PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT

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A Thesis
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In Partial Fulfilment
of the Requirements for the Degree
Master of Arts in Teaching (M.A.T.)
Major in Physics

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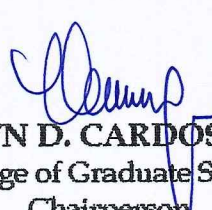
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APPROVAL SHEET

In partial fulfilment of the requirements for the degree, **MASTER OF ARTS IN TEACHING**, this thesis entitled **"PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT"**, has been prepared and submitted by **ALIDA G. PACLITA**, who having passed the comprehensive examination and pre-oral defense is hereby recommended for final oral examination.
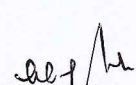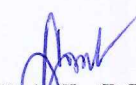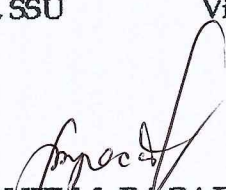

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DEDICATION

Every challenging work needs efforts as well as

guidance of people specially who were very close to

our heart.

I dedicate this humble effort to my sweet and

loving

Father and Mother

whose affection, love, encouragement and prayer

makes me able to get a successful endeavor.

ALIDA G. PACLITA

Researcher

ABSTRACT

This study determined to identify the factors affecting performance of fourth year high school students in Paranas in the NAT and the NCAE. This study employed the descriptive-correlation research method which aimed to determine the significant relationship of the students' performance in the NAT and NCAE and some cited variables. As to relevant extra-curricular activities, the school-respondents seldom conducted nor participated in some extra co-curricular activities like Seminar Workshops, science camp, science fair, science excursions/field trips, establishing science museum, science film forum, science film showing, forest reforestation and conversation, environmental protection and conservation, and membership to science organizations. Most of the school-respondents had inconsistent performance in the NAT and NCAE for the last five years. All schools lacked in school facilities and equipment; the performance of the students in the NAT and in NCAE was below the target MPS which was 75.00 percent. It is highly recommended that all science teachers must upgrade themselves professionally. They can do it by enrolling in graduate education, attending more trainings and workshops to improve their teaching competencies. School administrators should regularly supervise and asses their teachers, so that they know and are aware of their strengths and weaknesses and introduce ways to enhance their teachers' capabilities.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

The demands of the time highly influenced the inexorable changes that take place in a country. For every decade that passed there had been marked changes, not only in the external features of the environment brought by science and technology, but also in the social order.

This is an age of science and its impact in every aspect of life cannot be ignored. Science and technology are potent sources of economic and social changes that bring about enduring and far reaching effects in economic, social and cultural life. It is acknowledged that science and technology have become important driving forces in propelling development especially that the country is now in the era of globalism (Florencio, 1995: 4). It is, therefore, essential to teach children and adults to become good citizens of the world equipped with broad scientific knowledge and strengthened technological skills.

Quality education has always been the main goal of the Philippine Basic Education. In fact, it is in this context that varied attempts have been made under the Philippine Educational System like the revision of the New Secondary Education Curriculum (NSEC) to the Basic Education Curriculum (BEC), and the 2010 Secondary Education Curriculum with Understanding by Design (UbD)

Approach which is the recent reform which the Department of Education (DepEd) has instituted.

To establish the extent to which quality, relevance and other educational goals are being met, evaluation and assessment are deemed necessary. Therefore, many tests have been given to ensure effectiveness of the teaching-learning process. These are the school, division, regional as well as the National Achievement Test (NAT).

In addition, the National Career Assessment Examination (NCAE) is also conducted for the fourth year high school as an assessment of a student's aptitude and estimates what field or discipline the student can excel in. The result will show the interest and career inclination of the student, whether it is technical-vocational, entrepreneurial or a full college education course. "This way, parents and students will be guided on what career track would best be taken after high school," DepEd said, "adding that the result of the NCAE is not mandatory but recommendatory". The exam is also open to other interested fourth year students, out-of-school youth and Alternative Learning System (ALS) passers.

