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Factors Contributing to the English National Achievement Test (Nat) Performance

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Abstract

Purpose: *The main purpose of this study was to determine the factors that contributed to the English National Achievement Test (NAT) Performance of the Top Five High Performing Secondary Schools in the Division of Bohol for school years 2009-2010 and 2010-2011.*

Approach/Methodology/Design: *It utilized descriptive-correlational research design through survey method.*

Findings: *The results of the study revealed that the practices of the teachers on the school factors that affect students' English NAT performance were having: class size of 31 to 50 students, a student-book ratio of 1:1, monthly supervision of heads, review classes every Saturday and remedial teaching as the need arises. However, there was a significant relationship between all the four teacher factors namely: age, highest educational attainment, length of service and number of relevant seminars; eight of the nine school factors. Teacher's age, number of relevant seminars attended, conduct of remedial teaching and students' academic performance are the factors contributing to the students' English NAT results for school year 2009-2010 while teacher's number of relevant seminars attended, varying teaching strategies, pairing low performing students with high performing ones and students' academic performance are the factors contributing to the students' English NAT results for school year 2010-2011.*

Practical Implications: *The results of this studying should be taken into account in order to improve students' NAT performance in English.*

Originality/value: *This research concludes that all the factors are interrelated.*

1. Introduction

Learning English as a second language has already been a major concern in the Philippines due to its advantage towards landing a job particularly in an English speaking country. Its benefits have created an impact that motivates each one to master such communication skill (Cajes, 2010). English has been part of the different areas of discipline in the Philippine educational system even until now. Filipino learners of English immerse themselves devotedly in learning English in order to have good performance at their schools.

Academic performance of a student depends on the many learning factors: teacher, school and student. Teachers' characteristics could be one of those factors that affect learning since teachers are the prime movers of the educational wheel and influences much to the learning

styles of the students. However, according to (Nwatah, 2010), school facilities, class size and characteristics may also have its contribution to student learning. Thus, to ensure that academic performance of students remains optimum, it is imperative that influence of these factors on students' performance be sort and kept on check. Moreover, individuals (students), parents, schools, communities, policy makers and governments should make a concerted effort in harnessing the positive effects of teacher, school and student factors to enhance school performance or institutional quality.

Institutional quality is something that must be measured since the basis for all educational reforms and improvement begin with an assessment and evaluation of institutional quality. For instance, the assistance packages from the government begin by determining where the school stands with respect to a quality continuum. Those at the top level require less assistance while those at the bottom level require more. Also, provinces with few resources/low income need more assistance because it is presumed that institutional quality is at the bottom in the economically-depressed provinces (Padua et al.,2002).

Surprisingly, in 2006, it was revealed in the National Achievement Test (NAT) results that there are top performing schools from poor provinces like Eastern Samar. It was found out that there are good practices which contributed to their impressive NAT performance (NSCB, 2006). With these situations, the researcher is motivated to determine the factors contributing to the National Achievement Test (NAT) performance in English of high performing secondary schools in the province of Bohol.

2. Literature Review

Student achievement is influenced by a number of factors. Adequate study time is not enough to attain high grades and achieve great things. The education system around the world is changing and the literacy and basic knowledge levels are decreasing. The level of education is changing and so are the factors that affect student achievement.

In this study, the students' NAT Performance in English was determined. As per Dep.Ed. Memorandum No. 7 s. 2011, the National Achievement Test (NAT) shall be administered to the second year high school students in both public and private schools nationwide. This is to give way to the fourth year students who will be taking the National Career Assessment Examination (NCAE), which is another program of the Department of Education (Dep.Ed) through the National Education Testing and Research Centre (NETRC) to assess the students' potentials and be directed towards an appropriate career.

Evaluation of a learning programme can be done with different intentions or aims and based on which several models have been proposed. The systems evaluation model looks into the

aspects in a programme that needs to be evaluated which include the Input. The input evaluation would focus on the strength of the resources, expertise, programme strategies and the designs used to meet the target audience and satisfy their needs. Accordingly, some of the important inputs that needs to be evaluated include among student characteristics, teacher experience, efficiency of course development, etc. (Siribaddana, 2010).

Also, inputs may include the teachers' quality, the kind of students admitted to the institution and school buildings, facilities, equipment and instructional materials available in the institution (Padua et al., 2002). The quality performance of a given school can be measured by the National Achievement Test or NAT. According to Cuevas (2012), NAT is an examination designed to determine the students' academic strengths and weaknesses through the five- major subjects: Mathematics, Science, English, Filipino, *HeKaSi*(Heograpiya, Kasaysayan at Sibika) in elementary and *AralingPanlipunan*in high school. It uses the five proficiency level descriptive equivalent: namely: Advanced, 91%-above, Proficient, 86%-90%, Approaching Proficiency, 81%-85%, Basic, 75%-80% and 74%-below, Pre-basic.

