Original Research Article

Factors of Performance of Secondary Schools in Science, Mathematics and English

Abstract

This sequential exploratory mixed methods research aimed to describe which among the demographics: school profile, teacher factor, student factor, learning resources and classroom management, management and governance, family background and parental involvement significantly influenced and predicted the performance of the secondary schools in Science, Mathematics and English in Davao del Sur Division and thereafter to develop empirical models. The instrument used was developed through the responses of the K11 informants, concepts of Creswell, and factor analyses. Using complete enumeration, the researcher selected 68 teachers and principals as respondents. Findings revealed that educational attainment, school based management, field of specialization significantly predicted competition; school type, teachers' attitude and motivation, class size were linked with NAT results in Science; school type, length of service, teachers' attitude and motivation, principal's projects and programs, and school size were associated with NAT results in Mathematics; school type, teachers' attitude and motivation, and classroom management positively correlated with NAT results in English; and school type, teacher's attitude and motivation, family background and parental involvement, and length of service significantly linked with NAT results in Science, Mathematics and English. The empirical models adopted were: (1) $Y_{Competition}$ = -5.028 + 2.472*Educational Attainment + 1.514*School Based Management – 1.531*Field of Specialization, (2) $Y_{NATScience}$ = 7.814 – 32.872*School Type + 13.007*Teacher's Attitude and Motivation + 14.318*Class Size, (3) $Y_{NATMathematics}$ = 74.026 – 28.828*School Type + 5.381*Length of Service + 9.523*Teacher's Attitude and Motivation – 6.782*Principal's Projects and Programs – 4.935*School Size, (4) $Y_{NATEnglish}$ = 52.674 – 18.505*School Type + 11.362* Teacher's Attitude and Motivation – 6.518*Classroom Management, and (5) $Y_{NATAverage}$ = 60.645 – 26.052*School Type + 8.362* Teacher's Attitude and Motivation – 4.902*Family Background and Parental Involvement + 4.158*Length of Service.

KEYWORDS: Factors performance, Secondary Schools, Science, Mathematics, English

INTRODUCTION

One of the goals of Education for All was to improve the quality of education. It was set with a global challenge to transform the lives of millions of children, youth and adults around the world (Education International, 2008). Education for All was to bring benefit of education to "every citizen in every society," wherein national governments, civil society groups, and development agencies like UNESCO and the Word Bank are part of the commitment. These goals also contribute to the global pursuit of the eight Millennium Development Goals (MDGs), especially on the universal primary education (United Nations, 2015) which may lead to MDG 1 on eradication of extreme poverty and hunger.

In 2000, the Philippines, as a reaffirmation of the vision set in the 1990 World Declaration, committed itself to the six EFA 2015 Goals at the World Education Forum in Dakar. One of its goals (Goal 6) is to

improve every aspect of the quality of education, and ensure their excellence so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills. This is congruent to the 1987 Philippine Constitution which likewise guarantees the right to education of every Filipino. It provided that, "The State shall protect and promote the right of all citizens to quality education at all levels and shall take appropriate steps to make education accessible to all." (Philippine Education for All, 2015)

One indicator that a country has increased its quality of education is the increase of student and teacher performances in school. School performance reflects 'the effectiveness and efficiency of the schooling process.' Effectiveness, in a general sense, refers to the accomplishment of the school's objectives, while efficiency indicates whether these objectives are accomplished in a timely and costly manner. As these definitions show, effectiveness and efficiency are judged according to the school's 'objectives'. Although these are school specific to some degree, school performance research focuses solely on objectives that schools, or a distinct type of schools, have in common. Despite this specific focus, a number of foundational studies have indicated that in several aspects measuring performance is multidimensional (Maslowski, 2001). However, two important indicators of school performance that this study focuses are: academic achievement of students and excellence in Science, Math and English competitions.

Comment [KK1]: Efficiency does not have to be expensive!

Comment [KK2]: objectives

United Nations Educational, Scientific and Cultural Organization [UNESCO] (2005) identifies another indicator of quality of education being provided is the cognitive achievement of learners. According to Adediwura and Tayo (2007), academic achievement is designated by test and examination scores or marks assigned by the subject teachers. It could also be said to be any expression used to represent students' scholastic standing. Lewin, Wasanga and Somerset (2011) report that the academic achievement of students at secondary school level is not only a pointer of the effectiveness of schools but also a major determinant of the well-being of youths in particular and the nation in general. Yusuf and Adigun (2010) and Lydiah and Nasongo (2009) note that the performance of students in any academic task has always been of special interest to the government, educators, parents and society at large.

Poor performance of students in the National Achievement Test (NAT) remains a serious concern of teachers, curriculum developers, parents and the general public. NAT has always been the key priority agendum of DepEd division, regional and central offices in the Philippines. The result of the test is disclosed yearly for discussion in formulating mechanism for the improvement of this academic achievement for the years to come. Aside from these, it measures the students' competencies in five learning areas (i.e. Science, Mathematics, English, Filipino and Araling Panlipunan) administered to determine the quality of education obtained by the students. Besides, it is also one of the indicators used in the computation of the DepEd's performance-based bonus (DepEd Order 3, s. 2015). It indicates that when students in a particular school attain high results in the NAT, there is a greater probability that the teachers of the same school will receive greater amount of the performance-based bonus.

Available data show evidence that the 4th year Filipino students have difficulty in the major subjects (i.e. Science, Mathematics, and English). The national performance of high school students in the NAT, which was presented in tabular and graphical forms in Philippine Basic Education (2013), showed that on the average, the fourth year students obtained a Mean Percentage Score (MPS) of 48.90 in the 2012 NAT, an improved performance when compared with the previous years (44.33 in 2006 and 46.80 in 2005). However, among the five learning areas, Science was the lowest with an MPS of 40.53 in 2012 NAT, followed by Mathematics with an MPS of 46.37. It was sad to note that marks obtained by Filipino

learners in any of the learning areas, including critical thinking skill were far less than the passing mark of 75%.

On one hand, Digos City National High School, one of the largest schools in Region XI, obtained an overall mean rating of 59.90%, still not a passing mark, for School Year 2013-2014. For School Year 2014-2015, on the other hand, Davao del Sur Division obtained an overall MPS of 54.87 for public schools only and 53.59 for public schools with private schools. The twin goals of Mathematics curriculum in K to 12 are developing every learner the critical thinking and problem-solving skills. The MPS obtained by students in critical thinking is 48.26 for public schools only while 48.17 for with private schools.

Studying various factors affecting school performance has been an interesting and challenging topic of the local, national and international researchers. Some of these are teacher, school, and student factors, teaching strategies of teachers and strategy and mechanism of the principal.

Over a period of time, it has been observed that students exposed to the same lessons by the same teachers perform differently when they are evaluated (Adesehinwa, 2013). This shows that outside the school environment, other factors influence students' academic performance. Also differences in the academic performances of gifted and non-gifted children cannot be traced to school environment (Adesehinwa & Aremu, 2010). Hence, many other uncontrolled variables can be responsible for academic performance of students generally, secondary school students inclusive. It was in this ground that this study was conducted.

Comment [KK3]: Also,

Purpose of the Study

The general objective of this study was to seek factors of performance of secondary public and private schools. Specifically, it aimed to:

Comment [KK4]: is

1. Explore factors that are associated with the performance of secondary schools in Science, Mathematics and English;
2. Describe the demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, family background and parental involvement, and performance of secondary schools in Science, Mathematics and English;
3. Describe which of the demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, and family background and parental involvement are significantly related to the performance of secondary schools in Science, Mathematics and English;
4. Determine factors that significantly predict performance of secondary schools in Science, Mathematics and English from demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, and family background and parental involvement; and
5. Develop empirical models illustrating functions of performance of secondary schools in Science, Mathematics and English.

Hypotheses

Ho_1: There is no significant relationship between demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, family background and parental involvement and school performance in Science, Mathematics and English.

Ho_2: No factor significantly predicts the performance of secondary schools in Science, Mathematics and English.

Significance of the Study

Findings of this research are believed to have a significant value to the following:

Department of Education (DepEd) Schools Division Superintendent and Other Officials. This study provides information or data which may be used in preparing the set of decisions for actions in the future, directed at achieving goals by preferable means, and in the planning among them to providing trainings in the division, regional and national levels suitable to the needs of the teachers which may be the identified factors significantly influencing the performance of secondary schools in Science, Mathematics and English.

School Heads and Department Heads. Results of the study may serve as a guide to the principals (and department heads for large high schools) in planning, programming, and budgeting system (PPBS) among schools before the school year starts. Trainings related to teaching strategies of teachers, strategies of school head, and other factors that greatly influence school performance may be given attention and a priority to educational planners like them.

Guidance Counselors. Provided with facts from this study, guidance counselors may use them as bases in planning guidance programs and in counseling students.

Science, Math, and English Teachers. The results derived from this study would serve as a guide to Science, Math, and English teachers to employ the teaching strategies that gear towards better performance in Science, Mathematics and English and excellence in competitions.

Parents. Results of the study would encourage parents to support their children, teachers, and the school to any endeavor that the school initiates to improve performance of the school in the NAT and in the competitions where their children are inclined to.

Students. Results derived would encourage students to attend symposia intended for them and with their parents initiated by the school head and other stakeholders.

Research Community. This study would contribute to the existing literature on factors influencing and predicting performance of secondary schools in Science, Mathematics and English.

Conceptual Framework

The researcher used the following representation of a conceptual model. Two (2) variables are illustrated in this framework, namely: the independent variables and the dependent variable. The independent variables are teacher's demographics, school profile, student factor, teacher factor, learning resources and classroom management, management and governance, and family background and parental involvement while the dependent variable is the performance of secondary schools in Science, Mathematics and English which is measured in terms of competitions, NAT rating in Science, NAT Rating in Mathematics, NAT rating in English and average NAT rating in Science, Mathematics and English.

Comment [KK5]: NOTE: Do you need that section? They are known and expected by everyone, but break the progression of the paper! In addition, the results do not correspond to the whole country let alone education as a whole.

