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Teachers' Perceived Causes of Poor Performance in Mathematics by Students in Basic Schools from Ningo Prampram, Ghana

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Abstract
The study aimed at determining factors influencing poor performance of students in mathematics in selected Basic Schools in the Ningo Prampram District in Accra, Ghana. Descriptive research design was adopted in which random and convenience sampling method was used to select 60 teachers for the study. Data was collected through questionnaire analysed using SPSS version 21. The study found that the most highly ranked school environmental factors responsible for student's low academic performance in mathematics were lack of supervision and monitoring of teachers by head teachers and circuit supervisors, larger class size and lack of teaching and learning materials in school. Similarly, the most highly ranked teacher factor that contributed to student's low academic performance in mathematics was untrained teachers teaching the subject. Also, high level of absenteeism among students and unruly student behaviour were the most highly ranked student's characteristics responsible for their poor performances in mathematics. For parental support, the highly ranked variables that contributed to poor performance in mathematics were parents not helping wards with their homework, inability of parents to provide wards essential instructional needs for mathematics studies and parents inability to approach the school to ascertain how their wards are faring in mathematics. However, independent t-test and ANOVA analyses did not find statistical differences between the gender of teachers and the qualifications with regards to perceived causes of low performance in mathematics. .It is recommended that metropolitan, directorate and circuit supervisors intensify supervision and provision of learning materials in schools.
Keywords: Student performance; Mathematics; School factors; Teacher characteristics parental support; Ghana.

1. Introduction
Access to quality basic education is a fundamental human right for every child. Meyer (2008) believes that children all over the world have the right to receive education that prepares them for social integration and economic freedom. Education also exposes the individual to social advancement and quality education can build significant analytical and social skills which enable youth to make good choices and pursue responsible life styles. Mathematics is seen by society as the foundation of scientific and technological knowledge that is vital in social- economic development of the nation (Anamuah-Mensah et al., 2005). Because of this, Mathematics has remained a compulsory subject at both primary and secondary levels in Ghana and used as a basic entry requirement into any of the prestigious courses at the tertiary level (Anamuah-Mensah et al., 2005). Mathematics reveals hidden patterns that help us to understand the world around us and at a psychological level, exposure to mathematics helps in developing an analytic mind and assists in better organization of ideas and accurate expression of thoughts (Adler, 2018). According to Michael (2015), Mathematics enables one to make the invisible to be visible, thereby solving problems that would be impossible otherwise .Again, Mathematics is widely used in various fields and covers a wide range of activities (Zakaria et al., 2010). It is therefore, critical that the progress of students in mathematics at the Junior High School is monitored.

In this regard, failure of students in mathematics is not only worrying to educators but to the student. For instance, the National Education Assessment (NEA) administered in July 2013 by UNICEF in collaboration with the Government of Ghana through the Ministry of Education has shown not only that children in Ghana have struggled to read, but also that performance in mathematics has lagged behind grade expectations, with the percentages of primary school pupils (P2, P3 and P6) achieving proficiency in mathematics falling below 20% (Ministry of Education, 2013). Similar results were reported in the 2016 Ghana National Education Assessment (Ministry of Education, 2016). Also, there had been a remarkable drop in the mathematics performance of some Ghanaian students over the last decade in national and international large scale assessments such as Basic School Certificate Examinations(BECE); West Africa Secondary School Certificate Examinations (WASSCE); and the Trends in International Mathematics and Science Study (TIMSS) (Anamuah-Mensah et al., 2004; Burt, 2017; Butakor, 2016).Specifically, over thirty-four public Junior High schools (JHS) recorded zero per cent pass rate in mathematics subject in the 2008 and 2010 BECEs. This BECE trend has been evident for several years, especially in rural Ghana.

Student's performance in mathematics at Ningo Prampram is no exception. In 2015 and 2016, the BECE results released by the West African Examination Council (WAEC) showed that 78% and 62.18% of candidates

