

Learners' Perception of Teachers' Interpersonal Behaviour as a Predictor of Academic Achievement in Junior Secondary School Certificate Examination of Edo State, Nigeria

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Abstract

The study is aimed at determining the learners' perception of teachers' interpersonal behaviour as it predict their academic achievement in Junior Secondary School Certificate Examination of Edo State, Nigeria. To investigate this study a research question was posed which was formulated into hypothesis and tested at 0.05 level of significance. The study adopted the survey design because it is a predictive study. A total number of 850 students in JSS III who have written the JSSCE of 2012/2013 were sampled from 84 secondary schools in Edo State, using Stratified Random Sample Techniques. 84 mathematics teachers of JSSIII were equally used. The instrument used for the study were the past 2012/2013 JSSCE mathematics results and Questionnaire on Teacher Interaction (QTI). The data collected were analyzed using Linear Regression. The findings of this study revealed that learners' perceptions of interpersonal behaviour of the teacher predict learners' academic achievement. It therefore recommended that government, school head and all stakeholders of education should ensure teachers in various schools are given adequate support to perform their duties effectively.

Keywords: Teachers' Interpersonal Behaviour, Perception, Learners, Teachers.

Introduction

In Nigeria the policy of secondary education is to prepare the individual for useful living within the society and for higher education. This policy emphasis is on junior and senior secondary level with the policy document of junior secondary school to be both pre-vocational and academic in nature, and shall aim at:

- Preparing students for useful living within the society
- Providing high quality education to primary school graduates
- Equipping students to live effectively in our modern age of science and technology
- Raising a generation of people who can think for themselves, respect the view and feeling of others and dignity of labour
- Inspiring students with a desire for achievement and self-improvement both at school and later life (FGN, 2004).

Considering the above policy one may wish to analyze the perfect nature of the learning environment to actualize the stated goal for this junior secondary because the citizen of Nigeria look forward for the actualization of it educational policy. Providing a functional and qualitative education that will prepare students for living in the rapidly changing world of science and technology is of great concern of Nigerians. But presently, results of students from WAESC, NECO and JAMB are not encouraging to parents and stakeholders. Poor academic performance of student at both internal and external examination is a major report of every Educational News in Nigeria. It appears the system is plagued by inadequate infrastructure and facilities, obsolete equipment, enrolment explosion, shortage of personnel, gross under finding and general neglect. Education in Nigeria has not been receiving enough attention or adequate resources as it ought to. Although efforts have been made to improve the quality of education in Nigeria since independence in 1960, yet the system seems not to have been able to achieve its goal of providing functional education for all Nigeria citizens. For many students, it seems that what they learn in schools seem not to be adequate enough to prepare them to handle the rapidly changing technology-oriented workplace.

The classroom learning environments according to researchers have focused historically on its psychosocial dimensions, these aspects of the environment that focus on human behaviour in origin or outcome. Setting up and maintaining an effective real learning environment puts teacher's knowledge of child development to test, classroom and play yard arrangement must be sensitive to the developmental sequences and individual differences. Teacher must know what to do when a child is experiencing learning difficulties, as well as another not making developmental progress and the third hampered by behaviour problems. Teachers must recognize that the first move is to step back and observe the child in the context of their programmes and make the necessary mid-way changes in the environment. It is the environment that needs fixing, not the child (Allen, 1992). The teacher in the classroom is expected to control certain variable which identify him more importantly in school learning situation. Where the teacher is unable to teach pupils to read or to add and subtract simple numbers in the primary school, such pupils are asked to repeat especially in subject like mathematics. This is

important for the development of modern science as an accompaniment of the national objective of education in Nigeria. It is believed that mathematics is the mother of modern science. The basic developed in mathematics such as equations, laws, algorithms, they are used implicitly in other sciences, for instance, the development of algorithms in mathematics will affect the future of computer science, since ninety percent (90%) of the computer science theories and programming structures are based on abstract algorithms. The language of mathematics is what connects the world because it is a tool that we can express using it as the mysteries of the universe, paranormal phenomenon or the secret of curing extreme diseases, mathematics connect people with other culture in order to communicate and transfer the understanding of strange phenomena. It needs to be amplified in education to provide students with skills required to achieve higher education, career aspiration and reaching personal fulfillment. Since mathematics is important and most students fear and find it difficult to pass the subject, it is against this premises that this study investigate the interpersonal behaviour of the teacher and the learner as a mean of determining academic achievement in mathematics in junior secondary schools in Edo State.

