.11	15.18	74.63	15.57	31.51

In table 2 showed that the students taught Oral English with task-based approach had the mean scores of 43.11 (SD = 15.18) and 74.63 (SD = 15.57) respectively at the pretest and post-test stages. Hence it is affirmed that from the pretest to the post test stage they gained a mean value/score of 31.51. So, task-based had a positive effect on the academic performance of students in Oral English.

Research Question 3: How do the performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ?

Table 3: Mean and standard deviation of students taught Oral English with video conferencing and those taught Oral English with task-based approach

Methods	Pretest			Posttest		Mean Gain
	N	Mean	Std	Mean	Std	
Video Conferencing	67	44.30	14.09	83.67	12.41	39.37
Task-Based	70	43.11	15.18	74.63	15.57	31.51

Table 3 indicates performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach. Students taught oral English using video conferencing had a mean gain of 39.37 while those taught oral English using task-based approach had a mean gain of 31.51. This implies performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differs in favour of video conferencing.

Hypothesis 1: Video conferencing does not have significant effect on the students' performance mean scores in Oral English.

Table 4: Analysis of Covariance of effect of video conferencing on the students' performance mean scores in Oral English

Source	Type III Sum	df	Mean	F	Sig.	Partial Eta
	of Squares		Square			Squared
Corrected Model	6543.886 ^a	2	3271.943	20.677	.000	.237
Intercept	80562.987	1	80562.987	509.124	.000	.793
Pretest	.204	1	.204	.001	.971	.000
Methods	6542.951	1	6542.951	41.349	.000	.237
Error	21045.731	133	158.239			
Total	826252.000	136				
Corrected Total	27589.618	135				

Table 4 shows significant effect of video conferencing on the students' performance mean scores in Oral English, ($F(1, 133) = 41.349$; $P < 0.05$, partial eta = 0.237. Since the $P < 0.05$, Therefore,

hypothesis was rejected on the significant effect of video conferencing on the students' performance mean scores in Oral English.

Hypothesis 2: Task-based approach does not significantly affect students' performance in Oral English.

Table 5: Analysis of Covariance of effect of Task-based approach on the students' performance mean scores in Oral English

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1656.232 ^a	2	828.116	4.210	.017	.058
Intercept	64543.083	1	64543.083	328.090	.000	.707
Pretest	845.101	1	845.101	4.296	.040	.031
Methods	847.481	1	847.481	4.308	.040	.031
Error	26754.401	136	196.724			
Total	753602.000	139				
Corrected Total	28410.633	138				

Table 5 shows task-based approach significantly affect students' performance in Oral English, ($F(1, 133) = 4.308$; $P < 0.05$, partial eta = 0.031). So, it is concluded that task-based had a significant effect on the Oral English performance mean scores of the students. Therefore, the null hypothesis was rejected.

Hypothesis 3: There is no significant difference in the effect of video conferencing and task-based approach on students' performance mean scores in Oral English.

Table 6: Analysis of Covariance of effect of video conferencing and task-based approach on the students' performance mean scores in Oral English

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2862.731 ^a	2	1431.365	7.152	.001	.096

Intercept	81218.944	1	81218.944	405.793	.000	.752
Pretest	63.207	1	63.207	.316	.575	.002
Methods	2760.816	1	2760.816	13.794	.000	.093
Error	26819.912	134	200.149			
Total	885806.000	137				
Corrected Total	29682.642	136				

Table 6 shows significant difference in the performance mean scores of the student taught Oral English using video conferencing and task-based approach. ($F(1, 134) = 13.794$; $P < 0.05$, partial $\eta^2 = 0.093$). Since the p-value of 0.0005 ($p < 0.05$) is less than 0.093 the chosen level of significance, it is concluded that the effect of videoconferencing and Task-based on the students' Oral English differ significantly. This is in favour of videoconferencing. Therefore, the null hypothesis was rejected.

Discussion of Findings

The following findings were made from the results:

1. Video conferencing has significant effect on the students' performance mean scores in Oral English.
2. Task-based approach significantly affects students' performance in Oral English.
3. There is significant difference in the effect of video conferencing and task-based approach on the students' performance mean scores in Oral English.

The result of the study in table 1 revealed that video conferencing affects students' performance mean score in Oral English. Table1 confirmed that there is significant difference in academic performance of students in Oral English between pretest and posttest after the use of the video conferencing. Using video conferencing in teaching Oral English as shown in posttest result showed that there is significant effect in English fluency compared to the pretest result. In addition, there is greater Oral English proficiency and stronger self-confidence amongst learners of English who were exposed to video conferencing as they develop their Oral skills. The analysis outcome aligned with Adef and Hamzah, (2020) and the study found out that using video conferencing affected students' creativity in improvising their spoken English. The outcome of this result could possibly be attributed to the multimodality afforded by videoconferencing which enables students

to source a variety of inputs, such as audios, videos, texts, and images, and to process information through auditory and visual channels. Also, during videoconferencing, students and teachers can see each other. This mutual gaze helps to co-construct emotional experiences among students. The finding of this study also conform with the result of Mohammed (2013) who reported that students had a positive attitude toward Subtitled Videos used for teaching Grammar. It also helped them in understanding the context in which a particular grammatical structure was used.

The results of the study in table 2 showed that task-based approach affects students' performance mean score in Oral English. Table 2 confirmed the significant effect of task-based approach on the students' performance mean scores in Oral English. This might be due to the social interaction possibilities and friendly atmosphere that task-based approach provided for the students, as such, were motivated to learn. It was also indicated from the results that the students who were taught Oral English using the designed task-based approach have improved their Oral English production more accurately. The task-based approach was designed carefully and was validated for implementation to achieve its purposes. The task-based approach was highly effective because it involved active participation of the students thereby leading to increase in their oral English improvement. The result of this study aligns with Sun (2016) who found that task-based instruction increased students' independence, providing student support, and perceptions about real world relevance. It was discovered in this study that using task-based approach makes teaching and learning very easy. In fact, the teacher talks less while the students talk more and carry out the roles, activities or tasks themselves culminating in Oral English improvement unlike the conventional methods where the teacher does everything making the class boring and uninteresting. The finding of this agrees with Waruni, (2018) who found in his study that task-based approach inspired students better in learning Oral communication skills.

The results in table 3 have proved the effective impact of video conferencing had an effect on teaching of oral English. Both task- based and video conferencing affect the performance of students in oral English. However, when task- based and video conferencing are compared in teaching Oral English, performance mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differs in favour of video conferencing. Task-based approach provided learners with opportunities to use Oral English contextually, and to explore it through situational activities. Because task based learning is student centered, students were encouraged to use language creatively through the tasks they are asked to

perform. But video conferencing in teaching oral English brings a number of positive results on the part of the students. Teaching oral English with video conferencing improves students' speaking fluency and coherence, lexical resource, grammatical range and accuracy and pronunciation. More so, video conferencing improves students' speaking skills and employing such has a positive impact on learners speaking skills, fluency, and pronunciation. It also aids the students in overcoming speaking difficulty. The finding of this study agrees with the results of Salmah, (2016) who found out that technology clearly and effectively improved students' language and communication skills. In addition, Ruxana and Shaikh (2015) found out that 34% of students who participated in their study reported enjoying the pictures of different characters and scenes, (91%) enjoyed participating in questions and answers through the e-content, a total of 85% students reported using the computer in activities.

Conclusion

Based on the findings and discussion, the study concluded that the use of video conferencing and task-based approaches to teaching enhanced students' performance in Oral English and are very rewarding to students.

Recommendations

Based on the findings of the study, the researcher recommends the following:

1. Since video conferencing improved the students' performance mean scores in Oral English it is recommended to be used in our public schools by the teachers.
2. Task-based approach should be used in teaching Oral English in senior secondary schools hence it significantly affected students' performance in Oral English.

Contributions to Knowledge

Based on the findings of the study, there are a number of contributions to the body of knowledge in the following dimensions:

1. The study established that the utilization of video conferencing and task-based approaches can help in improving the academic performance of English students in Oral English and consequently help in addressing the challenges of the failure rate at the secondary school levels.
2. Policy makers and curriculum planners in Nigeria could capitalize on the literature covered in this study to advocate and emphasize that the teaching and learning of Oral English in senior secondary schools should be based on the use and exploration of video conferencing and task-based approach as a pedagogical design.

3. The study established that the use of video conferencing and task-based approaches can create enthusiasm in students towards learning Oral English, and as such speaking anxiety could be reduced among students.

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Video Conferencing and Task-Based Approaches on Students' Retention in Oral English in Port Harcourt L.G.A

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ABSTRACT

The design of the study was quasi- experimental design which involved pretest, treatment, posttest, control and experimental groups. The population of the study was five thousand, nine hundred senior secondary two students in fifteen public senior secondary schools in Port Harcourt City L.G.A of Rivers State that were enrolled in 2021/2022 academic session. The sample size was one hundred and thirty-seven senior secondary two students from two public senior secondary schools selected using purposive sampling technique. The instrument for data collection was researcher-made instrument tagged Oral English Retention Achievement Test. The reliability of the instrument was tested using test retest method and the result obtained was analysed using Kuder-Richardson Formula 21 to determine the consistency of the instrument. The reliability index of 0.85 was obtained. The study was guided by three objectives, three research questions and three null hypotheses. Mean and standard deviation were used to analyse the research questions while Analysis of Covariance was used to test the null hypotheses at 0.05 level of significance. The study found out that Video Conferencing had significant effect on the students' retention mean scores in Oral English. The students who were taught Oral English using Video Conferencing retained the concepts taught more than those students taught using Task-Based Approach. English Language teachers are recommended to use Video Conferencing more often than Task-Based Approach in teaching Oral English in their classrooms to help students overcome speaking challenges.

Keywords: Video Conferencing, Task-Based Approaches, Students' Retention

Introduction

Communication cannot be excluded from human existence as humans have communicated with one another right from the beginning, using various mediums. The issue of language should be taken very seriously because man must continuously communicate to live peacefully and also carry out his daily activities with his neighbours. Therefore, the existence of man and his development depends on language for communication (Alufohai & Aziegbe 2016).

In Nigeria, English language is an official language. It is also a compulsory subject in Nigerian secondary schools. However, it is essential to create an atmosphere or learning processes which can motivate learners to be able to communicate in English and to develop very good English

proficiency. English proficiency offers a person a golden opportunity to gain a better job (Chanseawrassamee, 2012). Nevertheless, a good knowledge of English language gives one an edge over others. Rahman (2015) posits that English Language is an unavoidable subject in schools, medium of instruction, and language of commerce, business and effective communication in a multilingual nation like Nigeria. English Language is made up of four language skills which are: listening skill, speaking skill, reading skill and writing skill. Speaking skill is where spoken words are used to express knowledge, ideas and feelings. English speaking skills should be developed to enhance effective communication. According to Alkamel and Chouthaiwale (2018), speaking has occupied a significant part in the context of English Language learning. Speaking is one of the four macro skills necessary for effective communication in any language, particularly when speakers are not using their mother tongues.

As English is universally used as a means of communication especially in the Internet world, English speaking skills should be developed along with the other skills so that these integrated skills will enhance communication achievement both with native speakers of English and other members of the international community. Because of the significant role of speaking in action, Li-Tang (2018) detailed how to enhance the development of speaking by means of syllabus design, principles of teaching, types of tasks and materials as well as speaking assessment. Speaking for special communication usually occurs in contexts where speaking performance is conducted for an audience in differing circumstances. For successful use of a language, one has to learn the speech sound of that language. The most essential part of every language is the sound system of that language. It is the speech sound of a language or languages that make that language unique (Li-Tang, 2018). Teaching Oral English to English language second learners has always been a challenge for the language teachers. As a result, teachers have often attempted to look for new methods that would enable students' effective learning of Oral English especially in this era of technology. It is the combination of sounds that produces words, words come together and form phrases, phrases form clauses/sentences (Ndimele, 2007). English language is an official language in Nigeria and all citizens must be well-grounded in both spoken and written aspects. Atolagbe and Adelana (2020) stated that in Nigeria, grammar, essay writing, letter writing, comprehension, summary and Oral English are the major aspects of English Language teaching and learning. According to Alufohai and Aziegbe (2016), for students to effectively learn the sounds and rhythms of a foreign language, they have to listen to good sounds in addition to samples of the

new language. Oral English fulfills a number of general and discipline-specific pedagogical functions. Learning to speak is an important goal in itself for it equips students with a set of skills they can use for the rest of their lives. Students need the knowledge of Oral English to speak well in their personal lives, future workplaces, social interactions, and political endeavors. Technology has come to stay both in educational sector and all facet of lives. It has made teaching and learning easier. One distinct feature of technology in the classroom is the fact that students can learn from anywhere in the world with no limitation, just a click on the mouse, and we are all one to attend a class like video-conferencing. With video conferencing, students interact with different students from far away from schools with other cultures. This makes them more exposed to the world as they may understand a particular culture that might have been terrifying for them.

According to Coolpo (2022), video conferencing is a type of online meeting where two or more people converse in real time. Using a strong and consistent internet connection the participants are able to see each other and are able to participate from any part of the world without any lag or time differences or drop in communication quality. Hence businesses are able to use video conferencing for collaboration communication and continued engagement with users outside of the organization, real classroom situation can also do the same. For video conferencing to really succeed, participants need to be able to see, hear and use meeting tools regardless of whether participants are in the same room or across the other side of the world.

According to Castro and Peck (2011) in Tamunobelesa (2018), learning methods and learning difficulties of foreign language students, they claimed that the preferred learning method of the student can be a help or a hindrance in the success of the student in the foreign language classroom. According to Kailin (2022) task-based approach's aim is to present opportunities for learners to master language both in speaking and writing through learning activities designed to engage learners in the natural, practical and functional use of language for meaningful purpose. Task-based is a language teaching method that emerged in response to some constraints of the traditional language teaching approach, denoted by the process of presentation, practice, and performance (Murat & Sibel 2011). Kailin (2022) stated that task-based approach has the significant meaning that language learning is a developmental process enhancing communication and social interaction rather than a product internalized by practicing language items, and that learners master the target language more powerfully when being exposed to meaningful task-based activities in a natural way.

As Larsen-Freeman (2000) states, since language learners make an effort to perform a task, they have rich opportunity to interact with their peers. It is this interaction that is assumed to ease language acquisition in that learners are to try to comprehend each other and to present their own meaning. Task-based approach provides learners with a natural context for language use, presents a fruitful input of target language for learners, increases learners' ability to communicate effectively, and maximizes motivation to the lesson. Task-based approach has attracted more and more attention in the foreign language teaching field since the 1980s. Being a learner-centered approach, it views language as a communicative tool which helps the learners/students to retain what they have learnt and retrieve it when it is needed. Retention is defined by Mayanga, Sithole and Hanson (2017) as the relationship between students' academic ability and motivation in order to gain academic characteristics. When the students are directly involved in academic and social life of the institution, retention occurs. Howard and Flora (2015) see retention as students' continuation in a course of study till they graduate successfully. They also asserted that retention can be an act where some students persist and complete their course of study with good grades while others do not.

According to Blazer (2019), retention of knowledge is the ability to recall or remember pieces of knowledge, processes or skills that were taught. However, retention is different from knowledge transfer. Although retention is the ability to remember information as it has been learnt, knowledge transfer is both recalling of information and making use of it to solve problem but retention has to take place before transfer comes (Blazer, 2019). In psychology, retention is seen as one stage in a dynamic model of learning process. She further submitted that successful learning process has structures and these grow out of consistent experiences with common traits and successful recall of information depends on the efficiency of receiving the information. Knowledge retention depends on the way teaching is done Steyn (2015) hence the teachers' method of teaching is responsible for students' retention.

Statement of the Problem

The researcher observed that a lot of problems seem to be bedeviling the effective teaching of Oral English in senior secondary schools in Port Harcourt LGA of Rivers State for a better retention ranging from inadequate facilities, poor learning environment, poor teaching aids, , overcrowded classrooms, inadequate and teaching methods. Teaching methods/tools which have great influence on teaching and learning according to scholars have to be effective in order to get an encouraging

result. So, “What effect do Video Conferencing and Task-based Teaching Approach have on Senior Secondary School Two (SS2) Students’ Retention in Oral English in Port Harcourt Local Government Area of Rivers State?”

Aim and Objectives of the Study

The aim of the study was to investigate the effect of Video Conferencing and Task-based Teaching Approaches on Senior Secondary School Two (SS2) Students’ Retention in Oral English.

Specifically, the objectives of the study were to;

4. examine the effect of video conferencing on the students’ retention mean score in Oral English;
5. investigate the effect of task-based approach on the students’ retention mean score in Oral English;
6. examine the difference on retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach.

Research Questions

These research questions guided the study:

4. What is the effect of video conferencing on the students’ retention mean score in Oral English?
5. What is the effect of task-based approach on the students’ retention mean score in Oral English?
6. How do retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ?

Hypotheses

Three null hypotheses were raised to guide the study and tested at 0.05 level of significance

4. Video conferencing does not have significant difference on the students’ retention mean scores in Oral English.
5. Effect of task-based approach on the students’ retention mean scores in Oral English has no significant difference.
6. The retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach do not differ significantly.

Methodology

Research design: The design of this study was quasi-experimental design. This design involves a pre-test, treatment and a post-test. There was follow-up test after three weeks of administering post-test to test the retention.

Study Area: This study was conducted in Port Harcourt City Local Government Area of Rivers State. It is a local government in Rivers State which belongs to the South South Geo-political zone, or Niger Delta. This local government area has an urban setting and it is one of the twenty-three local government areas in Rivers State with its administrative seat or headquarter in Port Harcourt City.

Population: The population of the study is all the senior secondary two students in all (15) public senior secondary schools in Port Harcourt City LGA of Rivers State which consists of 5,900 SS2 students admitted in 2021/2022 academic session.

1. **Sample and sampling technique:** The sample size of the study was one hundred and thirty-seven senior secondary two students from two selected public senior secondary schools out of all the fifteen public senior secondary schools in Port Harcourt City Local Government Area of Rivers State. The two schools were selected using purposive sampling techniques. The criteria for selecting the schools are: the schools must be government owned senior secondary schools, the schools must have written WAEC for at least six years and they must be co-educational schools. This sample size consisted of two intact classes for one experimental group and one intact class for control group in each of the schools. Both the schools and classes used were selected using purposive sampling techniques.

Results and Discussion

Research Question 1: What is the effect of video conferencing on the students' retention mean score in Oral English?

Table 1: Mean and standard deviation of the effect of video conferencing on the students' retention mean score in Oral English

Methods	Post-test			Post-post-test		
	N	Mean	Std	Mean	Std	Mean Gain
Video Conferencing	67	83.67	12.41	84.39	11.68	0.72

In table 1, it is shown that the students taught Oral English with video-conferencing had the mean scores of 83.67 (SD = 12.41) and 84.39 (SD=11.48) respectively at the post-test and post-posttest stages. Hence it is affirmed that from the post-test stage to post-posttest they gained a mean

value/score of 0.72. This implies that video conferencing affect students' retention mean score in Oral English.

