

Senior School Students' Rating of their Mathematics Teachers' Competency in Kwara State, Nigeria

**Khadijat Saka AMEEN, Maryam Ibronke SULEIMAN,
Semiu Ayinla SALAWU, Saidat Morenike ADENIJI &
Malik Ayinde NASIRUDEEN**

Department of Science Education,
Faculty of Education, University of Ilorin,
Ilorin, Nigeria

Abstract

The application of Mathematics affects all aspects of human life at different levels. Despite this importance, poor academic achievement of students in Mathematics has become a worrisome phenomenon among stakeholders in education. Many factors have been unveiled by past researchers to be responsible for the poor academic achievement of students in Mathematics. The factors amongst others include teachers' classroom management skills. Thus, the study investigated senior school student's rating of their Mathematics teacher's competency. A descriptive research of the survey type was employed. Simple random sampling techniques was used to sampled four hundred and fifty six (456) public and private senior schools II students in Ilorin. The research instrument used in the study was "Students' Rating of Mathematics Teachers' Competences Questionnaire" (SRMTCQ). A reliability value of 0.71 was determined using Pearson Product Moment Correlation. Data were analysed using frequency, percentages and t-test statistical tool at 0.05 significant level. The result of the study showed that senior school students rated their Mathematics teachers' competency excellent; there was a significant difference on how students rated their Mathematics teachers competency based on gender ($t_{(454)} = -3.93$; $p = 0.00$); there was no significant difference on how senior school students rated their Mathematics teachers competency based on school type ($t_{(454)} = -0.07$; $p = 1.00$). The study concluded that Mathematics teachers' competency as rated by senior secondary school students was excellent. Hence, it was recommended amongst others that Mathematics teachers should justify the rating ascribed to their teaching by improving on their pedagogical skills.

Keywords: Competency, Mathematics, Rating, Students, Teacher

Introduction

Mathematics as a subject affects all aspects of human life at different levels. Mathematics is seen by the society as the foundation of scientific and technological knowledge that is vital to socio economic development of any nation. In line with this statement, Eraikhuemen (2003) posited that a disciplined and ordered pattern of life can only be achieved through the culture of Mathematics. Mathematics can be described as the backbone of other branches of Science such as Pure and Applied Sciences, Social Sciences, Engineering, Agriculture, Medicine, and others. Mathematics is the study of dimensions, quantities, structure, space, and change in quantities (Abdu, 2014). Azuka (2013) viewed Mathematics as not only the language of science but an essential nutrient for thought and logical reasoning. Otunu-Ogbusi and Ukpebor (2009) also supported this by viewing Mathematics as an indispensable tool for the transformation of technological development. At the national and global levels, there is a general consensus that economic development, viability and stability are solely scientific and technologically based in this 21st century. This means that, economic prosperity of a nation depends largely on the scientific and technological development, which cannot be possibly attained without sound, effective and strong Mathematics education (Aminu, 2005). The relevance of Mathematics is therefore multi-dimensional and undisputedly accepted globally.

Mathematics is approved by the Federal Ministry of Education (2013) as one of the core subject offered in primary and post primary schools in Nigeria. It has also been considered as part of mandatory requirement for admission into tertiary institutions in the country (i.e. attainment of pass at credit level). In addition, job opportunities and recruitment exercises required a good result in Mathematics. Aptitude tests for employment, promotion and placement are made up of questions that are based on Mathematics. These are significant justification of the relevance of Mathematics for individual personal development and success (Abdu, 2014).

Stakeholders in education and relevant established examination bodies such as West Africa Examination Council (WAEC), National Examination Council (NECO), National Business and Technical Examination Board (NABTEB) among others have been showing greater concern over the poor performance of students in this relevant subject(Mathematics). Similarly, students negative attitude towards the subject coupled with their poor academic achievement in the subject have also warranted discussion among scholars especially on possible participating factors (Aminu, 2005). It can be deduce from the literatures that possible factors contributing to poor performance in Mathematics includes: unqualified teaching staff, lack of teaching and learning facilities, classroom congestion, as well as teachers and students attitude as the much quoted reasons (Abdu, 2014).

Adodo (2007) asserted that the key overriding factor for success of students' academic achievement is the teacher.Okoli (2011) suggested that no education system can rise above the quality of its teachers. Teachers' competences and exposure can go a long way to bring about students' academic achievement (Ibrahim, 2000).Teachers cannot be dissociated from the schools where they teach and academic results of the schools. It would therefore be reasonable to use the standardized students' assessments results as the basis for judging the performance of teachers.

Teachers are rewarded when their schools and teaching subjects are highly ranked. While appreciating the value of rewarding teachers who produce better results, teachers should also not escape a portion of blame when students perform poorly. Evidences had shown that teachers have an important influence on students' academic achievement (Fehintola, 2014). Teachers play a crucial role in educational attainment because the teacher is ultimately responsible for translating policy into action and principles (Afe, 2001). Therefore, their effectiveness and competency will go a long way in determining the success of any student or school.

Oshodi (2000) defines teacher competency as the ability of a teacher to produce desired results among his students in the course of instruction. The author further remarked that it is concerned with the relationship between the characteristics of the teacher, teaching acts and their effects on the learner. The importance of teacher competency in realizing educational goals and objectives in any educational system cannot be over emphasized. Teachers' competencies are the instructional behaviours exhibited by the teacher towards goal attainment (Adodo, 2013a). These behaviours are the combination of peculiar qualities, traits, mental or moral nature/strength and status that make one person or group different from another. Successful teachers' characteristics are those that have been found by empirical researches to be related to improved achievement of students in the cognitive, affective or psychomotor outcomes of education (Offorma, 1994).

Ojo and Maiyanga (2007) stated that teacher competency comprised of three components. The first is called content knowledge which is the knowledge of the subject matter or content of the teaching subject. The second is referred to as pedagogic knowledge which is the knowledge of the art of teaching and the third is called pedagogic content knowledge which is the knowledge of how to teach the content. The knowledge of these components assists Mathematics teachers greatly in sorting out the kind of information they need in teaching. Lack of adequate knowledge in these areas can deter good teaching and can create great problems for the Mathematics teacher in his professional assignment. Many Mathematics teachers at the secondary level teach without taking cognizance of these vital aspects of teaching which eventually lower their effectiveness even when assessed by their students (Oshodi, 2007).