respectively failed in mathematics at Ningo Prampram District (Ministry of Education, 2016). Should this trend continue, the country may not be able to achieve the Millennium Development Goal of universal education. Students' performance in both internal and external mathematics examination has persistently been poor. Marsh *et al.* (2018) This is an indication that students' performance in mathematics has not upgraded significantly despite its prominence, not even with the introduction and use of technology in mathematics. Zlatkin-Troitschanskaia *et al.* (2018). Educational researchers and policy makers have been occupied in their attempt to identify factors that affect poor performance in mathematics especially in BECE in Ghana. For instance, Sam (2002) believes that mathematics has been stereotyped to be for males which have generated a mathematics-phobia for female students. Also, some students have highly acclaimed mathematics to be suitable for other students studying engineering and the sciences (Ampadu, 2012). Some students also perceive mathematics as a difficult and boring subject (Zakaria *et al.,* 2010). For example, Anamuah-Mensah *et al.* (2005) has attributed the phenomenon to lack of effective supervision and monitoring at school, lack of motivation for teachers and inadequate number of qualified teachers to fill empty classrooms. Also, Anamuah-Mensah *et al.* (2004) attributed the poor performance of Ghanaian junior high school students (JHS 2) in the Trends in International Mathematics and Science Study (TIMSS) in 2003 to the inability of teachers to fully cover the mathematics curriculum content domains of number concepts, algebra, measurement, geometry, and data management. They also argued that the national mathematics curriculum puts an undue emphasis on number concepts or computational skills, knowledge of facts and procedures to the neglect of problem-solving. Similarly, Butakor (2016) and Butakor *et al.* (2017) attributed the poor performance of Ghanaian students on the TIMSS 2007 and 2011 to a combination of students background characteristics, classroom/teacher characteristics, and school factors. Other factors relating to students' poor academic performance are linked to parents support variables, student's characters and attitude towards the subject and school environment factors (Anamuah-Mensah *et al.,* 2005).

However, there is paucity of research into the causes of poor academic performance of students in mathematics of schools located in Ningo Prampram District in Greater Accra Region of Ghana. For this reason, this study focused on understanding the perceived causes of low students' performance in mathematics in some selected Basic Schools in Ningo Prampram District. To this end, school, teacher and students background characteristics and factors were explored. The outcome of the study will assist all stakeholders in the district, particularly at the basic education level, to fashion out appropriate strategies that would enhance the academic performance of pupils. The study will equally help the educational managers and planners to adopt new modern methods of managing schools for better results. This research will be a source of reference material for teachers, educators, students, stakeholders and the general public in any other study which will be related to this study

2. Review of Related Literature
2.1. School Factors

Teaching and learning materials/ resources such as books, stationery, furniture, equipment and recreational facilities are vital to effective education. Students perform better when they have such resources at their disposal since they are aids that foster learning. The availability and use of teaching and learning materials affect the effectiveness of a teacher's lessons. Durlak *et al.* (2011) pointed out that teaching materials is a common term used to describe the resources teachers use to deliver instruction and it can support students learning and improve students' achievement. Teaching and learning materials (TLMs) are important because they can significantly increase student achievement by supporting student learning TLMs come in many shapes and sizes, but they all have in common the ability to support students learning Cohen *et al.* (2009). TLMs also add important dimension to lesson planning and delivery of instruction and acts as a guide for both the teacher and students. Teaching and learning materials can assist teachers in an important professional duty such as differentiation of instruction (Ryan and Telfer, 2017). Differentiation of instruction is the tailoring of lesson and instruction to the different learning styles and capacities within the classroom (Basal, 2015). This means that TLMs help in attaining higher performance in mathematics. Some researchers also advocated that teachers should be resourceful and also encouraged to search for necessary instructional materials through local means to complement or replace the standard ones (Agudzeamegah, 2014). This means that teaching and learning materials are one of the important elements of teaching in our schools and helps in teaching and learning of difficult concepts and lessons. However, in Ghana, most schools lack simple resources such as textbooks, syllabus and other resources needed for teaching and learning of mathematics (Okyerefo *et al.,* 2011). Class sizes have also been identified as determinants of academic performance in mathematics. Studies have indicated that schools with smaller class sizes perform better academically than schools with larger class sizes. Kraft (2003) in his study of the ideal class size and its effects on effective teaching and learning in Ghana concluded that class sizes above 40 have negative effects on students' achievement. According to Mankoe (2002), supervision focuses on six areas of education such as administration, curriculum, instruction, human relations, management and leadership. It is therefore a major function of the school's operation. Thus, effective supervision improves the quality of teaching and learning in the classroom. Okyerefo *et al.* (2011) believed that the attitude of some public-school teachers and authorities does not promote an effective learning process for students. Some teachers even leave the classroom at will because there is insufficient supervision by circuit supervisors. This means that effective supervision would forestall teacher absenteeism and improve teaching in the schools. If teachers are always present following regular visits of circuit supervisors, pupils would be challenged to change their attitudes toward school.

Another school related factor responsible for student's poor performance in mathematics is overload of content in the Syllabus. Kraft (2003) agreed that the syllabus shows evidence of overloading of content to be taught in each

grade level at the basic school in Ghana. Many teachers are not able to complete the syllabus as well as the reading text assigned to each year. He described the situation and the problem created by the overloading of the textbook in particular when he said, "Teachers in the next grade start with the new book, regardless of whether students have mastered the previous essential skills or not". This situation results in poor academic of students in mathematics. The climate of the school indicated by variables such as classroom management, discipline, and leadership styles exhibited by the school heads also influenced students' academic performance (Lee and Shute, 2010). In fact, students performed better in schools where the climate is positive (Lubienski *et al.,* 2008).