Research Question 2: What is the effect of task-based approach on the students' retention mean score in Oral English?

Table 2: Mean and standard deviation of the effect of task-based approach on the students' retention mean score in Oral English

Methods	Post-test			Post-post-test		
	N	Mean	Std	Mean	Std	Mean Gain
Task-Based	70	74.63	15.57	75.79	13.82	1.16

In table 2, it is shown that the students in task-based learning strategy group had the mean scores of 74.63 (SD = 15.57) and 75.79 (SD = 13.82) respectively posttest and post-posttest stages. These mean scores yielded a gained mean score of 1.16 from the post-test to the post-posttest stages. This implies that task-based approach affect students' retention mean score in Oral English.

Research Question 3: How do retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ?

Table 3: Mean and standard deviation of the retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach

Methods	Post-test			Post-post-test		
	N	Mean	Std	Mean	Std	Mean Gain
Video Conferencing	67	83.67	12.41	84.39	11.68	0.72
Task-Based	70	74.63	15.57	75.79	13.82	1.16

Table 3 indicates the retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach. Students taught oral English with video conferencing had a mean gain of 0.72 while those taught Oral English with task-based approach had a mean gain of 1.16. This implies that retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ in favour of task-based approach.

Hypothesis 1: Video conferencing does not have significant difference on the students' retention mean scores in Oral English.

Table 4: Analysis of Covariance of effect of video conferencing on the students' retention mean scores in Oral English

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	28412.296 ^a	2	14206.148	458.814	.000	.873
Intercept	181.094	1	181.094	5.849	.017	.042
Posttest	16424.295	1	16424.295	530.453	.000	.800
Methods	1103.167	1	1103.167	35.629	.000	.211
Error	4118.050	133	30.963			
Total	794683.000	136				
Corrected Total	32530.346	135				

Table 4. shows that video conferencing on the students' retention mean scores in Oral English does differ significantly, ($F(1, 133) = 35.629$; $P < 0.05$, partial eta = 0.211. Since the p-value of 0.0005 ($p < 0.05$) is less than 0.05 the chosen level of significance, it is concluded that the videoconferencing had significant effect on the mean scores of the in Oral English, therefore, the null hypothesis was rejected.

Hypothesis 2: The effect of task-based approach on the students' retention mean scores in Oral English has no significant difference.

Table 5: Analysis of Covariance of effect of task-based approach on the students' retention mean scores in Oral English

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	23545.306 ^a	2	11772.653	335.386	.000	.831
Intercept	441.678	1	441.678	12.583	.001	.085
Posttest	19946.376	1	19946.376	568.244	.000	.807
Methods	1243.610	1	1243.610	35.429	.000	.207
Error	4773.845	136	35.102			

Total	723774.000	139
Corrected Total	28319.151	138

Table 5 shows significant difference in the effect of task-based approach on the students' retention mean scores in Oral English, ($F(1, 136) = 35.429$; $P < 0.05$, partial eta = 0.207. Since the p-value of 0.0005 ($p < 0.05$) is less than 0.05 the chosen level of significance, therefore, the null hypothesis was rejected on the basis that task-based approach showed significant effect on the students' retention mean scores in Oral English.

Hypothesis 3: The retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach do not differ significantly.

Table 6: Analysis of Covariance of retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	21197.741 ^a	2	10598.870	403.336	.000	.858
Intercept	831.462	1	831.462	31.641	.000	.191
Posttest	18664.444	1	18664.444	710.269	.000	.841
Methods	35.321	1	35.321	1.344	.248	.010
Error	3521.252	134	26.278			
Total	901359.000	137				
Corrected Total	24718.993	136				

Table 6 shows retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach do not differ significantly, ($F(1, 134) = 1.344$; $P < 0.05$, partial eta = 0.207. Since the p-value of 0.0005 ($p < 0.05$) is less than 0.05 the chosen level of significance, it shows that the effect of videoconferencing and task-based approach on the students' Oral English mean scores differ significantly. This is in favour of videoconferencing. Therefore, the null hypothesis was rejected.

Discussion of Findings

Based on data analysis, the major findings of the study are:

4. Retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach do not differ significantly.

The result obtained in research question 1 for this study revealed that video conferencing affect students' retention mean score in Oral English. Table 1 confirmed that video conferencing on the students' retention mean scores in Oral English does differ significantly. The results of the statistical and discourse analyses suggest that the incorporation of video conferencing into Oral English classes improved the students' overall retention ability at a significant level and it did have a statistically significant impact on the improvement of learners' retention. The analysis of the result might stem from the fact that learners can alleviate their speech anxiety over time and become more confident in speaking a foreign language through video conferencing, which, in turn, increases their retention in oral English. Students expounded upon the content of their speeches by providing examples since they had a chance to express themselves freely through video conferencing. Besides, having their fellow students as audience might have also contributed to the improvement of students' retention in learning Oral English. Also the use of video conferencing helped students to build up comfort and confidence, and increased their retention in retention in Oral English. One possible explanation for this might be that the students in the experimental group viewed video conferencing as a positive language learning experience, rather than as a component of the assessment. The accumulation of those interaction with their peers gave them a sense of achievement and strengthened a sense of ownership of their own Oral English learning, which may elevate their level of retention.

Analysis of table 2 showed that task-based approach affect students' retention mean score in Oral English. Table 2 showed significant difference in the effect of task-based approach on the students'

retention mean scores in Oral English. It is clear from the finding of this study that the use of task-based approach has enhanced the teaching and learning of Oral-English among Senior Secondary School Students resulting in higher retention by the learners. The reason for this significant difference could be that students seem to be motivated and to participate actively when involved in hand-on activities which aid their retention ability. When task-based activities are properly used as instructional tools of teaching, it enhances objectives of learning. Therefore, make learning concrete and create room for conceptual thinking and making learning meaningful and retentive.

The summary of analysis in Table 3 showed that retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach differ in favour of task-based approach. Table 4 confirmed that retention mean scores of students taught Oral English with video conferencing and those taught Oral English with task-based approach do not differ significantly. The result obtained with the effectiveness of task-based approach over video conferencing on the students' retention was due to the interactive nature of learning environment that guaranteed students thorough inquisition, self-assessment and freedom of expression on the concepts of teaching of oral English, which further motivated their learning. This implies active participation by students in the learning process through asking questions and getting feedback helped their retention of Oral English. The task-based approach may have made information provided familiar and meaningful thereby increasing the level of motivation of students at the time of learning to enhance retention. The provision of feedback in the task-based approach helped the learners to physically interact and link relatively meaningful information with prior schema making it easier for the materials to be learned, retained and remembered.

Conclusion

Based on the findings and discussion, the study concluded that the use of video conferencing and task-based enhanced students' retention in Oral English. This implies that video conferencing and task-based are very rewarding strategies to students in-terms of retention capacity.

Recommendations

Based on the findings of the study, the researcher recommends the following:

3. Video conferencing affected the students' retention mean scores in Oral English therefore, the English Language teachers should endeavour to use it more often in their classrooms.
4. Again, task-based approach significantly affected the students' retention mean scores in Oral English so it is recommended also for use in teaching Oral English.
5. The Ministry of Education in particular is recommended to adopt the present instructional program in designing English curriculum to include a variety of instructional strategies to teaching Oral English.
6. English Language teachers are recommended to use both video conferencing and task-based approach in teaching Oral English in their classrooms to help students overcome speaking challenges.

Contributions to Knowledge

Based on the findings of the study, there are a number of contributions to the body of knowledge in the following dimensions:

4. The study established that the utilization of video conferencing and task-based approach can help in retaining what the students have learnt in Oral English and consequently help in addressing the challenges of the failure rate of English students at the secondary school levels.
5. Policy makers and curriculum planners in Nigeria could capitalize on the literature covered in this study to advocate and emphasize that the teaching and learning of Oral English in senior secondary schools should be based on the use and exploration of video conferencing and task-based approach as a pedagogical design.
6. The study established that the use of video conferencing and task-based approach can create enthusiasm in students towards learning Oral English, and as such speaking anxiety could be reduced among students.

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UNDERSTANDING COMMUNICATION, CULTURE, LANGUAGE AND DEVELOPMENT

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Abstract

We are presently in an era where information flows virtually free across international boundaries, either broadcast by satellite orbiting high up in space or traveling by cyber speed along seamless infobahn on earth. In this form of technology, communication, culture, language and development are closely linked. This would not require repeated emphasis if the principal decisions at various national and cross border (international) levels dealing with development did not very often overlook the linkage among communication, culture and language.

Keywords: Communication, Culture, Language, Development.

Introduction

Development can be defined as the process of bringing about social change that allows people to achieve their human potential (The Challenge of Sustainable Development, 2017). Development is a process that increases choices. It means new options, diversification, thinking about apparent issues differently and anticipating change (Cavaye, 2017). Development is a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components (Israel, 2017). The purpose is a rise in the level and quality of life of the population and the creation or expansion of local communal income and employment opportunities, without damaging the resources of the environment. Development is visible and useful, not necessarily immediately, and includes an aspect of quality change and creation of conditions for a continuation of that change.

Communication is the process by which information or knowledge is transferred from one person to another (Oyebamiji & Adekola, 2008). It is the basis for human interaction and group

functioning. For any problem solving group to be effective, the members must communicate and obtain information. The process of communication starts from the sender who encodes the message and passes it through a channel to the receiver who decodes the message and responds to it meaningfully in the context which the source encoded it. Similarly, Griffin and Pattern in Fatimayin (2018) note that communication is the process of creating meaning as well as ascribing it. It is the exchange of ideas and interaction among group members. Evans (2021) sees communication as the sending and receiving of information one-on-one or between groups of people and face-to-face or through communication devices. It requires a sender, the person who initiates communication, to transfer his thoughts or encode a message. The message is sent to the receiver, a person who receives the message and finally, the receiver must decode or interpret the message. Enejah (2022) states that communication is the act or process of using words, sounds, signs or behaviour to express or pass across information. It involves different forms which include the personal and interpersonal group or mass communication.

Basically, communication means sharing knowledge, an opinion, a skill or a feeling with one or more people (Santucci, 2020). The communication can be voluntary, that is, the consequence of a planned decision or involuntary, that is, without any precise intention. Interpersonal communication, which refers to communication between two or more people, for instance, may be used for different purposes. Some of the most common purpose can be classified as follows:

- i. to obtain something
- ii. to control the behaviour of other people
- iii. to inform somebody
- iv. to satisfy a desire for knowledge
- v. to express a feeling

- vi. to express the pleasure of being with somebody else
- vii. to express psychological condition
- viii. to respect a social status.

Geography, climate and natural resources are gradually giving way to knowledge, education and access to new technologies as the drivers of productivity and economic growth. Now, the world is witnessing the gradual emergence of a universal, global culture based on such values as adherence to civil and human rights, gender equality, respect for property rights, the rule of law and acceptance of market forces as a mechanism for resources allocation. This means that education and the acquisition of knowledge and skills are desirable development objectives across different regions of the world – and that applies to all contemporary civilisations (Lopez-Claro & Perotti, 2014). But societies differ in the ways and the extent to which they have internalised some of the values in their policies, their traditions and their institutions as well as in a very fundamental way adopt a set of values that are compatible with humanity's moral development. In consequence, it is difficult to have a single, uniform definition of culture, in particular, as it relates to development because the concept is so fluid and dynamic.

According to Oxford Reference (2021), culture is the quality of enlightenment and refinement arising from an acquaintance with and concern for what is regarded as excellent in arts, letters, manners, the sum total of the ways of living built up by a group of human beings and transmitted from one generation to another. To Brown and Mazza in Axner (2020), culture refers to common experiences which a group or community shares that shape the way its members understand the world. It includes groups people are born into, such as race, national origin, gender, class or religion. It can also include a group people join or become part of. For example, it is possible to acquire a new culture by moving to a new country or region, by change in people's

economic status or by becoming disabled. Culture is the characteristics and knowledge of a particular group of people, defined by everything from language, religion, cuisine, social habits, music and arts (Zimmermann, 2015). Also, culture is that complex whole, customs and any other capabilities and habits acquired by “a human” as a member of society (UNESCO, 2016). Culture is a complex collection of knowledge, folklore, language, rules, rituals, habits, lifestyles, attitudes, beliefs and customs that link and give a common identity to a particular point in time (Ruben, 2020). In addition, Hall in Ruben (2020) states the general understanding of the complexity of culture and the importance of communication to understanding and dealing with cultural differences at the societal level. They include the following:

- i. Cultures are complex and multifaceted “structures”. The culture of relationships or groups, for example, are relatively simple compared to those of organisations and, especially, societies.
- ii. Cultures are subjective. There is a tendency to assume that the elements of one’s own culture are logical and make good sense. It follows that if other cultures – whether of relationships, groups, organisations or societies – look different, those differences are often considered to be negative, illogical and sometimes nonsensical. The tendency for many people is to equate “different” with “wrong” even though all cultural elements come about through essentially identical communication processes.
- iii. Cultures change over time. In fact, cultures are ever changing – though the change is sometimes very slow and imperceptible. It is through communication between individuals that cultures change over time. Each persons involved in a communication encounter brings the sum of his or her own experiences from other (past or present) culture memberships. In one sense any encounter between individuals in new relationships, groups, organisations

or societies is an intercultural communication event and the varying cultural encounters influences the individual and the cultures over time. Travel and communication technologies greatly accelerate the movement of messages from one cultural context to another and in small and large ways influence one another through communication. Phrases such as “melting pot,” “world community” and “global village” speak of the inevitability of intercultural influence and change.

- iv. Cultures are largely invisible. Much of what characterises cultures of relationships, groups, organisations or societies is invisible to those who breach it. Language, of course, is visible as are greeting conventions, special symbols, places and spaces. However, the special and defining meanings that these symbols, greetings, places and spaces have for individuals in a culture are far less visible.

Language

Language being a potent vehicle of transmitting culture, norms, values and beliefs from generation to generation remains a central factor in determining the overall status of a nation (Yusuf, 2012). It is an integral part of human behaviour and serves as the primary means of a people – that is, among the very first forms of behaviour that we learn as children and later when we learn other skills and acquire more knowledge, much of this reaches us only through the medium of language (Jibir-Daura, 2014). It is a form of communication which allows humans to engage in transaction and share thoughts, beliefs, emotions, ideas, experiences, and so on, which are presumably known to both parties (Odegbenle, 2013). It is an indispensable resource of man, necessary for his day to day transaction and activities. It lives and dwells with the people and the perception of the real world is construed by the language habit of the people or group of speakers (Emeka-Nwobia, 2015). It is important for the meaningful existence of the human race. Language

is used by man as a means of socio-cultural transmission as well as a means of knowledge advancement and cultural development (Alhassan & Ali, 2015). It is the unique property of human beings and all the development of man, be it intellectual, ethical, political, social or economic (Ene, 2021).

Significantly, indigenous language refers to the various native languages spoken in a country – they are languages that are aboriginal to the people (Adeniji & Bello, 2020). Local or indigenous language can be construed to mean a language spoken of, belonging or connected with a particular place or area which one is talking about or with the place where one lives (Adedeji, 2015). Indigenous languages are the tribal, native or local language spoken. The language could be from a geographically distinct community that has been settled in the area for many generations (Jibir-Daura, 2014).

Relationship between Communication, Culture and Language

The relationship between communication and culture is a very complex one. Culture is created through communication – that is, communication is the means of human interaction through which cultural characteristics – whether customs, roles, rules, rituals, laws or other patterns – are created and shaped. It is not so much that individuals set out to create a culture when they interact in relationships, groups, organisations or societies but rather that culture is a natural by-product of social interaction. In a sense, culture is the “residue” of social communication media. Without communication and communication media, it would be impossible to preserve and pass along cultural characteristics from one place in time to another. The reverse is also the case – that is, communication practices are largely created, shaped and transmitted by culture. Therefore, to understand the implications of the communication-culture relationships, it is necessary to think in terms of ongoing communication process rather than a single communication event (Ruben, 2020).

For example, when a three-person group first meets, the members bring with them individual thought and behavioural patterns from previous communication experiences and from other cultures of which they are, or have been, a part. As individuals start to engage in communication with the other member of this new group, they begin to create a set of shared experience and ways of talking about them. If the group continues to interact, a set of distinguishing history, patterns, customs and rituals will evolve and some of the cultural characteristics would be quite obvious and tangible such that a new person joining the group would encounter ongoing cultural “rules” to which they would learn to conform through communication. New members would in turn influence the group culture in small, and sometimes large, ways as they become part of it. In a reciprocal fashion, this reshaped culture shapes the communication practices of current and future group members.

All institutions within society facilitate communication and in that way, they all contribute to the creation, spread and evolution of culture (Ruben, 2020). Communication media such as television, film, radio, newspapers, compact discs, magazines, computer and the internet play important roles in development. Because media extend human capacities for creating, duplicating, transmitting and storing messages, they also extend and amplify culture-building activities. By means of such communication technology, messages are transmitted across time and space, stored and later retrieved and used. Television programmes, films, websites, video games and compact discs are created through human activity and therefore reflect and further extend the cultural perspectives of their creators. These media come to take a life of their own, quite distinct and separate from their creators as they are transmitted and shared around the increasing global community.

Furthermore, Ruben (2020) observes that understanding the nature of culture relationship to communication is helpful in a number of ways:

1. It helps to explain the origin of differences between the practices, beliefs, values and customs of various groups and societies and it provides a reminder of the communication process by which these differences came into being. This knowledge can and should heighten people's tolerance for cultural differences.
2. It helps to explain the process that individuals go through in adapting to new relationships, groups, organisations and societies and the culture of each.
3. It underscores the importance of communication as a bridge between cultures and as a force behind cultural change.

Languages, whether indigenous or foreign, are indispensable tools in the life of individuals because there is no aspect of human activities that can be useful without the effective use of language (Ayodele, 2013). Language plays a great role in culture and societal development because language is used every day in many ways to meet countless different needs. Language is an important tool in the society because man needs it to share his ideas, experiences, emotions and interact with other people in the society or in his environment (Ayeomoni, 2011). The repository of a people's identity and way of life is encapsulated in their language which can be transferred to other people and newer generations (Emeka-Nwobia, 2015). It is a phenomena that fosters communication and enhances national development as it enables interactions for education, economic, social, religious and political purposes (Benson, Okere & Nwauwa, 2016).

Communication, Culture, Language and Development

Development is frequently perceived as economic growth. If we consider economic growth only as a percentage of gross national product (GNP) or other statistics that provide national profiles in

economic terms, the record of the world in the past decades may seem to be impossible (Communication, Culture and Development, 2020). If we analyse the data further to see how these gains have been shared among people in terms of broader issues such as education, employment, buying power, consumptions and communication, sharing of social and cultural benefits to the society, the picture may seem less positive. Economic growth cannot be the sole objective of humanity.