These national tests are all under of the Department of Education (DepEd) and the National Educational Testing Research Center (NETRC) which take care of the assessment and evaluation matters and, therefore, largely concerned with the developing and administering as well as analyzing the results of these tests.

It is sad to note that for the school year 2002-2003 National Achievement Test (NAT) results, revealed that the average percentage of the correct responses

of the subject areas tested was only 46.64 percent placing Mathematics on top with 51.27 percent, followed by Science with 44.26 percent, and English with 44.22 percent (Department of Education Regional Memorandum No. 187, s. 2003).

Evidently, the performance in science of the secondary schools in Paranas in the NAT and NCAE MPS results are not consistent and are very low average. In particular, for the S.Y. 2005-2006, the Casandig National High School got 72.83 percent in NAT and 41.05 percent in NCAE; the Lawaan NHS got 82.92 percent in NAT and 73.08 percent in NCAE and the Wright NHS got 75.34 percent in NAT and 75.01 in NCAE. However, these results declined compared to the last four years, S.Y. 2009-20010, where the Casandig NHS got 68.74 percent in NAT and 25.81 percent in NCAE; the Lawaan NHS got an MPS of 55.69 percent in NAT and 64.91 percent in NCAE; and likewise, the Wright NHS got 66.74 percent in NAT and 75.33 in NCAE.

This fluctuating performance profile of the students in the Division of Samar, specifically in the secondary schools in Paranas in the NAT and NCAE, is quite alarming as the results are described below mastery. The result is very much below average of learning to help the child become a productive adult.

Gonzales (200:364) commented that the 21st century demands scientifically literate society even for developing countries like the Philippines. Moreover, if the members of that society are interested in joining the main stream of the global society and to advance like the rest of the nations in the application of science and technology, then that society must gear itself through proper instruction in the

language of science. That society must be equipped with the knowledge in the concepts, principles and methods of what is considered scientific in contemporary times as well as their application in life especially in industrial processed which are part of the workings of economy.

The child being the center of any educational process must be taken into consideration and must be considered of prime importance. It is therefore important to identify indigenous factors that are considered determinants of their performance.

As a matter of fact, this poor performance is a proof among others that today's learners indeed lack the basic foundation for them to do better in higher level. Hence, if high school students are not equipped with the necessary academic skills in Science, English, and Mathematics, it would heighten the deterioration of our educational system.

Consistent to the facts mentioned above, the researcher being a teacher in secondary school for five years, had observed that many students were attending the secondary school classes, and yet, were not prepared to tackle work in higher level because they had not acquired the basic competence prescribed by the educational system.

Since Science, English and Mathematics were considered the tool subjects, it is these learning areas that today's learners should be developed for them to be globally competitive. They must be equipped with the essential academic skills as

they progress from one level to another, so that their stay in high school is not considered wasteful and ineffective.

Hence, in the course of attaining quality education, it is within the premise that the researcher undertakes the study to assess if the cited factors affect the science performance in the NAT and NCAE of the high school students and believing that appropriate intervention requires an analysis of these students' poor scholastic performance.

Statement of the Problem

This study determined to identify the factors affecting performance of fourth year high school students in Paranas in the NAT and the NCAE.

Specifically, this study sought to answer the following questions;

1.   What is the profile of the school – respondents in Paranas, in terms:

   1.1   enrolment;

   1.2   teachers and their qualification;

   1.3   physical facilities and equipment;

   1.4   library, and

   1.5   related co-curricular activities?

2.   What is the performance level of student-respondents for the last five years in:

   2.1   NAT and

   2.2   NCAE?

3.	Is there a significant relationship between the student-respondents' Physics performance in the NAT and the NCAE and the following:

      3.1	enrolment;

      3.2	teachers and their qualifications;

      3.3	physical facilities and equipment;

      3.4	library, and

      3.5	relevant co-curricular activities.