Statement of the Problem

Schools are to provide resource variable that influence learners' academic achievement. Such resource variables are regarded as good indicators of school quality and can be classified into material, human and financial resources. The material resources include the physical size of a school, physical facilities, instructional materials and library activities. Human resources include staffs strength, experience and effectiveness. The quality of instruction and the end products of education depend to a large extent on the job performance of the teacher. The quality of teaching is a key determinant of learning. This depends on the quality of personnel in teacher education and their continuity in professional development as well as their work practices and working environment.

The American Federation of Teacher's (AFT) publication, Building Minds, Minding Building: Turning Crumbling schools into Environments for learning, was commissioned in response to section 5414 of the No child left Behind Act on the "health and learning impacts of environmentally unhealthy public school buildings on students and teachers" (Building Minds 2006, P1) the commissioned report found "poor environments in school... adversely influence the health performance and attendance of students (Building Minds, 2006 P1) factors such as poor lighting, inadequate ventilation, crumbling walls, damaged ceiling tiles, and inoperative heating and air conditioning system were reported in AFT's 2006 research results. All these were link to student's learning. Based on the above report, stakeholders in the educational system are looking at the different variables that may be responsible for improvement in the quality of education given to Nigerian citizens especially in the subject mathematics. The researcher is worried by the learning environment provided for students in mathematics in Junior Secondary Schools of Edo State. Therefore there is the need to obtain empirical evidence by investigating the Learners' Perception of Teachers' Interpersonal Behaviour as a Predictor of Academic Achievement in Junior Secondary School Certificate Examination of Edo State, Nigeria.

Hypothesis

The hypothesis formulated for the study is given below:

- Learners' perception of interpersonal behaviour of teacher does not significantly predict learners' academic achievement in mathematics in Junior Secondary School Certificate Examination in Edo State, Nigeria.

REVIEW OF RELATED LITERATURE

Concepts of Perception

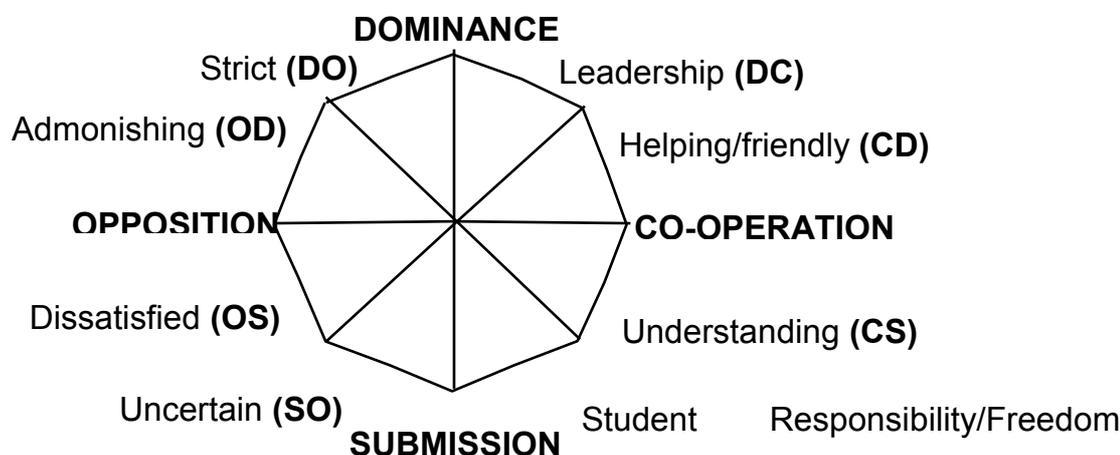
Allport (1966) discussed the psychological concept of perception as the way through which we evaluate people we are familiar with. This study is adopting the view of Allport as the theoretical basis for learners' perception of their teachers' attitude to work and teaching skills in Edo State Junior Secondary Schools. For convenience, Allport conceived that in person perception, the perceiver is the "judge" and person perceived is the "other". In this study therefore, the Junior Secondary Schools students are to serve as judges judging their teachers' effectiveness. Their judgment outcome will be scored with their academic achievement in order to test the hypotheses raised. Allport theory was found appropriate to be used as the theoretical basis for this study because of his explanation on the processes involved in person perception. He explained three concepts:

1. **Common Judgment Sets:** - In evaluating a person, there must always be a special reason in view. The reason for this study is to determine whether learner's perception of their selected teacher variable will predict learners' academic achievement in Junior Secondary School Certificate Examination.
2. **Categorization Tendency:** - Allport asserted that one of the most important thing to do in perceiving any object is to place it in a familiar category. The selected variable and learners' academic achievement belong to familiar category in educational psychology
3. **Combining Cures:** - Allport claimed that judging people involves putting together many bits of information. This study therefore will determine the learners' perception of teachers' attitude and teaching skills using a statistical measure of their response with their academic achievement to predict.

Teachers/Learners/Relationship

To investigate the teacher relationship in the classroom environment, we will study teaching from an interpersonal perspective. In system approach to communication, classroom groups are considered as ongoing system. For ongoing systems, certain stability is important for their continued existences, when students meet a teacher in a new class, they will be relatively open to any impression the teacher can make relatively because the context of classroom will raise certain expectations for the role of the teacher. Nevertheless, after the first lesson, the student will have tentative ideas about the pattern of relationship with this particular teacher based on the experiences in the first lesson. By the second lesson, the teacher may behave differently and students can tell what kind of teacher he/she is. This perception is equally applied to the teacher ideas about students. To describe these kinds of processes, the systems approach distinguishes different levels of communication. The lowest levels consist of messages, which consist of one question, assignment response, gesture etc. The intermediate level is that of interactions, made up of chains of several messages. When the interactions show recurrent patterns and some form of regularity one has arrived at the pattern level. This pattern level is important in describing the rather stable interpersonal relationships that determine the working atmosphere of classrooms. In the systems approach to communication, the focus is the effect of communication on the persons involved. To be able to describe the perceptions students have about the behaviour of their teachers, the model design by Leary, (1957) was used. This Model has been extensively investigated in clinical psychology and psychotherapeutic settings (Strack, 1996). It has proven to be a rather complete model to describe interpersonal relationships. In the Leary Model, two dimensions are important; Leary called them the DOMINANCE Submission Axis and the HOSTILITY – Affection axis. These dimensions have relevance to education. Brekelmans, Wubbel and Brok (2002) demonstrated their importance in teachers' effort to influence classroom events. Adapting the Leary Model to the context of education, Wubbel used the two dimensions, which they called influence (Dominance – Submission) and Proximity (Opposition – Cooperation) to structure the perception of eight-behaviour segment:

1. Leadership
2. Helpful/Friendly behaviour
3. Understanding
4. Giving students freedom and responsibility
5. Uncertain
6. Dissatisfied
7. Admonishing
8. Strict



Source: Webbels and Levy (2002)

