

Influence of Classroom Interactions on Students' Academic Performance in Secondary Schools in Rivers State, Nigeria.

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Abstract

The study centred on Influence of Classroom Interactions on Students' Academic Performance in Secondary Schools in Rivers State, Nigeria. The descriptive survey research design was adopted for this study. The population of the study was 34 public senior secondary schools with the total population of 874 (teachers) and 1,346 (students) in Port Harcourt Metropolis schools, Rivers State Nigeria. The sample size was 262 (teachers) and 404 (students) using 30% of the total population. The instrument used for this study was questionnaires titled, Class Interaction and Student Academic Performance Questionnaire (CISAPQ). (15) Items were drawn for the study. The respondents were requested to response to research questions rated on 4-points scale of: Very High Extent (VHE), High Extent (HE) Very Low Extent (VLE) and Low Extent (LE). Thus, 666 copies of questionnaires were distributed and retrieved 538 (81%) copies for the analysis of research questions using mean scores with standard deviation and Z-test for the hypotheses. The findings revealed that when the teachers create an interactive environment during teaching and learning process, it elevates students' mindset to improve on their student academic performance. It was therefore recommended that school administrators should persuade the teachers to create an interactive environment that will improve communication with the students and discussion method should be initiated assiduously to captivate students' interest in the subject matter of the topic.

Keywords: Classroom Interaction, Students' Academic Performance, Communication Skills, Discussion and Demonstration Methods.

Introduction

It is widely accepted that education is one of the leading tools for promoting growth and development of individuals and the society. Through education, individuals acquire knowledge, skills and attitude that are necessary for effective living. However, to facilitate the process of knowledge sharing, teachers and students must communicates appropriately in the classroom using interactive techniques that best suit specific objectives and expected academic outcomes (Chrisantus, 2019). For Sita (2010) classroom interaction is everyday activities between the teacher and the learners. Interaction commonly defines as a kind of action that occurs as two or more objects has an effect upon one another. The idea of a two-way effect is essential in the concept

of interaction, as opposed to a one-way causal effect. Education with its correlated activities of teaching and learning process involves interaction between teacher and students as channels of realizing its objectives. Interaction occurs every day in teaching and learning process thus it is managed by everyone, not only by the teacher in the classroom, but also the students. This therefore implies that interaction is usually used to express their ideas all together.

The teacher in teaching and learning process focuses on the best method, looking for the most appropriate approach, design of materials, or set of procedures in a particular case. In this case, the teacher is being flexible, while keeping interaction central in respects of interaction between teacher and learners, learners and teacher, learner and learner, learner and authors of texts, learner and the community that speaks the language. Thus, the situation required that the teachers have to be direct and non-dominated in the classroom because Interaction cannot be one-way, but two-way, three-way or four-way. Education is a social process which brings positive changes in the behavior, character and knowledge of the students. A school is one of the social institutes established to achieve specific goals of bringing changes in the behavior, knowledge and character of the students. The teacher is not mere a transmitter of knowledge, he is rather supposed to play quite a significant role in modifying the modes of thinking and acquitting among students. In this regard instructions towards purposeful direction are quite necessary for the success and fecundity of learning process (Liaqat, Iqbal & Khuda, 2011). This modified role of teacher requires that classroom interaction be an active process rather than passive one. It should be a communication and both the parties (students and teachers) be actively engaged for its best accomplishment.

According to Whitaker (2004), the main variable in the classroom is not the student, but the teacher. Great teachers have high expectations for their students, but even higher expectations for themselves. These teachers recognize the importance of connecting with their students, that if they are unable to connect with them emotionally then influencing their minds may be impossible. For both teachers and learners to be actively involved in the teaching and learning process, the method in use ought to create opportunity for the required interaction to take place. It is an interpersonal transaction between the teacher and student which occurs at different levels. This encompasses a lesson situation during which the teacher and students through their verbal and non-verbal actions have reciprocal effect on each other. In particular, the relationship between students and their teachers is an essential part of teaching and learning process and it is expected to have a great effect on students' learning experiences. Interaction in the classroom is an essential part of teaching learning process. This action may be verbal or nonverbal. By this circumstance, it is observed as a technique that consists of objective and systematic observation of the classroom events for the

study of the teacher's classroom behavior and the process of interaction going on inside the classroom.