Theoretical Framework

The theories anchored to this study are twofold. First is what Green (2000), Snyder, Acker-Hocevar, and Snyder (2000), and Huitt, Huitt, Monetti, and Hummel (2009) have suggested in their research-based school improvement efforts. It stated that there is a need to understand classrooms, schools, families, and communities as systems. Attention must be paid to both developing well-functioning teams within schools (i. e., transformational leadership; Chin, 2007). Efforts at school reform that do not consider schools and classrooms as systems may find that the system merely adapts to the intrusion by outside forces in order to preserve the integrity of the teachers, classrooms, or schools that are the focus of change (Gustello & Liebovitch, 2009). Second is the direct offspring or subset of Sigmund Freud's theory which is Martin Ford's motivational systems theory (MST). This framework focuses on the individual as the unit of analysis, but embeds the individual in the biological, social, and environmental contexts that are crucial to development. MST attempts to describe the development of the whole person-in-context, in much the same way a biologist might describe an individual plant and its relation to its immediate ecological niche, as well as the larger ecosystems in which it resides (Campbell, 2007). Ford proposed a simple mathematical formula that attempts to represent all these factors in one model. The formula for effective person-in-context functioning is:

$$Performance/Achievement = \frac{(Motivation\ x\ Skill)}{Biological\ Structure}\ x\ Responsive\ Environment$$

The formula proposes that actual "achievement and competence are the results of a motivated, skillful, and biologically capable person interacting with a responsive environment" (Ford, 1992, p.70). The motivational systems theory does not attempt to replace or supersede any of the existing theories. Instead, it attempts to organize the various motivational constructs from different theories into one model. The main constructs are self-efficacy beliefs, the role of expectancy, and goal orientation. The formula suggests that in any behavior episode, there are four major prerequisites for effective functioning: 1) the person must have the *motivation* needed to initiate and maintain the activity until the goal directing the episode is attained; 2) the person must have the *skill* necessary to construct and execute a pattern of activity that will produce the desired result; the person's *biological structure* and functioning must be able to support the operation of the motivation and skill components; and the person must have the cooperation of a *responsive environment* that will facilitate progress towards the goal (Ford, 1992).

Campbell's (2007) study aimed to investigate the relationships between motivational strategies, biological factors, responsive environment factors, skill/prior ability, and academic performance of these college students and the impact on the level of academic performance by the college students' gender and race. The results of his study indicated that the motivational systems theory is a valid predictor of performance.

Scope and Delimitation

This exploratory study was limited to the secondary public and private schools in Davao del Sur Division. It explored the direct experiences of the teachers and principals in Davao del Sur in the determination of factors of performance of secondary schools in Science, Mathematics and English. In addition, results of the qualitative data were used in the formulation of the questionnaire. The questionnaire was used to describe the teacher's demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, family background and parental involvement, and performance of secondary schools in Science, Mathematics and English. Furthermore,

Comment [KK6]: NOTE: How this concept fits with the regressions you used? This should be clear

the study described which of the demographics, school profile, teacher factor, student factor, learning resources and classroom management, management and governance, and family background and parental involvement significantly affected and predicted the performance of secondary schools in Science, Mathematics and English. Finally, it develops empirical models illustrating functions of performance of secondary schools in Science, Mathematics and English.

METHOD

Research Design

The Sequential Exploratory Mixed Methods Design was used which consisted of two distinct phases: qualitative followed by quantitative. Borrego, Douglas, and Amelink (2009), Creswell and Plano Clark (2007) elucidated that exploratory designs begin with a primary qualitative phase, and then the findings are validated or otherwise informed by quantitative results. This approach is usually employed to explore a phenomenon (Creswell, Plano Clark, et al., 2003) and to develop a standardized instrument in a relatively unstudied area (Creswell and Plano Clark, op. cit.). The qualitative phase identifies important variables to study quantitatively when the variables are unknown (Creswell, 2007; Creswell, et al., 2003). In this study, the researcher developed an instrument of factors of performance of secondary schools in Science, Mathematics and English as an intermediate step between the phase that was built on qualitative results and was used in the subsequent quantitative data collection.

Comment [KK7]: I did not detect any descriptive or statistical validation?

Locale of the Study

Department of Education (DepEd) in Davao region has 10 divisions. One of which is the Davao del Sur division in the province of Davao del Sur. Formerly it has 23 districts but through RA 10360 An Act Creating the Province of Davao Occidental known as the Charter of the Province of Davao Occidental approved January 14, 2013 Davao Occidental is created and therefore establish, maintain a separate school division in the province whose jurisdiction shall cover all the municipalities of the new province as stated in RA 10360 sec 44a with nine districts in five municipalities, leaving Davao del Sur division with 14 districts.

Comment [KK8]: NOTE: If Davao del Sur is one of 10 regions how can you use the results of your study to make inferences about the region and the country, if no evidence presented to indicate that it is a representable sample?

Informants Selection and Sampling Procedure

In qualitative phase, purposive sampling was used to determine the key informant interview samples consisting of 20 informants composed of teachers and principals. Five from performing public schools, five from performing private schools, five from non-performing public schools, and five from non-performing private schools. The topmost performing public and private schools and bottommost public and private schools were identified based on their average ratings in Science, Mathematics and English in the NAT for the School Year 2014-2015. The informants were from from Hagonoy National High School, Sinawilan National High School, St. Therese School of Bansalan, and Holy Cross of Sulop, Inc.

Comment [KK9]: NOTE: How this compares with a RANDOM sampling? And mainly how did you choose your sample? Also, how about the location of the sample (i.e. if all schools are from urban areas how representative is your sample for the whole region?)

In the quantitative phase, the respondents of this study were secondary school principals and Mathematics, Science, and English teachers regardless of year/grade level. For teacher-respondents, the researcher used complete enumeration with a grand total 68 teachers and principals.

Comment [KK10]: NOTE: This is the population, not a sample and therefore your conclusions refer only to the secondary schools in the Davao del Sur region!
So the qualitative phase utilizes a sample and the quantitative a population.

Research Instruments

An interview guide and a survey questionnaire were used as instruments in this study. The former was used for the qualitative phase and the latter was utilized for the quantitative phase. A set of guide questions was made up of open-ended questions to explore the factors that were associated with the

Comment [KK11]: NOTE: In a journal paper space is limited but abbreviated form of the Questionnaires is extremely important

performance of secondary schools in Science, Mathematics, and English. It included two (2) grand tour questions with probing questions in each. On the other hand, the survey questionnaire contained four (4) parts, namely: Part I – Teacher's Demographics, Part II – School Profile, Part III – Survey Questionnaire on Factors of Performance of Secondary Schools in Science, Mathematics and English (SQFPSSSME) which covered the five (5) emerging themes with their respective clustered themes, and Part IV – School Performance.

Data Collection Procedures

Qualitative Phase. Data collection in the qualitative phase used the following 4-step procedure. First, was formulation of guide questions. A set of guide questions was made up of open-ended questions to explore the factors that are associated with the performance of secondary schools in Science, Mathematics, and English. It contained two grand tour questions with probing questions in each. Second, was the validation of the Key Informant Interview (KII) guide questions. The set of guide questions was validated and enhanced by three experts. Third, was the pilot testing of KII. The guide questions were tried out to three secondary school teachers who were not part of the group of KII informants. Lastly, was the conduct of KII. The interviews were personally conducted by the researcher to four schools consisting 21 teachers and principals all in all as informants.

Comment [KK12]: NOTE :Do you mean a DELPHI method or you have just chosen three persons arbitrary? So how valid are the results?

Quantitative Phase. Data collection in the quantitative phase used the following 5-step procedure:
Step 1: Creswell Analysis. The responses of informants during the KII were transcribed. The transcripts were read several times. The significant statements were crafted from the transcripts. Each significant statement was temporarily assigned to a cluster theme and subsequently to an emerging theme. All significant statements with the same cluster and emerging themes were collated and were analyzed through Creswell Analysis. Consequently, items were formulated using the organized significant statements. Through this analysis, 128 item-survey questionnaire which was subjected to factor analysis pertaining to the factors that are associated with the performance of secondary schools in Science, Mathematics and English were articulated. A 5-point Likert-type scale was used for each statement, namely: (5) very high, (4) high, (3) moderate, (2) low, and (1) very low. Step 2: Validation of the 128-Item Survey Questionnaire. The items formulated were subjected for content validation by three (3) experts in this field of focus. Step 3: Reliability Testing. These items were conducted to 20 respondents of the same school, that is, Matan-ao National High School, Poblacion, Matan-ao, Davao del Sur. The researcher used internal consistency reliability testing, where Cronbach's alpha was computed. The responses were tallied, analyzed and interpreted for reliability testing using SPSS version 17.0. The computed value of Cronbach's alpha was .910 which was described as excellent by George's and Mallery's (2003) rule of thumb. Step 4: Factor Analysis. The same set of items which was conducted to 150 respondents was subjected to Factor analysis. This analysis validates the grouping of the identified temporary cluster and emerging themes in the Creswell analysis. With this analysis, it was found that there were five emerging themes that came out. These are student factors, teacher factors, learning resources and classroom management, management and governance, and family background and parental involvement. Additionally, out of 128 statements, only 105 were left which were grouped accordingly by emerging and cluster themes. Step 5: Development of Research Instrument. The instrument was developed by the researcher. It contained four parts, namely: Part I – Teacher's Demographics, Part II – School Profile, Part III – Survey Questionnaire on Factors of Performance of Secondary Schools in Science, Mathematics and English (SQFPSSSME) which covered the five (5) emerging themes, and Part IV – School Performance. This research instrument was given to 68 main respondents to answer the research problems as stated in the purpose of the study.