Again, there is no uniformity or precise formula for development. Development is based on various ideologies, culture and experiences. Various innovations need to be applied by people of different societies for different problems and issues. As a consequence, with increased globalisation, external influences play a greater role in the transportation of beliefs through political, economic, technological and intellectual interactions. As a result, communication plays a pivotal role in development, especially today in the context of globalisation (Communication, Culture and Development, 2020). People need information that can be assimilated and interpreted for their advancement in spiritual, material, intellectual and emotional fields. Communication is expected to satisfy the demand for providing necessary information across the board.

Traditional celebrations are some of the core aspects of culture. Whether it is a wedding, a harvest festival, a religious holiday or a national observance, celebrations are woven tightly into overall cultural identity. Celebrating traditions offer an excellent opportunity for intercultural exchange and understanding. The undertakings contribute to an increase in intellectual potential and build conscious, open and tolerant society. Cultural events are fun, entertaining and educative. They allow individuals to integrate physically and mentally. At many levels of society, a dynamic cultural sector is a requirement for a well-functioning public sphere with the arenas for critical debate and the exchange of ideas (Kimanuka, 2016).

Identity expressed through culture is a necessity for all human development. Identity creates the fundamental building blocks in people's personality and in the ties that link them to communities and nations. We instinctively know, with no need for explanation, that maintaining a connection with the unique character of our historic and natural environment with the language, the music, the arts and literature, which accompanied us throughout our life, is fundamentally for our spiritual well-being and for providing a sense of who we are (UNESCO, 2017). Hence, there is an intrinsic value of culture to a society, irrespective of its place in the human development index, which makes it a development outcome in itself and a critical ingredient for any profession.

Culture thus is a power driver for development with the community-wide social, economic and environmental impacts. People's lifestyles, individual behaviour, consumption patterns, values related to environmental stewardship and interaction with the natural environment are mostly influenced by culture. If development can be regarded as the enhancement of living standards, then efforts geared towards development cannot ignore culture. Additionally, interventions that are responsive to the cultural context and the particularities of a place and community and advanced human-centred approach of development are most effective and likely to yield sustainable, inclusive and equitable outcome. UNESCO (2017) believes that the role of culture in creating green jobs, reducing poverty, making cities more sustainable, providing safe access to water and food, preserving the natural resources of oceans and forests and strengthening the resilience of communities in the face of disasters is truly major and irreplaceable. The organisation argues that placing culture at the heart of our strategies is the condition for both sustainable development and a powerful driving factor for its achievement.

People need a wide range of ideas, customs and wisdom to solve problems and enrich community life. When cultural groups join forces, they will be more effective in reaching common

goals than when each group has unique strengths and perspectives that the larger community can benefit from. Understanding cultures will also help communities overcome and prevent racial ethnic divisions (Axner, 2020). Racial and ethnic divisions result in misunderstanding, loss of opportunities and sometimes violence. Racial and ethnic conflicts drain communities of financial and human resources; they distract cultural groups from resolving the key issues they have in common.

Politically, culture plays a natural part in any development policy that is serious about human rights (Kimanuka, 2016). A free and strong cultural sector will promote other rights and values such as freedom of expression, diversity and debate about needs in society. Culture ensures unity during crisis and influences identity, debate and dialogue. It is important for nation-building and peace and reconciliation. It lays essential foundation for other political rights and is highly important in the link between the ancient and modern democratisation: modern democracy is an extension of what our forebears or rulers established. The whole progress of organisation of states during and after colonialism would not have been easy were it not for prior existing structures.

Importantly, too, culture in development process is a strong part of peoples live (Axner, 2020). It influences their views, their values, their humours, their hopes, their loyalties and their worries and fears. Thus, when a development agent is working with people and building relationships, it helps to have some perspective and understanding of their culture. In order to build communities that are successful at improving conditions and resolving problems, there is need to be understood and appreciate many cultures.

The place of language in development in any society is expected to be preserved and rated with the highest priority and attention from both government and individuals for it serves as a catalyst in national development (Olaifa, 2014; Uzochukwu, 2020). It holds the power to maintain

national and cultural identity (Emeka-Nwobia, 2015). It is needed for interaction in the society and to share ideas and experiences with others (Ayeomoni, 2011). Without language, there is bound to be problem in the society which would become incommunicado (Jibir-Daura, 2014). It provides means of assessing our thoughts. It provides a means of showing social relations, encoding and decoding, recording and derecording of information (Emeka-Nwobia, 2015).

Conclusion

It is through communication that community members can reach understanding of one another. Through communication, they can build up trust in themselves, coordinate their actions and plan strategies for the accomplishment of goals. Communication enables people to exercise control over their environment (Oyebamiji & Adekola, 2008).

No development can be sustainable without including culture (UNESCO, 2019). In 2015, the United Nations General Assembly adopted the “2030 Agenda for Sustainable Development” with 17 ambitious, universal goals to transform our world. UNESCO ensures that the role of culture is recognised through a majority of the Sustainable Development Goals (SDGs), including those focusing on quality education, sustainable cities, the environment, economic growth, sustainable consumptions and production patterns, peaceful and inclusive societies, gender equality and food security. The organisation admits that from cultural heritage to cultural and creative industries, culture is both an enabler and driver of economic, social and environment dimensions of sustainable development.

Language is an important instrument for the development of human beings as political animals and for meaningful development (Ayodele, 2013). No meaningful development can take place in a human community without language. As an instrument of communication, language makes it possible for the people in any environment to interact and coexist, thus paving the way

for the continuity of the society. Human beings are equipped for their maximum self-development and self-realisation through the use of language.

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FRAMEWORK ON PARTICIPATORY COMMUNICATION FOR MOBILISING RURAL COMMUNITIES TOWARDS SUSTAINABLE DEVELOPMENT

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Abstract

Concepts of sustainable development, rural community and community mobilisation are central to this framework on participatory communication for mobilising rural communities towards sustainable development. Participatory communication is capable of addressing specific needs and priorities relevant to people and at the same time assisting in their empowerment. It is capable of facilitating peoples involvement in decision-making about issues impacting their lives. It is a necessary component consistent with a democratic vision of international development needed to increase project sustainability and ensure genuine ownership by the so-called “beneficiaries.” It is based on dialogue, which allows the sharing of information, perceptions and opinions among the various stakeholders and thereby facilitates their empowerment. It is not just the exchange of information and experiences; it is also the exploration and generation of new knowledge aimed at addressing situations that need to be improved.

Keywords: Participatory Communication, Rural Communities, Sustainable Development

Introduction

Participatory communication is the theory and practice of communication used to involve people in the decision-making of the development process (Mefalopulos, 2009). Its purpose is to make something common or to share meanings, perceptions, news or knowledge. In this context, sharing implies an equitable division of what is being shared, which is why communication should almost be naturally associated with a balanced, two-way flow of information. It promotes the sustainable and dialogic use of communication in the development process to help ensure people’s participation at all levels.

Sustainable Development

The Brundtland Report (also known as Our Common Future) defines sustainable development as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (International Institute for Sustainable Development, 2021). Boutros Ghali in Onyeozu (2007) describes sustainable development as using renewable resources and avoiding the over-consumption of non-renewable resources. He also describes it as choosing production and production processes that have the least adverse impact on the environment. This is demonstrated, for example, in all areas of public and private life by a commitment of conserving natural resources and protecting ecological equilibrium.

In a general term, sustainable development means to conserve, reserve, use and manage resources and undergo the process of development in such a way that what is done to improve life and living standard today does not compromise future use of resources and improvement in life and living standards. Its aim is the creation of sustainable improvement in the quality of life for all the people. Its essence is the exploitation of resources, the direction of investments, the orientation of technological development and institutional changes which are all in harmony and enhance both current and future potential to meet human needs and aspirations. Its concern, therefore, in improving life and living standard and its emphasis on meeting human needs, makes it a very useful tool in community development (Oyebamiji & Adekola, 2008).

Rural Community

In general, a rural community or countryside is a geographical area that is located outside towns or cities (What is Rural? 2019). In the opinion of Olisa and Obiukwu in Egbe (2014), population is the main characteristic that distinguishes rural from urban areas, especially in the developing countries. In this regard, in Nigeria, an area with a population of twenty thousand

(20,000) people and below is classified as a rural community. However, this is not adequate to explain a rural area. According to Olisa et al. in Egbe (2014), the main features of rural areas are depression, degradation and deprivation. Many communities are immersed in poverty so palpable that people are the embodiment of it. In most rural communities in Nigeria, basic infrastructure, where they exist at all, are too inadequate for meaningful development. In other words, the rural communities lack virtually all the good things of life like roads, medical and health facilities, potable water, electricity, and so on. As pointed out above, these characteristics are not limited to rural communities alone but are also found in urban areas in Nigeria and other developing countries. The people engage in subsistence agriculture, their standard of living is very low, earning only a few naira annually, they are poorly served by almost all public amenities and they generally show considerable resistance to change in any form (Egbe, 2014).

Community Mobilisation

It is a process of collective action based on social solidarity and commitment to a community programme or project. It is the process of enabling groups of people to resist perceived discrimination or marginalisation from those in authority. It is a movement or campaign designed to activate the masses into the process of change for better living. It is an instrument for galvanising the feelings and emotions of the people into a form of action. It is a tool of community development which involves the pooling of resources for effective operation. This entails the mustering and coordination of all resources that can ensure the success of the community development programme (Oyebamiji & Adekola, 2008). Community mobilisation is the process of engaging communities to identify community priorities, resources, interests, needs and solutions in such a way as to promote representation, good governance, accountability and peaceful change (Corps, 2017).

It is a participatory communication approach that seeks to engage the whole community as individuals and groups, including marginalised population, to identify their problems, suggest solutions and initiate actions themselves. It empowers communities and enables them to initiate and control their development. Thus, a lot can be achieved when people from different parts of the community share a common goal and actively participate in both identifying needs and the solution. It is the process whereby a group of people have transcended their differences to meet on equal terms in order to facilitate a participatory decision-making process (Community Mobilisation, 2020). In other words, it can be viewed as a process which begins with a dialogue among members of the community to determine who, what and how issues are decided and also to provide an avenue for everyone to participate in decisions that affect their lives. Community mobilisation is a community level effort to address an issue or concern through organised action. It is an organising strategy that can be used to facilitate social and structural change as envisaged by the community. Community stakeholders, rather than an outside entity, determine the goal, priorities and timeline of the mobilisation process, often through an organised leadership or steering committee (Greenberg, Davis, Tutt&Katcher, 2020).

Different Ways Exist for Community Mobilisation

According To The History Of Community Mobilisation (2018):

- i. Understanding community practices and traditions prior to establishing contact can help identify the appropriate approach for engaging with different groups and members of the community. It is important to focus on learning from the community, especially during this initial contact.

- ii. Take every opportunity to meet informally with diverse members of the community. Meeting the host community and authorities is important to discuss the goals of community development and mobilisation.
- iii. Messages might also reach certain groups such as community leaders. Develop outreach strategies with the leaders and others to ensure that everyone is informed, including women, girls and boys, minority groups and people with physical challenges.
- iv. Identify an existing committee or a community-based organisation (CBO) which can give individual groups access to the committee and facilitate distribution of messages.
- v. Make sure information is delivered in a language everyone correctly understands – this is culturally sensitive.

The History of Community Mobilisation (2018) further states that:

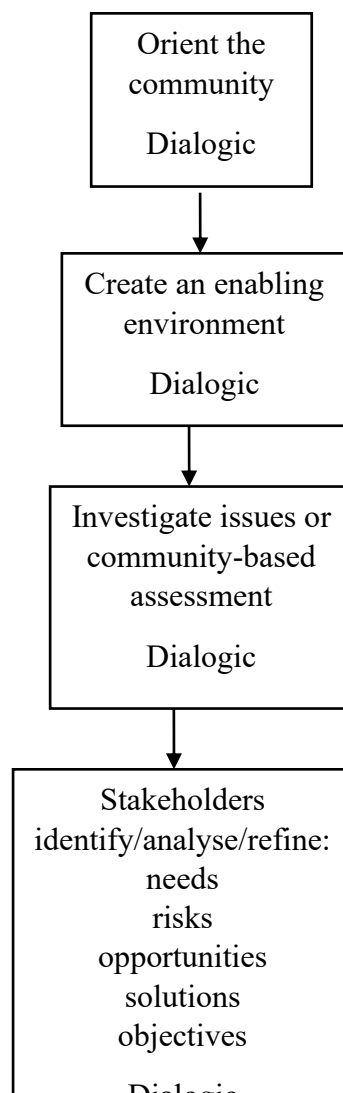
- a. Orienting the community is the first step to mobilise people. This can be done through an organised meeting. Meetings are more personal and conducive to building relationships. They facilitate two-way communication where questions can be answered efficiently. Having the meeting sponsored or hosted by a respected individual or group within the community can add credibility to its agenda. The goals of the meeting must be carefully considered and reflected in the agenda. Community leaders can provide assistance, presenting information in a carefully appropriate manner. During this meeting, it is important to invoke the input of the community. Identify their needs and begin to prioritise how those needs will be met. Individual groups should know that this meeting will be an opportunity to develop an awareness of what the contributing organisation can provide and also an opportunity to learn about the strength and resources of the community. It will be important to define mutual goals and develop a plan as to how to reach these goals. This

will include organising individuals to work together, coordinate services and properly manage resources.

- b. It is always easy to start a fire and involve a number of people. Community members need to choose certain people whose role will be to keep the fire of community mobilisation burning. These people are called “motivators.” Take time to carefully choose honest people who are respected by others and who can encourage others to work together. Each community should select two or three motivators. The people chosen need equipping and support in their role.
- c. Local people already know more than any outsider about their community and the people living there. Many of them assume they know everything about their local area but there is always more to learn and understand before making new plans. Therefore, time could be taken to help people in the community to tell their story together. One very effective way of doing this is to draw maps. Community mapping is a useful tool for collecting information from the community concerning the location of activities which may not be obvious from observation alone. This may also help to explain how the affected community views their situation and where they see opportunities or constraints. This method is most effective when used by a small group working to produce a large sketch map of the area in which they live. The map produced may be crudely drawn and not to scale but can still produce valuable information. So for mobilising communities, individual groups can do the social mapping of the community so that the people can become aware about the present problems in the community. Hence, encouraging people to work in small groups is another way to mobilise communities.

- d. Having chosen their first priority for action, local people need to decide whether they have enough information to take action. Electing teams of local people to gather relevant information is another way to mobilise communities. Choose people who can be trusted and who know their community well. Before sending teams out to gather information, take plenty of time to decide exactly what kind of information is needed.
- e. By arranging a community meeting to share all the information gathered is showing information clearly to the people. In this way, a large number of people can be mobilised for the collective action after getting all the facts and problems of the community. Rather than having large meetings, cluster meetings of project staff, community leaders and community members working on similar tasks are more manageable and efficient.

Figure 1: dialogic Use of Communication



Source: Mefalopulos (2021)

Ways to Communicate in Mobilising the People

Dialogue is the heart of participatory communication and its application should be the basis of any development initiative. In this perspective, media are no longer the central element of communication but one to be used according to the circumstances (Mefalopulos, 2021). It is necessary to demystify media use at the community level so that people can present their problems and explore possible solutions in the context of their situation (Dubey and Bhanja, 2022). In addition they note that:

- i. Dialogue increases message credibility and acceptance.
- ii. The effort can work well to motivate action. Local people can derive strength and confidence to solve their own problems.
- iii. It builds consensus, a process which requires trust, transparency and knowledge of the dynamics of human relationships, among the local people in favour of the development initiative. Such consensus is used to mobilise them throughout the whole project circle. Okunna in Ineji (2012) avers that mobilisation for development is concerned with rallying people together and motivating them to achieve the goal that has been set in development project or programme.

Dialogic use of communication will facilitate the creation of a safe public space and an enabling environment where stakeholders, even the most marginalised ones, can air their point of view and knowledge in search of the best course of action for improving the situation. In this respect, local resources should be tapped to obtain a better understanding of the relevant situation in assessing needs, risks and opportunities. During the assessment Participatory Rural Appraisal (PRA), a research method, is adopted. This approach will facilitate people's involvement in the problem-analysis process and stimulate the reversal of learning from the rural people to experts. PRA aims at enabling the local people and facilitators work together in the process of need assessment and planning towards community empowerment. In this situation, the local people are the principal actors since they are in the best position to provide the most authentic information about their present situation and on that basis determine the direction for their future (Coninck, 2016). With a timely information in hand, project managers can refine a project scope and objectives with deeper understanding of the environment in which it will be implemented. In doing so, they can avoid most common mistakes characterised as "the political explanation of failures," minimise risks, seek wider consensus, guide decision-making and identify the best strategy to support the intended change. In this way the methodology encourages all individuals to express their knowledge and ideas openly.

Dialogic use of communication can eliminate or significantly reduce exclusion and address the issue of deprivation arising from seeing limited available options. By engaging stakeholders who often have been excluded from any form of decision-making in their lives and allowing them to engage in the decision-making process, dialogue not only reduces poor people's capacity deprivation but also facilitates the process of empowerment, going well beyond the specific initiative in question. It takes into account the attitudes, perceived needs and capacities of the

people which the project is trying to help. Many projects failed in the past because assumptions were made about the willingness and capacity of rural people to absorb technology and development infrastructures into their way of living and working. Abandoned projects bear witness to this failure to bring about attitudinal change. If a development project has been planned with its beneficiaries, their mobilisation and participation are almost certain to follow quite naturally (FAO, 2022). However, even the best project, designed with its beneficiaries, cannot be cast in concrete; as it progresses, there will be an inevitable need to fine-tune its activities and introduce changes of emphasis. A good communication system can keep a dialogue open between all those involved in a development project thereby nipping problems in the bud as they arise. Such an ongoing information flow can also help to ensure coordination and proper orchestration of inputs and services to a development initiative.

Most important, dialogic use of communication will enhance project planning and results in development initiatives. The time spent on planning, no matter the duration, is not wasted. Stakeholders at the planning session should be prepared to have mutual respect for one another and accommodate one another's point of view for the benefit of the community (Imhabekhai, 2009). As a consequence, when the community members see positive results accruing to them from being engaged in the planning of projects, they will develop a new sense of ownership through the realisation that they can influence policy decisions. No matter what kind of project: governance, agriculture, fisheries, animal husbandry, food, water, transport, security, communication, irrigation, public works, employment, environment, ecology, health, education, power supply, income generation activities and family welfare, it will always be valuable, and often essential, to establish dialogue among relevant stakeholders.