According to Doyle (2002), teacher competency is ‘an act of faith’ on the parts of the students and the teachers to do their best. Gorton (1983) rightly pointed out that if a person is to be successful in his chosen career, that individual also needs a set of ethical beliefs or standards for guidance or direction in the appropriate use of competences.

A competent teacher seeks to know the learners’ behaviour in teaching, must perceive the individual learner as a whole because the learners have affective, cognitive and psychomotor talents. Also, students’ participation in the instructional process is critical and their perception presents methodological challenges. The knowledge of the way the students think and perceive can aid the teacher to reflect upon and adjust his teaching strategies to enhance students’ understanding and achievement (Etuk, Afangideh & Uya, 2013).

The involvement of students in the rating of teachers’ teaching effectiveness is seen as a practical demonstration of democracy in education. It is not in doubt that students are always able to provide more information on their teachers’ competency than any other individual (Organization for Economic Cooperation and Development, 2005). Doyle (2002) asserted that students are in a good position to report on the extent to which students-teacher interaction was productive, informative, satisfying or worthwhile. Murray (2005) in a study of student evaluation of teaching concluded that students’ ratings tend to be reliable, valid, relatively unbiased and useful. If secondary school Mathematics teachers are to be effective, improve and become well informed about their professional responsibilities, students’ assessment will essentially provide highly acceptable clues. Also, Salsali (2005) opined that rating of teaching is important in the teaching-learning process. The review of evaluation data can identify areas of effectiveness, as well as problem areas in teaching. According to Inko-Tariah (2013) stated that students’ perception of their teachers’ competence could influence their attitude toward Mathematics or any other school subject. Students more often than not judge their teachers in such areas as the teachers’ knowledge of the subject matter, communication ability, the choice of appropriate teaching method and the general classroom management skills. A teacher who is rated high on these indices in the perception of the students is likely to enjoy the confidence, respect and admiration of his students.

Also, David and Adebowale (1997) noted some benefits of the students’ evaluation to include among others: it increases the chances of recognising and rewarding excellence in teaching; provides means of interaction between the teacher and the students; provides the only direct and extensive information about the teacher; and provide tangible evidence of students’ recognition and involvement in rebranding them. In other words, students’ evaluation can be used to improve classroom instruction, students’ learning, and to foster professional growth of the teacher. Also the results of such evaluation can be used for administrative decisions like promotion, salary increase, demotion, dismissal, awards and lot of others. From the foregoing, it is worth investigating how the students would rate the teaching behaviour of their Mathematics teachers in view of the present notion that some of the secondary school teachers are incompetent in their teaching subjects, culminating to a popular demand for teachers’ competency test. It is against this, the present study would seek to investigate senior school students’ rating their Mathematics teachers’ competency in Kwara State, Nigeria.

Statement of the Problem

In Nigeria, the poor academic performance of students in Mathematics has become a worrisome phenomenon among stakeholders in education. Many factors have been unveiled by past researchers to be responsible for the poor academic achievement of students in Mathematics. The factors amongst others include: teachers’ instructional techniques and students’ inability to understand lessons (Imhanlahimi&Aguele, 2006); students’ feelings towards Mathematics; inadequate learning facilities; teachers classroom management skills; teachers negative attitude to work; and poor teaching habits (Madu, 2016). Adelakun (2017) conducted a study on senior secondary school students’ ratings of their chemistry teacher’s competency in Oyo state. The study shows that that students rating of their chemistry teachers’ competency based on their knowledge of subject matter, disposition to teaching, punctuality, relationship to students, use of instructional material, and use of appropriate evaluation techniques was

Excellent based on students' rating. It was also found that there was no significant difference between school type and students gender as applicable to students' rating of their teachers.

Also, Madu (2016) conducted a study on students' evaluation of mathematics teachers' preparedness for effective instruction in secondary schools in Kano State. Four areas were chosen namely; knowledge and teaching of subject matter, teaching method, instructional materials and lesson evaluation. The result from the study showed that students responses in four research questions indicates that secondary school Mathematics teachers are ineffectiveness and this is due to inadequate preparation for lessons. Achimugu (2016) conducted a study on the principals' assessment of chemistry teachers' effectiveness in teaching chemistry in Federal Capital Territory (FCT); Abuja. The results show that chemistry teachers do not use variety of teaching methods, relevant instructional materials and appropriate evaluation techniques in teaching chemistry. It was also found that there is significant difference in the mean scores of private and public principals on their assessment of the chemistry teachers' effectiveness in teaching chemistry in favour of private secondary schools.

Again, Ayodele (2013) conducted a study on students' ratings of teaching behaviour of Chemistry teachers in public secondary schools in Ekiti state. This study showed that the teaching behaviour of Chemistry teachers in public secondary schools in Ekiti State was good based on students' ratings. Ratings ascribed to each category of teaching behaviour of the teacher were statistically reliable while gender bias in students' rating of their teachers was insignificant. The above reviewed research studies have a relationship with the present study as they all focused on student's rating; however they differed significantly from the present study in content and geographical scope. It is on this premise that the researcher was interested to investigate senior school student's rating their Mathematics teacher's competences in areas such as: teacher content knowledge, use of instructional materials, classroom management skills and evaluation of lesson in Kwara State, Nigeria. Also moderating variables such a student gender and school type was considered for the study.

