
STUDENTS' PERCEPTION OF TEACHERS EFFECTIVENESS AND LEARNING OUTCOMES IN MATHEMATICS AND ECONOMICS IN SECONDARY SCHOOLS OF CROSS RIVER STATE, NIGERIA.**ROBERT, Augustine Igwe***Department of Social Science Education,
University of Calabar, Calabar.
robertaugustineigwe@yahoo.com*

&

OWAN, Valentine Joseph*Department of Educational Administration and Planning,
University of Calabar, Calabar.
owanvalentine@gmail.com*

Abstract

This study assessed students' perception of teachers' effectiveness and learning outcomes in mathematics and economics in secondary schools of Cross River State, Nigeria. Two null hypotheses were formulated to direct the study. The factorial research design was adopted for the study. Cluster and purposive sampling techniques were however employed in selecting a sample of 1,800 students from the three education zones in Cross River State. "Students' Perception of Teachers Effectiveness Questionnaire (SPTEQ)", Mathematics Achievement Test (MAT), and Economics Achievement Test (EAT) were used as instruments for data collection. Reliability estimates of .86, .91, and .81 were obtained for the three instruments using Cronbach alpha. Collected data were analysed using descriptive statistics while the research question was answered and the null hypothesis tested using Pearson Correlation matrix and multiple regression analyses (where applicable), with the aid of Minitab v18. Findings revealed amongst others that, there is a significant composite influence of students' perception of teachers' motivational skills, teaching methods, relationship with students, and communication level on learning outcomes in Mathematics ($F = 142.46, p < .05$) and Economics ($F = 150.31, p < .05$) respectively. It was recommended amongst others that secondary school teachers should adopt motivational techniques such as praises, rewards, and smiles, in strengthening the interest of learners during mathematics and Economics lessons.

Keywords: Students' perception, Teachers effectiveness, Motivational skills, Learning outcomes, Mathematics, Economics.

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Introduction

Students' learning outcomes go beyond mere passing an examination or test but should reflect broad conceptual knowledge and adaptive vocational and generic skills. It should reflect essential knowledge, skills or attitudes and focuses on results of the learning experiences. It reflects the desired end of the learning experience, not the means or the process. Learning outcomes represent the minimum performances that must be achieved to successfully complete a course or program, and may be considered to be exit behaviors (Lesch & Brown,

2018). It can be inferred from the foregoing that students' learning outcomes refer to those observable and measurable knowledge, skills and attitudes of learners after a learning encounter. It does not necessarily imply students' performance in a test because test performance is just an index amongst several others that can be used to assess the learning outcomes of learners.

The issue of students' poor learning outcomes remains an eye-sore within the context of Cross River State. There is a clear disparity between

investment and learning outcomes which has gone further to create gaps, imbalance, and inequality between the production of secondary schools and the expectations of the society. Many students especially secondary school leavers rarely portray nor demonstrate such features which are convincing of a secondary school leaver with good learning outcomes. One notable instance of students' poor academic performance was recorded in the West African Senior School Certificate Examination

(WASSCE) in 2018. The performance of students in Cross River State was very poor, consequently, the state was ranked 20th out of the 36 States of the Federation. There is also another instance of poor students' academic performance at the Unified Tertiary Matriculation Examination (UTME) in 2018 for the nation in general. The breakdown of the aggregate scores of students at various intervals is presented in Table 1 below.