Attaching a positive value to dialogic use of communication will motivate and enable stakeholders exchange ideas as well as provide innovation through which the rural communities may change. Its application will transform the rural communities in the direction of higher quality of life which will be influenced by the core values that are consonant with development to fulfill their potentials. Todaro and Smith (2014) declare these core values as sustenance, self-esteem and freedom:

- i. Sustenance – This is the ability to meet basic needs of people. All people have certain needs without which life would be impossible. These basic needs include food, shelter, health and protection. People should have these basic needs. If any one of them is absent or in short supply in any economy, it would present the state of underdevelopment. Therefore, the purpose of development is to make efforts possible whereby the helplessness and nursery of the people which arises due to lack of food, shelter, health and protection could be removed. A country develops if its citizens have enough or more than enough for their basic necessities, there is growth of income, extreme poverty is addressed and there is equality among members of society.
- ii. Self-Esteem – Sense of worth and self-respect and feeling of not being marginalised are extremely important for individual's well-being. All people and societies seek some form of self-esteem-identity, dignity, respect, honour, and so on. The nature and form of self-esteem may vary from one culture to another from time to time. Higher income or wealth may be equated with higher worthiness. A country is developed if this unique need of the people is addressed.
- iii. Freedom from Servitude – Human freedom, the ability to choose, is essential for the well-being of individuals. Freedom involves an expected range of choices for societies or

communities: economic and political. It involves freedom from bondage, serfdom and other exploitative economic, social and political relationships. In general, freedom prevails if people live a comfortable life, if they have the freedom to choose their religion, to vote and to express their opinion about administration and governance and if they enjoy equal opportunities for education and employment.

Thus the best way of mobilising rural communities for sustainable development is through dialogic use of communication. The most common obstacles, however, to the dialogic communication are to be found in inappropriate timing of the inclusion, typically halfway through the project, once a number of preventable problems may have already emerged and in relying on inappropriate expertise. Communication must exploit its full dialogic and analytical potential. It should be included from the beginning of development initiatives, regardless of whether the initiative's nature is related or not to communication issues (Mefalopulos, 2021). Once this proposition is applied professionally and systematically, the value added development communication will become increasingly evident through the evaluation of all types of development initiatives.

Conclusion

Participatory communication tends to be associated with community-driven development but it could be used at any level of decision making (local, state, national, international) regardless of the diversity of groups involved (Mefalopulos, 2009). By actively engaging stakeholders from the start and seeking a broader consensus around development initiatives, participatory communication is increasingly being considered a key component of development projects around the world. This reason is partly because many conflicts and obstacles can be prevented if addressed quickly. Genuine participation also increases the sense of ownership by local stakeholders,

enhancing sustainability. To be genuinely participatory and truly effective, communication should occur among all parties affected, ensuring all have similar influence on the outcome of the initiative.

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IMPACT OF CAREER MOTHERS ROLE STRAIN AND SOCIAL ADJUSTMENT OF SECONDARY SCHOOL STUDENTS IN RIVERS STATE

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Abstract

The increasing number of mothers engaging in paid employment while simultaneously managing their family responsibilities has brought forth an evolving dynamic in the modern family structure. Career mothers have suffered a lot of stress in the day-to-day care of the family, it is against this background that this study examined the intricate relationship between career mothers' role strain and the social adjustment of secondary school students. This study delved into the challenges career mothers face, the potential repercussions on their children's social adjustment, and the factors that can mitigate these effects. To achieve this, two objectives, two research questions and two hypotheses guided the study. The study adopted the descriptive survey design. The population of the study was 6,893 teachers distributed across public secondary schools in 23 Local Government Areas in Rivers State. The sample size was determined using Taro Yamen formula, a total of 672 teachers comprising 302 male and 370 female teachers serving in the 286 public secondary schools in Rivers State. The stratified random sampling and convenience technique were used to draw the sample. The instrument used to generate data was a self-structured questionnaire titled "Career Mothers Role Strain and Social Adjustment of Student Questionnaire (CMRSSASQ). The Cronbach Alpha was used to establish the reliability coefficient of the instrument at 0.81. The research questions were answered using mean and standard deviation, while the hypotheses were tested at 0.05 significance level using the z-test. The study revealed that career mothers face mental health problems due to unfulfilled family and workplace responsibilities, pressure at work and home which have led some to quit jobs. This study recommended that mothers working as teachers in the school should acquire knowledge on how to manage their lives, their household chores and professional responsibilities. Such knowledge will help them to consistently create conducive educational atmosphere that fosters educational and social adjustment of students. By shedding light on this significant aspect of contemporary family life, this research has made bare the importance of addressing the needs of career mothers and their children.

Keywords: Role strain, Social Adjustment, Work-Life Balance.

Introduction

The rise of dual-earner families has led to an increased focus on understanding the experiences of career mothers and their potential implications for the well-being of their children, particularly during the formative years of secondary school. In Nigeria, employment relationships are structured according to gender norms, resulting in the disproportionate subjugation of women because men are socialized to be breadwinners, while women are always expected to care for the home (Abubakar, 2018). Traditionally, women assume a critical supporting role in both family and societal settings in many different cultures Kostiainen et. al. (2009). Even as many families' standard of living is dependent on mothers working in paid employment; as a result, work and family responsibilities have become complicated, and their spouses' unshared workload frequently causes stress (Craig & Powell, 2018). Now that many of these mothers have paid jobs, they have not abandoned their roles in their families (Kayode et al., 2012; Nnubia et al., 2022), and these in most cases have resulted in overloading of roles. That is why Barnett and Marshall (1992) opined that the more roles they accumulate, the greater the overload and conflict and the likelihood that working mothers will not have time to do everything they set out to achieve, and as such can affect the overall well-being of the mother leading to depression, guilt, low self-esteem and general non satisfaction towards life in general. Due to high cost and standard of living, which has caused high inflationary trends in such that, in most homes, the income of the men seems not to sustain the family needs. As a survival strategy, efforts are being made to adjust to the reality in the surroundings and so many women have risen to assist their families win bread. This strategy has expanded and multiplied women duties and roles in and out of the home. In order to leverage on work and family circle successfully, career mothers make every mutual adjustment in collaboration with their spouses concerning childcare, financial care etc. for which this study has identified the gap created and role adopted by career mother to balance between their family and work life participation in social activities to enhance secondary school students.

Statement of the problem

Despite a growing body of research on the challenges faced by working mothers and the social adjustment of children, there is a limited understanding of the specific relationship between role strain experienced by working mothers and its impact on the social adjustment of their secondary school-age children. While some studies have explored aspects of role strain and social adjustment

separately, there is a lack of comprehensive research that directly examines the potential link between these two variables which is what this study addressed. Furthermore, previous research has primarily focused on the influence of maternal employment on child development, often overlooking the experiences of working mothers who face strain in balancing their multiple roles.

The study

1. examined the causes of role strain among career mothers and how it impacts on the social adjustment of students in secondary schools in Rivers State.
2. analyzed the challenges of career mothers as determinants of the social adjustment of students in secondary schools in Rivers State.

Research Questions

1. What causes these problems faced by working mothers on the social adjustment of students in selected secondary schools in Rivers State?
2. In what ways are the challenges of career mothers' determinants of social adjustment of students in secondary schools in Rivers State?

Hypothesis

1. There is no significant difference in the mean scores of rural and urban respondents on the causes of role strain on career mothers and social adjustment of students in secondary schools in Rivers State.
2. There is no significant difference in the mean scores of urban and rural teachers on the challenges of career mothers as determinants of the social adjustment of students in secondary schools in Rivers State.

Literature Review

Role Strain Among Career Mothers

Role strain is a concept that describes the tension and stress experienced by individuals when fulfilling multiple roles that have conflicting demands Salami (2007). Role strain can affect other areas of life, such as family and personal relationships as well as competing demands of academic responsibilities, social relationships, and family obligations (Yadav 2023; Borelli et al. (2017). Ahmad (2017) refers to it as the challenges and difficulties experienced in balancing the responsibilities and expectations associated with their dual roles as employees and mothers. When people try to take on too many roles at once, it can cause stress and anxiety which can affect all

aspects of life, including family relationships, employment, school, and social life. Societal norms or expectations can cause role strains but can also be caused by one's standards and expectations (Verma & Shukla 2019). For working mothers the pressures are enormous because in an attempt to balance the competing demands of your role as a mother with your other roles; you might have to care for an ill child and prepare breakfast for another child who must prepare for school, at the same time, your boss may be expecting you at work within the next hour. The stress that can occur from attempting to fulfill these seemingly incompatible roles is an example of role strain. As a wife who works outside of the home might experience role strain when balancing the demands of her job with her responsibilities as a spouse and parent. A wife may feel that her husband is left to do all the housework, leading to resentment. In addition, she might not be able to spend enough time with her children, which can cause role strain at home. Once she gets to this stage what is experienced is termed role conflict. Role conflict arises when an individual holds multiple roles that come with contradictory responsibilities and expectations. Ademuyiwa et al., (2022), mothers' dual roles are often in conflict with one another and cause work family conflict because they divide their time and energy between the two spheres of activity. They face difficulties managing their children's tasks, careers, and social circles. Due to their determination to achieve the desired results in both settings, mothers may find it difficult to distinguish between their responsibilities at home and at work, which can lead to work-family conflict (Nkulenu, 2015). It can impact an individual's well-being and social adjustment, as it grapples with the pressures and obligations tied to their roles. In the context of working mothers, it specifically relates to the difficulties they encounter in balancing their roles as employees and mothers. The conflicting demands from work and family can have negative consequences on their career development and overall psychological well-being. The societal expectations and traditional gender roles are not left out as they add to the complexity of this issue. The resultant effect of all of these is that it creates an avenue for some people to experience both role conflict – which is when two roles have demands that are mutually exclusive and role overload - when one doesn't have the resources to meet the demands of multiple roles.

Causes of the challenges of working mothers

- 1) **Societal Expectations:** Women often face the burden of conforming to societal expectations, such as being the perfect caregiver, wife, mother, and homemaker. This pressure can lead to feelings of inadequacy and stress, especially when trying to juggle

multiple roles. For instance, a working mother may experience emotional strain trying to balance her professional responsibilities with family obligations and feel guilty about not being able to spend enough time with her children. Societal Expectations: Societal norms and expectations regarding specific roles can put pressure on individuals to meet these expectations, leading to role strain if they cannot fulfill them Nickerson (2023). Working mothers often face societal expectations and gender role pressures, which can create additional stress and feelings of being judged or inadequate. Struggling to meet societal expectations of being the perfect mother, wife, and employee can impact their self-esteem and overall well-being.

- 2) **Stigma surrounding mental health:** Women may face additional challenges in seeking help for their emotional and mental struggles due to the stigma around mental health. This reluctance to seek support can exacerbate their emotional strain and prevent them from receiving the help they need. It's important to recognize that emotional and mental strain is not a weakness but a natural response to the challenges and pressures women face. Providing a supportive and understanding environment can help women cope better with these strains and promote their overall well-being. Seeking professional help from therapists or counselors can also be beneficial for those experiencing significant emotional and mental strain. Health remains a concern as approximately one-third of women still experience burnout, and more than half rate mental health as a top concern. Stress levels have increased for many, and fewer women report being able to switch off from work. Access to support at work is crucial, but there has been a decline in this area.
- 3) **Workplace Challenges:** Women often encounter gender biases and discrimination in the workplace, leading to emotional strain. They may face unequal pay, lack of opportunities for career advancement, or even workplace harassment. Such experiences can lead to feelings of frustration, anxiety, and self-doubt.
- 4) **Caretaking Responsibilities:** Women often take on the role of primary caregivers for children, elderly parents, or family members with health issues. The constant emotional and physical demands of caregiving can lead to burnout and emotional exhaustion.
- 5) **Parenting Challenges:** Balancing the demands of parenthood with personal and professional life can be overwhelming for many women. The responsibilities of raising

children and the desire to provide the best upbringing for them can lead to emotional strain and self-doubt.

- 6) **Relationship Struggles:** Difficulties in personal relationships, such as marital conflicts or breakups, can cause emotional strain for women. The stress of navigating through relationship challenges can result in feelings of sadness, anxiety, and emotional distress.
- 7) **Time Constraints and Self-Care:** Working mothers often have limited time for self-care and personal pursuits as they prioritize their family and work obligations. Neglecting self-care can lead to physical and emotional exhaustion, impacting their overall health and well-being.
- 8) **Body Image and Self-Esteem:** Women are frequently exposed to unrealistic beauty standards and media portrayal that can negatively impact their body image. This can lead to feelings of insecurity, low self-esteem, and even disordered eating behaviors. For example, a woman may experience mental strain due to constant comparisons with the Photo shopped and idealized images of models in magazines, leading to body dissatisfaction and emotional distress.
- 9) **Hormonal Changes:** Hormonal fluctuations during the menstrual cycle, pregnancy, and menopause can have a significant impact on a woman's emotions and mental state. For instance, premenstrual syndrome (PMS) can cause mood swings, irritability, and anxiety, affecting a woman's ability to cope with daily stressors.
- 10) **Traumatic Experiences:** Women can be victims of various traumas, such as domestic violence, sexual assault, or childhood abuse. These traumatic experiences can cause long-lasting emotional and mental strain, often resulting in conditions like post-traumatic stress disorder (PTSD) or depression.
- 11) **Financial Pressures:** Women may experience financial strain due to factors like wage gaps, single parenthood, or economic hardships. Financial stress can lead to anxiety, depression, and a sense of helplessness.

This section examines the concept of role strain for career mothers, focusing on the challenges and stressors they face in managing their professional and parenting responsibilities. Factors such as

time constraints, work-related stress, and societal expectations contribute to the role strain experienced by career mothers.

Social Adjustment of Secondary School Students

Several factors can influence the social adjustment of children. These include some of the following:

1) Parents/Family Environment – the kind of family a child comes from affects social adjustment. The child adjusts to fit into the dynamic conditions in the environment. The interaction between the child and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment. The environment of the child includes everything surrounding him. His parents, family, siblings, school, friends, peers, teachers, etc. everything in the child's environment affects the social adjustment of the child, directly or indirectly. Children who experience the security of loving parents and have strong attachments to their parents are better able to reach out to relate with others. According to attachment theory as explained by Maccoby, (1993), children who enjoy a secure attachment relationship with their parents and caregivers use this relationship as a pivot to venture out and explore their environment. They reach out to others, return to the caregiver for support, and venture out again, going further into the world of social relationships (Ainsworth et al., 1978). As the child confidently wanders out to test the social waters, he enlarges his social world, expands his social contacts, and is more likely to learn from experience in social interaction. The pattern by which these children are guided is determined by the parenting style and the quality of parent-child relationships which is also determined by the family environment. It is the parents or the family of the child with whom the child first comes in contact when he is born, the child first interacts with the mother or the initial caregiver, and later as he grows he slowly learns to interact with others surrounding him. This initial interaction is very essential as it forms the base for further social development and understanding for the child of the world around him. The family environment, including family dynamics, communication patterns, and the presence of conflict or stability, can impact a child's social adjustment. Hyman (1997) observed that members of the lower working class place high value on the education of their children because it is realized to be a means to personal advancement and a way of achieving high occupational status. He observed that an individual in the lower class does not aim at much success because of the limited resources at

his disposal; thus, the motivation to achieve in the school or outside it is generally lower among members of the lower class. Hyman observed that the causes of poor performance are traceable to the home environment of the child. He noted that the factors that contribute to poor academic attainment of a child include tension in the home, desertion of children by both parents, lack of care and motivation, prejudices, and malnutrition. Similarly, Ogunlade (1995) found that the influence of environment on school attainment is very great and that a positive correlation exists between parents' level of education and their children's intelligence. Mother-father relationships have been identified as a salient context for children's concurrent and later social-emotional development. Positive mother-father relationships are associated with better child social-emotional adjustment Nyamayaro (2013). Working mothers often make a concerted effort to be involved in their children's education, despite their work commitments. They may attend parent-teacher meetings, engage in academic discussions, and provide emotional support for their children. This increased parental involvement positively influences students' academic performance and social adjustment.

A supportive, nurturing, and emotionally secure family environment fosters positive social adjustment, while a dysfunctional or neglectful family environment can hinder it. For instance in an Authoritative parenting environment, the child experiences warmth, support, clear expectations, and consistent discipline, which tends to promote better social adjustment. On the contrary, authoritarian parenting environment may hinder social development. Kriesenberg (1990) reported that the middle-class family is more supportive and rewarding of academic achievement than the lower-class family. To Chancham (1990) the family moral and economic factor influences the development of children's personality; and that the mothers' early care provides a stepping stone for nursery school teachers. This view is supported by Uche (1991) who also observed that the family has a remarkable influence on the child's academic achievement and that pupils learn faster at home when the family motivates them towards education and contributes to their success in school. He further observed that parents' religious beliefs their philosophies of life, prestige, social status, political powers, and all act as factors that influence the child's academic achievement. Other subordinate influences according to him are the extended family influence and polygamous family, as well as urban and rural influences. He opined that pupils from polygamous families or homes were so encumbered with domestic duties that they had little time for study. Also, pupils from rural areas are withdrawn from school during farming seasons or spent time looking after

younger siblings. This is in contrast with life in urban centres where parents, most of whom are professionals understand the value of education.

2) School and Peer interactions: Interactions with peers play a vital role in the process of social adjustment. Schools encourage children to develop socially and give the children a chance to understand themselves and others. This leads a person to become helpful, cooperative, and adjusting. Once children are in a school setting, it affects their social understanding (Berk, 2001). Positive peer relationships, such as having friends who are supportive, empathetic, and share similar interests, contribute to healthy social development. On the other hand, experiences of rejection, bullying, or social isolation can negatively affect social adjustment. In addition to a child's parents and family, the teacher becomes an agent of socialization. Now the teacher and perhaps the principal set rules, limits, and standards for behaviour. Other children also become models, setting new or different standards for social behaviours. The dichotomy of socialization developing a strong sense of individuality while learning to become a member of a group is ever-present in school and affects the social adjustment of a child. The school environment, including the classroom atmosphere, teacher-student relationships, and the presence of bullying or social support systems, can significantly impact social adjustment. A positive and inclusive school climate that promotes social interactions, cooperation, and emotional well-being tends to facilitate better social adjustment among children. The school of the child often becomes his second home from him and it is here that the child spends a major part of his life here and learns several skills including social interaction.

3) Socioeconomic status: Socioeconomic factors can influence a child's social adjustment. Children from lower socioeconomic backgrounds may face additional challenges, such as limited access to resources, exposure to stressors, and reduced opportunities for social engagement. These factors can affect their social adjustment, although individual resilience and supportive environments can mitigate some of these effects. The level of income of working mothers determines the type of food they eat, the type of house they live in and the type of schools the children attend. Dele (1992) discovered that pupils from stable families are more likely to be higher in academic performance (obtaining A and B grades) and that this means that there are high intelligence quotient scores by pupils from stable families. This is because such families are more coordinated and give attention as well as guidance to their pupils. According to him, nutrition plays a very vital role in the development of a child. If a child is hungry in school, that child is less likely

to concentrate. He states that diet has remarkable influences on a child's mental and physical development and that inadequate feeding of pupils can lead to problems which often influence the rate and extent of brain growth.