A very good performance in NAT could be attributed to several factors. According to (Traylor, 2010), teachers/administration is one of the factors affecting students' learning. In secondary schools, in which teachers are expected to teach a particular subject – and be an expert in it -- administrators will often place these teachers in unfamiliar subjects. Sometimes, a math teacher discovers one year he has to teach Social Science, or an English teacher must teach Science. This can cause confusion and unfamiliarity among these teachers. On top of that, it can affect students' abilities to learn the subject if the teacher is not an expert in it.

On the other hand, educational qualification of teachers, skills and experience of teachers affect student learning. A highly qualified teacher can provide high scholarly instruction which can affect more than a general graduate teacher. Moreover, after increasing teaching experience, a teacher learns many new things in teaching which he can employ in next time teaching. A fresh teacher may not leave an effect on students but after five years of teaching, a teacher can have more effect on students (Kumar, 2009). Another factor that may affect performance is the school factor. According to Abucay (2009), the type and quality of instructional materials and equipment play an important role in the efficiency of the school's instruction. Classrooms, textbooks, equipment, school supplies and other instructional materials are needed to acquire good learning conditions. It cannot be denied that the quality and type of instructional materials build due regard in the formation of educational objectives and functions.

On the other hand, according to National Statistical Coordination Board (2006), results of the National Achievement Test (NAT) were affected by some factors. First, class size matters in performance. Fourth Year students who are in classes with 31-50 students scored from 48.0 to 48.1 overall compared to 43.1 to 47.1 for classes with more than 50 students. Second, it was found out that there is better NAT performance for pupils with more textbooks. Pupils who used at least six books in Grade VI have better performance than those who used less than 6 textbooks. Pupils who used nine or more textbooks got the highest score (60.8) in the

achievement test. Moreover, an impressive NAT performance was an outcome of the "Best Practices" being implemented in the divisions and schools as being practiced by the Eastern Visayas. Examples of the best practices include the following: Reinforcement, Remediation and Enrichment (RRE); Project IMS – Intensive Monitoring and Supervision; Twinning Approach – Pairing the High Performing Schools with Low Performing Schools; Begin It with Right Program (BIRP); and Project MEDIA – Monitoring Educational Development for Immediate Action; to name a few.

There are also student factors that can affect his/her academic performance. According to Abucay (2009), intellectual factor is one important factor. Students who excel with high academic performance encounter no difficulty in mastering or applying school work. Sometimes, students do not learn because of special intellectual disabilities. A low score in one subject and in the other subjects indicate the possible presence of a deficiency. Second, there are the learning factors. Lack of mastery of what has been taught, limited background of a certain topic or issue and faulty methods of work and study are related factors that affect learning. If the school fails to evaluate or monitor the pupil's performance in learning, he will surely grasp number of deficiencies that hinder successful development and progress.

Moreover, the Centre of Public Education (2007) opines that teachers' content knowledge influences student performance. Many claim that teachers who teach subjects that they have previously studied in depth (by earning a major or minor in the field while in college or earning an advanced degree in the discipline) are particularly effective. However, advanced degrees in general—degrees that are not in the subject matter being taught—have not been found to be associated with higher student achievement. Additionally, teaching experience is positively correlated with higher student achievement even though findings about its meaning vary. Many studies demonstrate that students with certified teachers perform better than students with teachers who have no certification or emergency certification. Similarly, studies show that teachers who have professional education training, or "pedagogy," produce higher student achievement than those who enter the profession and lack this background.

Cajes (2010), in his study on Students' Academic Performance in English in Relation to their National Achievement Test (NAT), S.Y. 2006-2009 revealed that student's achievement in English based on the National Achievement Test (NAT) results from each specified years vary and that female respondents performed better than the male respondents. Moreover, there is a significant relationship in the student's performance in English and the student's results in the National Achievement Test (NAT). Thus, students who performed well in class also performed well in the National Achievement Test. In another study made by Jepsen (2004) on "Teacher characteristics and student achievement: evidence from teacher surveys" found out that teachers and peers are believed to have a strong influence on student achievement, but the specific characteristics that affect student achievement are hard to identify. Additionally, Blanca (2003) as cited by Victorino (2011), found out that the academic performance is significantly influenced by the following factors: teaching competence, attitude of teacher work and students, library facility, educational attainment of parents, parents' attitude towards

studies of their children. On the other hand, Victorino (2011), in her study on Factors Affecting the National Achievement Test performance of Selected Second Year High School Students in Santa Maria, Bulacan revealed that technology and media are said to have a direct causal relationship to the performance of the students in the National Achievement Test.

Although, several studies have been conducted to assess students' achievement and performance, there is lack of sufficient studies conducted to ascertain the factors that improve students' achievement test. The few studies conducted do not assess the teacher, school and student factors that contribute to the students' National Achievement Test. This gap in the literature needs to be addressed.