TABLE 1
Scores of students in 2018 Unified Tertiary Matriculation Examination (UTME) in Nigeria

| Score | 200 and above | 180-199 | 160-179 | 140-159 | 120 - 139 | Total |
|-----------|---------------|-----------|-----------|-----------|-----------|------------|
| Year 2018 | 465,025 | 1,407,988 | 2,250,726 | 3,096,798 | 3,202,650 | 10,423,187 |
| % | 4.462 | 13.508 | 21.593 | 29.711 | 30.726 | 100 |

Jamb results statistics, (2018); Authors' computation

From the results presented in Table 1 above, one can deduce a high rate of failure from the examinations. Owan, Nwannunu, and Madukwe (2018) revealed that apart from poor performance in examinations, many secondary school students in Calabar Education Zone cannot read and write resulting in serious examination malpractices as means to passing their examinations. This trend has not only affected the secondary school system, but it has also eaten deep into the quality of graduates produced for the tertiary education level (Owan et al., 2018). This may be because even most of those who are admitted into tertiary institutions struggle to cope academically. Consequently, they resort to cheating and other forms of malpractice as a means of passing examinations. Akiri and Ugborugbo (2009) noted that the issue of poor academic performance of students in Nigeria has been of much concern to all and sundry. The problem is so much that it has led to the widely acclaimed fallen standard of education in Delta State and Nigeria at large.

The major problem that Nigerian secondary education is facing is the student's poor performance in core subjects, especially Mathematics and Science and Technology (Gimba, Hassan, Yaki, & Chado, 2018). The research of Kurumeh and Imoko (2008) revealed a low academic achievement of students in Science and Technology at all levels of education in

Nigeria from primary school (Basic education) to secondary school. Also, pupils and secondary school students complained about Science and Technology as being difficult. This entails that Science and Technology foundation in primary school level is very weak and is carried forward to Junior and Senior Secondary School levels which have contributed a lot to poor academic achievements of students in Senior School Certificate Examination (Gimba, et. al., 2018).

Considering governments' huge investment in public education, its output in terms of quality of students have been observed to be unequal with government expenditure. Consequent upon the observed deterioration in the academic achievement, attitude, and values of secondary school students in public secondary schools in Cross River State, one wonders if the high failure rates and the poor quality of the students is not a reflection of their perception of the instructional quality of teachers in the schools. It was on this note that this study was undertaken to assess and determine whether there is an association between students' perception of their teachers' effectiveness and their learning outcomes in Mathematics and Economics.

Students' perception of teachers' effectiveness refers to how students see the activities of their teachers. That is, it includes the degree to which students view the punctuality, teaching, behaviour,

dressings and all other physical or observable activities of their teachers. A student may perceive a teacher as being effective or ineffective. This is because teachers are role model to students and their behaviour goes a long way to affect those of the learners. The quality of education depends on the teachers as reflected in the performance of their duties. Over time pupils' academic performance in both internal and external examinations had been used to determine excellence in teachers and teaching (Ajao, 2001). Both teaching and learning depend on teachers: no wonder an effective teacher has been conceptualized as one who produces desired results in the course of his duty as a teacher (Uchefuna, 2001). This study focused specifically on students' perception of teachers' motivational skills, students' perception of teaching methods, students' perception of teachers' relationship with students, and students' perception of teachers' communication level, which have been explained below.

Students' perception of teachers' motivational skills refers to how the students in a class, view the strategies employed by their teachers to make them willing to learning. A student can perceive a teacher's motivational approach as being good, fair or bad. They may also perceive such skills as being effective/positive, or ineffective/negative. Teachers' motivational skills refer to those techniques a teacher employs to keep learners happy, excited, make them ready and willing to learn. It includes the excitement in the teacher, his relationship with students, his comments to students' questions or answers to questions and many others. Teachers' motivational skills are the abilities to maintain the interest that brought students to the course in the first place (Obot, Essien & Akpan, 2014). Haider, Qureshi, Pirzada, and Shahzadi (2015), investigated the impact of students' motivation on their academic performance. The population of the study was made up of 120 students from the three different departments (DMS, CS, and Pharmacy) of the Islamia University of Bahawalpur. The study revealed that intrinsic and extrinsic motivation had a positive impact on students' academic performance and our overall model is significant ($p < 0.05$). The study reveals that motivation is a very important part of students' study life and play a very important role in students' success.