2.2. Teacher Factors

Agyeman in 2005 reported that a teacher who does not have both the academic and the professional teacher qualification would undoubtedly have a negative influence on the teaching and learning of his/her subject. In the Ghana education system, some good percentage of teachers are Senior High School graduates who had been recruited as pupil teachers to supplement the deficit in the available number of qualified teachers in the Primary and Junior High Schools. Such teachers do not have the requisite skills and methods of teaching mathematics. Students of such teachers do not perform better as compared those taught with qualified professional teachers (Oduro and MacBeath, 2003). However, Agyemang (2005) further stated that a teacher who is academically and professionally qualified, but works under unfavorable conditions of service would be less dedicated to his work and thus be less productive than a teacher who is unqualified but works under favorable conditions of service. According to Oduro and MacBeath (2003) almost 50% of teachers at the senior and Junior Secondary level are not professionally trained as mathematics teachers. Most basic education teachers are ill-prepared to teach mathematics and technology. This means that teacher qualification and area of subject specialization play a key role in students learning and performance in mathematics. Good teachers have knowledge of the special blend of content and pedagogy. Stephenson (2018) pointed out that pedagogical content knowledge relates to knowing how to present exact content in a way that is understandable to student to promote or improve the learning of that content by diverse students. Most teachers lack the skills to invoke students thinking in mathematics. On the other hand, pedagogical knowledge is generic knowledge about teaching and comprises areas such as classroom management (Hibbard, 2017). Pedagogical content knowledge builds on and intermingles with content knowledge and the difference between them may not always be precise (Stephenson, 2018). Teachers must have adequate knowledge of content and pedagogy to be able to teach student to understand mathematics and to perform well in it.

Another teacher related factor responsible for student's low performance in mathematics is lack of motivation. Motivation is significant factor of education which plays a key role in success and it is a driving force behind human behavior therefore and linked to genuine interest, determination, and commitment, and related to academic achievement (Sekreter and Doghonadze, 2016). Motivation is more or less arousing in teacher or, students the desire to teach or learn (Farr and Riordan, 2015). Teacher's enthusiasm, self-determination or self-efficacy has been shown to have an impact on teacher behavior, which in turn impacts on learner's motivation and achievement (Sahakyan *et al*., 2018). Motivated teachers also have more open-minded and flexible view of changes in the educational system (Abós *et al.,* 2018). Specifically, motivated teachers exhibit positive dispositions and personality provide more engaging classroom lessons; apply variety of instruction techniques; and build positive relationships with their students (Sekreter and Doghonadze, 2016). A teacher whose needs are not met may be psychologically unstable and consequently not productive (Asamoah, 2009). Asamoah (2009) further stated that the key to improving performance is motivation, and for this reason employers need to understand what motivates their employees. Mathematics teacher motivation has not been widely instituted in Ghana making teachers not to deliver to their best of abilities (Asamoah, 2009).

According to Allen *et al.* (2018) teachers' attitude and beliefs play a very important role in the life of students as they are model educators that student draw on. Teachers with positive attitude towards mathematics are most likely to implant into students positive attitude towards mathematics (Afif *et al*., 2017). Evidence has shown that attitude of some teachers to their job is reflected in their poor attendance to lesson, lateness to school, unsavory remarks about student's performance that could damage their self-esteem, poor methods of teaching which eventually affect pupils academic performance (Harris and Bourne, 2017). Investigation has revealed that students with enthusiastic teachers are daring and determined to face school life (Keighren *et al.*, 2017). This suggests that teachers need to construct positive attitudes to motivate students to develop positive attitude towards learning Mathematics. Teachers attitude towards mathematics intrinsically motivate students to learn the subject and perform better (Zee and Koomen, 2016). In Ghana, most teachers do not see mathematics as a profession, and they have negative attitude towards researching into new ways of teaching and learn so they use the same methods always and the result is the same.

2.3. Student's Characteristics

An individual student's intelligence has the most significant impact on their ability to perform well academically (Nichols and Sutton, 2013). Without mental capacity to understand and retain the imparted knowledge and skills they will not enjoy the teaching and learning. It has also been observed that intelligent students normally help the low achievers to upgrade their grades and enhance their confidence (Nichols and Sutton, 2013). Students with low level of intelligence perform poorly in school. According to Nichols and Sutton (2013) teachers to need to establish good relationship with their students to help them identify students with low mental capacity and assist them understand mathematical concepts to enable them perform better in mathematics.