RESULTS AND DISCUSSION

Factors that Influence the Performance of Secondary Schools in Science, Mathematics and English

As the informants were interviewed about the factors of performance of secondary schools in Science, Mathematics and English, there were two factors that surfaced, namely: teacher's demographics and school profile, and five themes emerged, namely: teacher factor, student factor; learning resources and classroom management, management and governance, family background and parental involvement. Seven indicators were identified under the first factor, namely: sex, civil status, employment status, length of service, educational attainment, vertical alignment and teaching in the field of specialization; and three indicators under the second factor, namely: school size, class size and school type. On the other hand, the five emerging themes had clustered themes in each. In the first emerging theme, four clustered themes were determined, namely: teacher's expertise, teacher's attitude and motivation, teacher's trainings and advancement and teacher's teaching strategies and methodology. In the second theme, two clustered themes were identified, namely: student's behavior and student's performance. Another two were determined under the third emerging theme, namely: learning resources management and classroom management. For the fourth emerging theme, another three clustered themes were identified, namely: principal's relationship to stakeholders, principal's projects and programs, and school based management. While for the fifth and last emerging theme, two themes were conceptualized, namely: family background and parental involvement. Results in the qualitative and quantitative aspects are discussed in the succeeding paragraphs.

Comment [KK13]: school-based

Teacher Demographics

Comment [KK14]: NOTE: All these descriptive results (the essence of the paper and practically half of its text) are nor accompanied by any supporting evidence, even a simple!
How these factors compare between themselves. All have the same impact?

Civil Status. Students' success is greatly influenced by teachers' factors as to teaching. One of the numbers of factors that has been found to be related to student's success is the teacher's civil status. Teacher's status affects the student's productivity and performance in school

Employment Status. Teachers with high quality performance are more likely to have a stable job. Teacher's performance is the basis for determining whether the teacher has done his/her part as a teacher inside the classroom. Hence, if the teachers are not yet stable their performance is greatly affected.

Length of Service. Teachers, who are experiencing a high quality of work life, are motivated to perform at higher levels and are willing to stay with an organization. If teachers find satisfaction, teacher work life would lead to greater stability. These factors influence teacher's performance and play a major role in their decisions to switch schools or leave the teaching profession.

Education. Student's academic achievement also depends on the teacher's experience and educational qualifications. Teachers acquiring higher education allow themselves to grow and make sound of educational improvements that address the achievement existing gaps. In order for a student to get where they are now to where they need to be educationally, teachers with good qualifications should always be present to ensure student learning outcomes.

Vertical Alignment. Teaching and learning process would be worthwhile if teachers are passionate with their work. Practicing one's acquired profession enables him/her to carry out the given tasks. With such, teachers will not find difficulty to handle the class for they are trained and honed to perform what they are expected to do. However, in some cases, there are problems in terms of vertical alignment.

Field of Specialization. As to field of specialization, transfer of knowledge is easy if teachers already mastered their subject matter. With this, teachers are likely to use various teaching strategies and techniques suitable to the level of learners. They can think of better activities that would motivate the students to learn and develop their critical thinking. Through this, teachers are expected to provide a work effort far beyond normal expectations to cater the individual needs of diverse students.

School Profile

Class Size. Another factor that affects the school's performance is the school size. There is a difference in handling the school in terms of the school size. The bigger the school the greater the responsibility of the administrator assigned in the said school. On the other hand, if the school is small then the administrator can manage well the school. In order to make sure learning and comprehension, class size should be looked into to cater individual's needs and give sufficient attention for their wants.

School Type. There are two types of school – the public school and the private school. The school type is a factor in the school performance as to the teachers' and students' part.

Teacher Factor

The result of the quantitative research shows that there is a higher Level of agreement of teachers and principals on teacher factors that are perceived to be associated with the performance of secondary schools in Science, Mathematics and English. It only means that teacher factor can affect the performance of the secondary schools.

Teacher's Expertise. When it comes to the teacher's expertise, it is proven in the study that it is also a factor that affects the performance of the school. Thus, the expertise of teacher should be considered as one of the teacher factors in terms of school performance in the three disciplines.

Teacher's Attitude and Motivation. The attitude and motivation of the teachers also matter in the teaching-learning process because these two will affect the performance of the teachers in terms of their teaching. If the teacher has a positive attitude towards the learning and welfare of the students and the teacher also is well motivated then it reflects on how the students perform in the class. In terms of the school's academic performance, teacher's attitude and motivation must be taken into account. These two affects many of the issues surrounding the quality of teacher's work for the way they perceive and handle the students' diversity matters a lot.

Teacher's Trainings and Advancement. In order for teachers to grow and cope with the latest trends with regards to handling and catering student's hunger to be educated, they should first let themselves to be fully equipped with it through participating trainings and advancement seminars.

Comment [KK15]: space

Teacher's Teaching Strategies and Methodology. Students learn best from the teacher they like. There are certain subjects wherein the students find difficulty in learning. The teacher should be well-equipped with teaching strategies and methodologies so that the students will not find the subject too dull and boring. The teacher should find remedy of the certain dilemma, so that the students will be motivated and will learn to love the subject no matter how difficult it is. Thus if there are problems that has been encountered, there should always be quick solutions especially when the knowledge of the student is at stake. On the other hand, the study also looks into the general perspective or the teaching approach of the teachers toward the disciplines. It has a great impact in terms of performance of students. It was well-observed in the teacher's responses. And so it is proved that teaching approach used by the teachers inside the classroom setting greatly affects students' performance.

Student Factor

Students are the primary elements of learning. Teaching and learning would not be possible without them for they are the focus of it.

Students' Behavior. Another factor that affects the performance of the students in school is the students' behavior. Thus, students' behavior should be taken into account as to assessing student's performance in school.

Student's Performance. As to factors influencing school's performance, there are so many aspects to look into. Students are the primary element in the teaching and learning process. Their success and development can be measured by their performance in any aspect in the process.

Learning Resources and Classroom Management

The learning resources and management are considered as factors in the performance of the students because the former serves as one of the sources of knowledge and the latter is the one that helps in conveying the knowledge to the students.

Learning Resources Management. Learning resources is found to be one of the factors that affect the performance of the school. The students learn better if they have it firsthand. If the school has complete learning resources then the students also will have quality performance. Moreover, most students are visual learners. Hence, they learn best when they can see the actual thing that the teacher is trying to convey. To ensure better understanding and learning, it is essential that the facilities and equipment are provided.

Classroom Management. The importance of classroom management is that learning will only take effect if the teacher has the capacity and the ability to handle the class well. It means that the teacher is the driving force when it comes to imparting the knowledge to the students. If the teacher has low classroom management, then there is a tendency that the class will not learn from the teacher.

Management and Governance

The management and governance should also be looked upon because it is important to see how the higher authorities handle the school. The success of the school highly depends on how the administration manages the certain institution. As the quantitative result showed that there is an average level of agreement of teachers and principals on school based management that is perceived to be associated with the performance of secondary schools in Science, Mathematics and English.

Principal's Relationship to and Among Stakeholders. Stakeholders are the people or organizations who have a great importance or influence in an educational institution. It is essential that schools must take into consideration the stakeholders in order to get support from them. Therefore, schools need the help or support from the stakeholders for them to be productive. Building a harmonious relationship among stakeholders is very crucial since stakeholders are the receiver of the product of the schools. Hence, it is good to take good care of the relationship that is already built. There should be equal effort between the school and the stakeholders in order to maintain a lasting relationship.

Principal's Projects and Programs. Teachers need not to be efficient but effective as well so it is necessary for them to initiate projects/programs for students' benefits. Hence, teachers should also give

importance to the project/program that would give the students opportunity to gain education that they ought to gain.

School Based Management. The school principals have different ways in dealing with their teachers as well as the way they handle their school. Thus, the strategies of the principal may vary but it is still for the betterment of the performance of the school. Students do not only learn from school but also in their home and community. Community as one of the students' learning environment, it must also be healthy for it helps molding the students not just as a better person but in totality. Monitoring is one way of looking into the smooth flow of the learning process, and it is observed in the responses of the key informants. Thus, it is very essential to urge the teachers to be particular with their preparation in teaching as to see the readiness and preparedness to cater the students' needs.

Family Background and Parental Involvement

The next emerging theme was the parent factor. The quantitative results stated that there was an average level of agreement of teachers and principal on family background and parental involvement that are perceived to be associated with the performance of secondary schools in Science, Mathematics and English.

Family Background. The learner's family background should be properly checked so that the teachers may be able to understand the student's performance. The financial status of the parents as part of the family background must be monitored so that their children would not be at risked of being one of the out of school youth as well as it would not be the hindrance with the learner's performance. For these reasons, it is better to have a portfolio of students regarding their family background.

Parent Involvement. Parents' involvement is also a big factor in students' performance for the students look up into them for support. Therefore, parents need to play their part as to give their students proper education and guidance for them not to be tempted and focus on their studies. Moreover, students' inspiration to go to school varies if they can feel the care and love of their parents. Therefore, parents' attention is the utmost need of the students to pursue their studies for parents' support is still the best way to show their care and love.

Teacher's Demographics, School Profile, Teacher Factor, Student Factor, Learning Resources and Classroom Management, Management and Governance, Family Background and Parental Involvement, and Performance of Secondary Schools in Science, Mathematics and English

Teacher's Demographics. The demographic profile of respondents includes gender, civil status, employment status, educational attainment, vertical alignment and field of specialization. It depicted that out of 68 respondents, 23 or 33.8% of the respondents are male and 45 or 66.2% are female; 27 or 39.7% of the respondents were single, 39 or 57.4% were married, and the other 2 or 3% were widow/er and separated; 54 or 79.4% were permanent, 10 or 14.7% were contractual, 4 or 5.9% were substitute and others; 40 or 58.8% of the respondents belong to 0 to 5 years, 13 or 19.1% belong to 6 to 10 years, and 15 or 22.1% belong to 11 years and above. Regarding their education, 43 or 63.2% were bachelor's degree holders only, 23 or 33.8% were master's degree holders and 2 or 2.9% were doctoral degree holders. Of those who acquired master's or doctoral degree, only 15 or 22.1% were vertically aligned while 10 or 14.7% were not. Out of 68 respondents, 48 or 70.6% were teaching in their field of specialization while 20 or 29.4% were not.