Students' perception of teachers' teaching methods refers to the way students judge their teachers

who they are in contact with. Since they maintain proximity with teachers, they can easily rate or judge such teachers based on certain indices. Students usually judge their school teachers in areas such 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 on these indices at the high level is likely to enjoy the confidence, respect, and admiration of his students based on their perception (Hassan, Maizam, Kahirol & Awang, 2017). The knowledge of the way the students think and perceive can aid the teacher to reflect upon and adjust their teaching strategies to enhance students' understanding and achievement (Hassan et. al., 2017).

Ahmad, Azizan, Rahim, Jaya, Shaipullah, and Siaw (2017) carried out a study to determine the relationship between students' perceptions of the teaching and learning towards the lecturers with their achievements in Mathematics at the Centre for Pre-university Studies. The study adopted a descriptive research design. The population of the study comprised of 841 students. The findings revealed that there is no significant correlation between the average scores of students' perceptions of teaching and learning towards the Mathematics lecturer with the average scores Mathematics achievement of the students. The findings of the study revealed that lecturer can improve their teaching skills and techniques that are appropriate to the students.

Students' perception of teachers' relationship with students is simply the manner or extent to which students view their relationship with the teacher. A teacher may relate cordially and cohesively with his/her students, while another may be brutal or unfriendly to his/her students. Depending on the kind of attitude portrayed by the teacher, will determine how students' view his relationship to them. The more teachers know about their students, the better the rapport the teacher has with them and the more likely they are to benefit from the teachers' experience of the world (Jonhendro, et. al., 2002). Abdulrahman (2007), assessed students' views on student-teacher relationship and its effect on academic grades. The instrument for data collection was a questionnaire measured on a 4-point scale. The population of the study comprised of 420 students. This study disclosed that the student-teacher relationship was good in a

medical school and the views of students on this relationship were independent with their academic grades.

Students' perception of their teachers' communication level simply implies the way the learners see and judge their teachers' communication. Some students view certain teachers as bad communicators while others feel excited when certain teachers speak. Many students go as far as wishing to be like those teachers whose communication pattern, they admire. Undoubtedly, students perceive and develop impressions of a teacher's behaviors in part through the teacher's style of communication. That is, depending on the way a teacher communicates effects the impression the student has of him/her (Frumkin & Murphy, 2007).

Ahmad and Aziz (2009) conducted a study to find out the purpose of students' perception of the teachers' teaching of literature communicating and understanding through the eyes of the audience. Results of the study revealed that students admit their teachers have a positive attitude towards literature and literature teaching. The findings of the study showed that teachers always tried to cultivate an atmosphere that was cooperative rather than competitive, perceived to be non-threatening. Students were allowed to give their views and opinions, thereby, creating a receptive classroom atmosphere to produce maximum learning input. It is important when communicating with others, that the party for which the message is intended receives and accepts it. Due to this two-way interface, the sender and the receiver should ensure that both parties interpret and act on the message in the same way (Arop, Owan, & Ekpang, 2018).

Having explored the literature that is relevant to this study, it was deduced that several gaps are still existing which this study was able to close. Previous studies have not adequately shown with clear evidence, the relationship that links students' perception of teachers' effectiveness and learning outcomes. This study also takes a specific view of students' learning outcomes in Mathematics and Economics only, as opposed to the general perspective observed in earlier studies. The sub-variables of this study, have not been fully captured in the literature vis-à-vis students learning. From a local context, a study of this magnitude seems to be rare in Cross River State.

It was based on these reasons, that this study carried out.

Statement of the problem

The objective of secondary education as well as societal expectations, appear to have met some bottlenecks based on the poor learning outcomes of most secondary school students. In Cross River State, there is a high rate of misbehavior amongst students. Many secondary school students are performing below expectations in internal and external examinations. Some have developed disrespectful attitudes toward parents. There is also a high rate of involvement in cultism and other social vices by secondary school students. Such negative attitudes as stealing, smoking of cigarettes and/or Indian hemp and many others, are commonplace. In fact, it is no longer news to see secondary school students engaging in such unacceptable social menace in which the society frowns at. This is indeed a backlash given that, these students were supposed to be in school, learning and working hard to improve themselves, their families and the society in general.