The teachers and students have a reciprocal effect upon each other through what they say and do in the classroom. Hence, this research seeks to investigate perceived influence of classroom interactions on students' academic performance in secondary schools in Rivers State. Finally, classroom interaction refers to the interaction between the teacher and learners, and amongst the learners, in the classroom. It helps learners develop language learning and social skills and so maximizing interaction in the classroom is an important part of the teacher's role. Interaction will not necessarily happen spontaneously. In this situation, the researchers are of the view that a particular communication mode has to be considered before teaching in respect of teacher – student's interaction and student-student's interaction.

Statement of the Problem

Class room Interaction between students and teachers is an essential part of teaching learning process. It aims at meaningful communication among the students in their target language. This practice helps a teacher to assist students with their questions and doubts, develops language learning and social skills hence maximizing interaction in the classroom. Effective and efficiency of classroom interaction depends on the capacity of the teachers whose bodies of knowledge and skills already acquired have to be displayed during teaching and learning activities. This is because there has been a paradigm shift in modern times to promote classroom instructiveness. In this context, a learning strategy that promotes interaction between the teachers and the learners, as well as among learners, is sought and seen as the pivotal to improving students' communicative skills in the classroom and at length impact on their academic performance. Thus, for teachers to maintain or establish a good relationship with their students, certain features need to be observed such as: recognizing and respecting the learners' individuality, communication skills, and utilization of demonstration, discussion methods and teachers' sufficient knowledge of the subject matter. This will enable the teacher to determine or observe when the student or learner may have problem and when to intercede to diagnose the obscurity in any subject matter. This observation, therefore, informed the researchers to investigate influence of classroom interactions on students' academic performance in secondary schools in Rivers State, Nigeria.

Purpose of the Study

The purpose of the study was to investigate influence of classroom interaction on students' academic performance in secondary schools in Rivers State, Nigeria.

Research Questions

The following questions were answered to guide the study.

1. To what extent do communication skills influence students' academic performance in secondary schools in Rivers State, Nigeria?
2. To what extent does discussion method influence students' academic performance in secondary schools in Rivers State, Nigeria?
3. To what extent does demonstration method influence students' academic performance in secondary schools in Rivers State, Nigeria?

Hypotheses

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

1. There is no significant difference in the mean responses of teachers and students on how communication skills influence students' academic performance.
2. There is no significant difference in the mean responses of teachers and students on how discussion method influences students' academic performance.
3. There is no significant difference in the mean responses of teachers and students on how demonstration method influences students' academic performance.

REVIEW OF RELATED LITERATURE

Concept of Classroom Interaction

Interaction is a communication that goes on constantly as responsive or initiatory acts between the teachers and its students. From the above, it shows that students learn through interaction. Hamre and Pianta (2006) posited that teachers need to be actively engaged in interactions with their students for effective learning to take place. Which Mohrman, Tenkasi and Mohrman (2003) asserted that lasting change does not result from plans, blueprints and events; rather the change occurs through interaction of participants. In another development, according to Tyler and Boelter (2008) teacher expectations were associated with high academic performance or academic gains; whereas negative teacher expectations resulted in decrease in academic performance. The significance of knowing teachers' beliefs regarding their roles in student motivation is crucial due to the accepted correlation between this perception and action.

Modern theories like (Interactionist theory by Gallagher (2008) and Atkinson's Achievement Motivation Theory (1957) suggested that the instructional process has to be learner-centred for effective academic performance. In the traditional classroom setting, teachers or students do not demonstrate reasonable understanding of concepts if either the teachers or students only dominate the instructional process because significant interaction is absent. Interaction between students and teachers is an essential part of teaching learning process. It promotes involvement of students' independent learning interest in each subject. It promotes a shift from teacher centered to a student-centered environment while maintaining a teacher led activity. In related instance to the above notion, Koli (2010) portrays classroom interactions as one of the basic facilitators of improved

students' academic performance. In an effort to bring home the benefits of classroom interaction, Amadi and Akpan (2017) argues that if teachers provide learners with enough interactive opportunities, then students' academic performance is bound to be magnified.