3. Methodology and Procedures

The study was conducted in the top five high performing secondary schools in the Division of Bohol for school years 2009-2010 and 2010-2011 namely: Cabul-an High School in the municipality of Buenavista, Pres. Carlos P. Garcia Technical Vocational School of Fisheries and Arts in Bien Unido, Ubay National Science High School in Ubay, Fermin Tayabas National High School in Calape, Sikatuna National Agricultural High School in Talibon, Isabel Gujol National High School in the municipality of Carmen, Francisco Dagohoy Memorial High School in Danao, Batuan National High School-Rizal Annex in Batuan, Bayawahan National High School in Sevilla and San Jose National High School in Talibon.

The respondents were the sophomore English teachers of the top five high performing secondary schools in the Division of Bohol for school years 2009-2010 and 2010-2011. The main data-gathering instrument was the self-made questionnaire which underwent pretesting and validation. School records such as Form 18-A and NAT results were gathered and tabulated. The data were subjected to statistical treatment using percentage to determine the profile of the teacher-respondents and students, practices of teachers on the school factors that affect English NAT performance, the English NAT results of the sophomore students and the strategies implemented by the top performing secondary schools to improve students' English NAT performance. T-test for independent samples was used to determine the significant difference in the NAT results between the sophomore students of S.Y. 2009-2010 and the sophomore students of S.Y. 2010-2011. Pearson Product Moment Correlation was used to determine the relationship between the three identified factors and the NAT results and t-test was used to determine whether the correlation is significant. On the other hand, multiple linear regression was used to determine the causal relationship of all factors to the NAT results and Analysis of Variance (ANOVA) was used to test whether the regression is significant.

4. Results and Discussion

Table 1: Profile of the Teacher- Respondents

Category	**F**	**%**

Age		
20-30	4	30.77
31-40	5	38.46
41-50	4	30.77
Total	**13**	**100**
Sex		
Male	0	0
Female	13	100
Total	**13**	**100**
Educational Qualifications		
BSE-English	6	46.15
M.A-18 units	2	15.38
M.A-CAR	4	30.77
MAED-EM	1	7.69
Total	**13**	**100**
Length of Service		
5-below	2	15.38
6-10	7	53.85
11-15	1	7.69
16-20	1	7.69
21-above	2	15.38
Total	**13**	**100**
Title of Seminars Attended for the last 5 years		
In-Service Training for the Teachers	3	23.08
Division Mass Training of Second Year Teachers on the 2010 Secondary Education Curriculum (SEC)	5	38.46
District Press Conference	1	7.69
Division Secondary Schools Press Conference	3	23.08
In-Service Training (DLP)	1	7.69
Dynamic Learning Program	6	46.15
Summer In- Service Training (NCBTS-TSNA Tool)	2	15.38
Moral Values Seminar- District	2	15.38
Summer INSET on RSEC	1	7.69
ASRH Orientation Training Workshop Integration in Curricula	1	7.69
School Based Workshop in English, Science, Math with ICT Integration	1	7.69
K-12 Basic Education Curriculum	5	38.46
Understanding by Design	2	15.38
Learner Information System Seminar	1	7.69
First National Conference for SPED	1	7.69
Second National Conference For SPED	1	7.69

No. of Relevant Seminars for the last 5 years		
0	2	15.38
1-3	7	53.85
4-6	2	15.38
7-above	2	15.38
Total	**13**	**100**

Table 1 shows the profile of the teacher-respondents in terms of age, sex, educational qualifications, length of service and title and number of relevant seminars attended in last 5 years. As to their age, 4 (30.77%) were 20-30 years old and another 4(30.77%) were 41-50 years old and 5 (38.46%) were 31-40 years old. Data revealed that most of the teachers of the surveyed top performing secondary schools belonged to 31-40 years old bracket. Surprisingly, all the 13 teacher-respondents were females.

In terms of educational qualification, 6 (46.15%) of the respondents were BSE-English graduate, 2 (15.38%) obtained Master's units, 4 (30.77%) were M.A CAR while only 1 (7.69%) was a full-fledged MAED-EM graduate. The result implies that many of the teachers had a low educational qualification which is BSE- English graduate only, no advance graduate units. As to the length of service, majority or 7 (53.85%) of the respondents had 6-10 years, similar number of 2 (15.38%) had been teaching for 5 years and below and 21 years and above respectively and 1 (7.69%) had taught for 11-15 and 16-20 years respectively. The findings indicated that the teachers in the respondent schools were still considered as novices in their teaching career since majority of them had been teaching for 6-10 years only.