In the past, many students have attributed their unserious attitudes to be as a result of lack of parental support, peer pressure, low self-esteem, poverty and so on. However, several pieces of research have been conducted on all these factors, and recommendations which one expects should have been enough to address these issues, have been made. Parents, as well as the government, are making efforts each passing day to improve the quality of students produced through improved learning outcomes. The persistent increase in the poor performance of students especially in subjects like Economics and Mathematics is unacceptable and calls for urgent attention. It was on this note, that the researcher wonders what might be responsible for this issue and thus, sought to investigate whether students' perception of their teachers' effectiveness has any association with their poor learning outcomes in Mathematics and Economics.

Purpose of the study

The main purpose of this study was to assess students' perception of teachers' effectiveness and learning outcomes in Mathematics and Economics in secondary schools of Cross River State, Nigeria. This study assessed specifically:

- i. The relationship between students’ perception of teachers’ motivational skills, students’ perception of teachers’ teaching methods, students’ perception of teachers’ relationship with students, students’ perception of teachers’ communication level, and their learning outcomes in Mathematics and Economics.
- ii. The composite influence of students’ perception of teachers’ motivational skills, students’ perception of teachers’ teaching methods, students’ perception of teachers’ relationship with students, and students’ perception of teachers’ communication level on their learning outcomes in Mathematics and Economics.

Statement of hypothesis

- i. There is no significant relationship between students’ perception of teachers’ motivational skills, teachers’ teaching methods, teachers’ relationship with students, and teachers’ communication level with learning outcomes in Mathematics and Economics.
- ii. There is no significant composite influence of students’ perception of teachers’ motivational skills, teachers’ teaching methods, teachers’ relationship with students, and teachers’ communication level on learning outcomes in Mathematics and Economics.

Methods

This study adopted the factorial research design which is well-suited to a study purported to examine the influence of multiple factors on multiple

response variables. Thus, this was the most appropriate research for this study. The population of this study comprised all the secondary school students’ in Cross River State. Cluster and purposive sampling technique were however employed in selecting a sample of 1,800 students from the three education zones in Cross River State, implying that 600 students were selected from each education zone.

Three instruments were used for data collection including a questionnaire titled: “Students’ Perception of Teachers Effectiveness Questionnaire (SPTEQ)”, Mathematics Achievement Test (MAT), and Economics Achievement Test (EAT). The questionnaire was structured in two sections. Section A obtained students’ demographic data, while section B contained the 24 items that were organized on a 4 points Likert Scale for respondents to tick. Each sub-variable of the independent variable was measured using six items. The Mathematics and Economics Achievement Tests were used respectively to assess students’ learning outcomes and comprised 10 objective test items and 5 essay questions each. These instruments were tested for reliability using Cronbach approach and reliability estimates of .86, .91, and .81 were obtained respectively for the SPTEQ, MAT and EAT. These values confirmed that the instruments were internally consistent for measurement. The data obtained were coded accordingly using person-by-item matrix. The research question was answered while the null hypothesis was tested using Pearson Correlation matrix and multiple regression analyses (where applicable) with the aid of Minitab statistical software v18.

The regression model specification is as follows:

$$\text{MATLO} = a + b_1 \text{SPTMS} + b_2 \text{SPTTM} + b_3 \text{SPTRWS} + b_4 \text{SPTCL} \dots \dots \dots \text{ i}$$

$$\text{ECOLO} = a + b_1 \text{SPTMS} + b_2 \text{SPTTM} + b_3 \text{SPTRWS} + b_4 \text{SPTCL} \dots \dots \dots \text{ ii}$$