Figure 1: The model of interpersonal

The sections are labeled DC, CD (according to their position in the co-ordinate system. Much like the directions in compass) for example, the first two segments of “leadership” and “helpful/friendly”, are both characterized by Dominance and Co-operation (DC). In the DC sector, the Dominance aspect prevails over the Co-operation aspect. A teacher displaying DC behaviour might be seen by students as enthusiastic and motivating. The adjacent CD sector, however include behaviour of a more Co-operative and less dominant type where the teacher might be seen as helpful/friendly and considerate. The model can be used to describe teaching at the message, interaction and pattern level. To map teaching from an interpersonal perspective at the pattern level of interpersonal teacher behaviour, the Questionnaire on Teacher Interaction (QTI) has a four point response scale, ranging from Never, Sometimes, Often and Always. It is scored on the basis of eight sectors or

two summarizing dimensions of influence (or DS) and Proximity (or CD) the Dominance/Submission (DS, also known as Influence) dimension is primarily comprised of behaviours in the sector closest to DS axis – strict, leadership, uncertainty and giving student responsibility/freedom. The sectors which mostly make up the Co-operation/Opposition (CO, or Proximity) dimension helpful/friendly, understanding, dissatisfied and admonishing. Data on the perception of student are obtained after administering the questionnaire to students.

Learners' Perception/Teachers' Interpersonal Behaviour

Scott (2003) investigated primary learners' perceptions of their teachers' interpersonal behaviour in Brunei Darussalam. She found that leadership helping/friendly and understanding behaviour correlated positively with learners' achievement in science. While helping/friendly had more impact than other teacher's interpersonal behaviour. Riah (1998) reported that teacher interpersonal behaviour was associated with form five (5) learners' attitudes and achievement in chemistry. More specifically, he reported that leadership behaviour has a strong positive and significant correlation with learners' attitudes while understanding behaviour significantly with achievement. In Australia, Rickards (1999) found that secondary school science learners' attitude score were higher in classroom in which they perceived greater leadership, helping/friendly, and understanding behaviours in their teachers. He also reported positive associations between cognitive achievement and co-operative behaviours of teacher. Fisher and Fraser (2000), reported that associations with learners' perceptions of their learning environment were stronger for the attitudinal outcome than for cognitive and practical skills outcomes. It was emphasized by Hallak (1990), that the quality of the education system depends on the quality of its teachers. Obanyan (2006) submitted that a qualified teacher is not necessarily a competent teacher, and a competent teacher may not necessarily be an efficient teacher. One simple measure of teacher's competence – cum – effectiveness is interaction pattern in the classroom. The Federal Republic of Nigeria in the National policy on Education (1991) in aligning with Jaiyeoba (2008) stated that no education system could rise above the quality of its teachers. In the same vain, Peleyeju (2008) asserted that the quality of an output cannot supersede the quality of its inputs. According to Badmus (2006), teacher quality as measured by teacher ability, and teacher background account for about 40 percent of variance in student learning. The provision of relevant learning experiences depends, on the teacher having a thorough and deep understanding of the subject matter to be taught, how students are likely to learn it and the difficulties and misunderstanding they are likely to encounter. But teachers cannot provide experiences and activities that guide learners' progress and development towards understanding of ideas, if they themselves do not know these ideas; neither can they provide experiences that challenge students understanding, if they themselves share the same understanding (Badmus,2006).

METHOD OF STUDY

This study was descriptive and correlational in nature. The population of the study consist all the 8,500 Junior Secondary School students in two hundred and eighty (280) public secondary schools and 280 Mathematics teachers in JSS in Edo State. The choice of these students was based on the idea that they have completed their Junior Secondary School Certificate Examination and the result for JSSCE for 2012 and 2013 were used. A total of eight hundred and fifty (850) students were selected from eighty four (84) public secondary schools from the eighteen (18) local government area which constitute the strata and 25% of each local government was randomly stratified (84) and 10% of the students from each secondary school were also randomly stratified (850). A mathematics teacher from each school was also selected in J.S.S. session.

The instruments used for this study were result of 2012/2013 for Junior Secondary School Certificate Examination and questionnaires. The questionnaire was titled Teachers Interaction within the classroom (QTI) adapted from Brekelmans, Webbels and Brok (2002). The instrument was constructed to elicit answers comprehensively on the content of the central thrust of the study. The instruments were given to experts. They certified that the instrument was valid but however, made suggestions which were taken into consideration in the preparation of the final copy of the instrument.