Classroom Communication

Teaching is an interactive act. In the classroom, communications between the teachers and students goes on constantly as responsive or initiated acts. The patterns of verbal and non-verbal communication and the types of social relationships which occur within classrooms remain fundamental for effective teaching and learning. Learning in the classroom is a cooperative effort between the teachers and the students. It points to how the teachers and their students interact and how students interact amongst themselves. The teacher initiates interactions with the whole group of students and with individuals, right from the beginning of the class. Initially the students can only respond non-verbally or with a few target language words they have practiced. Later on, the students have more control of the target language and can respond more appropriately and even initiate interaction themselves.

Tyler et al (2008) described classroom interaction mode in respect of the teacher interacts with the whole class, the teacher interacts with a group, a pair or an individual student, students interact with each other. The teacher sometimes interacts with the class as a whole while at other times with sub-groups in the classroom. Amina and Mazila (2017) stated that teacher has to introduce variations in the pattern of interactions. The claims may reflect on the fact that using of varieties of teaching methodologies concretize or develop curiosity in the mind of the students. The dominant pattern of interaction is that of the teacher's question, the student's response and the teacher's feedback. This is commonly found in all classrooms and is typical of classroom exchange.

Teacher's talk not only takes up the largest portion of talk but also determines the topic of talk and who talks. It is therefore a very important component of classroom interaction. The ways in which students behave and interact during a classroom organized and controlled by the teacher enable teaching to take place most effectively. In this study, the researchers observed that through classroom interaction, knowledge is constructed as well as reconstructed between participants in particular conditions utilizing the cultural resources at their disposal, as they propel towards the collaborative achievement of goals that emerge in the course of their activity.

Teacher-Student Relationships

Teacher-Student relationship is one of the most crucial environmental factors in changing a child's path of education (Baker, 2006). As posited by Downey (2008), the nature of the relationship between the teachers and students will result in a higher level of learning in the classroom. Many

of the students who are not doing well academically are the same ones who have a poor relationship with their teachers. This depicts that students who are able to relate well with the teachers and other classmates can effectively participate in learning activities that will enhance their performance. Typically, the more they fall behind academically, often, the more this relationship is weakened. If they are constantly reprimanded in class, the environment and the teacher-student relationship begin to hold negative associations. It is not sufficient for teachers to be able to gain knowledge about effective teacher- student interactions; they needed actual skills involving identification of effective interactions with a high degree of specificity in order to be most likely to transfer the coursework into changes in their practice. Therefore, the interactive relationships should be based on respect, trust, caring, and cohesiveness.

Students' Academic Performance

Academic performance is defined as the level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is often represented by percentage of marks obtained by students in examinations (Koli, 2010). This implies that students' academic performance is an observable and measurable behaviour in a particular subject or circumstances during a course. Therefore, students' academic performance consists of scores at any particular time obtained from a Teacher-Made Test in any given subjects' matter. The scores obtained from Teacher-Made Test could be; first, second and third term examination or first term examination, second term examination as well as mid-term test, which is a criterion for promotion.

Similarly, Okoye, Momoh, Aigbomian and Okecha (2008) in their study, examined the instruction between two independent variables of teacher quality and instructional strategy on student academic performance in Secondary School Science. Their study showed that, the variables of teacher quality and instructional strategy had positive significant relationship with student academic performance in science. However, they found that teacher quality and instructional strategy were two non-separate interactive independent variables in Science Education.

Teacher's Interaction and Students' Academic Performance

The teacher's personality and style of interaction with the students has been reported to be a very crucial variable in student's academic performance. Students like non-authoritarian teachers' better, feel free in expressing their difficulties with them, and achieve higher results in their classes. Teachers who are successful in creating a climate of warmth and support can extract greater academic performance. Adjustment in school, at home and with peers generates greater classroom trust. Koli (2010) reported that teachers score on locus of control was directly related with students' achievements. Rivkin, Hanushek and John (2005), reported that teacher attraction was positively associated with academic growth, confidence and motivation. But this was only for students with opposite sex models; teacher attraction was not related to student's growth.