Data show that out of the 13 teachers, 6 or (46.15%) have attended the Dynamic Learning Program; similar number of 5 (38.46%) have attended the seminars on Division Mass Training of Second Year Teachers on the 2010 Secondary Education Curriculum (SEC) and Division Mass Training of Second Year Teachers on the 2010 Secondary Education Curriculum (SEC) ; similar number of 3 (23.08%) have attended the seminars on In-Service Training for the Teachers and Division Secondary Schools Press Conference; similar number of 2 have attended the seminars on Summer In- Service Training (NCBTS-TSNA Tool), Moral Values Seminar-District and Understanding by Design and another similar number of 1 have attended the following seminars: District Press Conference, In-Service Training on Dynamic Learning Program (DLP), Summer INSET on RSEC, ASRH Orientation Training Workshop Integration in Curricula, School Based Workshop in English, Science, Math with ICT Integration, Learner Information System Seminar, First National Conference for SPED and Second National Conference for SPED.

Majority or 7 (53.85%) had attended only 1-3 relevant seminars in the last five years while similar number of 2 (15.38%) never attended and attended 4-6 seminars and 7 above, respectively. These findings manifest the need for teachers to attend relevant seminars and trainings at least once a year to upgrade themselves with the innovations in teaching. It can be noted that majority of them had attended only 1-3 seminars in the last five years.

Table 2: Profile of the Students

Category		Frequency	Percentage
Age			
12- 14		445	44.72
15- 17		469	47.14
18- 20		60	6.03
21- up		31	2.11
	Total	995	100
Sex			
Male		465	46.73
Female		530	53.27
	Total	995	100
Years in School			
7.0-8.0		793	79.70
8.1-9.0		160	16.08
9.1-10.0		28	2.81
10.1-up		14	1.41
	Total	995	100
English Academic Performance			
95-100	(Outstanding)	3	.30
89-94	(Very Good)	52	5.23
83-88	(Good)	214	21.51
76-82	(Fair)	585	58.79
70-75	(Poor)	141	14.17
	Total	995	100

Note: Grade Descriptive Equivalent is based on DepEd Order No. 33, s. 2004 " Implementing Guidelines on the Performance-Based Grading System 2004-2005

Table 2 presents the profile of the sophomore students in terms of age, sex, years in school and English Academic Performance. As to their age, 445 (44.72%) were 12 -14 which is considered as the normal age for a sophomore student, 469 (47.14%) were 15-17, 60 (6.03%) were 18-20 and 31 (2.11%) were 21 years old up which can be considered as over-aged. Data showed that more than half of the sophomore students of the surveyed schools were over-age or their age is not in harmony with their year level. In terms of sex, 530 (53.27%) were females while 465 (46.73%) were males.

As to their years in school, majority or 793 (79.70%) belonged to the range of 7-8 years, 160 (16.08%) had stayed 8.1-9.0 years, 28 (2.81%) had stayed 9.1-10.0 years and 14 or (1.41%) had stayed more than 10.1 years. Data revealed that majority of the sophomore students had a normal number of years in school. As to their English Academic Performance, only three (3 or 0.30%) out of 995 students obtained "Outstanding" academic performance with a grade range of 95-100, 52 (5.23%) obtained "Very good" with a grade range of 89-94, 214 (21.51%) obtained "Good" with a grade range of 83-88, 585 (58.79%) obtained "Fair" academic

performance with a grade range of 76-82 and 141 (14.17%) got the grade range of 70-75 with "poor" as the descriptive equivalent. The findings showed that most of the students obtained only a "fair" academic performance.

Table 3: Practices of the teachers affecting students' English NAT performance

SCHOOL FACTOR (Practices of the teachers)	Frequency	Percentage
a.Class size (no. of students per class)		
30 and below	3	23.08
31 to 50	7	53.85
51 and above	3	23.08
Total	13	100
b. Number of English textbooks used		
One book per student	6	46.15
One book for every two students	4	30.77
One book for 3-4 students	2	15.38
Others (No book)	1	7.69
Total	13	100
c. Regular Supervision of Heads as to the content coverage per grading period		
Weekly	2	15.38
Bimonthly	2	15.38
Monthly	8	61.54
Quarterly	1	7.69
Total	13	100
d. Conducting English Review Classes		
Every Saturday	12	92.30
Every Saturday and Sunday	0	0
Others(every time there's a free period)	1	7.69
Total	13	100
e. Conducting English remedial teaching to slow learners		
After, lunch everyday	1	7.69
After 5 pm, everyday	0	0
As the need arises	10	76.92
Others (Not Applicable)	2	15.38
Total	13	100
f. Organizing team teaching for English subject		
Weekly	6	46.15
Monthly	3	23.08
Others (As needed)	4	30.77

Total	13	100
g. Pairing the low performing students with the high performing ones		
Daily	3	23.08
Weekly	4	30.77
Monthly	2	15.38
Others(everytime a need arises)	4	30.77
Total	13	100
h. Varying teaching strategies for English subjects		
As the need arises or content warrants	6	46.15
Availability of the materials and facilities	7	53.85
Others	0	0
Total	13	100
Providing varied instructional materials appropriate for English lesson		
Daily	5	38.46
Weekly	6	46.15
Monthly	1	7.69
Others(As the need arises)	1	7.69
Total	13	100