School Profile. The school profile of the selected secondary schools included school size, average class size and school type. Of the respondents, only 4 or 5.9% belonged to large school with a student population of 1000 and above, 26 or 38.2% belonged to medium size schools while 38 or 55.9% belonged to small schools. Fifty-two, or 76.5%, respondents belong small class size with a range of 26 to 50 and 16 or 23.5% belonged to large class size with more than 50 students. Fifty-three, or 77.9%, of the respondents came from public while 15 or 22.1% belonged to private.

Teacher Factor. Teacher factors included teacher's expertise, teacher's attitude and motivation, teacher's trainings and advancement, and teacher's teaching strategies and methodology. It showed that the mean of teacher's expertise is 4.22; teacher's attitude and motivation, 4.37; teacher's trainings and advancement, 4.39; and teacher's teaching strategies and methodology, 4.17. All of these teacher factors had a descriptive equivalent of *agree*, which means that the statements under these factors were *often true* for the respondents. Similarly, teacher factor as a whole obtained a mean of 4.29, with a descriptive equivalent of *agree*. This means further that the statements are *often true* for the respondents.

Teacher's Expertise. Ten statements are found under teacher's expertise. It showed that the means of all statements under this cluster theme obtained a mean rating ranging from 3.50 to 4.49, which descriptive equivalent was *agree*. This means that the statements are *often true* for the respondents on the average.

Teacher's Attitude and Motivation. Fifteen statements are under teacher's attitude and motivation. It revealed that among the 15 statements, only three statements had a mean greater than 4.50, which were equivalent to *strongly agree*. This means that these statements, "Teachers are enthusiastic in the delivery of the daily lessons," "Teachers are willing to be trained for their professional development," and "Teachers feel fulfilled when their former students perform well in school" are *always or almost always true* for the respondents. On the other hand, other statements obtained means whose descriptive equivalents were *agree*. This means that these statements are *often true* for the respondents. Teacher's attitude and motivation in general obtained a mean of 4.37 or *agree*. It means that on the average, the statements are *often true* for the respondents.

Teacher's Trainings and Advancement. Three statements were under teacher's trainings and advancement. It showed that among the statements, the statement "Teachers feel that attending content-based and K to 12 trainings is a necessity" obtained a mean of 4.57 which was equivalent to *strongly agree*. This means that that statement is *always or almost always true* for the respondents. On the other hand, statements 2 and 3 obtained a mean of 4.12 and 4.49, respectively which were both equivalent to *agree*. It means that the statements are *often true* for the respondents. Teacher's trainings and advancement as a whole obtained a mean of 4.39 or *agree*. It further means that the statements on the average are *often true* for the respondents.

Teacher's Strategies and Methodology. Fifteen statements fall under this cluster theme. All statements had a mean within the range of 3.50 to 4.49, which was equivalent to *agree*. It means further that all statements are *often true* for the respondents. Furthermore, the teacher's teaching strategies and methodology had a mean of 4.17, which was equivalent to *agree*. It means that the statements of this cluster theme are *often true* for the respondents.

Student Factor. Student factor included student's behavior and student's performance. It showed that the student's behavior and student's performance obtained a mean of 2.93 and 3.20, respectively. Both

values had a descriptive equivalent of *moderately agree*. It means further that the statements under these cluster themes are *sometimes true* for the respondents. Similarly, the student factor as a whole obtains a mean of 3.07, which was equivalent to *moderately agree*. It means that the statements under this emerging theme are *sometimes true* for the respondents.

Student's Behavior. Six statements are classified under student's behavior. It showed that all statements had mean within the range of 2.50 to 3.49, which were equivalent to *moderately agree*. It means that all of these statements are *sometimes true* for the respondents on the average. Similarly the overall mean of student's behavior was 2.93 which was equivalent to *moderately agree*. It means the statements in general are *sometimes true* for the respondents.

Student's Performance. Ten statements are identified under student's performance. It showed that all statements had means which were within the range of 2.50 to 3.49. This statistics is equivalent to *moderately agree*. It showed that the statements were *sometimes true* for the respondents in general. Similarly, the overall mean of student's performance was 3.20 which was equivalent to *moderately agree*. It means the statements in general are *sometimes true* for the respondents.

Learning Resources and Classroom Management. Learning resources and classroom management is divided into two cluster themes, namely: learning resources management and classroom management. These are discussed in the following paragraphs. It showed that learning resources management had a mean of 3.65 while that of classroom management was 3.99. Both statistics were equivalent to *agree*. It means that the statements under these cluster themes are *often true* for the respondents.

Learning Resources Management. Seven statements were classified under learning resources management. It showed that statement 1 got the highest mean of 4.60 or *strongly agree*. It means that the respondents in general strongly agree to the statement, "The school has convenient chairs in the classroom." Equivalently, the statement was *always or almost always true* for the respondents. Statements 2, 4 and 6 obtained mean score of 3.88, 3.70, and 3.94, respectively. All these statements were equivalent to *agree*. It means that these statements are *often true* for the respondents. The overall mean of learning resources management was 3.65 or *agree*. It means that on the average the statements are *often true* for the respondents.

Classroom Management. Five statements are classified under classroom management. Results showed that all statements had means within the range of 3.50 to 4.49, which were all described as *agree*. It showed that the statements were all *often true* for the respondents. The overall mean of classroom management was 3.99, which was equivalent to *agree*. It means that on the average, the statements are *often true* for the respondents.

Management and Governance. Management and governance included principal's relationship to stakeholders, principal's projects and programs, and school based management. It revealed that the principal's relationships to stakeholders and principal's projects and programs had means of 4.13 and 3.86, respectively. These were equivalent to *agree*. It means the statements under these cluster themes are *often true* for the respondents. On the other hand, school based management got a mean of 3.44, which was equivalent to *moderately agree*. It means the statements under this cluster theme are *sometimes true* for the respondents. The overall mean of management and governance was 3.81, which was equivalent to *agree*. It means that on the average the statements are *often true* for the respondents.

Principal's Relationship to Stakeholders. Six statements are under the cluster theme principal's relationship to stakeholders. It depicts that the means of the statements were within the range of 3.50 to 4.49. These were described as *agree*. It means that all these statements are *often true* for the respondents. The overall mean of principal's relationship to stakeholders was 4.14, which was equivalent to *agree*. It means that on the average the statements are *often true* for the respondents.

Principal's Projects and Programs. Ten statements belong to principal's projects and programs. It depicted that the means of the statements were within the range of 3.50 to 4.49. These were described as *agree*. It means that all these statements are *often true* for the respondents. The overall mean of principal's projects and programs was 3.86, which is equivalent to *agree*. It means that on the average the statements are *often true* for the respondents.

School Based Management. Eight statements were under the cluster theme school based management. It depicted that statements 1, 2, 4 7 and 8 had means within the range of 3.50 to 4.49. These were described as *agree*. It means that these statements are *often true* for the respondents. Statements 3 and 6, on the other hand, had means within the range of 2.50 to 3.49. These were described as *moderately agree*. It means that these statements are *sometimes true* for the respondents. Statement 5 obtained a mean of 2.41, which was equivalent to *disagree*. It means that this statement is *rarely true* for the respondents. The overall mean of school based management was 3.44, which was equivalent to *moderately agree*. It means that on the average the statements are *sometimes true* for the respondents.

Family Background and Parental Involvement. The emerging theme family background and parental involvement was divided into two cluster themes namely: family background and parental involvement. It showed that family background had a mean of 3.54, which was described as *agree*. It means that the statements under this cluster theme are *often true* for the respondents. On the other hand, parental involvement obtained a mean of 3.35, which was described as *moderately agree*. It means that the statements under this cluster theme were *sometimes true* for the respondents. The overall mean of family background and parental involvement was 3.44, which was equivalent to *moderately agree*. It means that on the average the statements are *sometimes true* for the respondents.

Family Background. Six statements are under the cluster theme family background. It depicts that statements 1 to 4 have means within the range of 3.50 to 4.49. These were described as *agree*. It means that these statements are *often true* for the respondents. Statements 5 and 6, on the other hand, had means of 3.32 and 3.15, respectively. These were described as *moderately agree*. It means that these statements are *sometimes true* for the respondents. The overall mean of family background is 3.54, which was equivalent to *agree*. It means that on the average the statements of this theme are *often true* for the respondents.

Parental Involvement. Four statements are under the cluster theme parental involvement. It depicted that statement 3 had a mean of 3.57 which was described as *agree*. It means that the statement is *often true* for the respondents. Statements 1, 2 and 4, on the other hand, had means within the range of 2.50 to 3.49. These were described as *moderately agree*. It means that these statements are *sometimes true* for the respondents. The overall mean of parental involvement was 3.35, which is equivalent to *moderately agree*. It means that on the average the statements of this theme are *sometimes true* for the respondents.

Performance of Secondary Schools in Science, Mathematics and English. Performance of secondary schools in Science, Mathematics and English included the excellence in competitions and the NAT results. Each of these indicators was discussed in the succeeding paragraphs.

Excellence in Competitions. The results showed that 6 or 22.2% of Science teachers won in the competitions while 21 or 77.8% did not; 8 or 44.4% of Mathematics teachers won in the competitions while 10 or 55.6% did not; 7 or 36.8.% of English teachers won in the competitions while 12 or 63.2% did not; and 2 or 50% of the principals whose teachers won in the competition while 2 or 50% did not. On the average, 23 or 33.8% won in the competition while 45 or 66.2% did not.

NAT Results. It showed that the mean percentage rating of NAT in Science among Science teachers is 56.57% with an average mastery level, in Mathematics among Mathematics teachers is 55.65% with an average mastery level, in English among English teachers is 53.73% with an average mastery level, and in average NAT results in Science, Mathematics and English is 55.32% with an average mastery level.

Relationships among Teacher's Demographics, School Profile, Teacher Factor, Student Factor, Learning Resources and Classroom Management, Management and Governance, and Family Background and Parental Involvement on the Performance of Secondary Schools in Science, Mathematics and English

Teacher's Demographics. Results revealed that marital status and length of service significantly linked with NAT results in Science and in Mathematics. Moreover, employment status showed significant relationship to NAT results in Science. Further, educational attainment and vertical alignment showed relationship with competitions. However, sex and field of specialization, showed no significant relationship with the performance of secondary schools in Science, Mathematics and English.