Communication Skills and Students' Academic Performance

Communication is a dynamic process in teaching and learning processes. A study conducted by Ehindero and Ajibade (2000) indicated that for effective teaching, teacher requires good communication skills by constant updating of knowledge in their respective area of specialization. Rockoff (2004) conceived communication as an exchange of information among individuals by means of speaking, writing or using a common system of signs or behaviors requires for the creation of rapport between the sender and the receiver. When someone passes information, communication cannot be said to have taken place until it is understood by the receiver. By implication, therefore, if a teacher fails to attract the interest and understanding of the learners to what he presents, no communication has occurred. This process of communication is however not the mere talking and hearing that happens in every normal classroom, but the psychological (mindset underlining learning progress) and emotional communication that predisposes the learners to effectual learning.

The issues of communication skills inform and educates students at all levels and motivates them to support the strategy (Barrett, 2002). It is also the process by which information is passed between individuals and organizations by means of previously agreed symbols. Effective communication skills take place when the person to whom it is intended, subsequently, the receiver understand the meaning intended and reacts accordingly (Akam, 2011). Thus, it is believed by a lot of experts that effective communication requires a degree of cognitive organizational reorientation, comprehension and appreciation of the proposed change. It is the key mechanism for achieving integration and coordination of the activities of specialized units at different levels of students' academic performance.

Degbuyi, Adunola, Worlu, Rowland and Ajagbe (2015) in their studies reviewed that business strategies such as: customer orientation, employee autonomy, communication, training and development job satisfaction, corporate social responsibility, motivational factors have major role to play in organizational performance. This is similar in the education sector where teachers' roles in classroom interactions remain inevitable and fundamental for the realization of the lesson goals and objectives. This is predicated on the fact good communication skills of teacher are the basic need of academic's success of students and professional success of life.

Azam and Kingdon (2014) reported in their study that teachers matter a great deal as far as achievement of students is concerned. Apart from the basic knowledge, the effective communication skills play a foremost role in motivating the students, knowing their aspirations and the problems they may have. Though, both the verbal and the non-verbal communication play a vital role, yet an effective verbal communication helps in building a teacher-student relationship

which acts as a platform for the veritable cognitive development. Easy and effective verbal communication helps the teachers to get an insight into the students' thoughts, ideas, opinions and issues while the students inversely get the knowledge of the teacher's expectations, knowledge and skills. Effective communication helps students learn easier, strengthens the relationship between the teacher and the learner, and creates a positive atmosphere in the learning environment. Communication in the classroom is socially applicable and linguistically precise (Diloyan, 2017) hence it has to be structured to build effective teaching relationship by showing a sincere enthusiasm or humor, building friendship: making learners the focus of the lesson, ensuring that there is trust between the teacher and the students, creating an atmosphere of interdependence, probing into learners' intellectual aptitude at the onset of a class, ensuring that learners feel challenged as well as the master of the subject matter (Amadi and Akpan, 2017). This is justifiable in respect of the argument that for the success of a student's future career, communication skills are indispensable.

Discussion Method and Students' Academic Performance

In a classroom situation, teachers and students share their knowledge through discussion. Some philosophers and educationists on this note believe that knowledge arises within the students and not from external sources (Koli, 2010). Hence, discussion method is seen as an orderly process of face-to-face interaction in which participants exchange ideas about an issue for solving a problem, answering a question, enhancing their learning or making a decision.

Generally speaking, discussion method is considered an activity which involves written or oral expression of different points of view in a given situation. Also, it is a fundamental effort by teachers and students sharing views and engage in mutual and reciprocal critique of a subject matter (Khalid, Muhamad, Asmaa & Wafa, 2018). Proper discussion assists or critically informed an understanding of the topic, self-awareness and capacity for self-critique, appreciation of diversity, and informed action. The discussion process is not merely controlled by one individual presentation as the case in the lecture method. The teacher as the discussion leader may try to strike a balance between controlling the group and letting students air their views with no restrictions. Participation in a class discussion can be voluntary to avoid embarrassment of shy or introvert participants and would be achieved by creating a supportive climate.