Consequent on this, working mothers attract several socioeconomic benefits that positively impact the social adjustment and academic performance of students. Working mothers contribute to the household income, which can enhance the family's overall socioeconomic stability, increased financial resources can provide children with access to quality education, enrichment activities, educational materials, and a supportive learning environment, all of which can positively impact academic performance. Ademola (1995) stated that it has been found that pupils from the high and middle class ie society have more access to educational materials which enhances their best attainment and places them at an advantageous position over pupils from lower socio-economic status. In the same vein, Douglas (1995) noted that the child's mental and emotional development, which is a factor for school education, would be greatly influenced by the nature of the family into which the child is born. He noted, for instance, that poor feeding during pregnancy and after is likely to have adverse influences on the mental development of the child; and that a state of abject poverty may lead to emotional depression in the child. According to him, occupation is a major index in determining what class a group belongs to and can result in inequality of achievement of pupils.

Like women who remain at home, employed mothers perform most of the household chores and care activities. Women employed full-time may reduce the amount of time they spend on household tasks, but not the range of their responsibilities. This led some researchers to refer to employed mothers as "super moms" meaning mothers who remain heavily involved with family responsibilities while also meeting the demands of paid employment (Demeis and Perkins, 1996).

The financial resources gained from a mother's employment facilitate access to educational resources, such as tutoring, educational technology, and extracurricular activities. These resources enhance students' academic skills, knowledge, and opportunities for intellectual and personal development. Working mothers can serve as role models for their children, inspiring them to pursue education and career aspirations. Seeing their mother engaged in a fulfilling career can motivate students to set goals, work hard academically, and develop a strong work ethic. Through

their employment, mothers can expand their social networks, exposing their children to a broader range of experiences, perspectives, and role models. This exposure can enhance children's social skills, cultural competence, and ability to navigate diverse social environments. Employed mothers often need to manage their time efficiently, balancing work and family responsibilities. This emphasis on time management and responsibility can influence students' organizational skills, discipline, and ability to prioritize tasks, which are important for academic success. The employment of mothers can contribute to fostering gender equality values within the family and society.

Children growing up with employed mothers are more likely to embrace gender equality, challenge stereotypes, and develop a more equitable worldview. From the foregoing, it can be seen that socio-economic status determines the lifestyle of a family, the type of food they eat and the environment they live in and ultimately influence their children's academic performance in school.

Mohammed (1999) puts it more succinctly when she asserts that education is an important tool for knowledge, skills and the building of self-confidence and that through education, women can contribute most influentially in transforming their environment and improving the economic status of their families. For instance, the educational level of a woman determines the quality of health attained by her and the members of her family. The woman is the first contact the child has at birth and virtually all the first lessons of life received by the child (at least within the first three years of life are from the mother. Enoh (2001) asserts that parents with considerable wealth are capable of maintaining their children in schools for as long as they are willing to read. Poor parents, on the other hand, may be forced to withdraw their children from school even when they are still capable of reading just because they can no longer cope with the high cost of schooling. According to him, in certain societies, special schools are built for the very rich, and the criterion for selection in such schools is wealth and not aptitude. Enoh, therefore, concludes that there is no doubt that educational attainment is to a large extent determined by one's level of intelligence; however, socioeconomic factors and aspirations such as parental employment are equally important determinants. It is important to note that these socioeconomic benefits are not solely dependent on the employment of mothers but also on supportive family dynamics, access to resources, and a nurturing home environment. Working mothers have been found to have an impact on the social adjustments of students.

4) Cultural and community influences: Cultural norms, values, and community expectations can shape a child's social adjustment. The characteristics of culture also affect children's developing social skills (Wardle, 2001). Children who live in violent or unsafe communities may be fearful and withdrawn when in the classroom as they may be exposed to domestic abuse, gang violence, and petty or not-so-petty criminals and as such do not feel safe or secure. Their feelings of insecurity will interfere with their total development, especially social skills development. Therefore, teachers should take out time to observe and know the culture and community in which these children live; so as to be able to mediate and expel potential negative effects on children's social development. Cultural factors, such as collectivism versus individualism orientations i.e our own versus my own tendencies, gender roles, and cultural practices, influence social expectations and behaviours. Community support, extracurricular activities, and access to social programs can also impact social adjustment.

5) Individual characteristics: Each child has unique individual characteristics that can influence their social adjustment. Factors such as temperament, personality traits, cognitive abilities, emotional regulation skills, and social competence can impact how children navigate social interactions and adapt to social environments. Every child is different and special and so is their personality. It depends from person to person how he will socially interact with others. Some children tend to introduce themselves to others and take the lead in a conversation while others wait for the opposite person to begin. Some children are naturally introverted while others are extroverts which affects the social relationships a child can form and thus affects his social adjustment.

6) Parenting style: The parenting style and the quality of parent-child relationships significantly influence a child's social adjustment. So also the family environment. The different parenting styles affect the overall being of the student. In Authoritative parenting, the child experiences warmth, support, clear expectations, and consistent discipline, which tends to promote better social adjustment. On the contrary, authoritarian parenting styles may hinder social development. It is the parents or the family of the child with whom the child first comes in contact when he is born, the child first interacts with the mother or the initial caregiver, and later as he grows he slowly learns to interact with others surrounding him. This initial interaction is essential as it forms the

base for further social development and understanding for the child of the world around him. The family environment, including family dynamics, communication patterns, and the presence of conflict or stability, can impact a child's social adjustment. A supportive, nurturing, and emotionally secure family environment fosters positive social adjustment, while a dysfunctional or neglectful family environment can hinder it.

8. Individual characteristics: Each child has unique individual characteristics that can influence their social adjustment. Factors such as temperament, personality traits, cognitive abilities, emotional regulation skills, and social competence can impact how children navigate social interactions and adapt to social environments. Therefore, the relationship between maternal career and social adjustment in children is an important aspect to be studied as social adjustment of secondary school students is a critical component of their overall well-being. We explore the dimensions of social adjustment, including peer relationships, academic performance, and emotional well-being, and how these are influenced by family dynamics.

The Interplay Between Career Mothers' Role Strain and Social Adjustment

The nexus between the mother's role and social adjustment, as well as the development of students, is a complex relationship that can significantly influence a child's overall well-being and success. Mothers need to serve as a positive role model for their children, demonstrating how to cope with adversity, handle stress, and overcome challenges Dar (2017). Children often emulate their parents' behaviors, and witnessing a mother's resilience can encourage them to develop similar coping strategies and attitudes. Mothers are more likely to provide consistent emotional support to their children, fostering a secure attachment style. This emotional support is crucial for a child's social and emotional development, as it helps build their self-esteem, confidence, and ability to form healthy relationships with others. Mothers are to create a more stable and nurturing home environment, which can reduce the amount of stress and chaos that children experience. A calmer household can positively impact a child's emotional regulation and overall social adjustment, leading to better academic performance and behavior in school. The complex interplay between career mothers' role strain and the social adjustment of secondary school students underscores the importance of addressing the unique challenges faced by dual-earner families. By recognizing these challenges and implementing supportive measures, we can contribute to the well-being and success of career mothers and their children in today's rapidly evolving societal landscape.

These set of behaviours as exhibited by working mothers' impacts on the social adjustment of the children; as explained by Lamar & Forbes (2022) the under listed are pointers suggesting that role strain of working mothers affect social adjustment of children in the following ways which we have elaborately discussed as follows:

Limited Availability: Career mothers often have demanding work schedules that can limit the time they can spend with their children. The reduced availability of working mothers may result in less quality time and interaction between the mother and child. This limited availability can impact the child's emotional connection with their mother, potentially affecting their social and emotional development.

Parental Stress and Emotional Availability: Work strain can contribute to increased parental stress and emotional exhaustion in career mothers. When mothers are stressed, they may have less emotional energy and patience to engage with their children effectively. This reduced emotional availability can influence the child's social adjustment, as they may not receive the necessary support and guidance they need during their social interactions.

Altered Parenting Styles: Career mothers may have to rely on alternative caregiving arrangements or support systems to manage their work commitments. This may result in changes in parenting styles or delegation of caregiving responsibilities to others. Different parenting styles or multiple caregivers can impact the child's socialization experiences and adjustment as they navigate different expectations and interactions.

Impact on Parent-Child Communication: Limited time and increased work strain can affect the quality and frequency of communication between career mothers and their children. Effective communication is crucial for children's social adjustment, as it helps them understand and navigate social norms, relationships, and conflicts. Reduced communication can lead to a lack of guidance and support in social situations, potentially impacting the child's social skills and adjustment.

Influence of Work-Related Stress on Parenting Behavior: Work strain can lead to elevated stress levels in career mothers, which can influence their parenting behavior. If mothers are experiencing high levels of stress, they may inadvertently exhibit less patience, responsiveness, or consistency in their parenting. This can affect the child's sense of security and their ability to develop healthy social relationships.

It is important to note that the impact of career mothers' role strain on the social adjustment of their children can vary depending on several factors, including the child's temperament, support systems, and the overall family environment. Many working mothers successfully manage role strain and maintain positive relationships with their children. Supportive environments, open communication, and quality time spent with children can help mitigate the potential negative effects on social adjustment. Additionally, involving other caregivers or family members in the child's life can provide additional support and opportunities for positive social interactions. It is important to note that many working mothers successfully manage work/role strain and maintain positive relationships with their children. Supportive environments, open communication, and quality time spent together can help mitigate potential negative effects and foster healthy social adjustment in children.

This section delves into the ways in which career mothers' role strain can impact the social adjustment of their secondary school children. Drawing on relevant research, we discuss potential consequences such as increased stress, decreased quality time, and changes in parenting style.

. Factors Mitigating the Impact

The effect of the challenges of role strain among Nigerian working mothers is a complex issue influenced by various factors such as cultural norms, societal expectations, workplace policies, and personal circumstances. Role strain as already explained refers to the stress and conflict that individuals experience when trying to fulfill multiple roles, such as being a mother and an employee, simultaneously. In the case of Nigerian working mothers, here are some potential challenges include:

1. Time management and childcare responsibilities: in the Nigerian society emphasis is placed on the role of mothers in childcare and household responsibilities. If work schedules demand long hours or irregular shifts, it can lead to challenges in managing both work and family responsibilities. This can result in increased stress and role strain for working mothers who feel torn between their duties at home and their obligations at work

2. Cultural expectations: Cultural norms in Nigeria may dictate that mothers should be heavily involved in their children's upbringing and home life. Working mothers might experience feelings

of guilt or conflict if their work schedules prevent them from being as present as they would like to be in their children's lives, contributing to role strain.

3. **Work place flexibility:** The availability of flexible work arrangements, such as telecommuting or flexible hours, can significantly impact role strain. If Nigerian working mothers have access to flexible work options, they might be better able to balance their work and family roles, reducing the negative effects of role strain.

4. **Support system:** The presence of a strong support system, including family, friends, and community networks, can help alleviate role strain. If working mothers have access to reliable and affordable childcare options or family members who can assist with caregiving responsibilities, they may experience less role strain.

5. **Mental and Physical health:** Long and demanding work schedules can take a toll on the mental and physical health of working mothers. Role strain can lead to increased stress, burnout, and decreased overall well-being, affecting their ability to effectively manage both their work and family roles.

6. **Career advancement:** Some Nigerian working mothers might face challenges in career advancement due to perceptions that they cannot fully commit to their jobs because of family responsibilities. This dilemma can contribute to feelings of role strain, as they try to navigate the expectations of their workplace and society.

6. **Workplace policies:** Workplace policies that support work-life balance, parental leave, and family-friendly practices can positively impact the role strain experienced by working mothers. Organizations that prioritize these policies can help alleviate the tension between work and family roles.

7. **Personal choices:** The degree of role strain experienced by Nigerian working mothers can also be influenced by their personal choices, including the type of work they engage in, their career aspirations, and their willingness to seek support or make trade-offs between work and family roles.

Not all career mothers and their children experience negative consequences. We examine the factors that can mitigate the impact of role strain, including social support, time management strategies, and flexible work arrangements. Additionally, the study discusses the importance of communication and open dialogues within the family.

Implications for Policymakers, Educators, and Parents

This section provides recommendations for policymakers, educators, and parents to support career mothers and their children. Suggestions include the development of family-friendly policies in the workplace, promoting comprehensive sex education in schools, and encouraging parental involvement in adolescents' lives.

Conclusion

Based on the findings of this study, the researcher concludes that the impact of career mothers on the social adjustment of students are many, some of which have positive and negative effects on social adjustment of students. This study further concludes that career mothers face several problems and challenges ranging from their predisposition to suffer from guilt and mental health problems that may arise due to unfulfilled family and workplace responsibilities, to the increasing tendency of spouses of working mothers to pressure their wives to quit their jobs, and the struggle working mothers face in trying to balance work-life and family-life stability. This study also concludes that mothers derive benefits from their employment (as teachers) by earning income to support their families and the educational advancement of their children and students, thereby ensuring positive social adjustment of students as they grow to become adult members of the society

5.4 Recommendations

Based on the findings, the following recommendations are proffered:

1. Mothers working as teachers in the school should acquire knowledge on how to manage their lives, their household chores and profession responsibilities. Such knowledge will help them to consistently create a conducive educational atmosphere that foster educational and social adjustment of students.
2. Spouses of career mothers should assist and support their partners to pursue their careers while being a mother. Preventing them from working may lead to dissatisfaction and in some cases depression. The spouses should plan how to manage their households and careers together.
3. Government and policymakers should strengthen the implementation of laws on discrimination against career women and mothers. Laws on maternity leave should be

improved to give adequate time for a nursing mother to recuperate properly before she is required to return to her duty post.

4. Career mothers should endeavour to take care of themselves by taking some time to rest, attend to their personal needs, bodily needs, spiritual needs and family needs to avoid breakdown and maintain a sound mental health.

BUDGET MANAGEMENT AND SUSTAINABLE DEVELOPMENT GOAL IN PUBLIC SECONDARY SCHOOLS IN ABIA STATE

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Abstract

This study investigated budget management and attainment of Sustainable Development Goal in public secondary schools in Abia State. Two research questions and two hypotheses guided the study. The study adopted a correlational design. The population comprised 252 principals in the 252 public senior secondary schools in Abia State to conduct a census study. . The instruments that were used for data collection in this study were two self-structured questionnaires titled “Budget Management Questionnaire (BMQ) and Attainment of Sustainable Development Goal 4 (ASDGQ)” developed by the researcher. The face and content validities of the instruments were validated by four experts in the Faculty of Education and the reliability coefficient was obtained using Cronbach method to determine the internal consistency of the instrument, which yielded a co-efficient of 0.86 for the independent variable and 0.82 for the dependent variable. 252 copies of the questionnaire were administered but 250 copies were correctly filled and retrieved. The research questions were answered using simple regression while t-test associated with simple regression was used to test the hypotheses at 0.05 level of significance. The findings revealed that budget execution and budget evaluation predicted attainment of Sustainable Development Goal 4 in public senior secondary schools in Abia State. Also, all significantly predicted attainment of Sustainable Development Goal 4. Based on the findings of the study, the researcher recommended that principals should execute the budgets already prepared and planned by putting them into what they were prepared for. The Education Board and Ministry of Education in Abia State should evaluate the way budgets are carried out and executed in schools. They should send representatives from the Ministry of Education to evaluate the success of the budget in order to ensure the attainment of Sustainable Development Goal 4 in public secondary schools in Abia State.

Keywords: Budget Management, Sustainable Development goal, Public Schools

Introduction

The worrisome nature of Nigeria’s educational sector is showcased in the poor funding, poor budgeting and its preparation and management of funds. To ensure judicious spending of funds and accountability, school administrators should be involved in planning and preparation of budgets for their schools (Oboegbulam, 2013). Managing a budget requires adhering to strict

internal protocols on expenditure. A well-managed budget allows for continued smooth operations and growth. The budgeting process and budget implementation are crucial tools for effective financial management in the University system.

For the educational system in Nigeria to give high quality education, the country needs efficient financial management in the school. Presently, the budgetary system is the most plausible management strategy. In any economy, budget is the operational instrument of the allocation of resources. Money to be spent has to be planned for. Budget is an effective tool for control and management of institutions. The traditional method of budgeting known as the line item budget, after a strong criticism has undergone upgrading to give birth to the Planning, Programme, Budgeting System (PPBS). This budgetary technique is a guide, which helps the administrator to diagnose the state of wealth of the institution. The performance of the school can be controlled and evaluated through the use of budget.

Well-designed budget can provide indispensable information on project input and output. The rate of expenditure, unit cost, the input/output ratio can be used as basis for control and evaluation of activities in the school system. For example, the periodic comparison is an indicator in the process of rate of return analysis of expenditure and capital. No system grows or sustains the pace of its growth if the financial system is not properly organized or managed. The running of schools concentrates on transforming the school and providing services which are on the long run beneficial to society. Considering that Secondary education in Nigeria is on high demand and the percentage of the budget allocated to public Secondary school is very minimal to meet their needs, it has been a serious challenge. Most times, there is gap between required and actual funding of Secondary education in Nigeria. They receive less than the actual allocation required for their administration.

Sustainable Development Goal 4 (SDG4) is an important development goal in the development of a society or nation. It deals with the attainment of quality education. SDG4 is one of the development goals that talks about equitable and quality primary and secondary education. It is also regarded as the condition for the successful and effective development of most organizations and projects.

Sustainable Development Goal 4 deals with all the plans and processes in ensuring that citizens of a nation acquire quality education. The meaning of the SDG 4 targets on quality education – and, in fact, of the SDGs in general – is related here to the current discourse on education policy, which is strongly oriented towards various benchmarks, indicators and targets (Ozga 2012; Cardoso & Steiner-Khamsi 2017). Managing a budget involves analyzing current spending, organizing purchases by category, and monitoring cash flow over time. Budget management deals with the financial transactions that take place within an organization, both income and expenditure. It involves all the processes in ensuring that funds are utilized properly and to avoid misuse. Every budget management entails preparation of the budget, auditing, planning, reporting and execution. Every organization has its own objectives or goals, which determine the process and outcome of its budget. Individuals also consciously or unconsciously make budgets every day. No nation can do without budgeting

According to Ogundiran, and Awe (2012), educational (school) budgets are financial plans aimed at translating educational (school) objectives into reality. A budget is a statement which describes how to finance the various educational objectives outlined for the year or a given stated period. Okunamiri (2010) states that a budget is an annual estimate of revenue and expenditure of a country or organization. He further expresses that budgeting is a planning strategy aimed at reconciling the goals, objectives and with available or anticipated recourses in financial terms.