School Profile. Results showed that school size, class size, and school type significantly linked with the NAT results in Mathematics, in English and the average results.

Teacher Factor. Results showed that teachers' expertise had no significant relationship with the performance of secondary schools in Science, Mathematics and English. On the other hand, teachers' attitude and motivation and teacher factor had a significant relationship with NAT results in Science, in Mathematics, in English. Likewise, there is a significant relationship between the teacher's trainings and advancement and NAT results in Science while there is a significant relationship between the teachers' teaching strategies and methodology with the NAT results in English.

Student Factor. All indicators, students' behavior, students' performance, and student factor showed no significant with the performance of secondary schools in Science, Mathematics and English.

Learning Resources and Classroom Management. Results showed that there was a significant relationship between the learning resources management and the competitions. In terms of classroom management, it showed no significant relationship between the student factor and the performance of secondary schools in Science, Mathematics and English while learning resources and classroom management in general, showed a significant relationship with competitions.

Management and Governance

Results showed that there was a significant relationship between the principal's relationship to stakeholders and the competitions, NAT results in Science, in Mathematics and average results. It also showed that there is a significant relationship between the principal's projects and programs and school based management with NAT results in English. Likewise, there is a significant relationship between the management and governance and the competitions.

Comment [KK16]: where do you base this statement?

Comment [KK17]: Evidence?

Comment [KK18]: Evidence?

Comment [KK19]: Evidence?

Family Background and Parental Involvement

Results revealed that family background and parental involvement had no significant relationship with the performance of secondary schools in Science, Mathematics and English.

Multiple Regression Analysis of the Predictor Variables on the Performance of Schools in Science, Mathematics and English

Competitions. The probability value of F statistic of 11.683 is .000, which is less than .05 level of significance. Thus, the null hypothesis is rejected. This signifies that there is a significant relationship between the set of independent variables (i.e. educational attainment, school based management, and field of specialization) and the dependent variable (competitions). Moreover, multiple R of .595 means that there is a moderate correlation or substantial relationship of the predictor variables (i.e. educational attainment, school based management, and field of specialization) on competitions. R^2 = .354 or 35.4% of the total variation in the competitions is explained by its linear function of educational attainment, school based management, and field of specialization. In other words, 64.6% of the entire variation of competitions is not accounted to the variation of the educational attainment, school based management, and field of specialization. This suggests that there might be some other factors which influence the competitions.

The unstandardized coefficients of educational attainment, school based management, and field of specialization obtain t-values with Sig. values of .000, .001, and .029. All Sig. values are less than .05 level of significance. It denotes that the competition is significantly predicted by educational attainment, school based management, and field of specialization. Furthermore, the empirical model is $Y_{Competition}$ = -5.028 + 2.472*Educational Attainment + 1.514*School Based Management – 1.531*Field of Specialization.

NAT Rating in Science. The probability value of F statistic of 29.726 is .000, which is less than .05 level of significance. Thus, the null hypothesis is rejected. This signifies that there is a significant relationship between the set of independent variables (i.e. school type, teacher's attitude and motivation, and class size) and the dependent variable (NAT Rating in Science). Moreover, multiple R of .763 means that there is a high correlation or marked relationship of the predictor variables (i.e. school type, teacher's attitude and motivation, and class size) on the NAT Rating in Science. R^2 = .582 or 58.2% of the total variation in the NAT rating in Science is explained by its linear function of school type, teacher's attitude and motivation, and class size. In other words, 41.8% of the entire variation of NAT rating in Science is not accounted to the variation of the school type, teacher's attitude and motivation, and class size. This suggests that there might be some other factors which influence the NAT rating in Science.

The unstandardized coefficient of school type, teacher's attitude and motivation, and class size obtain t-values with Sig. values of .000, .000, and .002. All Sig. values are less than .05 level of significance. It denotes that the NAT rating in Science is significantly predicted by school type, teacher's attitude and motivation, and class size. Furthermore, the empirical model is $Y_{NATScience}$ = 7.814 – 32.872*School Type + 13.007*Teacher's Attitude and Motivation + 14.318*Class Size.

NAT Rating In Mathematics. The probability value of F statistic of 20.288 is .000, which is less than .05 level of significance. Thus, the null hypothesis is rejected. This signifies that there is a significant relationship between the set of independent variables (i.e. school type, length of service, teacher's

Comment [KK20]: NOTE: While the F and f coefficients are satisfactory some R^2 values (around .60) are not so high, requiring some comments on the role of the dependent variables.

Comment [KK21]: school-based

Comment [KK22]: school-based

Comment [KK23]: school-based

Comment [KK24]: school-based

Comment [KK25]: school-based

Comment [KK26]: school-based

Comment [KK27]: space

attitude and motivation, principal's projects and programs, and school size) and the dependent variable (NAT Rating in Mathematics).

Moreover, multiple R of .788 means that there is a high correlation or marked relationship of the predictor variables (i.e. school type, length of service, teacher's attitude and motivation, principal's projects and programs, and school size) on the NAT Rating in Science. R^2 = .621 or 62.1% of the total variation in the NAT rating in Mathematics is explained by its linear function of school type, length of service, teacher's attitude and motivation, principal's projects and programs, and school size. In other words, 37.9% of the entire variation of NAT rating in Mathematics is not accounted to the variation of the school type, length of service, teacher's attitude and motivation, principal's projects and programs, and school size. This suggests that there might be some other factors which influence the NAT rating in Mathematics.

The unstandardized coefficient of school type, length of service, teacher's attitude and motivation, principal's projects and programs, and school size obtain t-values with Sig. values of .000, .006, .002, .007, and .037, respectively. All Sig. values are less than .05 level of significance. It denotes that the NAT rating in Science is significantly predicted school type, length of service, teacher's attitude and motivation, principal's projects and programs, and school size. Furthermore, the empirical model is $Y_{NATMathematics}$ = 74.026 – 28.828*School Type + 5.381*Length of Service + 9.523*Teacher's Attitude and Motivation – 6.782*Principal's Projects and Programs – 4.935*School Size.

NAT Rating in English. The probability value of F statistic of 21.532 is .000, which is less than .05 level of significance. Thus, the null hypothesis is rejected. This signifies that there is a significant relationship between the set of independent variables (i.e. school type, teacher's attitude and motivation, and classroom management) and the dependent variable (NAT Rating in English).

Moreover, multiple R of .709 means that there is a high correlation or marked relationship of the predictor variables (i.e. school type, teacher's attitude and motivation, and classroom management) on the NAT Rating in English. R^2 = .502 or 50.2% of the total variation in the NAT rating in English is explained by its linear function of school type, teacher's attitude and motivation, and classroom management. In other words, 49.8% of the entire variation of NAT rating in English is not accounted to the variation of the school type, teacher's attitude and motivation, and classroom management. This suggests that there might be some other factors which influence the NAT rating in English.

The unstandardized coefficient of school type, teacher's attitude and motivation, and classroom management obtained t-values with Sig. values of .000, .000, and .025, respectively. All Sig. values are less than .05 level of significance. It denotes that the NAT rating in English is significantly predicted by school type, teacher's attitude and motivation, and classroom management. Furthermore, the empirical model is $Y_{NATEnglish}$ = 52.674 – 18.505*School Type + 11.362* Teacher's Attitude and Motivation – 6.518*Classroom Management.

Average NAT Rating in Science, Mathematics and English. The probability value of F statistic of 24.081 is .000, which is less than .05 level of significance. Thus, the null hypothesis is rejected. This signifies that there is a significant relationship between the set of independent variables (i.e. school type, teacher's attitude and motivation, family background and parental involvement, and length of service) and the dependent variable (Average NAT Rating in Science, Mathematics and English). Moreover, multiple R of .778 means that there is a high correlation or marked relationship of the predictor variables (i.e. school type, teacher's attitude and motivation, family background and parental involvement, and length of

service) on the Average NAT Rating in Science, Mathematics and English. R^2 = .605 or 60.5% of the total variation in the average NAT rating in Science, Mathematics and English is explained by its linear function of school type, teacher's attitude and motivation, family background and parental involvement, and length of service. In other words, 39.5% of the entire variation of average NAT rating in Science, Mathematics and English is not accounted to the variation of the school type, teacher's attitude and motivation, family background and parental involvement, and length of service. This suggests that there might be some other factors which influence the average NAT rating in Science, Mathematics and English.

The unstandardized coefficient of school type, teacher's attitude and motivation, family background and parental involvement, and length of service obtain t-values with Sig. values of .000, .002, .019, and .031, respectively. All Sig. values are less than .05 level of significance. It denotes that the average NAT rating in Science, Mathematics and English is significantly predicted by school type, teacher's attitude and motivation, family background and parental involvement, and length of service. Furthermore, the empirical model is $Y_{NATAverage}$ = 60.645 – 26.052*School Type + 8.362* Teacher's Attitude and Motivation – 4.902*Family Background and Parental Involvement + 4.158*Length of Service.

DISCUSSION

Teacher's Demographics. The demographic profile of the teachers affects their performance in school. If the teacher performs well in school then students also achieve a quality performance. Based on the International Journal of Education and Research Vol. 1 No. 3 March 2013 by Kimani et al. (2013) that the teachers cannot be dissociated from the schools they teach and academic results of schools. It would therefore be logical to use standardized students' assessments results as the basis for judging the performance of teachers. Based on the result, the population of the female teachers dominated. It means that there are more female teachers than male. However, gender does not affect the teacher's performance. This is supported by result of the study of Kant (2014) who states that there is no significant difference between male and female secondary school teachers on role performance. In the civil status, teachers who are married are more affectionate towards their students. The employment status of the teachers is also a factor in their performance as Darling-Hammond's (2003) supports the premise that teachers are motivated to perform at higher levels and are more willing to stay with an organization if they are experiencing a high quality of work life.