Hypothesis

Based on the specific questions posed in this study the following hypothesis was tested:

1.	There is no significant relationship between the student-respondents' Physics performance in the NAT and the NCAE and the following:

      1.1	enrolment;

      1.2	teachers and their qualifications;

      1.3	physical facilities and equipment;

      1.4	library, and

      1.5	relevant co-curricular activities.

Theoretical Framework

"If a child is not learning the way you are teaching, then you must teach in the way the child learns" as cited by Rita Dunn (Anne Bruetsch's Multiple Intelligences Lesson Plan Book)

One basis of this study is the *Theory of Multiple of Intelligence*. This theory strongly suggests that everybody has a different mind, and no two profiles of intelligence are the same. Therefore, the traditional concept of measuring intelligence by I.Q testing is far too restricted. From the 8 primary intelligences, an individual may excel in one, two or even three of these, but nobody is good at them all. Equally, the same rule applies to a child prodigy or mentally/physically disadvantaged person. A brain damaged child could have a severely impaired use of language, but be able to paint or play music magnificently. Dr. Gardner indicates that by introducing a broader range of learning methods, (known as the intelligences) educators and indeed parents, can home in on an individual's strengths and weaknesses by determining their preferred learning style. This would consequently give them the opportunity to learn in ways more productively to their unique minds.

Ells (1965: 16) cites factors associated with performance that, cultural factors enter into performance of intelligence test. It is mentioned that existing group test revealed a striking difference in the academic performance of children who came over from poor homes and whose cultural pattern, parental attitudes, and group standards are different from that of the middle class, one which are said to dominate in the testing situation.

This study is also anchored on Thorndike's Connectionism Theory (Lardizabal, 1988: 15) in where association is established between stimulus and response. Practice strengthens the association between the stimulus and response,

thus utilizing the law of exercise. The connection is strengthening by reward or satisfaction, as postulated by this theory. This makes use the law of effect. If a thing is to be learned there should be frequent repetition of stimulus and response also.

The theory cited preceding tries to explain that the learning occurs if there is a stimulus or an influence from the outside, whether that be a person or thing, good or bad. As much as in learning by imitation and identification occurs right in the early years of childhood, attention should be focused to give the children worthwhile stimulus by providing them good models, so that outmost responses will also be ensured.

Thorndike's theory is further boosted by the theory of Bloom (1975: 134) when he propounded that learning is the outcome of instruction. It is a change in behavior that may lead to the development of the potential of the individual so that he becomes a self-fulfilled person and an asset to the society.

And so, in answer to this belief, the Department of Education (DepEd) adopted some strategies to improve the quality of its outputs. One of which, is the creation of National Achievement Test (NAT) and the National Career Assessment Examination (NCAE), all for attaining quality education.

Conceptual Framework

Figure 1 shows the conceptual framework of the study. That the research schema, show the respondents involved in the study, that the research