Definitely, discussion method sometimes is seen as an interpersonal activity that needs to have clear relationship with the lesson activities. In this light, the teachers need to look at the use of functional language in context, both its linguistic context and its social, or situational, context. This is predicated on the fact that teaching-learning process involves mutual responses between the lecturer and students as well as amongst students themselves. Interactions during this activity

encourage students to exchange ideas and experiences which run alongside with what is learnt from the teacher. In a class, discussion can be among the common strategies which would be used by teacher to stimulate active learning. If the objectives of a course are to promote long-term retention of information, to motivate students toward further learning, to allow students to apply information in new settings or to develop.

Discussion approaches are appropriate to a number of objectives which include providing feedback about students' learning; meeting higher-order cognitive objectives, such as application, analysis, synthesis, and evaluation. These approaches also help students develop their interests and values in learning activities (Hamre & Pianta, 2006). Thus, it can be presumed that the major purpose of using discussion is to encourage students to evaluate events, topics, or results, to clarify the bases for their judgments, and to become aware of other points of view. It is the responsibility of the teacher to encourage students to participate in discussion. A careful and patient teaching can bring the class to a point where they interact courteously with one another, without always agreeing with each other, and do so without raising their hands to speak, giving assignment to students to paraphrase, clarify, and elaborate upon their own or other students' remark is a useful way to keep a discussion moving along and on target.

For Amina and Mazila (2017) discussion method is learner or student centred approaches which shift the focus of activity from instructor/teacher to learners or students. Learner-centred methods are associated with imaginative, critical and creative skills; active participation of learners in the learning process through discussion and intellectual engagement as well as higher learning achievement and effectiveness in addressing problems of humanity. In this circumstance, the roles of teachers are to keep a balance as a facilitator. In this case, discussion is not just a matter of teachers' communication with students, it is a chance for them to share ideas.

In another development, discussion teaching is better suited when goals are oriented more toward changing behavior and acquiring new skills or approaches to problems (Moore (1999). He further elaborated that one aspect of the discussion method which causes some concern is that its effectiveness is dependent on the skills of the individual lecturer. The ability to organize and explain a topic does not come naturally except to a fortunate few individuals.

Demonstration Method and Students' Academic Performance

Demonstration method could be described as a display or an exhibition usually done by the teacher while the students watch with keen interest. Also, demonstration method is described as a method whereby the teacher does whatever the learners are expected to do at the end of the lesson by showing them how to do it and explaining the step-by-step process to them (Ameh, Daniel & Akus, 2007). This method has some advantages over other teaching methods like lecture method in

respect of saving time and facilitate material economy, inducing attention. It is conceived as a powerful motivator in lesson delivery. Students receive feedback immediately through their own products hence gives a real-life situation of the skills needed in the teaching subject. In classroom interaction it is used in highlighting of various sub-skills of communication skills that could be demonstrated by the teacher during practice session.

In addition, demonstration could be conducted by the teachers as a method of triggering a discussion between groups of students, which can be termed cooperative learning. This approach is an educational learning technique whereby students collaborate in small groups on a certain task, project, or argumentation. In order to develop significant learning, students must process information actively. This category of learning activities creates an environment in which students actively pursue their tasks by sharing insights, ideas and representations, providing feedback, and by teaching each other. This shows that demonstrations method encourages generalization because they promote active involvement by students and also augment students' attention level (Eilks, Prins & Lazarowitz, 2013).

Buncick, Betts, and Horgan (2001) found that demonstrations encourage generalization because they promote active participation on the part of the students. For example, it was shown that demonstrations encourage student involvement, since it is teachers oriented and give students an opportunity to produce questions and to become more active in the learning process. This in turn basically motivates students to undertake an initial inquiry and also provides a learning opportunity, because it helps create mental links between new and previous learning. An effective demonstration involves illustrating a point in a lecture or a lesson by means of something other than routine visual aids or other means of instruction. A demonstration in chemistry may be defined as a pedagogical event whose objective is to illustrate a scientific concept.