Methodology

The study is a descriptive research of the survey type. The survey method was considered as the appropriate because the study finds out students' views. Questionnaire was used to seek information from respondents. The population for this study consists of all senior secondary school students in Kwara state. The statistics obtained from Kwara State Ministry of Education, revealed that there are three hundred and forty-seven (347) public and one hundred and eighty seven (187) private Senior Secondary Schools in Kwara State. The sample for the study comprises of four hundred and fifty six (456) senior secondary school students in Ilorin. All public and private senior secondary school II students were randomly sampled using simple random sampling techniques. The instrument used for the study was a questionnaire titled "Student Rating of Mathematics Teachers' Competency Questionnaire" (SRMTCQ) which was adapted from the work of Madu (2016). The questionnaire consists of 30 items. Section A consists of information on demographic data such as gender, school type and class of the students. Section B consists of information on how students rate their Mathematics teachers in area of knowledge of subject matter, class room management skills, use of instructional materials and teacher evaluation techniques. The students rated their Mathematics teachers on a five-point scale with a score of 1 indicating poor, 2 indicating fair, 3 indicating good, 4 indicating very good and a score of 5 indicating excellent competency level. The instrument was given to two senior secondary school Mathematics teachers and two lecturers in Department of Science Education, University of Ilorin for face and content validity. The instrument was finally submitted to the researchers' supervisor for further scrutiny. For reliability test, the instrument was administered on twenty (20) senior school students who did not participate in the research but similar in characteristics. A reliability index of 0.71 was obtained using Pearson Product Moment Correlation. The data collected in the study was subjected to descriptive and inferential statistics. Descriptive statistics of frequency and percentage were used to answer all the research questions while all the hypotheses was tested using t-test statistical tool at 0.05 level of significance.

Findings of the Study

This section presents the analysis of the data gathered in the study and the results of the analyses. The analyses and results are presented based on the researched questions raised and the research hypotheses formulated. The responses of the senior school students were analyzed using percentage and t-test statistical tool. The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22. All the hypotheses were tested at 0.05 level of significance.

Data Analysis

Table 1 presents the demographic characteristics of the students that participated in the study. As shown in the table, four hundred and fifty-six (456) students participated in the study, out of which 236(51.75%) were public school students while 220(48.25%) were private school students. This shows that majority of the students were public school students. 229 (50.22%) were males while 227 (49.78%) were females. This shows that majority of the students were male.

Table 1: Demographic Characteristic of Students

Variable	Type	Frequency(F)	Percentage (%)
School Type	Public	236	51.75
	Private	220	48.25
Gender	Male	229	50.22
	Female	227	49.78
Total		456	100

Research Question 1: How do senior school students rate their Mathematics teacher on knowledge of subject matter?

Table 2: shows the frequency, percentages as well as the average scores of how senior school students rate their Mathematics teachers on knowledge of subject matter.

S/N	Students' Rating of their Mathematics Teachers Competency on Knowledge of Subject Matter Items	Poor f (%)	Fair f (%)	Good f (%)	Very good f (%)	Excellent f (%)
1	My Mathematics teacher teaches the subject matter in a clear manner	4(0.9)	9(2.0)	17(3.7)	72(15.8)	354(77.6)
2	My Mathematics teacher always applies the knowledge of Mathematics to real life situations	3(0.7)	15(3.3)	54(11.8)	140(30.7)	244(53.5)
3	My Mathematics teacher does not skip important concepts during class lesson	18(3.9)	18(3.9)	36(7.9)	114(25.0)	270(59.2)
4	The teacher solves relevant problems during lessons	6(1.3)	8(1.8)	43(9.4)	59(12.9)	340(74.6)
5	My Mathematics teachers discusses topics confidently	2(0.4)	11(2.4)	30(6.6)	70(15.4)	343(75.2)
6	My Mathematics teacher provides satisfactory answers to all Mathematics questions asked	4(0.9)	8(1.8)	41(9.0)	73(16.0)	330(72.4)

7	My Mathematics teacher clearly explained procedure for solving mathematics problems	7(1.5)	11(2.4)	23(5.0)	89(19.5)	326(71.5)
8	My Mathematics teacher gives adequate examples during lesson	2(0.4)	3(0.7)	40(8.8)	61(13.4)	350(76.8)
Average score (%)		1.26	2.27	7.79	18.59	70.09

From Table 2, students rating of their Mathematics teachers' competency on subject matter knowledge on the following items: My Mathematics teacher teaches the subject matter in a clear manner(77.6%), My Mathematics teacher gives adequate examples during lesson(76.8%), and My Mathematics teachers discusses topics confidently with (75.2%) has the highest rating. While these items: My Mathematics teacher always applies the knowledge of Mathematics to real life situations(53.5%),My Mathematics teacher does not skip important concepts during class lesson(59.2%) and My Mathematics teacher clearly explained procedure for solving mathematics problems (71.5%) had the lowest rating. Thus, senior school students' rating of their Mathematics teachers' competency on knowledge of subject matter was "Excellent" with an average score of 70.06%

Research Question 2: How do senior school students rate their Mathematics teachers' use of instructional materials?

Table 3: shows the frequency, as well as percentages of how senior school students rate their Mathematics teachers' use of instructional materials

S/N	Students' Rating of their Mathematics Teachers' Use of Instructional Materials	Poor f (%)	Fair f (%)	Good f (%)	Very good f (%)	Excellent f (%)
	My Mathematics teacher always uses relevant materials during lessons	27(5.9)	22(4.8)	44(9.6)	150(32.9)	213(46.7)
2	The instructional materials used by my Mathematics teacher are always adequate	24(5.3)	25(5.5)	65(14.3)	113(24.8)	229(50.2)
3	My Mathematics teacher uses different teaching strategies to make the lesson interesting	9(2.0)	17(3.7)	40(8.8)	91(20.0)	299(65.6)
4	My Mathematics teacher adopt strategies that make lesson meaningful	12(2.6)	20(4.4)	36(7.9)	115(25.2)	273(59.9)
5	My Mathematics teacher makes use of different textbooks to enhance lesson	41(9.0)	35(7.7)	54(11.8)	105(23.0)	221(48.5)
6	My Mathematics teacher provides improvised materials where standardized ones are unavailable	36(7.9)	15(3.3)	70(15.4)	134(29.4)	201(44.1)
Average score (%)			5.44	4.89	11.29	25.88
					52.5	

From Table 3, the following items:My Mathematics teacher uses different teaching strategies to make the lesson interesting (65.6%), My Mathematics teacher adopt strategies that make lesson meaningful(59.9%) and The instructional materials used by my Mathematics teacher are always adequate(50.2%) were rated higher, whileMy Mathematics teacher provides improvised materials where standardized ones are unavailable (44.1%), My Mathematics teacher always uses relevant materials during lessons (46.7%) and My Mathematics teacher makes use of different textbooks to enhance lesson

(48.5%) had lowest rating. Therefore, senior school students’ rating of their Mathematics teachers’ competency on use of instructional materials was “Excellent” with an average score of 52.5%.