IMPROVED ACADEMIC PERFORMANCE OF STUDENTS

FINDINGS/ RECOMMENDATIONS

ANALYSIS OF RESULT

NAT and NCAE

Performance

Profile of the respondent-schools

*Enrolment
*Teachers & their Qualification
*Facilities & Equipment

F E E D B A C K

F E E D B A C K

SECONDARY SCHOOLS IN PARANAS
Casandig NHS
Lawaan NHS
Tenani IS
Wright NHS
S.Y. 2011-2012
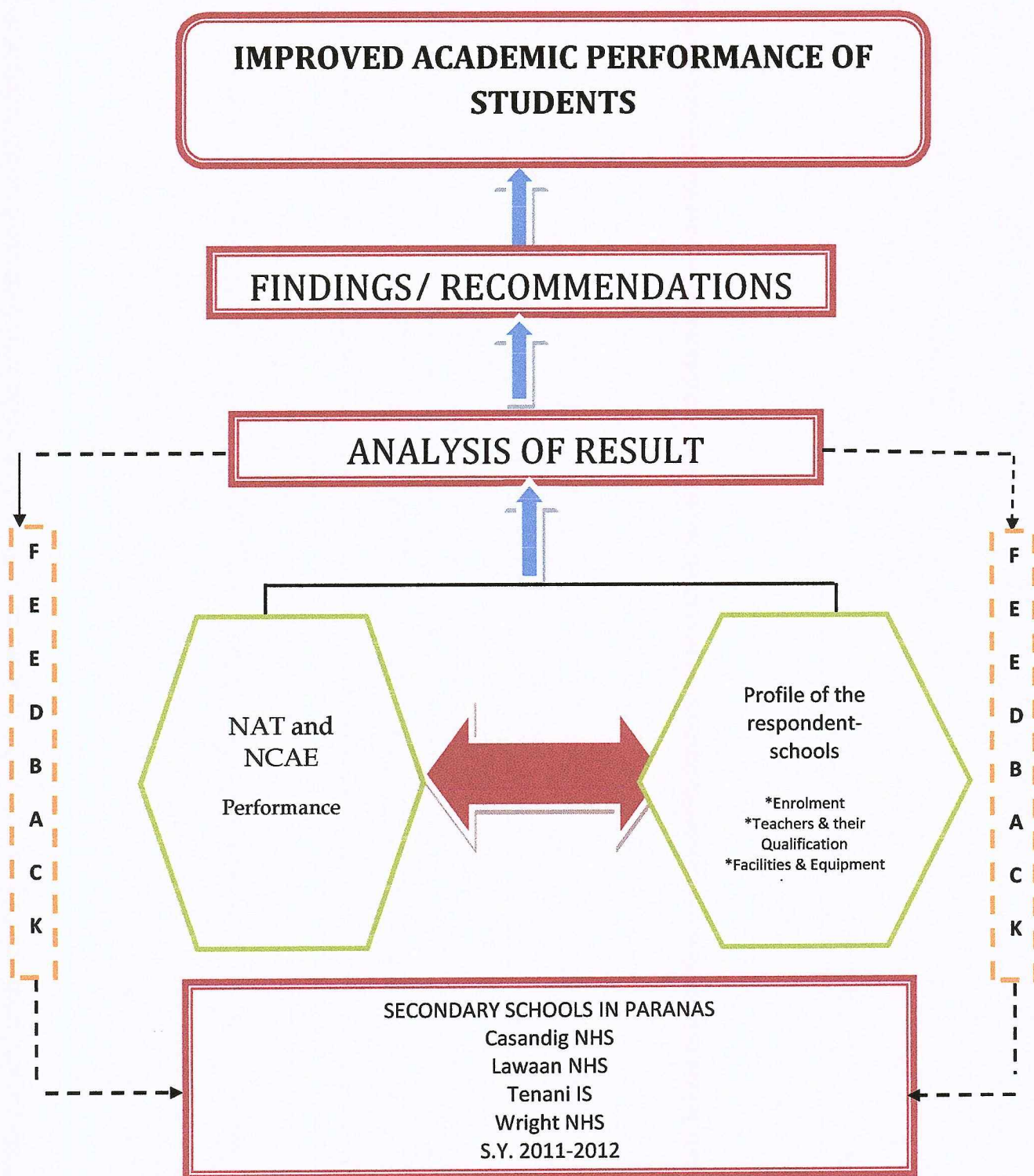
Figure 1. The Conceptual Framework of the Study

environment covers the Secondary Schools in Paranas, in the school year 2011-2012 as reflected in the base frame.

Double arrowheads show the correlation analysis which were undertaken between the profile of the respondents-schools and the academic performance of the students in the NAT and the NCAE.