Employment Status. The employment status of the teachers is also a factor in the school's performance as Darling-Hammond's (2003) favors the premise that teachers are motivated to perform at higher levels and are more willing to stay with an organization if they are experiencing a high quality of work life. According to the informants, the stability of the teachers really affects their performance. When teachers are stable, it would reflect on their performance. Moreover, in the result of the study, it is evident that majority of the respondents have permanent employment status. Although there are contractual, substitute, and other forms of employment but so far there is no problem that emerged in this certain aspect of the teachers. The administration and the teachers were able to come up with their consensus in terms of their employment status.

Length of Service. Length of service is the period wherein the teachers are exposed in teaching. Khurshid, Fauzia et al. (2012) found that there is a positive relationship between teachers' self-efficacy and their job performance. In this study, the majority of the respondents and informants belong to the 0-5 years of experience in teaching while only few from 6-10 years and as well as in the 11 years above. According to Kant (2014), the role performance of secondary school teachers did reveal significant

Comment [KK28]: NOTE: In all the regressions it could have be useful to see the partial regression coefficients of the independent variables to see which of them contributes the most in explaining the dependent variable.

Comment [KK29]: erase

Comment [KK30]: has shown

Comment [KK31]: the

positive relationship with their teaching experience. This is also true to the result of this study. As the informants revealed that the longer the experience they have in the field of teaching, the more effective they are in terms of their performance. Further, teachers who belonged to the 0-5years of experience stated that they are challenged to perform better.

Educational Attainment. The educational attainment of the teacher is also vital in their performance. In the study of Rivkin et al. (2005), they stated that we do not focus solely on measurable characteristics of teachers or schools as is typically done in this literature but instead rely on student outcomes to assess the magnitude of total teacher effects, regardless of our ability to identify and measure any specific components. This semi-parametric approach provides both an estimate of the role of teacher quality in the determination of academic achievement and information on the degree to which specific factors often used in determining compensation and hiring explain differences in teacher effectiveness. However, according to Kant (2014), there is significant positive relationship between role performance and educational qualification of secondary school teachers. It means role performance of secondary school teachers did reveal significant positive relationship with their educational qualification. The results of this study confirmed that of Kant. Although it appears that the number of the respondents that get high response is teachers who have Bachelor's degrees but it can also be observed that the numbers who have Master's degrees is not quite far from that result. Informants also affirm that their performance in school is affected by their educational qualification. They further state that the higher the education they have achieved, the more knowledgeable they are in their field of expertise and the more competent they are in their performance. Additionally, they also reveal that there are so many things that they will learn in their graduate studies that they could readily share to the students.

Vertical Alignment. In the field of teaching especially in the K – 12 curriculum, it is important that the subject taught or assigned to the teacher is aligned with the course the teacher took up. Informants stated that *you cannot give what you do not have.* Further, this statement is strengthened by another informant who states that it is not effective if the teacher is forced to teach the subject which is not his field of expertise. Additionally, the informants also shared that they were forced to teach the said subject due to the lack of teachers. Though they said that they also tried their best to perform well but it was a struggle for them. They could not focus on the said subject. The quantitative result reveals that majority of the respondents are vertically aligned with their course. It means that it is very important that teachers should teach in their field of expertise.

Field of Specialization. The teachers could perform well if the subject that they are handling is their field of specialization. It is easy for them to convey the teaching since it is their field of expertise as the informant had stated. Furthermore, the informants said that they could freely think of activities that best suit the topic because they are well-versed with the subject. The result of this study is not alarming because it is manifested that most of the teachers fall in their field of expertise.

School Profile. School profile is also a factor in the school performance. As the informants said that they are more likely to belong in a small school because in the small school they do not have difficulty in dealing with their administrator, co-teachers and also the students. In big schools, the teachers and administrators usually have difficulties in resolving issues that arise.

Class Size. Class size also matters in the performance of the school. According to Yelkpieri et al. (2012) that some of the key findings of the study are that lecturers disagreed with the view that large class size affects the quality of teaching. In addition, they also disagreed with the assertion that large class size makes assessment of students difficult. The students, on the other hand, agreed that large class size

does not afford lecturers an opportunity to pay attention to weaker students and do remedial teachings. However, based on the result of this study, class size really matters in terms of conveying the lesson to the students. Further, according to the informants that the higher the number of students, the lesser the learning and the lower the number of students, the higher the learning. Additionally, they state that when the number of students in the classroom is lesser, it is manageable and learning is very evident. Hence, this study affirms Yelkpieri et al. (2012) when the students agreed that large class size does not afford lecturers an opportunity to pay attention to weaker students and do remedial teachings. It is further supported by Graue et al. (2009) who state that they present multiple vignettes to illustrate that class size reduction provides opportunities that can be activated by organizing and implementing high-quality classroom practices.

School Type. There are two types of school included in this study, the public and the private school. The informants said that there is a difference in terms of the performance of the students. They said that in private schools, they can concentrate and focus on their students because of a smaller population unlike in public schools wherein the population is at the maximum classroom requirements or even beyond the number of students.

Teacher Factor. Teachers are one of the main ingredients in learning. They are the purveyor of knowledge to the students. Kimani et al. (2013) have cited the following: Rivkin, Hanusheck and Kain (2005), there have never been a consensus on the specific teacher factors that influence students' academic achievement. Akiri and Ugborugbo (2008) found that there was a significant relationship between teachers' gender and students' academic achievement. This is contrary to Dee as cited in Akiri and Ugborugbo (2008). Yala and Wanjohi (2011) and Adeyemi (2010) found that teachers' experience and educational qualifications were the prime predictors of students' academic achievement. However, Ravkin et al. (2005) found that teachers' teaching experience and educational qualifications were not significantly related to students' achievement.

Teacher's Expertise. Teachers are conveyors of knowledge. They are responsible from the theory to the applications of the learning of the students. Kant (2014) shows that there is significant positive relationship between role performance and teaching experience of Secondary School Teachers. This means role performance of secondary school teachers does reveal significant positive relationship with their teaching experience. Kant further states that more experienced teachers have better role performance than less experienced. Based on the result of this study, the informants stated that teachers should have enough knowledge to execute something. This also means that the need for the teachers to be expert in the subject matter is often true.

Teacher's Attitude and Motivation. The students become highly motivated and eager to learn if they see that teachers also are willing to impart their knowledge to them. In the study of Bahamonde-Gunnell (2000), he found that teachers who were satisfied with their jobs had more positive views about school climate than those who were not satisfied. It was supported by Kameshwar (2012) in which he found out that the attitude of secondary school teachers are more stable and reliable than the primary and higher secondary school teachers and college teachers. Furthermore, according to Wirth & Perkins (2013) indicated that teacher's attitude contributed significantly to student attention in classrooms.

Teacher's Attitude and Motivation. Mustafa and Othman (2010) examined the perceptions of high school teachers about the effects of motivation on their performance at work. They found that there is a positive relation between motivation and working performance of teachers, i.e., the greater the level of motivation the higher is the teacher's job performance or if provide a high level of motivation to a teachers then their job performance will be increased. This study affirms the above statement.

Informants have said that they are true to their commitment and when it comes to teaching, they are fully energetic, dynamic and full of enthusiasm.

Teacher's Trainings and Advancement. Teachers are like pencils. They need to be sharpened from time to time in order to get a better output. Kant (2014) states that those teachers who are more qualified show more positive relationship because more teachers gain knowledge more they show responsibility towards their profession. The result of this study also tells the same. The informants said that they have attended seminars especially in preparation for the K-12 curriculum.

Teacher's Teaching Strategies and Methodology. The teaching strategies and methodology are the two factors that highly influence learning. Knobloch (2003) states that making a difference to students' learning may be linked to effective teaching. Additionally, Aguele (2004) states that the supervision of students' activities has large impact on their overall acquisition and improvement of basic skills. Further, Chang (2010) adds that researchers have classified teaching styles in many ways and have considered certain teaching styles more effective in improving student learning. Based on the result of this study, teachers have different ways in their teaching strategies depending on the situation they are in or the students they have. Some informants said that they do have remedial classes, integrating the lesson in the real life situation and even performing the application of the theories and etc. they further said that students easily get bored if there is just one strategy that the teacher has to use. Thus, the quantitative analysis revealed that there is a higher level of agreement of teachers and principals on teacher's teaching strategies and methodology that are perceived to be associated with the performance of secondary schools in Science, Mathematics and English.

Student Factor. In the teaching learning process, the student factor is also observed. The result shows that student has a higher impact in the teaching-learning process.

Student's Behavior. The quantity of the knowledge that the students have gained depends on their behavior in the class. Flynt (2008) reveals that students who exhibit more off task behaviors are seen as being more hostile and requiring more attention. He also adds that students who exhibit positive behaviors generally have higher reading and math achievement scores than students who are perceived as exhibiting negative behaviors such as hostility or dependence. Based on the result of the study, the informants state that there are many factors that affect the students' behavior inside the class. They further say that nowadays, there are so many diversions that possibly affect the students' behavior like the mass media, computer games, peer influence, escaping from classes, chitchatting with friends while the class is ongoing.

Student's Performance. Akey (2006) states learning involves individual cognitive and emotional processes, student motivation is also significantly influenced by a supportive network of relationships. The likelihood that students get motivated and engaged in school is increased to the extent that they perceive their teachers, family, and friends as supportive. Further, based on her finding prior achievement is also significantly related to perceived competence, suggesting that students who do well on reading and mathematics assessment tests then perceive themselves as able learners, which promotes more reading and mathematics success. This study also affirms the said finding. The informants state that students are matured enough, participative and they know how to communicate well with their teachers. It is strengthened with the quantitative result which shows that there is a high response in terms of the students' performance in school.