In the educational system, demonstration approach is a method of teaching concepts, principles or real things by combining explanation with handling or manipulation of real things, equipment or materials (Edu, Ayang & Idaka, 2012). It involves showing by reason or proof, explaining or making clear by use of examples or experiments. Therefore, the greater the degree of participation and sensory involvement by the learner during the demonstration, the more effective learning will be. It is highly proactive as it bridges the gap between theory and practice, controls the rate of breakages of tools and equipment, and accidents as students watch the teacher demonstrating before being attempted by the students. It is learning by doing approach and so enables the teacher to teach manipulative and operational skills within a short time using little material.

METHODOLOGY

The descriptive survey research design was adopted for this study. The population of the study was 874 (teachers) and 1,346 (students) in Port Harcourt Metropolis schools, Rivers State Nigeria. The sample size was 262 (teachers) and 404 (students) giving the total of 666, using 30% of the total population. The instrument used for this study was questionnaires titled, Classroom Interaction and Students' Academic Performance Questionnaire (CISAPQ). (15) items were drawn for the study. The respondents were requested to response to research questions rated on 4-points scale of Very High Extent (VHE), High Extent (HE), Very Low Extent (VLE) and Low Extent (LE). The content validity of the instrument was determined by two experts in the Educational Management. To obtain the reliability, the data was analyzed using the Cronbach Alpha which yielded the result of 0.81, 0.79, 0.71 and 0.85 respectively. Thus, 666 copies of questionnaires were distributed and retrieved 538 (81%) copies for the analysis of research questions using mean scores with standard deviation. Any value below the criterion mean score of 2.50 was rejected. Z-test for the hypotheses.

RESULTS

The results of the study were presented as follows.

Research Question 1: To what extent do communication skills influence students' academic performance in secondary schools in Rivers State, Nigeria?

Table 1: Mean Responses on Communication Skills and Students' Academic Performance

Statement	Teachers (N = 210)			Students (N = 328)		
	M	SD	RMK	M	SD	RMK
1 Communication skills motivate students' aspirations towards solving academic problems.	3.19	0.76	HE	3.24	0.74	HE
2 Enhances strong cognitive development that activates academic performance of the students.	3.37	0.73	HE	3.30	0.76	HE
3 Level of the students' enthusiasm in the subject will grow hence leading to academic success	3.13	0.81	HE	3.06	0.91	HE
4 Strengthens the relationship between the teacher and the learners.	3.25	0.78	VLE	3.20	0.76	VLE
5 Creating an atmosphere of interdependence by probing into learners' intellectual aptitude at the onset.	3.17	0.85	HE	3.27	0.74	HE
Average Mean	3.20	0.79		3.21	0.78	

Findings from the table showed the responses of teachers with a mean score of 3.19, 3.27, 3.13, 3.25 and 3.17 while students' response revealed the mean score of 3.24, 3.30, 3.06, 3.20 and 3.27 respectively. The table also revealed average mean of 3.21 and standard deviation of 0.79 from both the teachers and students which indicated that the respondents were of the views that

communication skills influence students' academic performance in secondary schools in Rivers State, Nigeria.

Research Question 2: To what extent does discussion method influence students' academic performance in secondary schools in Rivers State, Nigeria?

Table 2: Mean Responses on Discussion method and Students' Academic Performance.

	Statement	Teachers (N = 210)			Students (N = 328)		
		M	SD	RMK	M	SD	RMK
6	Assists learner self-awareness and capacity for self-critique, appreciation of diversity of the subject goals and objectives.	3.09	0.75	HE	3.31	0.76	HE
7	Encourages mutual responses between the lecturer and students.	3.37	0.74	HE	3.17	0.78	HE
8	Stimulates active learning and long-term retention of information.	3.18	0.67	HE	3.00	0.83	HE
9	Facilitates learning capacity for essential academic performance.	3.11	0.70	VLE	3.19	0.76	VLE
10	Encourages students to evaluate events, topics for clarity in the bases for their judgments.	2.82	0.76	HE	3.28	0.79	HE
	Average Mean	3.11	0.80		3.21	0.78	

The data presented above showed the responses of teachers with a mean score of 3.09, 3.37, 3.18, 3.11 and 2.82 while students' response revealed the mean score of 3.31, 3.17, 3.00, 3.19 and 3.28 respectively. The table also revealed average grand mean of 3.15 and standard deviation of 0.79 from both the teachers and students which revealed that the respondents were of the view that discussion method influence students' academic performance in secondary schools in Rivers State, Nigeria.