Table 3 portrays the practices of the teachers on the school factors that affect students' English NAT performance such as the Class size, Number of English textbooks used, Regular supervision of Heads as to the content coverage per grading period, Conducting English Review classes, Conducting English remedial teaching to slow learners , Organizing team teaching, Pairing the low performing students with the high performing ones, Varying teaching strategies for English subjects, and Providing varied instructional materials appropriate for English lesson. The table depicts that in terms of class size, majority or 7 (53.85%) of the respondent schools had 31 to 50 students per class while 3 (23.08%) had 30 students and below and another 3 (23.08%) had more than 50 students. This implies that majority of the high performing schools had 31 to 50 students per class. The finding is in accordance to DepEd standard or ideal class size which is 45 students per class.

As to the number of English textbooks used, 6 (46.17%) were having a ratio of one book per student, 4 (30.77%) were having one book for every two students, only 2 (15.38%) were having one book for 3-4 students and 1 (7.69%) had no book at all. This implies that most of the respondent schools were almost having 1:1 book-student ratio which is the ideal ratio. As to the regular supervision of heads, majority or 8 (61.54%) of the teacher-respondents revealed that their heads supervised them monthly, similar number of 2 (15.38%) said they are supervised weekly and bimonthly and only 1 (7.69%) revealed that supervision was done

quarterly. This indicates that most of the teachers of the high performing schools experienced monthly supervision by their heads.

As to the conduct of review classes, almost all (12 or 92.30%) of the teachers said that it was done every Saturday while only 1 (7.69%) said review class was conducted everytime there's a free period. As to the conduct of remedial teaching to slow learners, majority (10 or 76.92%) of the teachers revealed that it was performed as the need arises, 2 (15.38%) responded that the above-mentioned factor was no longer applicable and only 1 (7.69%) revealed that it was performed every day after lunch. This indicates that majority of the teachers conducted remedial teaching to slow learners as the need arises.

As to organizing team teaching for English subject, 6 (46.15%) of the teacher-respondents have done this weekly, 3 (23.08%) did it monthly and 4(30.77%) revealed that they did it as needed. This implies that most teachers of the respondent schools organize team teaching weekly. As to pairing the low performing students with the high performing ones, a similar number of 4 (30.77%) of the teachers conducted it weekly or every time a need arises respectively. Three (23.08%) conducted it daily and 2 (15.38%) conducted it monthly. This implies that 4 (30.77%) of the teacher-respondents paired the low performing students with the high performing ones weekly and another 4 (30.77%) did it every time a need arises.

As to varying teaching strategies for English subjects, 7 (53.85%) of the teachers did it if materials and facilities are available while 6 (46.15%) of the teachers did it if a need arises or the content warrants. This indicates that most of the teachers vary their teaching strategies if materials and facilities are available. As to providing varied instructional materials appropriate for English lesson, 6 (46.15%) of the teachers were practicing it weekly, 5 (38.46%) practiced it daily, and 1 (7.69%) practiced it monthly or as the need arises. This implies that most of the teachers of high performing schools provide varied instructional materials to their students daily or weekly.

Table 4: English NAT Results of the Sophomore Students S.Y. 2009-2010 and 2010-2011

S.Y. 2009-2010				S.Y. 2010-2011			
Range	F	%	Proficiency Level Descriptive Equivalent	Range	F	%	Proficiency Level Descriptive Equivalent
91%Above	0	0	Advanced	91%-Above	0	0	Advanced
86%-90%	0	0	Proficient	86%-90%	0	0	Proficient
81%-85%	41	11.61	Approaching Proficient	81%-85%	3	.47	Approaching Proficient

75%-80%	62	17.56	Basic	75%-80%	35	5.45	Basic
74%-below	250	70.86	Pre-Basic	74%-below	604	94.08	Pre-Basic
Total	353	100		Total	642	100	

Note: *Proficiency Level Descriptive Equivalent is based on Students' Certificate of Rating*

Table 4depicts the English NAT results of the sophomore students of the top five high performing secondary schools for school years 2009-2010 and 2010-2011. It showed that nobody achieved the "advanced" and "proficient" levels. Out of 353 students for S.Y. 2009-2010, only 41 (11.61%) obtained "approaching proficient" level with the range of 81%-85%, 62 (17.56%) achieved "basic" level with the range of 75%-80%, and 250 (70.82%) obtained "pre-basic" level with the range of 74% -below. On the other hand, for S.Y. 2010-2011, only 3 (.47%) of the 642 students obtained "approaching proficient" level with the range of 81%-85%, 35 (5.45%) achieved "basic" level with the range of 75%-80%, and 604 (94.08%) obtained "pre-basic" level with the range of 74% -below.