Research Question 3: How do senior school students rate their Mathematics teachers’ classroom management skill?

Table 4 shows the frequency, percentages as well as the average score of how senior school students rate their Mathematics teachers’ classroom management skill.

Table 4: Senior School Students Rating of their Mathematics Teachers’ Classroom Management Skill

S/N	Students’ Rating of their Mathematics Teachers’ Classroom Management Skill Items	Poor f (%)	Fair f (%)	Good f (%)	Very good f (%)	Excellent f (%)
1	My Mathematics teacher is well-organized while in the class teaching	0(0.0)	5(1.1)	46(10.1)	79(17.3)	326(71.5)
2	My Mathematics teacher maintains enough classroom discipline during lesson	1(0.2)	13(2.9)	21(4.6)	128(28.1)	293(64.3)
3	My Mathematics teacher ensure class time is used in a productive manner	4(0.9)	16(3.5)	38(8.3)	111(24.3)	287(62.9)
4	My Mathematics teacher carried the whole class along in lesson delivery	13(2.9)	27(5.9)	36(7.9)	82(18.0)	298(65.4)
5	My Mathematics teacher know how to attract our attention to the lesson	13(2.9)	15(3.3)	46(10.1)	90(19.7)	292(64.0)
6	My Mathematics teacher sustains students’ interest in the lessons	1(0.2)	20(4.4)	45(9.9)	114(25.0)	276(60.5)
7	My Mathematics teacher always moves round the classroom to keep abreast of students’ activities	12(2.6)	4(0.9)	38(8.3)	92(20.2)	310(68.0)
8	My Mathematics teacher always involve every students in the classroom to control distraction	8(1.8)	20(4.4)	30(6.6)	104(22.8)	294(64.5)
Average Score (%)		1.43	3.29	8.22	21.93	65.13

From Table 4, students’ rating of their Mathematics teachers’ competency on classroom management skill on the following items: My Mathematics teacher is well-organized while in the class teaching (71.5%), My Mathematics teacher always moves round the classroom to keep abreast of students’ activities (68.0%) and My Mathematics teacher carried the whole class along in lesson delivery (65.4%) had the highest rating. While the following items : My Mathematics teacher sustains students’ interest in the lessons(60.5%), My Mathematics teacher ensure class time is used in a productive manner(62.9%) and My Mathematics teacher know how to attract our attention to the lesson (64.0%) had the lowest rating. Hence, senior school students’ rating of their Mathematics teachers’ competency on classroom management skills was “Excellent” with an average score 65.13%

Research Question 4: How do senior school students rate their Mathematics teachers’ evaluation of lessons?

Table 5 shows the frequency, average score as well as percentages of how senior school students rate their Mathematics teachers' competency on evaluation of lessons.

Table 5: Senior School Students Rating of their Mathematics Teachers' Evaluation of Lessons

S/N	Students' Rating of their Mathematics Teachers' Evaluation of Lessons	Poor f (%)	Fair f (%)	Good f (%)	Very good f (%)	Excellent f (%)
1	My Mathematics teacher always gives students exercises to solve during lessons	11(2.4)	8(1.8)	26(5.7)	34(7.5)	377(82.7)
2	My Mathematics teacher always gives assignments after every lessons	4(0.9)	8(1.8)	23(5.0)	69(15.1)	352(77.2)
3	My Mathematics teacher always returns answer scripts to students after marking	17(3.7)	8(1.8)	24(5.3)	94(20.6)	313(68.6)
4	My Mathematics teacher always makes corrections to the exercises given	1(0.2)	6(1.3)	20(4.4)	69(15.1)	360(78.9)
5	My Mathematics teacher evaluates students' performance continuously	4(0.9)	9(2.0)	42(9.2)	86(18.9)	315(69.1)
6	My Mathematics teacher includes questions in the tests that are based on the lesson taught	5(1.1)	13(2.9)	21(4.6)	72(15.8)	345(75.7)
7	My Mathematics teacher begins lesson by assessing the students on previous lesson taught	16(3.5)	12(2.6)	20(4.4)	110(24.1)	298(65.4)
8	My Mathematics teacher gives continuous assessment on weekly basis	15(3.3)	7(1.5)	42(9.2)	71(15.6)	321(70.4)
Average score (%)		2.00	1.98	5.97	16.6	73.4

From Table 5, students rating of their Mathematics teachers' evaluation of lessons on the following items: My Mathematics teacher always gives students exercises to solve during lessons (82.7%), My Mathematics teacher always makes corrections to the exercises given (78.9%) and My Mathematics teacher always gives assignments after every lessons (77.2%) had the highest rating. While, My Mathematics teacher begins lesson by assessing the students on previous lesson taught (65.4%), My Mathematics teacher always returns answer scripts to students after marking (68.6%) and My Mathematics teacher evaluates students' performance continuously (69.1%) had the lowest rating.

Hence, senior school students' rating of their Mathematics teachers' competency on evaluation of lesson was "Excellent" with an average score of 73.4%.

Research Question 5: Does students' gender influence their rating of Mathematics teachers' competency?

H₀₁: There is no significance difference between male and female students' rating of their Mathematics teachers competency.