Research Question 3: To what extent does demonstration method influence students' academic performance in secondary schools in Rivers State, Nigeria?

Table 3: Mean Responses on demonstration method and Students' Academic Performance

	Statement	Teachers (N = 210)			Students (N = 328)		
		M	SD	RMK	M	SD	RMK
11	Saving time and facilitate material economy.	3.26	0.75	HE	3.28	0.71	HE
12	Engaging actively in practical strategies for reasonable academic performance	3.25	0.74	HE	3.30	0.73	HE
13	Cooperative learning is enhanced for expected students' academic performance	3.08	0.67	HE	2.79	1.01	HE
14	Producing professional development opportunity in teaching and learning activities.	3.26	0.70	VLE	3.34	0.77	VLE
15	Combining explanation with handling or manipulation of concrete materials for effective teaching and learning.	3.20	0.76	HE	3.20	0.76	HE

Average Mean	3.21	0.80	3.18	0.79
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The data presented above showed the responses of teachers with a mean score of 3.26, 3.25, 3.08, 3.26 and 3.20 while students' responses revealed the mean score of 3.28, 3.30, 2.79, 3.24 and 3.20 respectively. The table also revealed average mean of 3.20 and standard deviation of 0.80 from both the teachers and students which indicated that the respondents affirmed that demonstration method influence students' academic performance in secondary schools in Rivers State, Nigeria.

Statistical Test of Hypotheses

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

Hypothesis 1

There is no significant difference in mean responses of teachers and students on how communication skills influence students' academic performance in secondary schools in Rivers State, Nigeria.

Table 4: Z-test on communication skills and students' academic performance

Respondents	N	M	S.D.	Z-cal	Z-crit	Decision
Teachers	210	3.20	0.79	0.72	1.96	Retained
Students	328	3.21	0.78			

The result of Table 4 indicated that the calculated z-calculated (0.72) was less than the z-critical (1.96) at the degree of freedom (536) and 0.05 significant levels. Hence, the null hypothesis of no significant difference in mean responses of teachers and students on how communication skills influence students' academic performance in secondary schools in Rivers State, Nigeria was retained.

Hypothesis 2

There is no significant difference in mean responses of teachers and students on how discussion method influences students' academic performance in secondary schools in Rivers State, Nigeria.

Table 6: Z test on Discussion Method and students' academic performance

Respondents	N	M	S.D	Z-cal	Z-crit	Decision
Teachers	210	3.11	0.80	0.81	1.96	Retained
Students	328	3.19	0.78			

The result of Table 5 indicated that the calculated z-calculated (0.81) was less than the z-critical (1.96) at the degree of freedom (536) and 0.05 significant levels. Hence, the null hypothesis of no significant difference in mean responses of teachers and students on how discussion method influences students' academic performance in secondary schools in Rivers State, Nigeria was retained.

Hypothesis 3

There is no significant difference in mean responses of teachers and students on how demonstration method influences students' academic performance in secondary schools in Rivers State, Nigeria.

Table 6: Z test on Demonstration Method and students' academic performance

Respondents	N	M	S.D	Z-cal	Z-crit	Decision
Teachers	210	3.21	0.80	0.99	1.96	Retained
Students	328	3.15	0.79			

The result of Table 6 indicated that the calculated z-calculated (0.99) was less than the z-critical (1.96) at the degree of freedom (536) and 0.05 significant levels. Hence, the null hypothesis of no significant difference in mean responses of teachers and students on how demonstration method influences students' academic performance in secondary schools in Rivers State, Nigeria was retained.