This implies that most of the students' English NAT results for the two school years were in the "pre-basic" level only and only very few achieved the "Approaching Proficient" level: 41 (11.61%) in S.Y. 2009-2010 and 3 (0.47%) in S.Y. 2010-2011. This is an alarming finding since these are English NAT results of the top five high performing secondary schools in Bohol yet nobody achieved the "proficient" and "advanced" level.

Table 5: Analysis on the significant difference in the NAT results between the sophomore students of S.Y. 2009-2010 and the sophomore students of S.Y. 2010-2011

Source of Variation	Mean	Computed t	Degrees of Freedom	Computed P-value
NAT results 2009-2010	40.90	25.83	669	0.013*
NAT results 2010-2011	30.08			

Note: ** - P-Value is significant at 5% level of significance*

Table 5 illustrates the significant difference in the NAT results of the sophomore students of S.Y. 2009-2010 and the sophomore students of S.Y. 2010-2011. T-test revealed that there was a significant difference in the NAT results of the sophomore students for S.Y. 2009-2010 and the sophomore students of S.Y. 2010-2011 because the computed p-value which is 0.013 is lower than the 5% level of significance. Therefore, the null hypothesis is rejected. On the other hand, based on the computed mean, the sophomore students of S.Y. 2009-2010 performed well

compared to the sophomore students of S.Y. 2010-2011. The computed mean of 40.90 in S.Y. 2009-2010 was higher than the computed mean of 30.08 in S.Y. 2010-2011.

Table 6.1: Analysis on the Relationship between teacher factor and the students' English NAT results

Teacher Factor	Mean	Std. Dev	N	Comp r	Comp t-value	Comp P-Value
Age	39.65	7.606	995	-0.392	-13.4	0.000**
Highest Educational Attainment	2.26	1.78	995	-0.267	-8.73	0.000**
Length of Service	14.46	6.833	995	-0.504	18.34	0.000**
No. of Relevant Seminars	2.36	2.661	995	0.303	10	0.000**

*Note: ** - P-Value is highly significant at 5% level of significance*

Table 6.1 on page 41 portrays the significant relationship between teacher factor and the students' English NAT results. Pearson Product-Moment Correlation revealed that there was highly significant relationship between the teacher factor and students' English NAT results since the computed P-values are all 0.000 which are lower than the 5% and 1% level of significance. Therefore, the null hypothesis is rejected. On the other hand, the table exhibits a computed r values of -0.392, -0.267, -0.504 and 0.303 which means that there was a weak linear negative correlation between teacher's age and highest educational attainment to the students' English NAT results while there was a moderate linear negative correlation between teacher's length of service to the students' English NAT results. In addition, there was a weak positive correlation between teacher's number of relevant seminars to the students' English NAT results. This implies that teacher's age, higher educational attainment and length of service are negatively correlated with higher students' English NAT performance. On the other hand, teacher's number of relevant seminars is positively correlated with higher students' English NAT performance.

This finding disagreed to the research of The Centre of Public Education, (2007) that teachers who teach subjects by earning an advanced degree in the discipline are particularly effective and teaching experience is positively correlated with higher student achievement. On the other hand, this finding is supportive to the above-mentioned source that teachers who have professional education training produce high student achievement than those who enter the profession and lack this background. This implies that there are other possible factors which could have caused the low NAT results.

Table 6.2: Analysis on the Relationship between school factor and the students' English NAT results

School Factor	Mean	Std. Dev	N	Comp r	Comp t-value	Comp P-Value
Class Size	2.21	0.669	995	-0.156	-4.97	0.000**

No. of English Textbooks	1.78	0.854	995	-0.223	-7.21	0.000**
Regular supervision of heads	2.55	0.873	995	-0.374	-12.71	0.000**
Conducting English review classes	1.12	0.484	995	0.099	3.14	0.001**
Conducting English remedial teaching	2.75	0.854	995	0.175	-15.71	0.000**
Organizing Team Teaching	2.60	0.985	995	-0.013	-0.013	0.338 *NS*
Pairing Low Performing Students with High Performing Ones	2.73	1.059	995	-0.105	-3.33	0.000**
Varying Teaching strategies	1.40	0.490	995	0.359	4.10	0.000**
Providing varied IM's	1.68	0.731	995	0.124	3.95	0.000**

*Note:** - P- Value is highly significant at 5% level of significance and significant at 1% level significance*

** - P- Value is significant at 5% level of significance*

NS - P- Value is not significant

Table 6.2 illustrates the significant relationship between school factor and the students' English NAT results. Pearson Product- Moment Correlation revealed that eight of the nine school factors namely: class size, number of English textbooks, regular supervision of heads, conducting English review classes, conducting English remedial classes, pairing low performing students with high performing ones, varying teaching strategies and providing instructional materials have high significant relationship with students' English NAT results since the computed P-values of 0.000, 0.000, 0.000, 0.001, 0.000, 0.000, 0.000, and 0.000 are lower than the 5% and 1% level of significance respectively. Thus, null hypothesis is rejected. Organizing team teaching was the only school factor having no significant relationship with the students' English NAT results since its P-value which is 0.338 is greater than the 5% and 1% level of significance respectively. Therefore, the null hypothesis is accepted.