Students' attitude towards mathematics influences the efforts they put in understanding and practicing mathematical concepts and skills. According to Akey (2006) students' beliefs about their competence and their expectations for success in school have been directly linked to their levels of engagement, as well as to emotional states that promote or interfere with their ability to be academically successful. Thus, attitudes determine the effort a student is likely to put in his learning of mathematics. It is therefore necessary for mathematics teachers to strive and sustain positive attitudes towards mathematics for good performance. Also, dislike of mathematics found in both adults and students is associated with anxiety and fear. This anxiety and fear may elicit negative attitudes towards the subject among adults and these general unfavorable perceptions and attitudes about mathematics are passed on to children from adults.

According to Engin-Demir (2009) regardless of intelligence, students who spend more time on assignments and homework improve their grades. The amount of time students invests in homework and other related activities have also been found to be strongly related to motivation (Butakor, 2016; Butakor *et al.*, 2017). Etsey (2005) found homework to be a correlate of academic performance. He stated that "homework bore a positive relationship with learning outcomes when it is relevant to learning objectives, assigned regularly in reasonable amounts, well explained, motivational and collected and reviewed during class time and used as an occasion for feedback to students" (p. 3). Homework is in reality an interaction between school and the home, and an essential ingredient of the educational process when measuring academic achievement (Etsey, 2005). Further, in recent times, students have found a need to seek employment while studying on a part-time basis due to financial constraints. Research on this subject seems to provide a consensus that students who miss classes perform poorly compared to those who attend classes (Oduro and MacBeath, 2003). Also, many students believe that they succeed for a variety of reasons, and their beliefs and interests are very important in determining how they deal with failure, the risks they are willing to take, and the ways in which they interact with new opportunities. It is without doubt that the academic achievement of students depends on some basic factors of which effort is paramount (Tella and Tella, 2010).

2.4. Parental Support

Okyerefo *et al.* (2011) observed that the home plays diverse roles in the facilitation of academic performance of students at school. The main role is played by parents, with support from other significant household members such as siblings, uncles, aunts among others. Different parenting styles lead to various means of interaction with children, each of which forms an important component in shaping the child's worldviews. For example, some studies have shown that parents spend less time with their children between the ages of six and ten years because they are then normally at school (Okyerefo *et al*., 2011).

Another critical aspect of the home environment is socio-economic status which is most commonly determined by a combination of factors such as; parents' education level, occupation and income level (Jeynes, 2002). Unsurprisingly, in most studies on the academic performance of students, socio- economic status is identified as a major indicator of academic performance. For instance, parents who provide materials such as mathematics textbook and employ after- school strategies such as engaging their children after school to study mathematics tends to perform better in mathematics (Stipek *et al.,* 2017). Burt (2017) pointed out that most parents show negative attitudes towards mathematics education and some parents have weak mathematics background and this has made it impossible to help their children in the home. The occupation of parents also has effects on the academic performance of students. Students from well resource families are more likely to register in schools early and are given the best in terms of educational needs. But students from less deprived homes are faced with a lot of difficulty such as inability to pay school fees, exercise books, and inadequate textbooks uniform, etc. All these emotionally depress the child and reduce the zeal to perform well in academics (Sattin-Bajaj *et al.,* 2018).

Schiller *et al.* (2002) also argued that parents who have more education appear better able to provide their children with the academic and social support important for educational success when compared to parents with less educated. This means that parents who fail to provide academic and social support for their children puts their wards in difficult situation resulting in their inability to perform better. The number of siblings that a pupil has is assumed to have an influence on his/her academic achievement (Askhia, 2010). The larger the family size the less the attention and devotion from parents to the child and the more the difficulties encountered by the parents in meeting the needs of the children both physically and emotionally particularly in this austerity period when the prices of food and commodities are skyrocketed (Askhia, 2010).

Students who are absent themselves regularly from school have lower achievement and may be penalized on test scores (Barker and Jansen, 2000). Lotz and Lee (1999) indicated that sustained absences may affect retention as it may degenerate into truancy. The study also revealed that the act of delinquency is more frequent among students who exhibit low grade, have spotty attendance and later on drop out of school. In the commonwealth's public schools, it was estimated that by reducing excessive absenteeism by 25% would enable 22,000 more young students to score above the national average on standardized tests (Applegate, 2003). In addition, research indicates that regardless of social and economic factors, the schools with higher attendance rates achieved higher test scores (Applegate, 2003). According to Dampson and Dominic (2010) the unrelenting parental courage and determination to persevere despite all odds has a ripple effect on children's attitudes toward education and challenge. A study conducted by Etsey (2005) revealed that the inability of parents to provide the basic needs of students, attend Parent-Teacher Association (PTA) meetings and interact with their children's teachers among others are some of the causes of low academic performance of some public schools in Ghana. Inability to provide basic school needs like textbooks, supplementary readers, food to eat when coming to school, and school uniforms among others, have ripple effects on the child's performance.