Where:

a = intercept

b1 – b4 = regression weights

MATLO = Mathematics learning outcomes

ECOLO = Economics learning outcomes

SPTMS = Students’ perception of teachers’ motivational skills,

SPTTM = Students’ perception of teachers’ teaching methods

SPTRWS = Students’ perception of teachers’ relationship with students

SPTCL = Students’ perception of teachers’ communication level

Results

Hypothesis one

There is no significant relationship between students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and teachers' communication level with learning outcomes in Mathematics and Economics. This null hypothesis was tested at the .05 alpha level using Pearson product moment correlation matrix. The results showed a significant relationship between students' perception of teachers' motivational skills and learning outcomes in Mathematics ($r = .273, p < .05$) and Economics ($r = .332, p < .05$). There is also a significant relationship between students' perception of teachers' teaching methods, learning outcomes in

Mathematics ($r = .313, p < .05$), and learning outcomes in Economics ($r = .342, p < .05$). Students' perception of teachers' relationship students is significantly related to their learning outcomes in Mathematics ($r = .309, p < .05$) and Economics ($r = .341, p < .05$) respectively. The results also showed that students' perception of teachers' communication level has a significant relationship with their learning outcomes in Mathematics ($r = .405, p < .05$), and Economics ($r = .344, p < .05$) respectively. There is also a positive, moderate, and significant relationship between students' learning outcome in Mathematics and outcomes in Economics ($r = .518, p < .05$). The result is presented in Table 2 below.

TABLE 2

Pearson correlation matrix showing the relationships between students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and teachers' communication level with learning outcomes in Mathematics and Economics.

| Variables | SPTMS | SPTTM | SPTRWS | SPTCL | MATLO |
|----------------------------|----------------|----------------|----------------|----------------|----------------|
| MATLO | 0.273 0.000 | 0.313 0.000 | 0.309 0.000 | 0.403 0.000 | |
| ECOLO | 0.332 0.000 | 0.342 0.000 | 0.341 0.000 | 0.344 0.000 | 0.518 0.000 |
| <i>Cell Contents</i> | $\alpha = .05$ | Df = 1798 | Cal. r.= 0.062 | | |
| <i>Pearson correlation</i> | | | | | |
| <i>P-Value</i> | | | | | |

Hypothesis Two

There is no significant composite influence of students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and teachers' communication level on learning outcomes in Mathematics and Economics. The analysis of variance of the regression analysis was used in testing this null hypothesis and the result is presented in Table 3.

TABLE 3.

Analysis of variance results of the regression showing the composite influence of students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and teachers' communication level on learning outcomes in Mathematics.

| Variables | S | R-sq | R-sq(adj) | R-sq(pred) | |
|------------------------------|---------|---------|-----------|------------|---------|
| Mathematics learning outcome | 4.82167 | 24.10% | 23.93% | 23.59% | |
| Economics learning outcome | 4.76811 | 25.09% | 24.92% | 24.60% | |
| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
| Regression | 4 | 13248.1 | 3312.02 | 142.46 | 0.000 |
| Error | 1795 | 41731.0 | 23.25 | | |

| | | | | | |
|-------------|--------|---------|---------|---------|-------|
| Lack-of-Fit | 1398 | 41363.6 | 29.59 | 31.97 | 0.000 |
| Pure Error | 397 | 367.4 | 0.93 | | |
| Total | 1799 | 54979.1 | | | |
| Term | Coef | SE Coef | T-Value | P-Value | VIF |
| Constant | 4.540 | 0.470 | 9.67 | 0.000 | |
| SPTMS | 0.1202 | 0.0228 | 5.27 | 0.000 | 1.17 |
| SPTTM | 0.1464 | 0.0231 | 6.32 | 0.000 | 1.24 |
| SPTRWS | 0.1503 | 0.0220 | 6.83 | 0.000 | 1.18 |
| SPTCL | 0.2928 | 0.0225 | 13.00 | 0.000 | 1.17 |