The instrument was subjected to internal-consistency using the split-half reliability. The test was administered to one group, the item on the test divided into halves, all odd number items in one half and all even number items on the other half, then computed each person's scores on the two halves. This was done by administering the instrument to 40 teachers and 60 students who were not included in the subject of study. The data were analysed using the Cronbach Alpha formula and reliability coefficient of 0.75, 0.89, 0.79 and 0.86 were obtained respectively, thereby establishing internal consistency of the instrument. The data collected were analyzed using linear regression.

RESULTS

The analysis of data, results and discussion focused on the predictive value of the independent variable of learners' perception of interpersonal behaviour of the teachers' as predictors of academic achievement of learners in mathematics the Junior Secondary School Certificate Examination.

Hypothesis: Students' perception of interpersonal behaviour of the teacher does not significantly predict students' academic achievement in Junior Secondary School Certificate Examination in Mathematics

TABLE I: The regression analysis summary for the predictive value of students' perception of the interpersonal behaviour for academic achievement in Mathematics in Junior Secondary School Certificate Examination

ANALYSIS OF VARIANCE				
Sources	Df	SS	MS	F - Value
Regression	1	18.474	18.474	20.797***
Residual	848	753.290	18.88	
Total	849	771.765		

Variables	PARAMETER ESTIMATE			
	B	SE	R ²	R ² (Adjusted)
Constant	1.885	.219		
Student perception of the interpersonal behaviour	.286	.063	.024	.023

*** Significant at $P < 0.05$

Note: B = Regression coefficient SE = Standard Error of B

The results revealed that the regression coefficients for students perception of the interpersonal behaviour of the teacher was .0286 which was found to be significant at $P < 0.05$ coefficient of determination; R^2 of 0.024 and R^2 0.023 (adjusted) was obtained. These values indicated that students' perception of the interpersonal behaviour of the teacher accounted for 2.3% of the total variance in students' academic achievement in Junior Secondary School Certificate Examination. The Table also revealed that analysis of variance for the regression data yielded an F – value of 20.797 and was found significant at $P < 0.05$. Therefore hypothesis 1 (H_{0v}) was rejected. Thus, conclusion was reached that students' perception of interpersonal behaviour of the teacher will significantly predict students' academic achievement in Junior Secondary School Certificate Mathematics Examination.

Discussion

The result of the finding showed that the learners perception of interpersonal behaviour of teachers predict academic achievements of the students in Junior Secondary School Certificate Examination. The finding revealed that student perception of the teachers' leadership, helping/friendly understanding behaviour uncertain. Admonishing strict responsibility and dissatisfied behaviour predicted the learners' academic achievement in mathematics in the Junior Secondary School Certificate Examination. Studies have revealed that teachers' competence-cum-effectiveness with interaction pattern in the classroom according to Badmus (2006) teacher quality as measured by teacher ability and teacher background account for about 40% of variance in student learning. The provision of relevant learning experiences depends on the teacher having a through and deep understanding of the subject matter to be taught how students are likely to learn it and the differences and misunderstanding they are likely to encounter. But teachers cannot provide experience and activities that guide learners' progress and development towards understanding of ideals, if they themselves share the same understanding. Then teachers' quality should be considered when discussing teachers' behaviour. whose work on creativity and innovations for school in Manchester found that secondary school science students attitudes score were higher in classroom in which they perceived greater leadership helping/friendly and understanding behaviour in their teachers he also reported positive association between cognitive achievement and co-operation behaviour of teaching. The finding corroborates the research findings of Scott (2003) when investigated primary school learners' perceptions of teachers' interpersonal behaviour in Brune Darussalam. She found that leadership helping/friendly and understanding behaviour including admonishing and strict behaviour of teacher correlated positively with learners' achievements in sciences while helping/friendly had more impact than other teachers' interpersonal behaviour. However Fisher and Fraser (2000) reported that association with students perception of learning environment were stronger attitudinal outcome than for cognitive and practical skills outcome.