3. Materials and Methods

3.1. Participants

The target population of the study was teachers, mathematics subject teachers and head teachers of the selected JHS schools in Ningo Prampram District. The accessible population was class four to class six teachers at the primary school, mathematics teachers at the JHS and the head teachers of the selected schools in Ningo Prampram District. Random sampling method was employed to select twelve (12) basic schools located in Ningo Prampram District. In each of the selected basic schools, convenience sampling method was used to select class teachers from class four to six, mathematics subject teachers and head teachers of the schools for the study. Specifically, four (4) teachers and one (1) head teacher were selected from each school. Therefore, the sample size of the study was sixty (60) respondents.

3.2. Measuring Instrument

Questionnaire was used as the research instruments for the study. The questionnaire for this study was made up of five sections. Section A asked questions about the socio demographic characteristics of respondents. Section B was concerned about the school environmental factors that contribute to student's low academic performance in mathematics and Section C asked questions about teacher factors that contribute to student's low academic performance in mathematics in the selected schools. Section D asked questions about student's characteristics responsible for their poor performances in mathematics. Section E asked questions about parental support variables that cause JHS students in Ningo Prampram District to perform poorly in mathematics subject.

3.3. Data Collection Procedure

A letter of introduction and approval from the School of Educational Leadership and Management, University of Ghana was sent to the headmasters of the selected Basic Schools in Ningo Prampram District to obtain permission before the start of the data collection. The consents of the respondents were sought through written and verbal communication before administering the questions. Confidentiality of the information collected during and after the collection of data was assured by avoiding the use of names and addresses of participants in the study. Participants were allowed to participate in the study voluntarily. The questionnaire was administered to the sixty respondents that were selected from the twelve selected Basic Schools for the study. The respondents were allowed to fill the questionnaire on their own but informed about the objective of the study and its significance. The respondents filled and submitted the questionnaire on the same day they received it. Questionnaires were administered within one-week period. It took fifteen minutes for each questionnaire to be answered.

3.4. Data Analysis

Responses to the questions in the questionnaire were entered into SPSS version 22 and the data was analyzed using descriptive and inferential statistical techniques of the SPSS. Responses were reported using descriptive statistics in the form of frequency counts and percentages for simplicity and results were illustrated in tables. Descriptive statistics was used because it presents data in a more meaningful way, which allows simpler interpretation of the data.

4. Results

4.1. Socio-Demographic Characteristics of Respondents

Table-1. Sex of respondents (N=60)

Response	Frequency	Percentage (%)
Male	26	43
Female	34	57
Total	60	100

Table 1 indicates that forty-three percent (43%) of the respondents were males whilst fifty-seven percent (57%) of the respondents were females.

Table-2. Level of qualification of respondents (N=60)

Response	Frequency	Percentage (%)
Certificate A	7	12
Diploma	28	47
Degree	20	33
Masters	3	5
Total	60	100

The above table shows that forty-seven percent (47%) of the respondents have diploma in education studies, thirty-three percent (33%) have degree in education and twelve percent (12%) have certificate "A" in education. Five percent (5%) also have masters in education studies and few of the respondents (3%) were SSS/SHS graduates.

Table-3. Level of performance of students in mathematics (N=60)

Response	Frequency	Percentage (%)
Low	32	53
Moderate	17	28
High	11	19
Total	60	100

In table 3, more than half of the respondents (53%) indicated that their students have low performance in mathematics, twenty-eight percent (28%) had students performing moderately and nineteen percent (19%) of the respondents revealed performance of students in mathematics was high.

4.2. Research Question One

What school environmental factors are responsible for student's low academic performance in mathematics in selected Basic Schools in Ningo Prampram District?

Table-4. School environmental factors responsible for student's low academic performance in mathematics (N=60)

Response	Mean	Standard deviation
Lack of supervision and monitoring of teachers by head teachers and circuit supervisors	3.70	1.134
Larger class size	3.70	1.134
Lack of teaching and learning materials in school	3.70	1.134
Punishment of pupils when they fail maths in school	2.15	1.256
Mathematics teachers have high workload and larger content of syllabi	3.13	1.126
Bad condition of school infrastructure	2.15	1.256
Short instruction time for mathematics subject	3.13	1.126
Poor teacher-parent relationship	2.15	1.256

Table 4 presents school environmental factors responsible for student's low academic performance in mathematics in selected Basic Schools in Ningo Prampram District. The most highly ranked school environmental factors responsible for student's low academic performance in mathematics were lack of supervision and monitoring of teachers by head teachers and circuit supervisors, larger class size and lack of teaching and learning materials in school. These factors had common means and standard deviations of 3.70 and 1.134. The second highly ranked school environmental factors responsible for student's low academic performance in mathematics were high workload and larger content of syllabi and short instruction time for mathematics subject with similar means and standard deviation of 3.13 and 1.126. The least ranked school environmental factors responsible for student's low academic performance in mathematics were punishment of pupils when they fail maths in school, bad condition of school infrastructure and poor teacher-parent relationship. These factors had common means and standard deviations of 2.15 and 1.256.