Table 6: t-test Analysis of Students’ Rating of their Mathematics Teachers Competency Based on Gender

	Gender	N	Mean	Std. Dev.	t	df	Sig.	Remark
Teachers’ Competency	Male	229	4.3808	.58569	-3.93	454	.00	Significant
	Female	227	4.5862	.52820				

The t-test analysis as shown on Table 6 was conducted to compare male and female students’ rating of their Mathematics teachers’ competency. It was found that gender influenced students’ rating of their Mathematics teachers’ competency [$t_{(454)} = -3.93, p = 0.00$]. Since the p-value (0.00) is less than 0.05 (level of significance), the null hypothesis (H_{01}) was rejected. Hence, there was a significance difference between male and female students’ rating of their Mathematics teachers competency. Also, the mean scores of male (4.3803) is less than the female (4.5862) on rating of Mathematics teachers’ competency, this implies that the female students rated their Mathematics teacher competency higher than their male counterpart.

Research Question 6: Does students’ school type influence their rating of Mathematics teachers’ competency?

H_{02} : There is no significant difference between public and private school students’ rating of their Mathematics teachers’ competency.

Table 7: t-test Analysis of Students’ Rating of their Mathematics Teachers Competency based on School Type

	School Type	N	Mean	Std. Dev.	t	df	Sig.	rmk
Teachers’ Competency	Public	236	4.48	0.58	-0.07	454	1.00	NS
	Private	220	4.48	0.53				

Note*** Rmk = Remark, NS = Not Significant

The t-test analysis as shown on table 7 was conducted to compare private and public school students’ rating of their Mathematics teachers’ competency. It was found that school type did not influence students’ rating of their Mathematics teachers’ competency [$t_{(454)} = -0.07, p = 1.00$]. Since p-value (1.00) is greater than 0.05 (level of significance), the null hypothesis (H_{01}) was not rejected. Hence, there is no significance difference between private and public school students’ rating of their Mathematics teachers’ competency.

Summary of Findings

From the analysis and interpretation of the data collected for the study, the following are the major findings of the study:

1. Senior school students rated their Mathematics teacher knowledge on subject matter Excellent.
2. Senior school students rated their Mathematics teacher ‘excellent’ on classroom management skill.
3. Senior school students rated their Mathematics teacher ‘excellent’ on use of instructional materials.
4. Senior school students rated their Mathematics teacher ‘excellent’ on evaluation of lessons.
5. There was a significant difference in the male and female students’ rating of their Mathematics teachers’ competency.

6. There was no significant difference in the private and public school students' rating of their Mathematics teachers' competency.

Discussion, Conclusion and Recommendations

This section presents the discussion of results in the previous section. Conclusion was drawn based on the results and recommendations were made. Also, suggestions were raised to encourage further studies.

Discussion of Findings

Findings of the study revealed that senior school students rated their Mathematics teacher "excellent" on subject matter knowledge. This could be attributed to the competence and confidence the Mathematics teacher exhibits in his teaching which is a reflection of their in-depth knowledge of the contents of the subject. This result is in agreement with the finding of Adelokun (2017) who reported teachers possess the adequate knowledge of the subject matter when rated by their students, while the study was in contrary to the report of Etuk, Afangiedeh and Uya (2013) and Madu (2016) which in their separate findings reveals that Mathematics teacher do not processes adequate knowledge of subject matter.

On use of instructional materials, the finding indicates that the students rated their Mathematics teacher excellent towards the adequate use of instructional materials. The outcome of this finding is based on the fact that teachers who make use of adequate and effective use of instructional materials in lesson delivery are likely to achieve a set goal, and the concept would be properly learned by the students. Arubayi (2009) agreed with the findings of the study that students gave satisfactory appraisal to the adequacy use of instructional materials by their teachers while Achimugu (2016) and Etuk, Afangiedeh, and Uya (2013) disagreed with the findings and opined that instructional materials secondary school mathematics teachers used during lessons were irrelevant and inadequate.

The findings of the study also revealed that senior school students rated their Mathematics teacher 'excellent' on classroom management skill. The outcome is based on the fact that Mathematics teachers provide conducive learning environment that is disciplined and orderly that promote positive learning attitude for the students. This result is in agreement with the report of Chua and Raymond (nd) that senior school students rated their Mathematics teacher 'excellent' on classroom management skill but in contradiction to the findings of Etuk, Afangiedeh, and Uya (2013).

Furthermore, the findings showed that senior school students rated their Mathematics teacher 'excellent' on evaluation of lessons. This may be as a result of the fact that the teachers assessed their students regularly. This finding is in line with the report of Adelokun (2017) and Arubayi (2009) and Ayodele (2013) which in their separate findings reported that senior school Mathematics teachers evaluate their lessons regularly. While the result was in contrary to the reports of Madu (2016) and Achimugu (2016) who reported that secondary school mathematics teachers have a lukewarm attitude towards monitoring of students' learning progress.

The study revealed that there was significant difference in the male and female students' rating of their Mathematics teachers' competency. This could be attributed to the fact that female students perceived their teachers to be more competent than the male students. This implies that gender is an important factor to be considered when students' rating of their teachers' competency is in focus. This finding is in agreement with the report of Centra and Gaubatz (2000) and MacNell, Driscoll, and Hunt (2014) that there was significant difference in the male and female students' rating of their teachers' competency. This is in disagreement with the report of Ayodele (2013) that there was no significant difference in the male and female students' rating of their teachers' competency.

Finally, findings of this study showed that there was no significant difference in the private and public school students' rating of their Mathematics teachers' competency. This may be attributed to the fact that both private and public school Mathematics teachers teaches effectively and diligently. This result is in contradiction to Achimugu (2016) who reported that there is significant difference in the mean scores of private and public schools on their assessment of the teachers' effectiveness in teaching in favour of private secondary schools.

Conclusion

The study concluded that senior school students rated their Mathematics teacher 'excellent' on subject matter knowledge. Senior school students rated their Mathematics teacher 'excellent' on classroom management skill. It was also concluded in the study that senior school students rated their Mathematics teacher 'excellent' on use of instructional materials. Senior school students rated their Mathematics teacher 'excellent' on evaluation of lessons. The study further concluded that there was significant difference in the male and female students' rating of their Mathematics teachers' competency. There was no significant difference in the private and public school students' rating of their Mathematics teachers' competency.