The results of the test of significance of the correlation coefficient was used as bases for identifying what factors have something to do, or are related to the performance of students in the NAT and the NCAE for the last five years. Consequently, the researcher formulated suggestions and recommendations geared toward implementing instructional redirection. Hence, the outcome of this will provide input to supervisory and instructional redirections which in turn would facilitate or pave the way towards the attainment of the ultimate goals of the study which is to improved performance on the part of the students, which is reflected at the apex of the schema.

Significance of the Study

The students, teachers, administrators, and parents as well as the other researchers are expected to benefit from the findings of this study.

To the students. Through this study, the students shall be able to appreciate the efforts of their teachers who are trying to impart knowledge and information. This would motivate them to acquire and develop favorable attitude and interest

toward science as a subject. They would become aware of their responsibilities to reap for more knowledge and seek more actual involvement in learning.

To the teachers. This study shall enlighten them to consider several factors that affect the mastery of the learning subject. They shall be encouraged to provide many activities, exercises, and use varied methods of teaching that would help students gain mastery and attain high performance.

To the administrators. It is hoped that through the results of this study, the administrators shall be motivated to give full administrative and financial support in updating the teachers with their competencies by allowing them to attend seminars and trainings. This shall give them insights to redirect their management and administrative functions, giving priority to laboratory facilities, which are related to an effective science instruction.

To the parents. This shall make them aware of their role in the education of their children, so that they can work cooperatively with the teachers and supervise their children to perform well with their assigned task, as their complementary effort.

To the future researchers. The findings of this study shall give an overview for the future researchers in conceptualizing and conducting a related study.

Scope and Delimitation

This study focused on the Physics Performance of Fourth Year High School Students in Paranas.

Furthermore, this study tried to determine significant reasons whether these affect the academic performance of the students in the NAT and the NCAE for the last five years: enrolment; teachers and their qualifications; physical facilities and equipment; library; and related co-curricular activities of the school-respondents in Local Government Unit (LGU) of Paranas.

The respondents involved were all of the secondary schools in Paranas consisted of 10 teachers from Casandig National High School, five teachers from Lawaan National High School, four teachers from Tenani Integrated School, and 29 teachers from Wright National High School.

The results of this were used in improving students' academic performance in the different science subjects and as inputs to the science teachers for an improved performance of the students.

Definition of terms

To establish a common frame of reference, the following terms are hereby defined conceptually and operationally.

Academic performance. The term refers to some methods of expressing a student's scholastic standing expressed as average for group students (Leussin 1959: 8). In this study, it refers to the average rating of students in science.

Achievement. The accomplishment or proficiency of performance in a given skill or body of knowledge (Good, 1973: 7). In this study, this refers to the