Dependent variable: Students' learning outcomes in mathematics; $p < .05$

| Source | DF | Adj SS | Adj MS | F-Value | P-Value |
|-------------|--------|---------|---------|---------|---------|
| Regression | 4 | 13669.1 | 3417.27 | 150.31 | 0.000 |
| Error | 1795 | 40809.1 | 22.73 | | |
| Lack-of-Fit | 1398 | 40259.1 | 28.80 | 20.79 | 0.000 |
| Pure Error | 397 | 550.0 | 1.39 | | |
| Total | 1799 | 54478.2 | | | |
| Term | Coef | SE Coef | T-Value | P-Value | VIF |
| Constant | 3.981 | 0.464 | 8.57 | 0.000 | |
| SPTMS | 0.1901 | 0.0225 | 8.44 | 0.000 | 1.17 |
| SPTTM | 0.1663 | 0.0229 | 7.27 | 0.000 | 1.24 |
| SPTRWS | 0.1868 | 0.0218 | 8.58 | 0.000 | 1.18 |
| SPTCL | 0.1970 | 0.0223 | 8.84 | 0.000 | 1.17 |

Dependent variable: Students' learning outcomes in Economics; $p < .05$

The results in Table 2 indicate that students' perception of teachers' motivational skills, students' perception of teacher teaching methods, students' perception of teachers' relationship with students, and students' perception of teachers' communication level contributed a total of 24.10% and 25.09% to the variances in learning outcomes in mathematics and Economics respectively. By implication, the remaining variance in Mathematics (75.9%) and Economics (74.91%) could be accounted for, by other variables not included in the presented study.

A cursory look at the p-values shows that they are all less than the alpha level of .05 for both learning outcomes in Mathematics and Economics respectively. With these results, the null hypothesis is rejected, while the alternate hypothesis is retained. By conclusion, the results imply that, there is a significant composite influence of students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and

teachers' communication level on learning outcomes in Mathematics ($F = 142.46$, $p < .05$) and Economics ($F = 150.31$, $p < .05$) respectively.

From the relative coefficients presented in Table 2, it was discovered that, students learning outcome in Mathematics was mostly predicted by students' perception of teachers' communication level ($t = 13.00$, $p < .05$), followed by students' perception of teachers' relationship with students ($t = 6.83$, $p < .05$), students' perception of teachers' teaching methods ($t = 6.32$, $p < .05$) and students' perception of teachers' motivational skills ($t = 5.27$, $p < .05$) in that order. On the hand, the highest predictor of students' learning outcomes in Economics is students' perception of teachers' communication level ($t = 8.84$, $p < .05$), this is followed by students' perception of teachers' relationship with students ($t = 8.58$, $p < .05$), before students' perception of teachers' motivational skills ($t = 8.44$, $p < .05$) and students' perception of teachers' teaching methods ($t = 7.27$, $p < .05$).

The Regression Equations are:

$$\text{MATLO} = 4.540 + 0.1202 \text{ SPTMS} + 0.1464 \text{ SPTTM} + 0.1503 \text{ SPTRWS} + 0.2928 \text{ SPTCL} \dots \dots i$$

$$\text{ECOLO} = 3.981 + 0.1901 \text{ SPTMS} + 0.1663 \text{ SPTTM} + 0.1868 \text{ SPTRWS} + 0.1970 \text{ SPTCL} \dots \dots ii$$

Discussion of findings

This study discovered that the four sub-variables of this study contributed a total of 24.10% and 25.09% to learning outcomes in mathematics and Economics respectively. There is a significant relationship between students' perception of teachers' motivational skills, learning outcomes in Mathematics ($r = .273, p < .05$) and learning outcomes in Economics ($r = .332, p < .05$). This finding agrees with the finding of Haider, Qureshi, Pirzada, and Shahzadi (2015), which revealed that intrinsic and extrinsic motivation had a positive impact on students' academic performance and our overall model is significant ($p < 0.05$). The study reveals that motivation is a very important part of students' study life and play a very important role in students' success.