Budget is a rational way to handle school expenditure and other things in education. In consonance with the forgoing, a careful analysis of the above and other conceptions of budget by other scholars point to the fact that a budget is a financial blueprint for the operation of an organization, including the school system for the fiscal year. A budget is a means by which the planned objectives and targets are translated into a programme of action and in financial terms. Thus, a school budget is an established financial standard needed to consciously guide the activities of a school administrator and its management team towards the attainment of the aims and objectives of the school in a given fiscal year.

Nwafor and Efe (2020) stated that a serious and progressive government will not allocate funds for any rehabilitation of government buildings or purchase of buses at the expense of critical sectors like Health and Education. Therefore, the academic Staff Union of Universities (ASUU) warned the Federal Government against cutting down the budget of Health and Education sectors in the proposed 2020 revised budget. The implication of revising the budget downward will directly affect the education budget of the country which expertise have described as inadequate. Many infrastructural facilities and school expansion programmes planned for this year would be removed from the budget due to the budget cut down. It is recommended that the government should increase the funding of Higher Education's budget to allow the school administrators manage all the damages caused by the COVID 19 pandemic in Nigeria. So, for quality education to be achieved, it is essential that the budget allocated to them should be properly managed and fully utilized, (Oguechuba, 2014).

Among SMEs, budgeting is used as a planning tool. There is a high rate of failing by small and medium firms soon after they are established. Poor budgeting process is given as one of the major reasons causing this phenomenon. Since the budgets indicates the plan of action the firm is

taking, firm managers ought to maintain proper, updated and reviewed budgets lack of which make their firms remain small, stagnant and even close down.

The complexity of adapting education to new global conditions, reducing quality and increasing demand, inadequate funding and the need to form long-term processes. One of the most important resources for research is financing. Interruptions in the flow of funds may adversely affect the development of the project. Continuity and predictability of the volume of core resources should be provided for the sustainable development. “Impact of the macro economic factors on university budgeting. The budget management deals with how budget is prepared and executed for use within an organization. In the school system and for the achievement of SDG4, it must be management in such a way that quality education is attained for meaningful achievement.

Aim and Objectives of the Study

The aim of the study was to examine the extent budget management predicts attainment of Sustainable Development Goal 4 in public secondary schools in Abia State. Specifically, the objectives sought to;

1. examine the extent to which budget execution predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.
2. find out the extent to which budget evaluation predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Research Questions

The following research questions guided this study.

1. To what extent does budget execution predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State?

2. To what extent does budget evaluation predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State?

Hypotheses

The following hypotheses were tested in the study at 0.05 level of significance

1. Budget execution does not significantly predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.
2. Budget evaluation does not significantly predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Methodology

The study adopted correlational design since its emphasis was interested in finding out the extent budget management predicts attainment of sustainable development goal 4. The population comprised 252 principals in the 252 public senior secondary schools in Abia State. A sample of 252 principals was drawn from all the schools. The instruments that were used for data collection in this study were two self-structured questionnaires titled “Budget Management Questionnaire (BMQ) and Attainment of Sustainable Development Goal 4 (ASDGQ)” developed by the researcher. The face and content validities of the instruments were validated by four experts in the Faculty of Education and the reliability coefficient was obtained using Cronbach method to determine the internal consistency of the instrument, which yielded a co-efficient of 0.78 for the independent variable and 0.80 for the dependent variable. 252 copies of the questionnaire were administered but 235 copies were correctly filled and retrieved. The research questions were answered using simple regression while t-test associated with simple regression was used to test the hypotheses at 0.05 level of significance.

Answers to Research Questions

Research Question One: To what extent does budget execution predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State?

Table 1: Simple Regression Analysis on the extent budget execution predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.656 ^a	.631	.631	2.66861

Table 1 revealed that the regression coefficient R was calculated to be .656 while the regression squared value was computed to be .631. This shows that there is a prediction between budget execution and achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State. Judging by the coefficient of determinism, it shows that budget execution predicted achievement of Sustainable Development Goal 4 by 63.1% while the remaining 36.9% was accounted for by other variables.

Research Question Two: To what extent does budget evaluation predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State?

Table 2: Simple Regression Analysis on the extent budget evaluation predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.730 ^a	.681	.681	2.99861

Table 2 revealed that the regression coefficient R was calculated to be .730 while the regression squared value was computed to be .681. This shows that there is a prediction between budget evaluation and achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State. Judging by the coefficient of determinism, it shows that budget evaluation predicted achievement of Sustainable Development Goal 4 by 68.1% while the remaining 31.9% was accounted for by other variables.

Test of Hypotheses

HO₃: Budget execution does not significantly predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Table 3: t-test associated with simple regression on extent budget execution predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.384	.639		6.865	.000
1 Budget execution	.668	.040	.656	16.507	.000

Table 3 showed that the value of t-test associated with the simple regression was 6.865 at a significance level of 0.000 which was less than the p-value of 0.05 and on this note, the null hypothesis was not retained while the alternative hypothesis was upheld implying that budget execution significantly predicted achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

HO₄: Budget evaluation does not significantly predict achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Table 4: t-test associated with simple regression on extent budget evaluation predicts achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	7.715	.607		12.719	.000
1	Budget evaluation	.454	.038	.730	11.871	.000

Table 4 showed that the value of t-test associated with the simple regression was 12.719 at a significance level of 0.000 which was less than the p-value of 0.05 and on this note, the null hypothesis was not retained while the alternative hypothesis was upheld implying that budget evaluation significantly predicted achievement of Sustainable Development Goal 4 in Public Senior Secondary Schools in Abia State.

Discussion of findings

Findings on hypothesis 1 shows there is a prediction between budget execution and achievement of sustainable development goal 4 in public senior secondary schools in Abia State. The execution of budget means carrying the budget out and ensuring that what it stipulates is implemented to the best practice. The respondents agreed and believed that budgets are imperative and is operations help in improving and sustaining the development of education in schools. The execution of budgets can only be carried out and implemented if it was properly plan. A budget that lacks proper planning is not one that can be properly implemented. Budgets are very important

in the achievement of organizational goals. Hence, the need to ensure that they are planned, well prepared and properly executed and implemented. The implementation of budget entails ensuring that they are well prepared, reported, and approved. Principals and school administrators in schools are the ones who implement these budgets and it is essential for them to execute them accordingly. Budget preparation and planning are essential ingredients in the funding and financing of schools. So is the implementation of budgets as well. The respondents believe that implementing a budget has a significant relationship with the achievement of quality education in schools and the relationship is high between them. The relationship between the quality of education derived in schools and its proper and effective implementation is very high because without fully and planning a budget, quality education will not be attained.

From the findings on hypothesis 2, it was revealed that budget evaluation predicts achievement of sustainable development goal 4 in public senior secondary schools in Abia State. The respondents stated that the relationship is very significant and is high. This means that they are significantly related. When budgets are planned, prepared, reported and implemented, there is need for them to be evaluated and looked at to ensure that it was properly carried out. It entails the assessment of the budget implementation. The respondents also believed that when school principals assess the outcome and evaluate the implementation of budgets, it helps to inform them on the next decisions to take. It shows how effective the budget is and it achieved what it was set out to achieve. It is expected for the evaluation of budget to meet the needs it was established for. The respondents believe that evaluating a budget has a significant relationship with the achievement of quality education in schools and the relationship is high between them.

Conclusion

The study addressed budget management and attainment of sustainable development goal 4 in public secondary schools in Abia State. The researcher has in the process investigated two components of budget management which involved budget execution and budget evaluation as factors that predicted the attainment of sustainable development goal 4 in these public schools. Findings showed that budget management is very important in achieving SDG4, and that it is imperative for educational administrators ensure that budgets are managed properly.

Recommendations

The following recommendations were made based on the findings of the study:

1. Principals should execute the budgets already prepared and planned by putting them into what they were prepared for. They should ensure that it is properly carried out for attainment and achievement of quality education.
2. The education board and ministry of education in Abia state should evaluate the way budgets are carried out and executed in schools. They should send representatives from the ministry of education to evaluate the success of the budget.

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DEVELOPMENT AND VALIDATION OF SELF-MANAGED LEARNING TOOL FOR STUDENTS OF UNIVERSITIES IN RIVERS STATE

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ABSTRACT

In recent times, it has been observed that amidst so many distractions, some students fail to dedicate time to managing their learning experiences which could lead to examination malpractice and/or backlog of carryovers. It is therefore necessary to have a tool that assesses students' ability to manage their learning experiences. Against this background, this study developed and validated a self-managed tool for students of universities in Rivers State. Instrumentation research design was used to develop the tool while adopting Zimmerman's cyclical model. The theories that guided the study were self-managed learning and item response theories. The population was 71,778, and a sample of 1,440 students was drawn using multi-stage sampling procedure. Four research questions were answered using statistics from Microsoft Excel, SPSS, and R while one null hypothesis was tested using chi square goodness of fit. The overall MSA was 0.76 which is rated as adequate. Three factors loaded with eigen values of 4.93, 2.97, and 1.64. There was a significant difference between the negative and positive items. The ordinal reliability coefficient was 0.85. The researcher recommended among others that item response theory should be applied when developing a measurement tool because of its precision.

Keywords: Self-Managed Learning, Item Response Theory, Instrumentation,

Introduction

At birth some philosophers believe that a baby's mind is blank and only gets filled by the learning experiences acquired during the growth stage. A new baby is usually breastfed with a substance known as colostrums, which contains some essential nutrients to help in the baby's cell development. All the baby needs to do at this neonatal stage is to suck and sleep. As the infancy period goes on the infant learns to consume other types of food like solid food, mashed food, cereals, and so on. The youngster eventually learns how to stand, sit, walk, and run. As the child

grows older, he or she reaches the age when they may attend school with other students and participate in academic activities. Learning continues from when a child is born to death. Learning is therefore viewed by Mayer as cited in Malamed (2020) as a somewhat long-lasting shift in one's perspective or mindset brought about by new information. Furthermore, learning could be seen as a proportionately lasting activity that leads to practical moderation in behavior (Ellis as cited in Nwankwo, 2007). Learning originates from activities or practice that showcases a change in attitude. If there is no change in one's lifestyle from the previous to the new and desired one, then learning has not occurred. Nwankwo (2007) explained that learning is the result of former exposure. It means that someone can learn from past experiences. Hence there is a proverbial statement which says that experience is the best teacher. Morgan et al as cited in Nwankwo (2007) added that learning occurs not just by experience but also by practice. Onyenemezu (2017) views learning as a progressive activity; hence, despite the length of one's years, status, wealth, or fame, nobody will consciously want to stop acquiring knowledge. Mbagwu (2012) opined that the steps involved in learning start from the child taking part in unofficial education which is usually directed by members of the person's immediate family; after which, the student is taught by the environment and educational institutions. Mbagwu (2012) also noted that though it is not mandatory to learn, people are motivated to do so because of individual needs which include being able to provide material needs, gain self-worth, and improve techniques needed in the workplace, improvement of trade and financial rewards. Santrock (2009) observed that learning does not just affect how somebody behaves but also his or her understanding and reasoning abilities. Thus, it can be concluded that learning denotes modification in the manner with which an individual conducts himself.

Learning does not necessarily have to take place in the traditional classroom setting; people can build up ability to manage their learning experiences. Self-managed learning could be seen as the way learners control their feelings, reasoning, attitude as well as the context when learning is going on (Harding, Barba, & Goh, 2016). Furthermore, self-managed learning is the art of building on one's thoughts, emotions, and attitudes to guide them judiciously in attaining the desired goals (Santrock, 2009). It involves having a clearly defined purpose of action, channeling one's activities in such a way that the stated objectives are achieved, monitoring the processes involved in achieving the goals and learning from the mistakes so as to make amendments where necessary. The whole process takes a lot of determination and self-motivation.

Scholars who are able to self-manage their learning usually take charge of what they learn in order to achieve success (Foong, Ghouse, & Vadivelu, 2021; Zimmerman, 2000). Self-managed learners do not need to be coerced to learn, rather they arrange or set out a guide showing what is to be learned, how it will be done, and what is to be achieved. The learner is focused, hence is not easily distracted. Self-managed learners are versatile in knowledge and resilient. They have the discipline that enables them to learn both what is taught during lectures and other fields of interest (Wiener, 2010). Nobody can ever become big without aiming at success, getting committed to the goals, and also exhibiting the habit that will lead to success (Fosdick as cited in Covey, 2004). Self-managed learners are regarded by Ganda and Boruchoriteh (2018) as individuals who are coordinated, energetic, and very curious to learn. They think ahead and are not lazy in their day-to-day activities. It can be assumed that they do not participate in other social activities like partying, or visitations, but this is not the case because they prioritize their schedule to fit into different activities. After all, a proverbial statement says that anyone who puts all his efforts into working without taking time to play will eventually become bored (Kerouc, 2021). The attributes of self-managed learners as recommended by Winnie (2001 and 2005) include setting targets so that their learning capacity can be enhanced; putting their emotions under subjection; and regularly reviewing their achievements to make amendments where necessary.

It is however disheartening to note that some students who are admitted into the higher institutions of learning are not focused hence they get easily distracted by peer groups and other socializations. Nwanna-Nzewunwa (2009) opined that peer groups found in academic environments could be made up of intelligent students and the deviants. Nwanna-Nzewunwa (2009) expressed worries that the deviant students tend to have more powerful hookup than the academic minded peer groups. Students who allow themselves to be distracted by the wrong peer groups tend to loose control of their studies. Such students often rush through their books whenever it is time for an examination. The result of this unpreparedness is examination malpractice and other undesirable attitudes. As the saying goes, anyone who does not plan has already accepted failure (Franklin, 2020). Anybody who is determined to accomplish a task and who is bent on actualizing success in their chosen career should first draft out an individual plan. If there is no plan put in place, the tendency to be nonchalant comes in, and this can deprive students of maximizing their full potential (Blumenthal, 2004). Another proverbial statement says hurrying is a sign of mismanagement of time. Based on this Carnegie (n.d.) opined that somebody who is

focused, is capable of paying less attention to interferences. Pacesetters do not lose sight of what they are pursuing; they rather stay glued to their dreams. Evensen, Salisbury-Glennon, and Glenn (2001) observed that learners usually find it difficult to regulate their studies; based on this assertion, the researcher encourages students to self-manage their learning because it will help them to become pacesetters instead of yielding to unnecessary distractions.

In the midst of regular distractions from peer groups, social activities, phones, social media, and other electronic devices, it is worrisome to note that some undergraduates have not bought the idea of setting aside time for learning on their own. Some do not find it necessary apportioning extra time into expanding their knowledge other than what is taught during lectures. Such students only rush through their lecture notes during tests or semester examinations which make it difficult for them to perform creditable. The result of this unpreparedness is that students who fail to manage their learning activities find it difficult to cope with their school programs, and they find a short cut by indulging in examination malpractice or even carry over some courses which eventually lead them to graduate with poor grades or even end up as school dropouts. If this issued is not addressed, such students could end up becoming a menace to the larger society if they are not able to fit into the society. It is on this premise that the researcher deems it necessary to develop a tool that will be used in measuring the self-managed learning abilities of undergraduates of universities within Rivers State. Item response theory will be adopted to scrutinize the input and precision of each item and its contribution to the entire test. Therefore, the researcher hopes to develop and validate a self-managed learning tool that is indigenous, credible and if adequately put to use, will help in curbing the problem of students not managing their learning.

Aim and objectives of the study

The aim of the study is to develop a self-managed learning tool for undergraduates of universities within Rivers State. In specific terms, the objectives of the study include to:-

3. determine the factor adequacy level of the undergraduates self-managed learning tool.
4. determine the factor structure of undergraduates' self-managed learning tool
5. determine the ordinal reliability coefficient of undergraduates' self-managed learning tool.
6. determine the item information function of undergraduates' self-managed learning tool.

Research Questions

The following research questions guided the study:-

1. What is the factor adequacy level of undergraduates' self-managed learning tool?
2. What is the factor structure of undergraduates' self-managed learning tool?
3. What is the ordinal reliability coefficient of undergraduates' self-managed learning tool?
4. What is the item information function of undergraduates' self-managed learning tool?

Hypothesis

The following null hypotheses were formulated and tested at the significant level of 0.05.

1. There is no significant difference between the positive and negative items of undergraduate students' self-regulated learning scale

Methods

The design used for this study is instrumentation research design. Instrumentation research design is the techniques used in analyzing information gathered in specific areas of concern (Salkind, 2010). Instrumentation research design is therefore considered the most appropriate design for developing and validating this self-managed learning tool. This research study was carried out in the three universities within Rivers State excluding other higher institutions of learning. The population as at November, 2022 was estimated at 71,778; out of which a sample of 1,440 students was computed using the formula provided by National Educators Association (NEA) formula for sample size and confirmed by free online sample size calculator.

A multi-stage sampling procedure was adopted to draw the sample size. At stage one and two, purposive sampling technique was used to identify the universities within Rivers State excluding other higher institutions; and also select similar faculties that exist within the selected institutions. Finally, accidental sampling technique was used to pick students that participated in the study not minding their gender. The instrument used for data collection was logically developed and validated by the researcher. It was grouped into three sessions so as to elicit information from all aspects that affect ability to manage one's learning. This measurement tool is a non-cognitive questionnaire with a four-likert answering format of strongly agreed, agreed, disagreed and strongly disagreed. At the first instance, the researcher prepared a test blue print which specified the number of items to be included in the measurement instrument. As a follow up, one hundred and fifty (150) questions were developed and given to the experts to cross check and ascertain if it is actually measuring self-managed learning abilities, they went through and made some amendments; thus face validity was conducted. After which a pilot test was carried out by administering the instrument to three hundred (300) respondents which are not part of the

sample size. The scores generated were subjected to principal component analysis and three factors were loaded. Items whose factor loads fell below 0.5 were discarded, thereby reducing the items from 150 to 77.

With the help of three research assistants who were briefed on the importance of getting an accurate result, the 77 items were administered to the designated sample size of 1,440 undergraduates selected for the study, though, 1,390 was retrieved at the end of the process. The data generated from students was imputed into statistical package for social sciences (SPSS) version 25 and exported to R version 4.3.1 statistical programming package, where exploratory factor analysis was carried out. Items whose factor loads fell below the pre-determined cut off mark of 0.30; were discarded hence the items were reduced from 77 to 45. Nwankwo (2007) mentioned that factor analysis can be used as a strategy for ascertaining the construct validity of an instrument; therefore the author used this method to ascertain the construct validity of this instrument. Then, the item parameters of the remaining 45 items were estimated to ensure that they all had acceptable psychometric properties. From the analysis it was found out that items 41 to 45 had slope items of 0.09 and below so they are not acceptable; they were therefore discarded. The items were then brought down from 45 to 40. Content validity was then conducted by the researcher who gave the instrument to five specialists from the field of educational psychology, guidance and counseling to rate the relevance of the instrument by assigning numbers to each item as follows: Very relevant (VR = 1), relevant (R = 2), somewhat relevant (SR = 3), and not relevant (NR = 4). The data from the raters were collated, summed up and the mean for each of the items were computed. From the mean, the researcher found out that none of the items had a mean score below three (3.0) indicating that all the forty items were valid content wise. Hence, the researcher concludes that undergraduates' self-managed learning tool has a good content validity.