4.3. Research Question Two

What teacher factors contribute to student's low academic performance in mathematics in selected Basic Schools in Ningo Prampram District?

Table-5. Teacher factors contributing to student's low academic performance in mathematics (N=60)

Response	Mean	Standard deviation
Teachers absenting themselves from school	3.13	1.126
Ineffective use of instructional time	2.20	1.007
Lack of in-service training for teachers	3.13	1.126
Use of unsuitable methods for teaching the subject	2.20	1.007
Lack of motivation to teach	3.13	1.134
Lack of recognition	2.20	1.007
Language used by the teachers is difficult for students to understand	2.20	1.007

Table 5 represents teacher factors contribute to student's low academic performance in mathematics in selected Basic Schools in Ningo Prampram District. The most highly ranked teacher factors contribute to student's low academic performance in mathematics was untrained teachers teaching the subject. The mean and standard deviation of this factor is 3.70 and 1.134 respectively. The second highly ranked teacher factors contribute to student's low academic performance in mathematics were teachers absenting themselves from school, lack of in-service training for teachers and lack of motivation to teach. These factors had similar means and standard deviation of 3.13 and 1.126. The least ranked teacher factors contribute to student's low academic performance in mathematics in selected Basic Schools in Ningo Prampram District were ineffective use of instructional time, use of unsuitable methods for teaching the subject, lack of recognition and language used by the teachers is difficult for students to understand. These factors had common means and standard deviation of 2.20 and 1.007 respectively.

4.4. Research Question Three

What student's characteristics are responsible for their poor performances in mathematics in Ningo Prampram District?

Table-6. Student's characteristics responsible for their poor performances in mathematics (N=60)

Response	Mean	Standard deviation
High level of absenteeism among students	3.47	1.224
Maths is not interesting to students and they do not enjoy maths course	3.13	1.126
Students skip classes during market days to help parents trade	2.20	1.007
Lack of motivation to study mathematics	3.13	1.126
Peer influence	3.13	1.126
Unruly student behaviour	3.47	1.224

Table-6. presents student's characteristics responsible for their poor performances in mathematics in Ningo Prampram District. This study found high level of absenteeism among students and unruly student behaviour as the most highly ranked student's characteristics responsible for their poor performances in mathematics. These factors obtained the same means and standard deviation of 3.47 and 1.224. The second highly ranked student's

characteristics responsible for their poor performances in mathematics were the perception of studies that maths is not interesting to students and they do not enjoy maths course, lack of motivation to study mathematics and peer influence with each of this factors having mean of 3.13 and standard deviation of 1.126. The least ranked student's characteristics responsible for their poor performance in mathematics was students skip classes during market days to help parents trade. The mean and standard deviation of this factor was 2.20 and 1.007

4.5. Research Question Four

What parental support variables cause pupils in Ningo Prampram District to perform poorly in mathematics?

Table-7. Parental support variables contributing to students low performance in mathematics (N=60)

Response	Mean	Standard deviation
Parents not helping wards with their homework	3.70	1.134
Inability of parents to provide wards essential instructional needs for mathematics studies	3.70	1.134
Lack of motivation of students to study mathematics by parents	2.20	1.007
The Parent Teacher Association (PTA) of my school is not effective	3.13	1.126
Parents inability to approach the school to ascertain how their wards are faring in mathematics	3.70	1.134
Use of students for economic activities instead of being school	3.13	1.126
Larger family size	2.20	1.007

Table 7 presents parental support variables that cause pupils in Ningo Prampram District to perform poorly in mathematics. The most highly ranked parental support variables that cause pupils in Ningo Prampram District to perform poorly in mathematics were parents not helping wards with their homework, inability of parents to provide wards essential instructional needs for mathematics studies and parents inability to approach the school to ascertain how their wards are faring in mathematics. These factors had common means and standard deviations of 3.70 and 1.134. The second highly ranked parental support variables that cause pupils in Ningo Prampram District to perform poorly in mathematics were use of students for economic activities instead of being school and ineffective Parent Teacher Association (PTA) of schools. These factors had common means and standard deviations of 3.13 and 1.126. The least ranked factors parental support variables that cause pupils to perform poorly in mathematics were lack of motivation of students to study mathematics by parents and larger family size. These factors had common means and standard deviations of 2.20 and 1.007.