Recommendations

Based on the major findings and conclusion of this study, the following recommendations are considered relevant:

1. Mathematics teachers should justify the rating ascribed to their teaching by improving on their pedagogical skills to enhance better learning and performance of students in Mathematics.
2. Mathematics teachers should encourage their students to evaluate their teaching regularly while the feedback obtained from such evaluation be used to modify teaching and learning of Mathematics by the students.
3. Students should be courageous enough to provide valid and reliable information about their teachers, irrespective of gender so as to develop confidence and sound relationship for better learning and performance in Mathematics.
4. Workshops, Conferences and Seminars should be organized by the government at secondary level of education in order to boost content and pedagogic knowledge of teachers towards effective teaching and meaningful learning of Mathematics in schools.
5. Government at all levels should provide more relevant instructional materials and improve infrastructural facilities so as to further encourage use of instructional materials.
6. Public and private schools Mathematics teachers should be encouraged to improve on their teaching proficiency.

References

- Abdu, B. M (2014). *Assessment of the implementation of mathematics curriculum in senior secondary schools in Kano State* (Master's thesis). Ahmadu Bello University, Zaria, Nigeria.
- Abdu-Raheem, B. O. (2016). Effects of instructional materials on secondary schools students' academic achievement in social studies in Ekiti state, Nigeria. *World Journal of Education*, 6(1), 32-39.
- Abdu-Raheem, B. O. (2011). Availability, adequacy and utilization of social studies instructional materials in Ekiti state secondary schools. *Journal of Current Discourse and Research*. 3, 242-255.
- Abel, M. H., & Meltzer, A. L. (2007). Student ratings of a male and female professors' lecture on sex discrimination in the workforce. *Sex Roles*, 57, 173-180.
- Achimugu, L. (2016). Principals' assessment of teachers' effectiveness in teaching chemistry at the senior secondary school in the federal capital territory, Abuja, Nigeria. *International Journal of Scientific and Research Publication*, 6(8), 27-33.
- Ada, N.A. (2004). *Strategies for Effective Classroom Organization and Management: In the Practice of Teaching Perspective and Strategies*. A Resource Manual for Today's Teachers.

- Adediwura, A. A., & Tayo, B. (2007). Perception of teachers' knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary school. *Academic Journal on Educational Research and Review*, 2(7), 165-177.
- Adelakun, T. A. (2017). *Senior secondary school students' rating of their Chemistry teacher competency in Oyo, Nigeria* (Master's Thesis). University of Ilorin, Nigeria.
- Adeluku, S.A (2012). The influence of instructional materials on academic performance of senior secondary school students in mathematics in Cross River State. *Global Journal of Educational Research*, 2(1).
- Adeyemo, S. A. (2012). The relationship between effective classroom management and students' academic achievement. *European Journal of Educational Studies*, 4(3), 367-381.
- Adipo, A. J. (2015). *Impact of instructional materials on academic achievement of students in Mathematics in public primary schools in Siaya County, Kenya* (Master's thesis). University of Nairobi. Kenya.
- Adodo S.O (2007): *Effect of Diagnostic Remediation on Students learning outcome in integrated science in the JSS in South Western Nigeria* (Doctoral thesis). South west, Nigeria.
- Adodo, S. O. (2013a). Effects of two-tier multiple choice diagnostic assessment items on students' learning outcome in Basic Science Technology. *Academic Journal of Interdisciplinary Studies*, 2(2), 201-210.
- Afe, J.O. (2001). "Reflections on Becoming a Teacher and Challenges of Teacher Education". Inaugural Lecture Series 64. University of Benin, Nigeria.
- Agina-Obu, T. N. (2005). The relevance of instructional materials in teaching and learning. In I. Robert-Okah & K. C Uzoeshi. *Theories and Practice of Teaching*, Port Harcourt: Henry Publication.
- Ahmed, T.M. (2003). Education and national development in Nigeria. *Journal of Studies in Education*, 10, 35-46.
- Akinbobola, A. O. (2004). Effects of co-operative learning strategies on academic performance of students in physics. *Journal of Research in Education*, 1(1), 71-75.
- Akpakwu, S .O. (2003). Management of classroom towards a successful Universal Basic Science Education Scheme: Nigerian Academic Forum. *A multi disciplinary Journal*, 4(2), 16 – 20.
- Akpan V. I., & Okoli A. C. (2017). Effect of the use of instructional materials on academic performance of pupils in Ikwuano, Abia State. *International Journal of Trend in Research and Development*, 4(1), 247-250.
- Aminu, S .A. (2005). *A survey of problems of Mathematics teaching in primary and junior secondary schools in Bauchi State* (Master's Thesis). Department of Education, University of Abuja.
- Arubayi, D.O. (2009). Appraising instructional materials and evaluation strategies in the teaching of clothing and textiles. *Studies on Home Community Science*, 3(1), 25-28.
- Ayodele, O. J. (2013). Students rating of teaching behaviour of chemistry teachers in public secondary schools in Ekiti state. *International Journal of Education and Literacy Studies*, 1(1), 21-30.
- Azuka, B. F. (2013). The challenges of mathematics in Nigeria economic and technical development: Implication for tertiary education. *Abacus: Journal of Mathematical Association of Nigeria*, 28(1), 18-26.