The author computed the reliability of undergraduates' self-managed learning tool using both Cronbach Alpha reliability and Ordinal Alpha reliability with statistical package for social sciences (SPSS) version 25 and R statistical programming package version 4.3.1 respectively. Finally, the information for each item was ascertained by plotting an item information function.

Results

Research question one: What is the factor adequacy level of undergraduates' self-managed learning tool?

To enable the author answer the above question, the data for the forty items was subjected to Kaiser-Meyer-Olkin test in statistical package for social sciences version 25 and the output is presented in Table 1:

Table 1 Kaiser-Meyer-Olkin Factor adequacy output from SPSS version 25 for undergraduates self-managed learning tool

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.758
Bartlett's Test of Sphericity	Approx. Chi-Square	16838.517
	Df	780
	Sig.	.000

In other to confirm the result in table 1, the data for the forty items were also subjected to Kaiser-Meyer-Olkin factor adequacy in R psych package of R statistics programming language. The output is presented in table 2:

```
> KMO(ussls)
Kaiser-Meyer-Olkin factor adequacy
Call: KMO(r = ussls)
Overall MSA = 0.76
```

Table 4.2: A brief version of Kaiser-Meyer-Olkin factor adequacy from R Psyche

Items	KMO Value
1	0.68
2	0.65
3	0.66
4	0.76
5	0.73
6	0.74
7	0.65
8	0.75
9	0.57
10	0.72

Table 1 shows that the result of Kaiser-Meyer-Olkin factor adequacy level computed by statistical package for social sciences (SPSS) version 25 is 0.758 while that computed by Rpsyche programming package version 4.3.1 is approximately 0.76. Since the overall Measure of sampling adequacy (MSA) from both statistical package for social sciences (SPSS) and that from R Psyche programming package approximated to 0.76, it indicates the factor adequacy level of undergraduates' self-managed learning tool is adequate, hence the factor structure can be computed.

Research Question two: What is the factor structure of undergraduates' self-managed learning tool?

To enable the author answer the above research question, exploratory factor analysis was computed for the forty items. The factor loadings of each of the items were then imputed into excel spreadsheet package for ease of computations. Each of the factor loadings were squared. The squared factor loadings were added horizontally to get the eigen values; and also summed up vertically to get the communality. A brief section showing the factor structure matrix which answers research question two is presented in table 2.

Table 2: A compressed section of the factor structure matrix for undergraduates' self-managed learning tool

Items	Factor MR1	MR1 ²	Factor MR2	MR2 ²	Factor MR3	MR3 ²	Communality h ²
1	-0.01	0.0001	0.42	0.1764	0.04	0.0016	0.1781
2	0.02	0.0004	0.32	0.1024	-0.13	0.0169	0.1197
3	0.03	0.0009	0.50	0.2500	0.03	0.0009	0.2518
4	0.06	0.0036	0.40	0.1600	0.07	0.0049	0.1685
5	-0.02	0.0004	0.45	0.2025	-0.05	0.0025	0.2054
Eigen values $\Sigma(F1, F2, F3)$		4.9333		2.9704		1.6392	F1+F2+F3 9.5429
% of total variance $(\frac{4.9333}{40}) \times 100$		12.33325		7.426		4.098	23.85725
% of total communality $(\frac{12.33325}{23.8525}) \times 100$		A 51.69602532		B 31.12680632		C 17.17717	A+B+C 100

Table 2 shows the factor structure of undergraduates' self-managed learning tool.. The factor structure matrix shows the eigen values for factors 1, 2, and 3 all squared as 4.93, 2.97, and 1.64 respectively and they are all greater than ($>$) than one which indicates that all the factors loaded well. Since there was more than one factor whose eigen values were greater than one, it confirms that undergraduates' self-managed learning tool is multi-dimensional in nature, which is why a multi-dimensional item response theory is applied in assessing the psychometric properties of this instrument. Their communality (h^2) is 9.54. Similarly, the percentage (%) of total variances for square of factors 1, 2, and 3 are 12.33, 7.43, and 4.10 respectively; and their percentage of communality is 23.86. Lastly, percentage (%) of total communality ($\%h^2$) for square of factors 1, 2, and 3 are 51.70, 31.13 and 17.17 which gives a total sum of 100% for the communality.

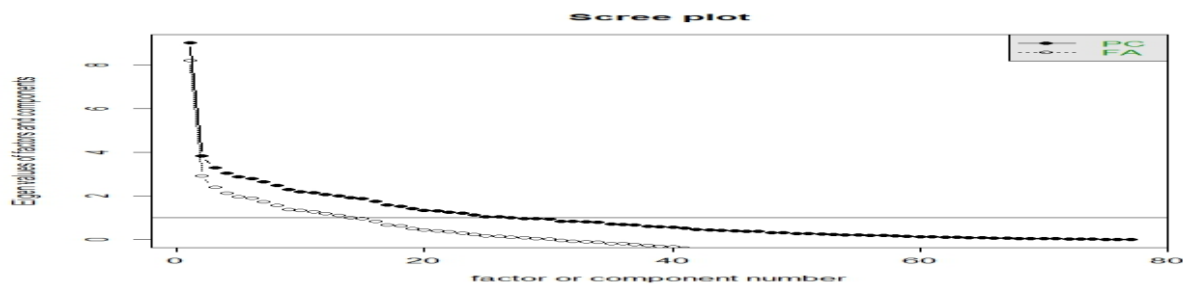


Figure.1: Scree plot for exploratory factor analysis

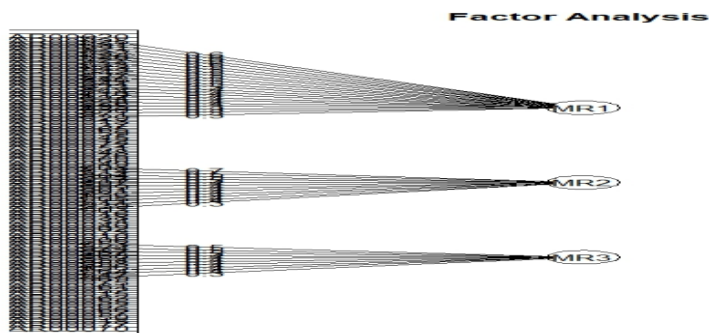


Figure 2- Minimum Residual plot

The scree plot is a graph which gives a picture of the eigen values plotted against the component numbers. An eigen value is either in plus (+) or minus (-) form; the scree plot shows that the eigen values of this factor structure is in positive form and the values are also above zero which indicates that the result is good. The curve slopes from the vertical axis to the horizontal axis and gradually but steadily laps with the component number line which confirms that preceding factor loads get smaller and smaller quantities of the total variance. Normally, the first component will get the largest total variance followed by the others. As can be seeing from the factor structure on table 1, loadings for the first factor are greater than the second, then the others. This is why eigen value, total variance and communalities reduced systematically.

The graph shows that the marking point is at eleven meaning that it is possible for factors to load up to eleven (11) components after which it will no longer be useful for further component extraction to be made; it explains why the slope got smaller after the marking point and almost lapped with the component number axis (horizontal axis). The researcher however deliberately fixed the factor extraction to three for ease of interpretation.

Research Question three: What is the ordinal reliability coefficient of undergraduates' self-managed learning tool?

To enable the author answer the above research question, the data from the forty items of undergraduate students' self-regulated learning scale were subjected to Cronbach Alpha reliability in statistical package for social sciences (SPSS) version 25. The output is presented in table 4.4. As a follow-up, the data for the forty items was imported from statistical package for social sciences to R programming package where ordinal Alpha reliability was computed. The output is presented in tables 3 and 4.

Table 3: Reliability statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.854	0.851	40

Table 4: Ordinal Alpha reliability

```
> library(psych)
> alpha(USLT)
```

Reliability analysis
Call: alpha(x = USLT)

raw_alpha	std.alpha	G6(smc)	average_r	S/N	ase	mean	sd	median_r
0.85	0.85	0.9	0.12 5.7	0.0055	3.1	0.3	0.12	

95% confidence boundaries

	lower	alpha	upper
Feldt	0.84	0.85	0.87
Duhachek	0.84	0.85	0.87

A summarized section showing reliability if an item is dropped:

	raw_alpha	std.alpha	G6(smc)	average_r	S/N	alpha se	var.r	med.r
VAR00001	0.85	0.85	0.90	0.13 5.6	0.0056		0.014	0.12
VAR00002	0.85	0.85	0.90	0.13 5.7	0.0055		0.013	0.12
VAR00003	0.85	0.85	0.90	0.13 5.6	0.0056		0.013	0.12
VAR00004	0.85	0.85	0.90	0.13 5.6	0.0056		0.013	0.12
VAR00005	0.85	0.85	0.89	0.12 5.5	0.0056		0.013	0.12
VAR00006	0.85	0.85	0.89	0.12 5.5	0.0057		0.013	0.12
VAR00007	0.85	0.85	0.90	0.13 5.7	0.0055		0.013	0.13
VAR00008	0.85	0.85	0.90	0.13 5.6	0.0056		0.013	0.12
VAR00009	0.85	0.85	0.90	0.13 5.7	0.0055		0.013	0.13
VAR00010	0.85	0.85	0.90	0.13 5.6	0.0055		0.013	0.12

The output in tables 3 and 4 show the Cronbach Alpha reliability coefficient and the ordinal Alpha coefficient. The two tables gave an Alpha reliability coefficient value of 0.85. Reliability values fall between zero (0) to one (1), hence a value of 0.85 indicates that the undergraduates' self-managed learning tool is reliable.

Hypothesis one: There is no significant difference between the positive and negative questionnaire items.

To enable the author test this null hypothesis, the data for the forty (40) items containing both positive and negative questions were subjected to non-parametric chi square test of

significance via statistical package for social sciences (SPSS) version 25. The output is presented in table 5. The output indicated if the null hypothesis will be accepted or rejected.

Table 5 A summarized section of the Chi square test of significance for undergraduates' self-managed learning tool

Item no.	Chi-square value	Degree of freedom (df)	Critical value of chi square	Observation
1	816.613a	3	7.82	Significant
2	1135.485a	3	7.82	Significant
3	1095.554a	3	7.82	Significant
4	731.295a	3	7.82	Significant

The chi square values were compared with the chi square critical values at the degree of freedom of three (3) and 0.05 level of significance which gave 7.82 for all the items. Since the chi square values of all the items are greater than the chi square critical values, the null hypothesis which states that there is no significant difference between the positive and negative items is rejected. This means that there is a significant difference between the positive and negative questionnaire items. This difference might be attributed to negative questions which are usually more difficult to comprehend.

Research Question four: What is the item information function of undergraduates' self-managed learning tool?

One good thing about item response theory is that information for each item is added up to form a test information function. The item information function gives a picture of the level of information provided by each item. Every item in figure 3 assesses the underlying unobserved construct. Information is represented by $I(\Theta)$ shown on the vertical side of the graph. The level of information is plotted against ability, to get the item information function.

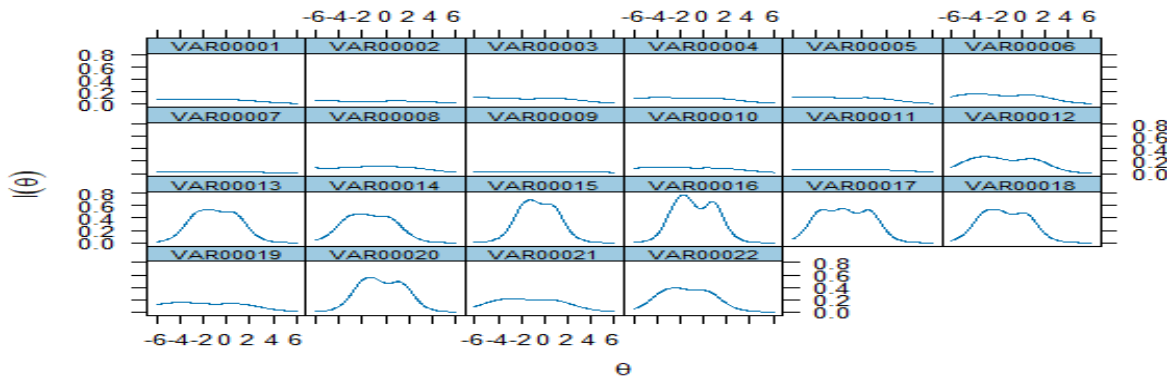


Figure 3 - Part of the item information function for undergraduate self-managed learning tool

From the set of item information functions items one (1) to eleven (11), nineteen (19), twenty one (21), twenty three (23), twenty eight (28), thirty one (31), and thirty five (35) to thirty eight (38) did not add much information to the test information function. However, the slopes of items twelve (12) to eighteen (18), twenty (20), twenty two (22), twenty four to twenty seven (27), twenty nine (29) to thirty two (32), thirty three (33) to thirty four (34), and thirty nine (39) to forty (40) indicated that they added more information to the test information function.

The overall Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) for the test is 0.76 which shows that the factor adequacy level of undergraduate students' self-regulated learning scale is middling. The result obtained by Dewanti, Hadi, Numan & Ibrahim (2021) yielded an overall sampling adequacy level of 0.783 which seemed to be approximately on the same level with that obtained by the researcher. Zampetakis, Lerakis, Kafetsics & Moustakis (2015) obtained a measure of sampling adequacy (MSA) value of 0.88 while Tan et al (2019) had an overall measure of sampling adequacy (MSA) of 0.903 which was considerably greater than that obtained by the researcher. All the values obtained by these researchers are suitable values for factor analysis.

The factor structure showed forty (40) items with three (3) factors whose eigen values were approximately 4.93, 2.97, and 1.63 respectively; their communality (h^2) is 9.54. Percentage (%) of total variances for square of factors 1, 2, and 3 are 12.33, 7.42, and 4.09 respectively; and their percentage (%) communality totaled 23.85. Lastly, percentage (%) of total communality (h^2) for square of factors 1, 2, and 3 are 51.70, 31.13 and 17.17 which gives total sum of 100% for the communality. The first factor accounts for approximately 52% of the total variance. Lambaerts, Engels, Athanasou (2007) also yielded a three-factor structure which is in agreement with that of

the researcher. Zampetakis, Lerakis, Kafetsics & Moustakis (2015) extracted three (3) factors with eigen values of 5.38, 3.30, and 1.27 accounting for 26.89, 16.47 and 6.31 of the total variance, respectively. The three factors extracted is in agreement with that of the researcher. Zanon, Hutz, Yoo & Hambleton (2016) identified two principal factors that explained 38.4% of total variance. The factor analysis carried out by Dewanti, Hadi, Numan & Ibrahim (2021) extracted only one (1) factor because only one component had an eigen value of 2.512 greater than one (1), hence the four (4) items assessed were loaded under one (1) factor which explained about 62.79% of the total variance, Three factors which accounted for 47.7% of the variance was extracted by factor analysis in the studies carried out by Tan et al (2019).

The Cronbach and Ordinal Alpha reliability coefficients obtained by the researcher both gave a value of 0.85. Salehi and Jafari (2005) as well as Wali (2016) got a Cronbach alpha reliability coefficient of 0.85 as well. The Cronbach Alpha reliability coefficient obtained by Zampetakis, Lerakis, Kafetsicd & Moustakis (2015) was 0.87 which is almost the same value obtained by the researcher. The Cronbach alpha reliability coefficient obtained by Dewanti, Hadi, Numan & Ibrahim (2021) is 0.796 is slightly lower than that obtained by the researcher. However, the Cronbach alpha reliability coefficient obtained by Oz and Sen (2018); Erdogan and Senenoglu (2016); Tan, Loh & Zhang (2019); and Adeola (2021) were approximately 0.90 which is also slightly higher than the coefficient obtained by the researcher. All the researchers mentioned above determined the reliability of their measuring instrument using Cronbach Alpha reliability while the researcher used both Cronbach Alpha reliability and Ordinal Alpha reliability to determine the reliability of undergraduate students' self-regulated learning scale, though they both gave the same coefficient of 0.85.

There was a significant difference between the negative and positive items. The difference could be traced to the negative items being slightly more difficult to understand. This finding is in agreement with that of Zanon, Hutz, Yoo & Hambleton (2016) who also discovered that the positive and negative scales were significantly different.

3. Undergraduate students are encouraged to imbibe the habit of managing their learning because it will help them expand their knowledge academically, and give them an edge over other students as well as give them the privilege of inculcating a habit that will be spread to other aspects of life.

4. Lecturers in Nigerian Universities should consider evaluating students using both cognitive and non-cognitive tests such as undergraduates' self-managed learning tool because the instrument possesses appropriate psychometric properties

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Artificial Intelligence Innovations in Universities in South-South Nigeria - Assessing the Perception of Lecturers in the Field of Educational Technology

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Abstract

This study explores the views of education technology lecturers on artificial intelligence (AI) innovations in universities located in South-South Nigeria. The research has two primary objectives, guided by research questions and one null hypothesis, using a descriptive survey design. The study's population consists of 1,990 education technology lecturers in the region, from which a purposive stratified random sample of 199 lecturers was selected. Data were collected through the Perception of Education Technology Lecturers Questionnaire (POETLQ), utilizing a modified four-point Likert scale ranging from Strongly Agree to Strongly Disagree, with a reliability index of 0.85. The validity of the instrument was confirmed by experts from the University of Port Harcourt. Statistical analysis involved mean, standard deviation, and ANOVA to test hypotheses at a 0.05 significance level. The findings reveal a strong perception of AI innovations among education technology lecturers, with senior lecturers showing a more favorable view, though this difference was not statistically significant. The study concludes that no significant differences exist among lecturers of varying ranks and recommends that senior lecturers collaborate with their peers in adopting AI innovations. It also advocates for universities to offer training and workshops to foster professional development.

Keywords: Artificial Intelligence, Innovations, Perception.

Introduction

Perception, a fundamental cognitive process, plays a pivotal role in shaping human behavior, decision-making, and responses to external stimuli. Understanding the intricate steps of perception is crucial in the context of innovation adoption and persuasive communication. This analysis

provides a step-by-step breakdown of the perception process, elucidating the complexities and nuances involved in how individuals interpret and understand information. Perception begins with sensation, in which sensory organs receive raw stimuli from the environment. This initial stage involves the activation of sensory receptors such as the eyes, ears, nose, tongue, and skin, leading to the formation of sensory experiences. These sensations provide raw data upon which the perceptions are built. Not all sensory information is equally processed. Attention filters and selects specific stimuli for further processing Anekwe, & Williams, (2014). Factors such as novelty, intensity, contrast, and relevance influence what individuals pay attention to. In the context of innovation adoption, attention plays a critical role in attracting individuals toward novel ideas or products.