Conclusion

The finding of this study have shown that classroom learning environment from the learners' perception of teachers' interpersonal behaviour predicted the academic achievement of the learners in the Junior Secondary School Certificate Examination in Edo State.

Recommendations

1. Given the level of availability of subject teacher in mathematics in the school system if increased that is even distribution to urban and rural areas interpersonal relationships with teacher might increase the student academic achievement

2. Adequately equipped libraries should be provided in secondary schools for this will encourage teacher to give assignments and homework to students regularly and mark, for this interaction will create academic impact on student that might help inform their academic achievement
3. Teacher should be exposed to regular professional seminars and workshops on the need to make adequate use of new material available in such as ICT, projectors, measuring instruments, visual and audio aid as this will enhance the teaching/learning process.

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**APPENDIX
 QUESTIONNAIRE**

Questionnaire on Interpersonal Behaviour of the Teacher with the Learners

Student Responsibility/Freedom		Never	Sometimes	Often	Always
S/N	Submission and Co-operation				
1.	The teacher gives us a lot of free time in class.				
2.	The teacher gives students time to read on their own, allow them to play outside the classroom to exercise their bones and bodies.				
3.	The teacher gives us opportunities to discover ideas and solutions to classroom problems.				
4.	The teacher allows the students to answer questions whether they are right or wrong.				
5.	The teacher shares the students into various groups with different assignment to demonstrate in class.				
Understanding					
6.	The teacher assigns some of the students to be in custody of the class money.				
7.	The teacher protects the class from external attacks and disturbances.				
8.	The teacher agrees with the students' genuine requests.				
9.	The teacher trusts us.				
10.	The teacher cares about students' well being both in and outside the class.				
Admonishing					
11.	The teacher frowns at students whenever they engage in rough plays.				
12.	The teacher is impatient with students who do not easily understand the lessons.				
13.	The teacher dislikes answering probing questions from students.				
14.	The teacher frowns at inquisitive students.				
15.	The teacher is temperamental.				
Dissatisfied {Opposition Submission}					
16.	The teacher is unhappy when he repeats a particular lesson over and over again.				
17.	The teacher frowns at inattentiveness of the students.				
18.	The teacher detests the class when it is noisy.				
19.	The teacher gets dissatisfied with students when they cannot answer simple questions.				
20.	The teacher is unhappy with students who do not do their homework.				
Uncertain {Submission and Opposition}					
21.	The teacher gets discouraged by malpractices in examinations.				
22.	The teacher gets disappointed when students ask questions outside the content and scope of lesson.				
23.	The teacher is not sure with challenging question such as, how many students will be promoted to the next class?				
24.	The teacher is uncertain about certain behaviour exhibited by the students.				
25.	Parents of students are to appraise the teacher.				
Strict {Dominance and Opposition}					
26.	The students are not allowed into classroom without the correct writing materials.				
27.	The students are not free with the teacher in the classroom.				
28.	All home work must be done in student handwriting and submitted at the right time.				

29.	All students note books must be checked.				
30.	Defaulting students are always disciplined before all other students.				
Leadership {Dominance Co-operation}					
31.	We listen to the teacher whenever he/she is teaching.				
32.	Our teacher displays mastery of the subject matter.				
33.	Our teacher leads by example				
34.	We take instruction from our teacher before doing any assignment.				
35.	Our teacher serve as a model in his way of dressing and behaviour.				
Helping/Friendly {Co-operation and Dominance}					
36.	The teacher is responsive to our needs in the classroom.				
37.	The teacher shows concern for every student.				
38.	Our teacher is empathetic.				
39.	The teacher is friendly				
40.	The teacher gives assistance at the time of need.				

Students' Achievement

What is the statistics of the students' performance in JSSC examination in the following subject?

- ✓ Mathematics

Year 2012/2013

Subject: Mathematics	
GRADE	Numbers
Distinction A1-A3	
Credit C4-C6	
Pass P7-P8	
Fail F9	