- Ball, D. L., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. In J. Boaler (Ed), *Multiple perspectives in mathematics of teaching and learning* (83-104). Westport, Conn: Ablex publishing.
- Barnuevo, U. R., Hasegawa, K. B & Edward, H. (2012). *Students Perception on the Instructional Competencies of the Teaching Force: Their Relationship to Students Academics Performance* (Master's Thesis). Don Bosco College, Calamba City.
- Bovina, K. (2002). *Teachers Morale: the Impact of Teaching Experience*. Retrieved from eric.ed.gov/?1d= ED467760.
- Byrne, D. B., Hatties, J. A., & Fraser, B. J. (2001). Students' perception of preferred classroom learning environment. *Journal of Educational Research*, 8(1),10-18.
- Centra, J. A., &Gaubatz, N. B. (2000). Is there gender bias in student evaluations of teaching? *The Journal of Higher Education*, 71(1), 17-33.
- Chau, L. C., & Raymond, K. H (nd). Students rating of teaching of effectiveness: what do students tell about their lecturers? *Malaysia Teacher Education Institute*, 7(2), 45-57.
- David, W., & Adebowale A. (1997). Student evaluation of teaching effectiveness: A Nigerian investigation. *Higher Education*24(4),453- 463.
- Doyle, J. (2002). *Evaluating Teacher Effectiveness*. Retrieved from [http://www.Ferris.edu/fctl/teaching-and-learning-tips/research on students evaluation of faculty teaching/Evaluation Teach Effect.htm](http://www.Ferris.edu/fctl/teaching-and-learning-tips/research%20on%20students%20evaluation%20of%20faculty%20teaching/Evaluation%20Teach%20Effect.htm)
- Eggen P., & Kauchak, D. (2002). *Strategies for teachers: Teaching content and thinking skills* (4th ed.). Needham Heights: M. A. Allyn and Bacon
- Emmer, E.T.,&Stough, L.M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist*, 36 (2), 103 – 112.
- Eniyewu, J. (2005). Effect of instructional materials on teaching of economics in secondary schools in Akoko North-East Local Governemnt Area of Ondo State. *Ikare Journal of Education*, 7, 117-120.
- Eraikhuemen, L. (2003). The influence of gender and school location on students' academic achievement in senior secondary school mathematics, *Ife Journal of Theory and Research in Education*, 7(2), 99-112.
- Etuk N. E., Afangideh M. E.,&Uya, A. O. (2013).Students' perception of teachers' characteristics and their attitude towards Mathematics in Oron Education Zone, Nigeria. *International Education Studies*, 6, (2).
- Fadeiye, J.O. (2005). *A social studies textbook for colleges and universities*. Ibadan: Akin-Johnson Press and Publishers.
- Fadipe, J.O. (2000). Education and Productivity on Nigeria: An Overview in E.O Fagbaniye& D.O DuroSaro(Eds) *Education and Productivity in Nigeria*. Ilorin: Hartee Press and Publishing Ltd.
- Fafuwa, A.B. (1974). Teachers' education in Nigeria. *West African Journal of Education*, 14(1).
- Federal Republic of Nigeria.(2013). *National Policy on Education*. Lagos: NERDC Press.

- Fajemidagba, O. (1986). A study of mathematics components of the mathematics teacher education programs in Nigerian University. *Ilorin Journal of Education*, 7, 70 -75.
- Fajemidagba, M.O., Salman, M. F. & Ayinla, O. (2012). Effect of teachers' instructional strategy pattern on senior secondary school students' performance in Mathematics word problems in Ondo. *Nigeria Journal of Education and Practice*, 3(7), 159-168.
- Fehintola, J. O. (2014). Teachers' characteristic as correlate of students' academic performance among secondary school students in Saki-west local government area of Oyo State. *Journal of Education and Social Research*, 4(6), 459-467.
- Fennema, E., & Franke, M. L. (1992). Teachers' knowledge and its impact. In: D. A. Grouws (Ed.) *Handbook of research on mathematics teaching and learning. A project of the National Council of Teachers of Mathematics*, 147-164. New York: Macmillan.
- Gorton, R. A. (1983). *School administration and supervision leadership: Challenges and opportunities*. Dubuque, Iowa: W.C Brown Co.
- Gutek, G. L. (2004). *Philosophical and Ideological Voices in Education Boston*: Pearson Education London.
- Hamilton-Ekeke, J. T. (2012). Impact of motivated science teachers on students' performance in science subjects in Bayelsa State, *Online Educational Research Journal*, available at: www.oerj.org
- Hindman, J. H., & Stronge, J. H. (2006). *Teacher Quality Index: A Protocol for Teacher Selection*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Huckstep, P., Rowland, T., & Thwaites, A. (2003). *Primary teachers' mathematics content knowledge, what does it look like in the classroom*. Retrieved from www.Scribd.com/doc/22550939/journal
- Ibrahim, A. (2000). *Evaluation of Pedagogical Competence of JSS integrated Science Teachers*. 40th annual conference Proceedings of Science Teachers Association of Nigeria, 138-142.
- Imhanlahimi, E. O., & Aguele, L.I. (2006). Comparing three instruments for assessing biology teachers' effectiveness in the instructional process in Edo State, Nigeria. *Journal of Social Sciences*, 13(1), 67-70.
- Inko, D. C. (2013): Attitude of lecturers towards students evaluation of their teaching effectiveness in Nigerian university: *journals of education and practice*, 4(15).
- Isangedighi, A. J. (2007). *Child psychology: Development and education*. Calabar: Eti-Nwa Associate.
- Isola, O. M. (2010). *Effect of Standardized and Improvised Instructional Materials on Students Academic Achievement in Secondary School Physics* (Master's Dissertation). University of Ibadan, Ibadan.
- Little, S. G., & Akin-Little, A. (2008). Psychology's contributions to classroom management. *Psychology in the Schools*, 45, 227-234.
- MacNell, L., Driscoll, A., & Hunt, A. N. (2014). Exposing gender bias in student ratings of teaching. *Innovative Higher Education*, 1-13.