On the other hand, the table had computed r values of -0.156, -0.223, -0.374, -0.099, 0.013, 0.175, -0.105, 0.359 and 0.124 which means that there was a very weak negative correlation between class size, organizing team teaching and pairing low performing students with high performing ones and the students' English NAT results while there was weak negative correlation between no. of English textbooks and English NAT results. This implies that the bigger the class size, the bigger number of students sharing books, the longer the interval of the supervision, organizing team teaching and pairing low performing students with the high performing ones will result to low NAT performance. On the other hand, there was a very weak positive correlation among the three school factors namely: conduct of English review classes, conduct of English remedial teaching and providing instructional materials and the NAT results

while there was a weak positive correlation between varying teaching strategies and the NAT results. This implies that as the teacher conducts English review classes and English remedial teaching, vary its teaching strategies and provide varied instructional materials to students frequently will result to better NAT performance.

This finding is supported by the National Statistical Coordination Board (2006) that results of the National Achievement Test (NAT) were affected by some factors such as the class size, number of textbooks used by the students and the practices implemented in the divisions and schools.

Table 6.3: Analysis on the Relationship between student factor and their English NAT results

Student factor	Mean	Std. Dev	N	Comp r	Comp t-value	P-Value
Sex	1.53	.499	995	0.086	2.72	0.003**
English Academic Performance	80.11	4.507	995	0.302	9.98	0.000**

*Note: ** - P-Value is highly significant at 5% level of significance and significant at 1% level significance*

Table 6.3, next page, shows the significant relationship between student factor and their English NAT results. It depicts that the two student factors which are the sex and the English Academic Performance have high significant relationship with their English NAT results since its P-values are lower than the 5% and 1% level of significance respectively. Thus, the null hypothesis is rejected. Moreover, sex was interpreted as very weak correlation while the Students' academic performance was interpreted as weak linear correlation since its computed r lies in the value of > 0 - ≤ 0.20 and 0 .21 to ≤ 0.40 respectively. The two factors are positively correlated with the English NAT results which indicate that the female students who perform well in class will also perform well in the NAT.

The result is closely related to the findings of Cajes (2010), that there is a significant relationship in the student's academic performance in English and the student's results in the National Achievement Test (NAT).

Table 7.1: Factors Contributing the NAT Performance in English of the Top Five High Performing Secondary Schools S.Y. 2009-2010

Model 4	Regression Coefficient	Std. Error	Computed t	Comp P-Value
Teacher Factor				
Age	-0.395	0.064	-6.187	0.000**
No. of Relevant Seminars	0.774	0.099	-7.840	0.000**

School Factor				
Conducting English Remedial Teaching	2.353	0.259	-9.084	0.000**
Student Factor				
Students' Academic Performance	0.329	0.073	4.508	0.000**

*Note: ** - P-Value is highly significant at 5% level of significance and significant at 1% level significance*

Table 7.1 depicts the Multiple Linear Regression Output showing the factors contributing to the NAT performance in English for school year 2009-2010. It showed that teacher's age, number of relevant seminar, conduct of remedial teaching and students' academic performance are the factors contributing to the students' English NAT results for school year 2009-2010. The computed p-values which are all 0.000 are significant at 5% and 1% level of significance, respectively. This implies that the students' English NAT performance is partially affected by teacher's age, number of relevant seminar, conduct of remedial teaching and students' academic performance.

Moreover, the regression coefficients indicated that there is -0.395 reduction in the NAT results if teachers get older. On the other hand, there is an additional of 0.774 and 2.353 to the NAT results if teachers attend more number of seminars and conduct English remedial teaching frequently. There is also an increase of 0.329 in the NAT if students' academic performance will increase.

Table 7.2: Factors Contributing the NAT Performance in English of the Top Five High Performing Secondary Schools S.Y. 2010-2011

Model 4	Regression Coefficient	Std.Error	Computed t	Comp P-Value
Teacher Factor				
Relevant Seminars	0.545	0.209	-2.607	0.009**
School Factor				
Varying Teaching Strategies	6.777	0.793	8.547	0.000**
Pairing Low Performing students with high performing ones	0.441	0.196	2.245	0.025*
Student Factor				
Students' Academic Performance	0.332	0.047	6.995	0.000**

*Note: ** - P-Value is highly significant at 5% level of significance and significant at 1% level significance*

** - P- Value is significant at 5% level of significance*

Table 7.2 reflects the multiple regression analysis in identifying the factors contributing the NAT performance in English of the top five high performing secondary schools for S.Y. 2010-2011.It showed that teacher's number of relevant seminars for the last 5 years, varying teaching strategies, pairing low performing students with high performing ones and students' academic performance are the factors contributing to the students' English NAT results for school year 2010-2011. The computed p-values of 0.009, 0.000 and 0.000 are significant at 5% and 1% level of significance, respectively. On the other hand, the computed p-value of 0.025 is significant at 5% level of significance. This implies that students' English NAT performance is partially affected by teacher's number of relevant seminars for the last 5 years, varying teaching strategies, pairing low performing students with high performing ones and students' academic performance. The regression coefficients indicated that there is additional of 0. 545, 6.777, and 0.441 in the NAT results if teachers will attend more number of seminars, vary their teaching strategies and pair the low performing students with high performing ones. There is also an increase of 0.332 in the NAT results if students' academic performance will increase.