Learning Resources and Classroom Management

Learning Resources Management. Learning resources management is very essential in measuring the school's performance. According to Sood (2000), at a bare minimum level, schooling would require a building; some provisions for seating children, drinking water, and sanitation facilities, teaching material; teachers and provision for upgrading skills of teachers. Lack of any of these would find the schooling experience ineffective. Moreover, Idowu (2012) observes that if all the resources allocated to the schools are prudently managed, it would lead to school efficiency in terms of good student learning outcomes. Based on the result of the study, the informants said that the learning resources should be looked into if the school aims to have a quality education. They also state that if the school could not provide the learning materials then the teacher must learn to improvise in order to have an effective output. Further, they also reveal that their school is being sponsored by private people who extend their hands by donating learning resources like televisions and projectors.

Classroom Management. The effectiveness of teaching-learning process also depends on the classroom management. The comfort the students inside the class, the proper ventilation, the instructional materials are part of the classroom management. In order to have a quality output, these things should be properly observed. Based on the study, the classroom management gets only an average score. Based from the study of Jalali et al. (2014), as cited from Everstone and Weinstein (2006) classroom management can be defined as "the actions teachers take to create an environment that supports and facilitates both academic and social emotional learning."

Management and Governance. The success of the educational process also depends on how the administration handles the school. As the quantitative result showed that there is an average level of agreement of teachers and principals on school based management that is perceived to be associated with the performance of secondary schools in Science, Mathematics and English.

Relationship to and Among Stakeholders. There should be harmonious relationship among stakeholders because they are the recipient of the product of the school. As the informants says that the good relationship towards the stakeholders should be maintained.

Principal's Projects and Programs. The school principal has projects for the welfare of the school, the community, the faculty and most especially the students. According to the informants, there are programs from their principal like feeding for those students who are less fortunate so that they could focus on their studies. They also add that there are also trainings and seminars for the teachers for their professional growth. Moreover, the parents are also given seminars.

School Based Management. Chika and Ebele (2008) emphasize that principals play their instructional leadership roles to high extent and these roles affect the work performance of their teachers. This study affirms the said statement. Informants say that their principals have different ways in handling them. There are principals who have programs like adopt-a-student program wherein the less fortunate students or poor but deserving students will be adopted by the teachers. Further, there are also principals who observe classes regularly despite their hectic schedules and they are also given advice on what to do with their subjects.

Family Background and Parental Involvement. Ademola and Olajumoke(2009) as cited from (Gianzero, 2001) mention that by encouraging their children and assisting on homework, parents can set example for their child, which is powerful and positive. Utah Education Association (2008) asserts that when parents are involved in their children's education at home, they do better in schools. Conway and Houtenwille (2008) also discover that parental involvement has a strong positive effect on student achievement. The results of the Ademola and Olajumoke (2009) study imply that parental involvement

is important in enhancing pupils' achievement in Mathematics and Science. It concludes that the higher the parental involvement, the higher the achievement in Science and Mathematics.

Family Background. Additionally, family background could also affect the performance of the students in school. As to the result of this study, informants say that poverty is one of the factors that hinders the focus of the students towards their studies.

Parental Involvement. It is assumed that academic achievement of students may not only depend on the quality of schools and the teachers, rather the extent of parental involvement has vital role to play in academic achievement of their kids (Rafiq et al. 2013). They further state that parental involvement in school has been linked with academic achievement. Although little research has been done in the area of parental involvement and secondary school students, the literature review examines the many factors that may contribute to the level of parental involvement and academic achievement in secondary school. As cited by Rafiq et. al (2013) from Henderson and Mapp (2002) they state that parents play a crucial role in both the home and school environments. In general, parental involvement is associated with children's higher achievements in language and mathematics, enrolment in more challenging programs, greater academic persistence, better behavior, better social skills and adaptation to school, better attendance and lower drop-out rates. The result of the study affirms the statements above. Based from the informants' responses, they explain that those students who are well supported by their parents have the high motivation in going to school.

CONCLUSIONS/IMPLICATIONS

Based on the significant findings of the study, the following conclusions are drawn. The null hypotheses are rejected on the following grounds:

On demographics, educational attainment and vertical alignment have significant influence on competitions; marital status, employment status and length of service on NAT results in Science; marital status and length of service on NAT results in Mathematics; and marital status and length of service on average NAT result. It implies that if a teacher desires to win in competitions, he has to go to school for master's degree or doctoral degree in line with his major in bachelor's degree.

On school factor, school type has a significant influence on NAT results in Science; school size, class size and school type on NAT results in Mathematics; school size on NAT results in English; and school size, class size and school type on average results. It implies that the school size and class size matter in the NAT results.

On teacher factor, teacher's attitude and motivation, teacher's trainings and advancement, and teacher factor as a whole have significant influence on NAT results in Science; teacher's attitude and motivation and teacher factor as a whole on NAT results in Mathematics; teacher's attitude and motivation, teacher's teaching strategies and methodology, and teacher factor as a whole on NAT results in English; teacher's attitude and motivation on average NAT results.

Learning resources and classroom management significantly influence competitions. It implies that if a principal wants to have achievements in competitions he has to work on the facilities of the school such as providing convenient chairs, proper ventilation, instructional materials (i.e. litmus paper, chemicals, graphing boards, etc.), sufficient classrooms with audio-visual materials (i.e. TV set, LCD projector, etc.). On the other hand, if the teacher wants to win competitions, he must have a good classroom management, that is, he strictly implements rules and regulations inside the classroom, provides

activities during ICL time, reprimands students lightly and has a portfolio of students which is used to address individual differences.

On management and governance, principal's relationship to stakeholders and management and governance as a whole significantly influence competitions; principal's relationship to stakeholders on NAT results in Science, in Mathematics and in average results; and principal's projects and programs and school based management on NAT results in English. It implies that if the principal aims to win competitions, he has to work on the harmonious relationship among stakeholders. If he desires better NAT results he has to organize different programs and projects for the benefit of the students, transparent to the appropriation and liquidation of the school's MOOE, strictly monitors the absences and tardiness of the teachers, initiates the conduct of NAT and observe classes together with the master teacher/department head.

RECOMMENDATIONS

Comment [KK32]: NOTE: To whom these recommendations are addressed, given that your work refers to a specific region.

Based on the foregoing results and conclusions, the following are recommended:

Principals should revisit the class scheduling and teaching loads of teachers to increase the number of classes that reduces the number of students in every class, should allocate funds from MOOE for sending teachers to trainings and for instructional materials, should encourage teachers to enroll in master's degree in line with their major in their bachelor's, and should plan for activities that establish harmonious relationship among teachers and other stakeholders such as team building activities.

The Division Office must initiate monitoring of the maintenance of school facilities and must provide appropriation to building new classrooms, better facilities, better library materials, equipped science and computer laboratories in every school.

DepEd supervisor and principal/head teachers should have a close monitoring regarding tardiness and absences of teachers.

DepEd central, regional and division offices should organize and facilitate trainings and seminar-workshop for teachers relative to teaching strategies, methodology and classroom management.

Teachers must be resourceful enough to look for reference books and the improvisation of the materials to be used in the class instruction.

The principal in coordination with the PTA should strengthen school projects and programs particularly those that facilitate the delivery of instruction.

LITERATURE CITED

Adediwura, A. A. & Tayo, T. (2007). *Perceptions of teacher knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools.* Educational Research and Review, 2(7): 165-171.

Adelabu. (2005). *Teacher motivation and incentives in Nigeria.* Nigeria.

Ademola, O. R. & Olajumoke, A. A. (2009). *Parental involvement as a correlate of pupils' achievement in mathematics and science in Ogun state, Nigeria.*

Adesehinwa, O. A. (2013). *Effects of family type (monogamy or polygamy) on students' academic achievement in Nigeria. Intl J. of Psychology and Counseling*, **5** (7), 153 – 156 DOI 10.5897/IJPC10.012 ISBN 2141 - 2499

Adesehinwa O. A. and Aremu, A. O. (2010). *The relationship among predictors of child, family, school, society and the government and academic achievement of senior secondary school students in Ibadan, Nigeria*. Procedia Soc. Behav. Sci. 5, 842 – 849.

Adeyemi, T. (2010). *Principals' leadership styles and teachers' job performance in senior secondary schools in Ondo State, Nigeria.* Journal of Education Administration and Policy Studies, 2(6), 83-91.

Adeyemo, D. A. (2005). *Parental involvement interest in schooling and school environment as predictors of academic self-efficacy among fresh secondary school student in Oyo State, Nigeria.* Electronic Journal of Research in Educational Psychology, 5 - 3:163 180

Adhiambo, W. M., Odwar, A. J. & Mildred, A. A. (2011). *The relationships among school adjustment, gender and academic achievement amongst secondary school students in Kisumu district Kenya.* Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 2 (6): 493-497. Scholarlink Research Institute Journals, 2011 (ISSN: 2141-6990). Retrieved January 9, 2016, from jeteraps.scholarlinkresearch.org.

Adul, E. O., Akinloye, G. M. &Olaoye, O. (2014). *Demographic variables as determinant of principal managerial efficiency.*

Aguele, L. I., Omo-Ojugo, M. O., Imhanlahimi, E. O. (2010). *Effectiveness of Selected Teaching Strategies in the Remediation of Process Errors Committed by Senior Secondary School Students in Mathematics*

Akey, T. M. (2006). *School context, student attitudes and behavior, and academic achievement: an exploratory analysis.* Retrieved March 24, 2016 from http://files.eric.ed.gov/fulltext/ED489760.pdf

Akiri, A. A. & Ugborugbo, N. M. (2008). *An examination of genders influence on teachers productivity in secondary schools.* J. Soc. Sci, 17(3): 185-191.

Ali, A. A. (2009). *The impact of teacher wages on the performance of students: evidence* Retrieved February 1, 2016 from PISAmpra.ub.unimuenchen. de/.../Impact _of_teacher_wages_on_the_ ...

Borrego, M., Douglas, E. P., & Amelink, C. T. (2009). *Quantitative, qualitative, and mixed research methods in engineering education*. Journal of Engineering Education, p. 59.