ADMINISTRATIVE MAP OF PARANAS, SAMAR
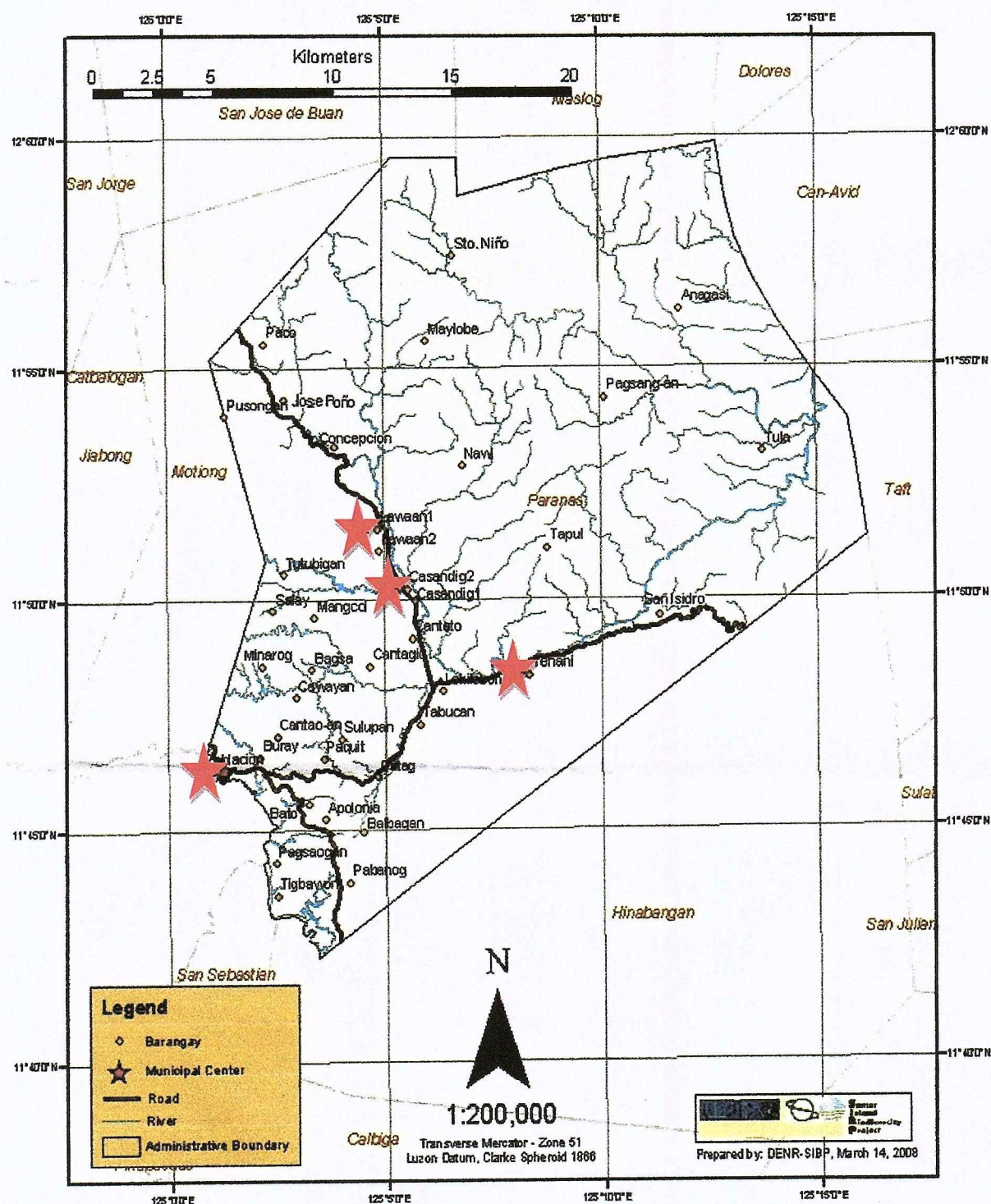
Figure 2. Administrative Map of the Municipality of Paranas,
Showing in Red Stars the School-Respondents.

scores of the students in the NAT and the NCAE in science which was conducted or administered by the Department of Education.

Facilities. Any means, or aid or convenience, a place or to fulfil a special function (Webster, Contemporary: 254). In this study, they are the materials used in the science laboratory.

Enrolment. This refers to the number of people registered; the number of people registered for something, e.g. a class. (Microsoft Encarta, 2009). In this study, it is the number of students registered in each of the secondary schools in Paranas, Samar.

Equipment. Generally, this refers to the necessary items: the tools, clothing, or other items needed for a particular activity or purpose. (Microsoft Encarta 2009). In this study, this refers to the items found in the science laboratory rooms needed for science experiments.

Instructional materials. It means the things needed for an activity or instruction (Word Finder, 1993: 661). In this study, it refers to the books, notebooks, etc. used by the students in studying.

Library. Place where books are kept: a room, building, or institution where a collection of books or other research materials are kept. (Microsoft Encarta 2009). In this study, it refers to a place in the school where books and research materials used by the students of the school are kept.

Laboratory. A place adapted to conduct scientific experiments and analysis (Webster, Contemporary: 254). In this study, it is the specific place in school where the students conduct scientific experiments.