Table 8: Strategies implemented by the top five high performing secondary schools to improve students' English NAT performance

S.Y. 2009-2010			**S.Y. 2010-2011**		
Strategy	**F**	**Rank**	**Strategy**	**F**	**Rank**
1. Group Review	1	5.5	Giving Review Materials at home	1	4.5
2. Maximizing Contact time with slow learners	1	5.5	2. Film Review	1	4.5
3. Doing Research through Internet Surfing	1	5.5	3. Giving Group Activity	1	4.5
4. Developing Critical Thinking	1	5.5	4. Providing Reading Materials	1	4.5
5. Having Positive Interactions towards other learners	1	5.5	5.Using instructional materials from private schools	1	4.5
6. Using Modified Written Test	1	5.5	6. Concentrating on the skills	1	4.5
7. Using Home Reading Report	1	5.5	7. Utilizing old NAT Questionnaires	3	1
8. Providing Vocabulary Support	1	5.5			
9. Creating Action Action Plan	1	5.5			
10. Counseling Students	1	5.5			

Table 8 reveals the strategies implemented by the top five high performing secondary schools to improve students' English NAT performance. It showed that there were 17 strategies used by the top performing schools for school years 2009-2010 and 2010-2011. All the 10 strategies implemented for S.Y. 2009-2010 namely: Group Review, Maximizing Contact time with slow learners, Internet Surfing, Developing Critical Thinking, Having Positive Interactions towards other learners, Using Modified Written Test, Using Home Reading Report, Providing Vocabulary Support, Creating Action Research Plan and Counseling Students had a similar ranking of 5.5. This implies that out of the 10 strategies implemented for S.Y. 2009-2010, none was considered as best strategy since only one teacher was using each strategy.

On the other hand, for S.Y. 2010-2011, out of the 7 strategies, Utilizing old NAT Questionnaires ranks 1 while Giving Review Materials at Home, Film Review, Giving Group Activity, Providing Reading Materials, Using instructional materials from private schools and Concentrating on the skills rank 4.5. This implies that Utilizing old NAT Questionnaires was considered as the most frequently used strategy for S.Y. 2010-2011.

Table 9: Analysis on the Relationship between intervening variables and students' English NAT results

Intervening Variables	Mean	Std. Dev	N	Comp r	Comp t-value	Comp P-Value
Age	15.56	1.744	995	.099	-3.14	0.001**
Years in school	8.25	.606	995	-.148	-4.71	0.000**

*Note: ** - P-Value is highly significant at 5% level of significance and significant at 1% level significance*

Table 9, below, presents the significant relationship between Intervening and students' English NAT performance such as age and years in school. It reflected that the two variables have negative correlation which means that as the students get older and increase its stay in school their NAT performance will become low. Furthermore, the two factors have high significant relationship with their NAT results since their p-values of 0.001 and 0.000 are lower than the 5% and 1% level of significance.

5. Conclusion and Suggestion

This research concludes that the NAT results of the sophomore students S.Y. 2009-2010 differed from S.Y. 2010-2011. There is a high significant relationship between all the four teacher factors namely: age, highest educational attainment, length in service and number of relevant seminars; eight of the nine school factors namely: class size, number of English

textbooks, regular supervision of heads, conducting English review classes, conducting English remedial classes, pairing low performing students with high performing ones, varying teaching strategies and providing instructional materials; and the two student factors namely: sex and English academic performance and the students' English NAT results for school years 2009-2010 and 2010-2011.

It is recommended that DepEd English coordinators and supervisors should conduct seminars and workshops prioritizing English teachers so as to improve students NAT performance in English since their performance, which is "pre-basic" level, is the lowest performance level. Teachers should cover all the topics which are given in National Achievement Test in order to raise English NAT performance from "pre-basic" level to "proficient" or "advanced" level. Schools should enhance their good practices towards the preparation of the actual NAT examination in order to have consistency of the NAT performance. Schools in the Division of Bohol should use old NAT questionnaires, utilize the Learning Resource Portals of DepEd and conduct intensive mock examinations prior to the examination so as to improve students' English NAT performance. A replicate study should be conducted on other factors affecting the students' NAT performance.

Conflict of Interest

The author of the article declares no conflict of interest.

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