Discussion of Findings

The result of research question one indicated that communication skills influence students' academic performance in respect of motivating students' aspirations towards solving academic problems, enhancing strong cognitive development that activate academic performance of the students. This view agreed with the perception of Ehindero,etal (2000) who stated that effective communication is considered a strong tool 'for effectiveness in the students' academic performance. In support of the above findings, Azam, etal (2014) reported in a study that teachers' communication skills matter a great deal as far as achievement of students is concerned. Apart from the basic knowledge, the effective communication skills play a foremost role in motivating the students, knowing their aspirations and the problems that they may have. Though, both the verbal and the non-verbal communication play a vital role, yet an effective verbal communication helps in building a strong teacher student relationship which acts as a platform for the strong cognitive development. The teacher and the learner therefore need to work together to have a creative learning process.

Further findings on research question one also indicated that enthusiasm in the subject will grow hence leading to academic success and interdependence by probing into learners' intellectual aptitude. This view is subscribed to by Amadi, etal (2017) who affirmed that communication is socially applicable and linguistically precise hence it has to be structured to build effective teaching relationship by showing a sincere enthusiasm or probing into learners' intellectual aptitude at the onset of a class.

The result of research question two implies that discussion method influence performance by creating learners' self-awareness and capacity for self-critique and appreciation of diversity of the

subject goals and objectives. This finding agreed with the opinion of Muhamad, et al (2018) who asserted that proper discussion would assist learner participants to reach a critically informed understanding of the topic, self-awareness and capacity for self-critique, appreciation of diversity, and informed action. The discussion process is not merely controlled by one individual presentation as the case in the lecture. The teacher as the discussion leader may try to strike a balance between controlling the group and letting students air their views with no restrictions. Participation in a class discussion can be voluntary to avoid embarrassment of shy or introvert participants and would be achieved by creating a supportive climate.

In support of the above fact, Amina et al (2017) affirmed that discussion as exploratory talk where participants explore ideas and feelings together, it makes absolutely fundamental contribution to learning. In situation where the strategy is properly layout, it motivates learners while also helping them retain knowledge and develop effective problem-solving aptitude.

Finding of research question three confirmed that demonstration method influences academic performance by way of saving time and facilitate material economy, engaging actively in practical strategy for better academic performance, producing professional development opportunity in teaching and learning activities and combining explanation with handling or manipulation of real things, equipment or materials. This finding is consonance with the observation of (Ameh, et al 2007) who identified that demonstration method save time and facilitate material economy, inducing attention hence conceived as a powerful motivator in lesson delivery.

Students receive feedback immediately through their own products hence gives a real-life situation of the skills needed in the teaching subject. For (Edu, et al 2012), demonstration approach is a method of teaching concepts, principles or real things by combining explanation with handling or manipulation of real things, equipment or materials. It involves showing by reason or proof, explaining or making clear by use of examples or experiments. Therefore, the greater the degree of participation and sensory involvement by the learner during the demonstration, the more effective learning will be. It is highly proactive as it bridges the gap between theory and practice leading to manipulative and operational skills within a short period of time.

Conclusion

Based on the findings, it was concluded that Classroom Interactions influence Students' Academic Performance in respect of motivating students' aspirations towards solving academic problems, enhancing strong cognitive development that activates academic performance of the students and creating an atmosphere of interdependence by probing into learners' intellectual aptitude at the onset. In other words, it promotes a shift from teacher-centered to a student-centered environment while maintaining a teacher led activity. Thus, for teachers to maintain or establish a good

relationship with their students, certain features such as recognizing and respecting the learner individuality, teacher sufficient knowledge of the subject matter need to be observed. This practice helps a teacher to assist students with their questions and doubts, develops language learning and social skills hence maximizing interaction in the classroom.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. School administrators should persuade the teachers to create an interactive environment that will improve communication with the students.
2. Discussion method should be initiated assiduously to captivate students' interest in the subject matter.
3. Demonstration method should be properly infused into lesson objectives to concretize, activate and enhance students' curiosity for independent learning.

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