Campbell, M. M. (2007, July). *Motivational systems theory and the academic performance of college students.* Journal of College Teaching & Learning, Vol, 4, No. 7

Chang, Y. C. (2010). *Students' perceptions of teaching styles and use of learning strategies.* Retrieved March 24, 2016 from http://trace.tennessee.edu/cgi/view content.cgi?article=1835 HYPERLINK "http://trace.tennessee.edu/cgi/view%20content.cgi?article=1835&context=utk_gradthes"& HYPERLINK "http://trace.tennessee.edu/cgi/view%20content.cgi?article=1835&context=utk_gradthes"context=utk_gradthes

Chin, J. (2007). *Meta-analysis of transformational school leadership effects on school outcomes in taiwan and the usa*. *Asia Pacific Education Review, 8*(2), 166-177.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches, 2nd edition*. Thousand Oaks, CA: Sage Publications.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). *Advanced mixed methods research designs in handbook of mixed methods in social and behavioral research*. Eds. A. Tashakkori and C. Teddlie, 209–240. Thousand Oaks, CA: Sage Publications.

Davidson, E. (2005). *The pivotal role of teacher motivation in Tanzania.* HakiElimu Working Papers, 1-10.

Education International. (2008). *Education for all by 2015. Education international's response to the global monitoring report 2008.* Retrieved January 6, 2015 from http://download.ei-ie.org/docs/IRISDocuments/EI%20Publications/ Other%20Publications/2008-00169-01-E.pdf

Egalite, Ann Jacob & Brian Kisida (2013). The impact of school size on student achievement: evidence from four states. EDRE Working Paper No. 2013-03. Last Updated May 2013

EMIS, Digos City National High School (2015).

Etsy, K. (2005). *Causes of low academic performance of primary school pupils in the Shamia sub-metro of Shama Ahanta East Metropolitan Assembly of Ghana.* Regional Conference of Education in West Africa, Dakar Senegal, 1st -2nd November 2005

Flynt, C. J. (2008). *Predicting academic achievement from classroom behaviors.* Retrieved March 24, 2016 from https://theses.lib.vt.edu/theses/available/etd-09162008-100711/unrestricted/Dissertation4.pdf

Ford, M. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs*. NewBury Park, CA: Sage Publications.

Fowler, W. J., Jr., & Walberg, H. J. (1991). *School size, characteristics and outcomes.* Educational Evaluation and Policy Analysis, 13, 189–202.

Comment [KK33]: color

Comment [KK34]: color

Graue, E., Rauscher, E., Sherfinski, M. (2009). *The synergy of class size reduction and classroom quality.* DOI Elementary School Journal, V110 N2 p178-201. December, 2009.

George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference.* 11.0 update (4th ed.). Boston: Allyn & Bacon. Retrieved January 6, 2016 from http://www.ssnpstudents.com/wp/wp-content/uploads/2015/02/ Gliem-Gliem.pdf

Gravestock, P. & Gregor-Greenleaf, E. (2008). *Student course evaluations: research, models and trends.* Toronto: Higher Education Quality Council of Ontario.

Green, R. (2000). *Natural forces: How to significantly increase student achievement in the third millennium*. Monticello, FL: Educational Services Consortium.

Gurney, P. (2007). *Five factors for effective teaching*. New Zealand Journal of Teachers' Work, Volume 4, Issue 2, 89-98, 2007.

Gustafsson, J., Hansen, K. Y. and Rosen, M. (2011). *Effects of home background on students achievement in reading, mathematics and science at fourth grade.* Relationship Report, TIMSS & PIRLS 2011 International Study Centre, 101 – 288.

Huitt, W., Huitt, M., Monetti, D., & Hummel, J. (2009). *A systems-based synthesis of research related to improving students' academic performance*. Paper presented at the 3rd International City Break Conference sponsored by the Athens Institute for Education and Research (ATINER), October 16-19, Athens, Greece. Retrieved December 23, 2015 from http://www.edpsycinteractive.org/papers/improving-school-achievement.pdf

Hurley, J. C. (2001). *The ship: less may be more*. Retrieved February 1, 2016 from http//:www.google.com.

Jalali, S., Panahzade, V., & Firouzmand, A. (2014). *Attitude towards computers and classroom management of language school teachers*.

Kant, R. (2014). *A study of effect of demographical factors on role performance of secondary school teachers in India.* Retrieved March 21, 2016 from http://mije.mevlana.edu.tr/archieve/issue_4_2/9_mije_14_20_volume_4_issue_2_page_109_121_PDF.pdf

Kimani, G. N., Kara, A. M., & Njagi, L. W. (2013). *Teacher factors influencing students' academic achievement in secondary schools in Nyandarua County, Kenya.* International Journal of Education and Research, Vol. 1 No. 3 March 2013.

Kimani, G. N. (2013). *Teacher factors influencing students' academic achievement in secondary schools in Nyandarua County, Kenya.* Retrieved March 24, 2016 from http://www.ijern.com/images/March-2013/23.pdf

Kosgei, A., Mise, J. K., Odera, O., & Ayugi, M. E. (2013). *Influence of teacher characteristics on students' academic achievement among secondary schools.* Journal of Education and Practice. Vol. 4, No. 3, 2013.

Comment [KK35]: color

Comment [KK36]: color

Comment [KK37]: color

Lewin, K. M., Wasanga, P., Wanderi, E. & Somerset, A. (2011). *Participation and performance in education in Ssub-saharan Africa with special reference to Kenya: improving policy and practice.* Create pathways to Access. Research Monograph No. 74: University of Sussex.

Lydiah, L. M. & Nasongo, J. W. (2009). *Role of the head teacher in academic achievement in secondary schools in Vihiga District, Kenya.* Current Research Journal of Social Sciences, 1(3): 84-92.

Malik, E., Danish, R., & Usman, A. (2010). *Impact of motivation to learn and job attitudes on organizational learning culture in a public service organization of Pakistan.* University of the Punjab, Lahore, Pakistan.

Maslowski, R. (2001). *School culture and school performance*. Ph.D. Thesis. University of Twente: Twente University Press. Retrieved January 6, 2016 from http://www.ub.utwente.nl/webdocs/to/1/t0000012.pdf.

Miller, A. 1996. *Pupil behaviour and teacher culture*. London: Cassell.

Morse, J. M. (1991). *Approaches to qualitative-quantitative methodological triangulation*. *Nursing Research* 40: 120–23.

Mugenda, O. M. & Mugenda, A. G. (2003): *Research methods: quantitative and qualitative approaches.* Nairobi: Acts Press.

Muhammad, H. & Rafiq, W. (2013). Parental involvement and academic achievement: a study on secondary school students of Lahore, Pakistan.

Mustafa, M., & Othman, N. (2010). *The effect of work motivation on teacher's work performance in Pekanbaru senior high schools, Riau Province, Indonesia*. *SOSIOHUMANIKA, 3*(2), 259-272.

Odhiambo, G. (2005). *Elusive search for quality education. the case of quality assurance and teacher accountability.* International Journal of Education Management, 22(5): 417-431.

Ogbemudia, M. I. and Aiasa, M. V. (2013). *Influence of home environment on the academic performance of primary five pupils' in English Language in Orhionmwon Local Government Area of Edo State.* Merit Res. J. of Ed. and Rev., 1 (5), 120 – 125.

Olaleye, F. O. (2011). *Teachers characteristics as predictor of academic performance of students in secondary schools in Osun state*, Nigeria. European Journal of Educational Studies 3(3), pp 505-511

Oredein, A. O. & Oloyede, D. O. (2007). *Supervision and quality of teaching personnel effects on student academic performance.* Educational Research and Review, 2 (3): 032-035.

Philippine Basic Education. (2013). *The national performance of high school students in the NAT.* Retrieved on Dec. 27, 2015 from http://www.philippines basiceducation.us/2013/07/the-national-achievement-test-in.html. Last update July 20, 2013.

Comment [KK38]: color

Philippine Education for All 2015: *Implementation and challenges.* (2015). Retrieved January 6, 2016 from http://planipolis.iiep.unesco.org/upload/ Philippines/Philippines_EFA_MDA.pdf

Pintrich, P. & Schunk, D. (1996). *Motivation in education: theory, research, and applications.* Englewood Cliffs, NJ: Prentice Hall.

Rivkin, S. G., Hanushek, E. A., & Kaini, J. F. (2005). *Teachers, schools, and academic achievement.* Econometrica, Vol. 73, No. 2 (March, 2005), 417–458.

Robinson Kurpius, S. E. & Stafford, M. E. (2006). *Testing and measurement: A user-friendly guide.* SAGE Publications: Thousand Oaks, London and New Delhi.

Snyder, K., Acker-Hocevar, M., & Snyder, K. (2008). *Living on the edge of chaos: Leading schools into the global age* (2nd ed.). Milwaukee, WI: American Society for Quality Press.

Teddlie, C., & Springfield, S. (1993). *Schools make a difference: lessons learned from a ten year study of school effects*. New York: Teachers College Press.

Terhune, M. N. (2006). *A study of demographics and job-related categories that influence the quality of teacher work life in montana schools with indigenous populations.* Retrieved March 21, 2016 from http://citeseerx.ist.psu.edu/ viewdoc/download?doi=10.1.1.553.2643&rep=rep1&type=pdf-

Udofia, N. A. (2014). *Development and validation of a project package for junior secondary school basic science*.

United Nations. (2015). *Millenium development goals and beyond 2015*. Retrieved January 6, 2016 from http://www.un.org/millenniumgoals/ bkgd.shtml.

Wikipilipinas. (2010). *Philippine education for all.* Retrieved January 6, 2016 from http://en.wikipilipinas.org/index.php/Philippine_Education_for_All. Last modified on February 9, 2010.

Wright, S. P., Horn, S. P. & Sanders, W. C. (1997). *Teacher and classroom context effects on student achievement: implications for teacher evaluation.* Journal of Personnel Evaluation in education, 11, 57-67.

Yala, P. O. & Wanjohi, W. C. (2011). Performance determinants of KCSE in mathematics in secondary schools in Nyamira division, Kenya. Asian Social Science, 7(20): 107-112.

Yusuf, M. A. & Adigun, J. T. (2010). *The influence of school sex, location and type on students' academic performance*. Int J Edu Sci, 2(2): 81-85.

1366