There is also a significant relationship between students' perception of teachers' teaching methods, learning outcomes in Mathematics ($r = .313, p < .05$), and learning outcomes in Economics ($r = .342, p < .05$) respectively. This finding contradicts the position held by the finding of Ahmad, Azizan, Rahim, Jaya, Shaipullah, and Siaw (2017) that there is no significant correlation between the average scores of students' perceptions of teaching and learning towards the Mathematics lecturer with the average scores Mathematics achievement of the students. The focus of this study was on secondary school students while Ahmad et al had focused on tertiary students. This reason may be the reason why the results are not in the same direction.

Students' perception of teachers' relationship with students is significantly related to their learning outcomes in Mathematics ($r = .309, p < .05$) and Economics ($r = .341, p < .05$) respectively. This finding also negates the finding of Abdulrahman (2007), which disclosed that the student-teacher relationship was good in a medical school and the views of students on this relationship were independent with their academic grades. The results may have been different due to the

Conclusion

The study concluded generally that students' perception of teachers' effectiveness influences their learning outcomes in Mathematics and Economics in secondary schools of Cross River State. There is a joint significant contribution of students' perception of teachers' motivational skills, teaching methods, relationship with students, and communication level, to their learning outcomes in Mathematics and Economics. The highest predictor of students learning outcome in Mathematics and Economics is students' perception of

characteristics of respondents used in this study that are different from the ones used in the study of Abdulrahman. The location and approach also differ and such locational variations may have influenced the results obtained thereof.

This study also established that students' perception of teachers' communication level has a significant relationship with their learning outcomes in Mathematics ($r = .405, p < .05$), and Economics ($r = .344, p < .05$) respectively. This finding is consistent with the study of Ahmad and Aziz (2009) which revealed that students admit their teachers have a positive attitude towards literature and literature teaching. The findings of the study showed that teachers always tried to cultivate an atmosphere that was cooperative rather than competitive, perceived to be non-threatening. Students were allowed to give their views and opinions, thereby, creating a receptive classroom atmosphere to produce maximum learning input

There is also a positive, moderate, and significant relationship between students' learning outcome in Mathematics and outcomes in Economics ($r = .518, p < .05$), and there is a significant composite influence of students' perception of teachers' motivational skills, teachers' teaching methods, teachers' relationship with students, and teachers' communication level on learning outcomes in Mathematics ($F = 142.46, p < .05$) and Economics ($F = 150.31, p < .05$) respectively. The findings of this study are not surprising because students' who perceive their teachers as being effective in their motivational patterns, teaching methods, relationship and communication abilities, will develop the spirit of love for such teachers. The students' may start viewing such teachers as role models, and will eventually develop an interest in their subjects. When this interest is present, it goes a long way to affect the performance level of such students.

teachers' communication level, followed by students' perception of teachers' relationship with students. There is a significant relationship between students' learning outcomes in Mathematics and Economics. Thus, schools where students' perception of teachers' effectiveness is positive, will witness positive learning outcomes, especially in Mathematics and Economics.

Recommendations

Based on the findings of this study, it was recommended that:

- i. Secondary school teachers should try and adopt motivational techniques such as praises, rewards, and smiles, in strengthening the interest of learners during mathematics and Economics lessons.
- ii. Appropriate teaching methods such as discussion, exploration, and demonstration techniques that allow for the active participation of all students should be adopted by secondary school teachers in order to promote their activeness in academic activities.
- iii. Teachers should relate with all students following by serving as foster parents to students and accepting them as their own children. This will make the students feel loved and stir up their likeness for teachers which may consequently improve their learning outcomes.
- iv. Teachers should avoid the use of unfamiliar vocabulary that is above the level of the learners. Lesson contents should be communicated in a serene environment that will enable every learner hears clearly, what is being said.
- v. Motivation, appropriate teaching methods, good relationship, and effective communication should be jointly used in classroom situations to create an effective learning environment that triggers easy understanding. In this way, students will learn happily, stay focused, and be willing to contribute to class discussions

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