4.6. Test of Mean Difference

An independent t-test analysis did not reveal any significant gender differences between male and female teachers in terms of perceived causes of low performance of students in mathematics. Similarly, ANOVA result did not find any significant difference between teachers' qualification and the perceived factors responsible for students' low performance of mathematics.

5. Discussions

This study found lack of supervision and monitoring of teachers by head teachers and circuit supervisors as one major factor contributing to student's low performance in mathematics in some selected basic schools in Ningo Prampram District. The finding of this study agrees with that of Etsey (2005) who believes ineffective supervision of teachers and students in our schools because low performance of students. If circuit supervisors are more regular in schools, this would put the teachers on the alert to be more regular and early in school (Etsey, 2005). This would forestall teacher absenteeism and improve teaching in the schools.

Also, larger class size was one of the school related factors found to be contributing to student's low performance in mathematics. The finding of this study is similar to that of Kraft (2003) who found out that larger class size negatively influenced students' performance and that class sizes above 40 have negative effects on student's achievement.

Another school related factor in some selected basic schools in Ningo Prampram District identified to be hindering student's performance in mathematics was lack of teaching and learning materials in schools. The findings of this study agrees with that of Ministry of Education (2008) which stated that material resources such as books, stationery, furniture, equipment and recreational facilities are vital to effective education and students perform better when they have such resources at their disposal since they are aids that foster learning. Ministry of Education (2008) further concluded that schools that lack teaching and learning materials have their students performing poorly in mathematics. Also, the findings of this study agreed with those of Okyerefo *et al.* (2011) who found out that most schools lack simple resources such as textbooks, syllabus and other resources needed for teaching and learning of mathematics resulting in low performance of students in the subject. It is important for stakeholders in education to provide teaching and learning materials for our schools.

The study found high workload and larger content of syllabi and short instruction time for mathematics subject as the second highly ranked school environment related factors that cause low performance in mathematics. The findings of this study agreed with Kraft (2003) who found out that mathematics syllabus shows evidence of overloading of content to be taught in each grade level. Many teachers are not able to complete the syllabus as well as the reading text assigned to each year and this cause many students not to do well in mathematics. On teacher factors, the study found out that students perform poorly in mathematics due to the use of untrained and unprofessional teachers in teaching mathematics. The finding of the study is line with that of Agyemang (2005) who reported that a teacher who does not have both the academic and the professional teacher qualification would

undoubtedly have a negative influence on the teaching and learning of his/her subject resulting in their low academic performance. The findings of the study agree with those of Oduro and MacBeath (2003) who also found out that students of untrained teachers do not perform better as compared to those taught with qualified professional teachers.

One of the second highly ranked teacher factors identified in this study to be a barrier to improved performance in mathematics among students was teachers absenting themselves from school. The findings of this study are similar to that of Etsey (2005) who stated that lateness and absenteeism of teachers reduce the amount of instructional time and these results in the syllabi not being completed resulting in students poor performance in mathematics.

Lack of motivation of teachers was found in this study as a teacher related factor which contribute to low performance of pupils in mathematics. The finding of this study agrees with that of Asamoah (2009) who found out that a teacher whose needs are not met may be psychologically unstable and consequently not productive resulting in low performance of students in mathematics. Authorities in the education sector in Ningo Prampram District must institute reward system that seek to motivate mathematics teachers to perform better. On the issue of students' characteristics, this study found out that high level of absenteeism among students in some selected basic schools in Ningo Prampram District caused low performance of students. The findings of this study are similar to Etsey (2005) who found out that students with high level of absenteeism do not perform well in mathematics. Etsey (2005) further concluded that such students skip classes especially on market days to work to supplement the family income or due to peer influence. School authorities must strictly check student's attendance and make sure that such bad characteristics among some students are brought under control. Absenteeism among students caused loss of contact hours, disrupts teachers' lesson plans and students do not understand of topics taught in his or her absence. Student's unruly behavior was also identified as a contributor to their low performance in mathematics. The finding of this study is similar to that of Akey (2006) who found out that students attitude towards mathematics influences the efforts they put in understanding and practicing mathematical concepts and skills and their perception that mathematics is not interesting and difficult negatively influence their performance negatively. Teachers of such students must develop strategies to diffuse such misconception about the subject among students to instill in them the confidence and good attitude they need to study the subject. Peer influence among students in some selected schools at Ningo Prampram District resulted in low performance of pupils in the area. The finding of the study agreed with that of Carman and Zhang (2010) who also indicated that the adolescents who have a high level of conformity to unconventional peer behavior tend to have lower GPA than those who have lower level of conformity. Also, the findings of the study conform to that of Tope (2011) who asserted that peer group could either positively or negatively influences the academic performance in school. In this study, peer influence negatively affected academic performance of students.