- Madu, C. I. (2016). Students' evaluation of Mathematics teachers' preparedness for effective instruction in Kano State. *Journal of Research & Method in Education*, 6(3), 10-14.
- Malone, B. G., & Tietjen, C. L. (2000). Re-examination of classroom skills. The need for clarity and specified behavior. *Special services in the school*, 16, 159-170.
- Mapaderun O. (2002). *Teaching Method for Business, Science, Social Science and Technical Education*, Ibadan: Holyem Communications.
- McLendon, M.K. (2003). The politics of higher education: Toward an expanded research agenda. *Educational policy*, 17(165).
- Muijs, D., & Reynolds, D. (2002). Teachers' belief and behaviours: What really matter? *Journal of classroom, interaction*, 37(2), 3-15.
- Murray, H. G. (2005). *Student evaluation of teaching: Has it made a difference?* A paper presented at the annual meeting of the Society for Teaching and Learning in Higher Education. Charlottetown, Prince Edward Island. June 1—15. www.stihe.ca.
- Noddings, N.(2007). *Philosophy of education*, (2nded) London: Builder West View Press 2007
- OECD, (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Retrieved from <https://www.oecd.org/edu/teacherpolicy>
- Offorma, G. C. (1994). *Curriculum implementation and instruction*, Onitsha: Uniworld Educational Publisher (Nig) Ltd.
- Ofoegbe, F. I. (2004). Teacher motivation: A factor for classroom effectiveness and school improvement in Nigeria. *College Student Journal*, 38(1).
- Ogbonnaya, U. I. (2007). *Exploring the Relationship between Mathematics Teachers' Subject Matter Knowledge and their Teaching Effectiveness* (Master's thesis). University of South Africa.
- Ojo, M. O., & Maiyanga, A. A. (2007). *Teaching the Teachers: A Festschrift for Kabiru Isyaku*. Abuja, National Commission for Colleges of Education.
- Okoli.N. (2011). Towards a revolutionary education and teacher development in some selected African Countries. *A Journal of Contemporary Research*, 8(1), 24-34.
- Olasehinde-Williams, F., Yahaya, L., & Owolabi, H. (2018). Teachers' knowledge indices as predictors of secondary school students' academic achievement in Kwara State, Nigeria. *IAFOR Journal of Education*, 6(1), 73-90.
- Olatoye, R. A. (2006). Science teacher effectiveness as a predictor of student performance in the senior secondary school examinations. *Olabisi Onabanjo Journal of Educational Studies (OOUJES)*, 6(1), 105-113.
- Olatoye, R. A., & Afuwape, M. O. (2004). Empirical analysis and diagnostic feedback of science students' ratings of their teachers' effectiveness in Ogun State, Nigeria. *Journal of Research in Education*, 3(1), 111-123.
- Olatoye, R. A., & Anu, E. M. (2011). Senior secondary school science teachers' perception of using students to evaluate teaching effectiveness: *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 2(3), 164-170.

- Oliver, R., & Reschly, D. (2007). *Effective classroom management: teacher preparation and professional development*. Retrieved from <http://www.tqsource.org/topics/effectiveClassroomManagement.pdf>
- Olumorin, C. O., Yusuf, A., Ajidagba, U. A., & Jekayinfa, A. A. (2010). Development of instructional materials from local resources for art based courses. *Asian Journal of Information Technology*, 9(2), 107-110.
- Oluwagbohunmi, M.F., & Abdu-Raheem, B.O. (2014). Sandwich undergraduates' problem of improvisation of instructional materials in social studies: The case of Ekiti State University. *Journal of International Academic Research for Multidisciplinary*, 1(12), 824-831.
- Oluwatayo, J. A. (2012). Student rating of teaching behaviour of chemistry teachers in public secondary schools in Ekiti State. *International Journal of Education & Literacy Studies*. 1 (1),1-6.
- Omenka, J. E., & Otor, E. E. (2015). Influence of classroom management on students' academic achievement in science and Mathematics in Oju Local Government Area of Benue State. *Global Journal of Interdisciplinary Social Sciences*, 4(4), 36-40.
- Onwuachu, W. C., & Nwakonobi, F. E. (2009). Students' evaluation of classroom interactions of their biology teachers: Implications for Curriculum Implementation. *An International Multi-Disciplinary Journal*, 3 (1), 349-361.
- Orji, N. S. (2014). Relationship between science teachers' classroom management effectiveness and students' outcomes in Chemistry, *International Journal of Modern Education Research*, 1(1), 11-14.
- Osakwe, R. N. (2009). Dimensions of communication as predictors of effective classroom interaction. *Studies on Home and Community Science*, 3(1), 57-61.
- Oshodi, O. O. (2007). *Students' Assessment of Science Teachers' Effectiveness for Sustainable Development*. Science Teachers' Association of Nigeria Proceedings of the 50th Anniversary Conference.
- Otunu- Ogbisi, R. O., & Ukpebor N. J. (2009). Mathematics Education: A tool for Technological development in Nigeria. *The Journal of Mathematics Association of Nigeria*, 34(1), 46-53.
- Salsali, M. (2005). Evaluating teaching effectiveness in Nursing Education: An Iranian Perspective. *BMC Medical Education*, 5, 26 –34.
- Stichter, J. P., Lewis, T. J., Wittaker, T. A., Richter, M., Johnson, N. W., & Trussell, R. P. (2009). Assessing teacher use of opportunities to respond and effective classroom management strategies: Comparisons among high- and low-risk elementary students. *Journal of Positive Behavior Interventions*, 11, 68-81.
- Sugai, G., & Horner, R. H. (2002). Introduction to the special series on positive behavior support in schools. *Journal of Emotional and Behavioral Disorders*, 10, 130-135.
- Sule, A. O. (1990). *An Investigation into difficult Areas of the current junior secondary school mathematics curriculum*. Retrieved from <http://ijeiloring.net>
- Tal, C. (2010). Case studies to deepen understanding and enhance classroom management skills in preschool teacher training. *Early Childhood Education Journal*, 38, 143-152.
- Udofot, M. A. (1995). Current trends of teacher educational practices. *UyoImasons Educational Services*.

- Ugbe, A.I. (2000). Influence of Teacher's competence on student's academic performance in senior secondary school chemistry. *Educational Journal*, 8, 61-69.
- Uya, A. O. (2011). *Teacher's characteristics and students' attitude towards mathematics in senior secondary of Oron Federal constituency of Akwa-Ibom State* (Master's Thesis). University of Uyo, Akwa-Ibom State.
- Williams, E. O. (2004). Extent of utilization of school physical facilities in the secondary school in Gboko educational zone of Benue state (Bachelor's Thesis). University of Makurdi.
- Yasemin, C. G. (2012). *Teachers' mathematical knowledge for teaching instructional practices and student outcomes* (Master's thesis). University of Illinois.