Interpretation: Once attention is focused on a particular stimulus, the brain interprets sensory information. Interpretation involves assigning meaning to stimuli based on existing knowledge, experience, and cultural context. Cognitive schemas and mental frameworks developed through past experiences significantly influence interpretations. For innovation, individuals interpret features and benefits, aligning them with their needs and desires. Raw sensory data are often ambiguous and fragmented. **Perceptual organization** refers to the brain's ability to organize sensory information into coherent and meaningful patterns. Gestalt principles such as proximity, similarity, closure, and continuity guide how individuals perceive and group stimuli. In the context of innovation, effective design and presentation influence how a product or idea is perceived and understood. **Perceptual integration** combines various sensory inputs into unified and coherent perception. This stage involves synthesizing information from different senses to create a holistic perception. For innovations, integration occurs when individuals combine visual, auditory, and tactile cues to form a comprehensive understanding of the product or idea. **Perception of Depth and Distance:** In the perception process, individuals gauge the depth and distance of the objects in the environment. Depth perception allows people to perceive innovations spatially, understand their dimensions, and understand how they fit into the surrounding world. Innovations presented visually, such as advertisements, leverage depth cues to create a sense of realism and proximity. **Perceptual Constancy:** Perceptual constancy ensures that individuals perceive objects as stable and unchanging despite variations in sensory input. For innovations, perceptual constancy allows consumers to consistently recognize core features and benefits, even in different contexts or

presentations. Maintaining a consistent message and branding reinforces perceptual constancy in consumers' minds (Adeola et al., 2020). Understanding this step-by-step process of perception provides valuable insights for innovators and communicators. By comprehending how sensory input is selected, interpreted, organized, integrated, and maintained, persuasive messages can be effectively tailored. Innovations that align with the perceptual processes of the target audience are more likely to be positively perceived, leading to increased adoption rates and successful integration into the market.

Purpose of the study

The purpose of the study is to determine Education Technology Lecturers' perception on Artificial Intelligence Innovation in Universities in South-South Nigeria. Specifically, the study is to:

1. determine the education technology lecturers' perception on artificial intelligence innovation
2. To find out education technology lecturers' perception on artificial intelligence innovation based on cadre

Research Questions

1. What is the perception of education technology lecturers on Artificial Intelligence Innovations?
2. Does cadre influence education technology lecturers' perception of artificial intelligence innovation?

Hypotheses

H₀₁: Cadre does not significantly influence education technology lecturers' perception, of artificial intelligence innovations

Review of related Literature

According to Alina, and Natal'ya, (2021), people must adjust to new technologies that are continually being developed in the face of technical obstacles. While other human traits and socioeconomic traits of various social groups can also be thought of as drivers of openness to technological breakthroughs, this discussion will focus on how innovations are perceived. Based on this supposition, the authors of this article set the following goals: they assess the population's

openness to innovation (by creating an index), look at how innovation is perceived (by identifying what influences this perception), and test the relationship between openness to innovation and how new technologies are perceived. The multi-domain index of openness to innovation incorporates evaluations of each person's attitude toward, acceptance of, and trust in innovations in several aspects of their life. The Davis Technology Acceptance Model reveals how people perceive innovation, which includes how new technologies are perceived to be easy to use, useful, secure, and reliable, as well as how they are perceived to have elitist features. This study shows that different population groups have distinct perceptions of new technologies, which influences their openness to innovation. This study is comparable to the current study, which examined how lecturers in educational technology at Nigerian universities perceived and used innovations in artificial intelligence (AI). The fact that both of them are looking at perception as a variable and among professionals gives it relevance.

Evla, and Murat, 2018; Chaka and Govender (2017) in their findings, submitted that based on the unified theory of acceptance and use of technology (UTAUT) model, performance expectancy, effort expectancy, social influence, and mobile learning conditions are positively correlated with behavioral intention and significantly predict students' intention towards m-learning. Odede, (2021) in his work Innovation and Value: Customer Perception, Application, and Concept, also Owen, et al (2021) sought to understand the way individuals Perceive and engage Technology Innovations. According to Alina, and Natal'ya, (2021), people must adjust to new technologies which are continually being developed in the face of technical obstacles. While other human traits and socioeconomic traits of various social groups can also be thought of as drivers of openness to technological breakthroughs, their discussion was focus on how innovations are perceived. Based on this supposition, the authors of the article set the following goals: they assess the population's openness to innovation (by creating an index), look at how innovation is perceived (by identifying what influences this perception), and test the relationship between openness to innovation and how new technologies are perceived. The multi-domain index of openness to innovation incorporates evaluations of each person's attitude toward, acceptance of, and trust in innovations in several aspects of their life. The Davis Technology Acceptance Model reveals how people perceive innovation, which includes how new technologies are perceived to be easy to use, useful, secure, and reliable, as well as how they are perceived to have elitist features. This study shows that

different population groups have distinct perceptions of new technologies, which influences their openness to innovation. This study is comparable to the current study, which examined how lecturers in educational technology at Nigerian universities perceived and used innovations in artificial intelligence (AI). The fact that both of them are looking at perception as a variable and among professionals gives it relevance.

The work by Odede, (2021) on mobile learning (m-learning) Gregory, and Heidi, (2021) seeks to understand and quantify how people perceive the meaning of the word "innovation" and its total value. The research that informed this study was done by (Caraballo, & McLaughlin, 2012; Zhuang, 1999). The study supported earlier research (Caraballo & McLaughlin, 2012), which recast innovation as a multidimensional entity. The research from 2019 was able to show distinctions between those with and without technical backgrounds.

In this study, Odunayo et al. (2022) examined the impact of technology's perceived utility on several important outcomes in Nigeria. identifying specifically how the perceived value of technology in the oil and gas industry is influenced by employee performance. The impact of individual variables on the rate of adoption of new technology is one of the most crucial study problems in the field of technology, according to Kamel, and Dahawy, (2005) in their article Perception and/or Individual Difference: What Affects the Acceptance of New Technology. This study looked at a model proposed by Agarwal and Prasad (1999) that combines the elements from the Technology Acceptance Model (TAM) with the impact of individual characteristics on technology acceptance. examines the Agarwal and Prasad (1999) model using a case study from Egypt. In Teachers' perceptions of the impact of technology on children and young people's emotions and behaviors, *Annita, et al.*, (2021) noted that an increasing number of children and young people (CYP) use technology daily for educational, amusement, and socialization purposes due to the development of new technology and the central role it plays in contemporary times. Although the impact of technology on children's mental health and education has been extensively studied, there is a need to understand the teacher's point of view which will help in understanding the practical concerns around the usage of technology in the classroom and how their perspectives influence their actions. The findings revealed that instructors understood the value of technology as a teaching and learning tool, provided it is used responsibly. Wilkowska, et al, (2022) mentioned

that technological innovations such as artificial intelligence should be prioritized in whole-school initiatives today more than ever.

Q-methodology research, by Yenilmez, et al., (2021) used the Q technique to research and investigate how science teachers view the nature of technology. Caraballo, and McLaughlin, (2012), in another study, investigated how people perceive the meaning of the word "innovation" and its total value. This research study was done by (which looked at a particular and largely homogeneous socio-cultural group (Hispanic IT Professionals pursuing higher academic development). The perception of innovation varied significantly among generational cohorts in the prior study. This new study chooses a group of MBA students from a (Zhuang, 1999). The study supported earlier research (Caraballo & McLaughlin, 2012), which recast innovation as a multidimensional entity. The research from 2019 was able to show distinctions between those with and without technical backgrounds. The findings make marketing and sales efforts to this heterogeneous demographic even more difficult. These studies examine perception, however, the current study examines how lecturers in educational technology at universities in Nigeria perceive intelligence (AI). innovations in artificial It is significant since both of them are looking at perception as a factor.

In this study, *Odunayo et al.* (2022) examined the impact of technology's perceived utility on several important outcomes in Nigeria. Clarifying the specific ways in which the perceived value is addressed in Dahawy's (2005) article, "*Perception and/or Individual Difference*," is essential for a deeper understanding. What influences technology acceptance? Agarwal and Prasad (1999) integrate elements of the Technology Acceptance Model (TAM) with the effects of individual characteristics on the adoption of technology. To investigate the impact of individual variations on the adoption of employing technology in teaching courses for Certified Public Accounting (CPA), the research examines the Agarwal and Prasad (1999) model using a case study from Egypt.

In Teachers' perceptions of the impact of technology on children and young people's emotions and behaviors, *Annita, et al.*, (2021) noted that an increasing number of children and young people (CYP) use technology daily for educational, amusement, and socialization purposes due to the development of new technology and the central role it plays in contemporary times. Although the impact of technology on children's mental health and education has been extensively studied, there is a need to understand the teacher's point of view which will help in understanding the practical

concerns around the usage of technology in the classroom and how their perspectives influence their actions. The purpose of their study was to find out what teachers thought about how using technology impacts children's emotions and behavior.

Methodology

This study employed a descriptive survey research design and was carried out in the South-South Geopolitical Zone of Nigeria, covering an area of approximately 84,587 square kilometers. The region comprises six states: Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers. The study population consisted of 1,990 education technology lecturers from the Departments of Curriculum Studies and Education Technology across 31 universities in the South-South zone. The sample size of 199 participants was determined using the Taro Yamane sampling method, with a multi-stage sampling technique employed to select the participants systematically. Data collection utilized the Artificial Intelligence Innovation Perception of Education Technology Lecturers Questionnaire (AIIPETLQ), which was validated by experts and achieved a reliability coefficient of 0.85 using Cronbach's Alpha. The instrument was distributed both electronically and in hard copy format to gather responses from participants. The data collected were analyzed using descriptive statistics, specifically mean scores and standard deviations. A decision criterion means of 2.50 was set, where items with mean scores of 2.50 or higher were considered acceptable. Mean and standard deviation were used to address all research questions, while Analysis of Variance (ANOVA) was employed to test the study's hypothesis.

Results and Discussion

Research question 1. What is the perception of education technology lecturers on Artificial Intelligence Innovations?

Table 1: Mean and standard deviation of lectures Perception on Artificial intelligence innovation

S/N	Items	N	Mean	Std. D	Remark
1	I have an understand of how Artificial Intelligence tools function generally	125	2.53	.50	Reject

2	I think AI tools such as QuillBots, Spinbots, Grammarly, ChatGBT, Bing, Copy AI, Wordtune, RefWorks, EndNote, Zotero, Paperpal, Jasper AI, Mathway, Wolfram Alpha, Maple Calculator, etc., are relevant in modern education.	125	2.75	.41	Reject
3	I believe integrating AI tools such as QuillBots, Spinbots, Grammarly, ChatGBT, Bing, Zotero, Paperpal, Score AI, Scispace, Elicit.org, Consensus AI, Open Read, Jenni AI, and so on enhances reviews and research activities.	125	2.26	.44	Reject
4	I believe AI tools like Edu Birdie, Undetectable AI, Chugzi, Jarvis, HIX.AI, Hypotenuse AI, and so on., stifle creativity.	125	3.35	.48	Accept
5	I believe that artificial intelligence can revolutionize education.	125	2.76	.43	Accept
6	I believe AI image-creating tools like Adobe Firefly, Bing Image Creator, Lensa AI, Pixray Image Creator, Playground AI, Spark AI, Topaz Photo AI, BigSleep, etc., enhance traditional education effectively.	125	2.51	.50	Accept
7	I consider staying updated on AI-related research tools crucial for educators.	125	3.06	.69	Accept
8	I believe AI tools like Zotero, Paperpal, Score AI, Scispace, Elicit.org, Consensus AI, Open Read, Jenni AI play a significant role in addressing literature review challenges.	125	3.02	.71	Accept
9	Mathematical tools like Microsoft Math Solver, MyScript, Symbolab, Demos, GeoGebra, Minitab, Runiter, AMY, etc., can encourage laziness and lack of seriousness in users.	125	2.79	1.01	Accept
10	I'm willing to invest time and effort in adopting and effectively using image creator AI like Wombo Dream, Night Café, Starryai, Upscaler, Deep AI, Midjourney, Craiyon, Jasper art.	125	2.58	.91	Accept
11	I see AI mathematical tools like SymbMath, Photomath, Socratic, Mathway, Wolfram Alpha, Brilliant Mathematics, and Microsoft Math Solver as unnecessary disruptions to the educational process.	125	2.53	.50	Accept
12	I'm concerned about using literature review AI tools like Elicit.org, Consensus AI, Open Read, Jenni AI, Explain Paper, Paper Digest, Chatdoc.com, ChatGPT.	125	2.50	.50	Reject

13	I'm interested in using AI paraphrasing tools (Semrush, AISEO, SpinnerChief, PrepostSEO, Editpad, Paraphrase-tool.com, Paraphrase-online.com, Rewrite, QuillBots, Spinbots) for writing, reviews, and research purposes.	125	2.06	.69	Reject
14	The use of AI paraphrasing tools like QuillBots, Spinbot, Copy AI, Wordtune, Jasper AI, Grammarly, WordAI, Writesonic, Paraphraser.io, etc. is distracting to students.	125	3.34	.80	Reject
15	I'm concerned about ethical and privacy issues with AI when using literature reviewing tools like CiteThisForMe, RefWorks, EndNote, Zotero, Paperpal, Score AI, Scispace.	125	2.79	.41	Accept
16	I believe I can do very well professionally without AI in this 21st century	125	3.53	.50	Accept
Average			2.77	0.50	

The Perception of Education technology lecturers in universities in South-South Nigeria on Artificial intelligence innovations has the grand mean of 2.77 indicating that education technology lecturers have a strong perception of artificial intelligence above the criterion mean of 2.50. Education technology lecturers preferred item 16 which states “I believe I can do very well professionally without artificial intelligence in this 21st century” (3.53, SD=0.50). Item 13 “I'm interested in using AI paraphrasing tools (Semrush, AISEO, SpinnerChief, PrepostSEO, Editpad, Paraphrase-tool.com, Paraphrase-online.com, Rewrite, QuillBots, Spinbots) for writing, reviews, and research purposes,” was least preferred with (2.08, SD=0.69).

Research Question 2 : Does carder influence education technology lecturers’ perception of artificial intelligence innovation?

Lecturer's Carder * Perception Cross tabulation

Table 2

	Carder / Perception					Total
	Strongly Disagree	Disagree	agree	Strongly Agree	Neutral	

Lecturer's Carder	Graduate Assistant	0	3	6	1	3	13
	Assistant Lecturer	3	1	7	1	0	12
	Lecturer II	1	3	4	4	0	12
	Lecturer I	1	2	4	3	0	10
	Senior Lecturer	2	4	30	14	3	53
	Reader/Ass. Prof.	1	0	3	7	2	13
	Professor	0	2	5	4	1	12
Total		8	15	59	34	9	125

Table 2 above illustrates the impact of cadre on the perceptions of education technology lecturers regarding Artificial intelligence innovation, with Senior Lecturers being the highest influenced. As follows Laggards 1, Late Majority 4, Early Majority 30, Early Adopter 14, and Innovators 3 making a total of 53. Lecturer I, carder did not respond positively to Artificial intelligence innovation adoption being the lowest 10. Graduate assistant carder had 14, Assistant Lecturer carder 12. Lecturer II carder 12, and Professor Carder 12 each. The lecturer I carder did not respond positively to Artificial intelligence innovation adoption being the lowest with 10.

H₀₁: Cader does not significantly influence education technology lecturers' awareness, perception, and innovation adoption category

ANOVA

Lecturer's Cader

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.006	1	.006	.002	.967
Within Groups	312.899	63	3.365		
Total	312.905	62			

The above table presents the results of lecturers' perception across different cadres. **Between Groups Analysis:** Sum of Squares (SS): .006, Degrees of Freedom (df):1, Mean Square (MS): .006, F-statistic (F): .002. Significance (Sig.): .967. These values indicate that the variance between the groups is very small compared to the variation within the groups. The F-statistic is extremely low, and the p-value (Sig.) is high, suggesting that there is no significant difference between the means of the groups in terms of lecturer cadre. **Within Groups Analysis:** Sum of Squares (SS): 312.899, Degrees of Freedom (df): 63. Mean Square (MS): 3.365 This represents the variation within each group, which is substantial compared to the variation between groups. **Total:** Sum of Squares (SS): 312.905, Degrees of Freedom (df): 62 This encompasses the total variability in the data.

The findings showed that the perception of education technology lecturers in South-South Nigeria on Artificial intelligence innovations is high. This agrees with (Chaka and Govender, 2017; Odede, 2021) that noted that students at Nigerian institutes of education have a favorable opinion of mobile learning and are willing to adopt it. Odunayo et al. (2022) specifically examine how employee performance influences the perceived value of technology in the oil and gas industry. The finding demonstrated that the salient outcomes for oil and gas personnel are significantly influenced by the perceived usefulness of technology. This study agreed with the current study that education technology lecturers have a high perception of artificial intelligence innovation. While, Yenilmez, et al., 2021; Alina, and Natal'ya, 2021; Evla, and Murat, 2018; *Owen, et al*, 2021; and *Odunayo et al.*, 2022) in their various studies disagree with the findings of this present study.

The findings on cadre influence indicate that the perception of artificial intelligence innovation among education technology lecturers was most significantly impacted at the Senior Lecturer level. Responses included 2 strongly disagree, 4 disagree, 30 agree, and 14 strongly agree .and 3 Neutral making a total of 53. Although, generally cadre did not significantly influence education technology lecturers' awareness, perception. This study agrees with Cakiroglu et al., 2022; Adeola et al 2020; Panel Abid et al. (2022) Their findings reveal that factors influencing university professors' adoption of smartphones include professional needs and academic responsibilities, aimed at ensuring inclusive, equitable, and high-quality education for all students. This therefore implies that the Perception of education Technology Lecturers are very important despite cadre.

However, MacCallum (2019) disagrees with this finding as his study revealed the inability of some professors to utilize digital technology and the capability required to incorporate it into their instruction.

Conclusion

In conclusion, this study analyzed the Perception of artificial intelligence innovations among 125 education technology lecturers in South-South Nigerian universities. It found that there is a strong perception of AI innovations among education technology lecturers.

Recommendations

The study suggests that promoting expert forums and promoting knowledge dissemination can sustain the growth of educational technology instructors. Future projects should build on these findings to improve AI integration in South-South Nigerian universities.

Universities should encourage collaboration and knowledge-sharing platforms to promote and enhance positive perception of artificial intelligence innovations among education technology lecturers. This study also recommends that universities in the South-South Nigeria should implement strategies to ensure equitable access to AI technologies, promoting diversity and equality in the academic landscape.

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