Also, the study found lack of motivation to study mathematics negatively influenced student's performance in mathematics. The finding of this study is similar to that of Engin-Demir (2009) who found out that lack of motivation from teachers and parents cause low performance in mathematics among students. Parents need to provide support by providing learning materials they wards would need in school and helping them in doing their homework. Teachers need to do away with corporal punishment melted out to students who fail in mathematics and focus on methods that will improve students' performance in mathematics. The study identified that parent's inability to help their wards with their homework resulted in low performance of students in Ningo Prampram District. The findings of this study is similar to that of Schiller *et al.* (2002) who argued that parents who have more education appear better able to provide their children with the academic and social support important for educational success when compared to parents with less educated. Schiller *et al.* (2002) further indicated that educated parents help their wards with their homework and provide them with needed materials for learning which makes such students perform better in school. This means that parents who fail to provide academic and social support for their children puts their wards in difficult situation resulting in their inability to perform better in mathematics.

This study identified parent's use of students for economic activities instead of being school as a cause of low performance of students in Ningo Prampram District. The finding of this study agree with Akey (2006) who found out that parents with low socio-economic status allow their children to do economic activities instead of being in school. This encourages absenteeism among students and allow for lack of concentration on studies which result in low performance of students in mathematics.

Also, larger family size was identified as one of the parental support variables that caused students to perform poorly in mathematics. The finding of this study agrees with that of Askhia (2010) who found out that the number of siblings that a pupil has is assumed to have an influence on his/her academic achievement. Askhia (2010)Afurther concluded that larger the family size the less the attention and devotion from parent child parents and the more the difficulties encountered by the parents in meeting the needs of the children both physically and emotionally particularly in this austerity period when the prices of food and commodities are skyrocketed.

This study also found ineffective Parent Teacher Association (PTA) of schools as a reason for low performance in mathematics among students. This finding of the study conformed to that of Etsey (2005) who revealed that the inability of parents to provide the basic needs of students, attend Parent-Teacher Association (PTA) meetings and interact with their children's teachers among others are some of the causes of low academic performance of some public schools in Ghana.

5.1. Summary, Conclusion and Recommendations

The study aimed at determining factors influencing poor performance of students in mathematics in selected Basic Schools in the Ningo Prampram District. The study found out that low academic of students in mathematics

persist in Ningo Prampram District partly due to school environment factors, teacher factors, students own characters and parental support variables which negatively influence academic performance of students. The school environment factors that influenced low performance of students in mathematics were lack of supervision and monitoring of teachers by head teachers and circuit supervisors, larger class size and lack of teaching and learning materials in school, high workload and larger content of syllabi and short instruction time for mathematics and punishment of pupils when they fail maths in school, bad condition of school infrastructure and poor teacher-parent relationship.

The teacher factors influencing low academic performance of students in mathematics among students in selected Basic Schools in the Ningo Prampram District were untrained teachers teaching the subject, teachers absenting themselves from school, lack of in-service training for teachers and lack of motivation of teachers to teach, ineffective use of instructional time, use of unsuitable methods for teaching the subject, lack of recognition and language used by the teachers is difficult for students to understand.

This study found student's characteristics such as high level of absenteeism among students and unruly student behaviour, perception of studies that maths is not interesting to students and they do not enjoy maths course, lack of motivation to study mathematics and peer influence and students skipping classes during market days to help parents trade influenced students low performance in mathematics in some selected Basic Schools in the Ningo Prampram District. Parental support variables responsible for students low performance in mathematics in Ningo Prampram District were not helping wards with their homework, inability of parents to provide wards essential instructional needs for mathematics studies and parents inability to approach the school to ascertain how their wards are faring in mathematics, use of students for economic activities instead of being school and ineffective Parent Teacher Association (PTA) of schools as well as lack of motivation of students to study mathematics by parents and larger family size.

5.2. Recommendations

Based on the findings and conclusions drawn, the following recommendations are made for policy and practice:
1. Allocation of more time to the teaching of mathematics on school time tables so that mathematics syllabus can be completed on time.
2. Intensive supervision from the metropolitan directorate and circuit supervisors is needed to complement the head teachers' supervisory role which will lead to more accountability among teachers and students.
3. Ministry of Education and schools managements should motivate teachers especially after the release of examination results.
4. Parents should be encouraged to get involved in their children's education.
5. Unfavorable attitudes should be curtailed professionally and early enough before students utterly give up in learning mathematics.

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