NAT. It is the acronym for the National Achievement Test (NAT) which is a national public examination given to elementary pupils (deped.gov.ph). In this study, it is used as the measuring tool in the assessment of the performance of the students in science.

National Career Assessment Examination (NCAE). A part of the report card of DepEd and the whole education system given by the National Educational Testing and Research Center (NETRC). In this study, it is used as the measuring tool in the assessment of the performance of the students in science subjects.

Profile. The term is defined as a short biographical sketch vividly presenting the most striking characteristics of a personality (Webster, 1999: 1006-1007). In this study, it refers to the personal information of respondents such as their Age, Civil Status, Area of Specialization, Load, Length of service, Highest Educ. Qualification, Years in Teaching Physics, and Subjects Handled for the teacher – respondents and for the student -respondents, their Physics performance in the NAT and the NCAE for the last five years.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

In an earnest desire to obtain relevant ideas related to this particular study, the researcher reviewed books, unpublished theses and dissertations, periodicals and journals that are related to the present study.

Related Literature

Bugash (2001: 48) anchored this study, on the effect of goals or target on individual performance. He emphasized that the earliest findings about goals were: 1) that individual that sometimes gets goal, achieve higher level of output when they set goals rather than from nothing, and 2) that individual who sets goals outperformed those who did not. These findings have been developed further to include other factors such as the specificity of goals, goal difficulty, and feedback and the expected versus the unexpected evaluation which will lead to better performance.

Moreover, Aquino (1988: 545-546) pointed out that excellent performance is much needed today. It can be applied to every degree/level of ability to every socially acceptable activity, but is more than that. A theorist stressed that teaching has always been in, and always will be, the primary means of human progress and survival. He further emphasized that not only does teaching provide service humanity, it greatly influences the students' social, economic,

political, scientific and moral life for their society. These elements are basically pointing to economic development according to an economic expert which can be attained through scientific and technological knowhow.

All students possess a drive to achieve something, somewhere, or sometime. This is the major school problem, however, may awaken that drive with reference to education. Drive within is very important, so that reinforcement like study habits will justify learning specially in different science subjects, which portray a vital role in education and a country as a whole. However, Ebel (1965: 4) states that, "learning is looked upon as an attitude formation as well as concept formation. Hence, attitude and interest of the students are inseparable in the learning through Drive-Reinforcement.

However, factors are not only limited to the attitudes and interest which indeed have a role in the study habit and in the academic performance of the student. Some environmental factors which influence scholastic performance of the student were cited by Kapunan (1978: 48) as 1) city children were found to be better than the country children because of the availability of the educational facilities; 2) parents' occupation; 3) children in isolated and backward sections do not acquire the kind of experience in their home, school and community more than children living in urban or progressive section do; 4) children of well-to-do parents have greater accessibility to libraries, places of culture and other facilities than those of poor parents. The author has mainly cited the socio-economic conditions of the family involved. As mentioned the socio- economic condition

really affects the scholastic achievement of the student, especially that science subjects need only discussions or lectures from the teacher. If possible, a lot of resources are viewed just to understand concepts and ideas from science.

According to Cortes (1994: 153) there are many ways of ascertaining quality education. However, the most common measures of indicators of this education are: pupils or students' scores in achievement examination, such as the NCAE and other examination.

Miguel (1994: 235) pointed out that there are some factors associated with academic achievements. The analyses of educational system were done by determining the relationship between the input and output factor and the following are its results: 1) the score on the mental ability test correlate highly with the score in the achievement test; 2) The correlation is higher with as science, language and reading; 3) the factor analysis of the subject area test scores shows that the underlying common intellectual skill among elementary school graduates is one that is most similar to those learned in Science and English; 3) females tended to score somewhat higher than males, especially in subject area of language.

Calhoun (1994: 320) cited that the most obvious function of school is to equip people with the capabilities they need for they need for effective participation in modern societies. These tasks involve teaching young people the basic skills, developing their ability to reason and solve problems and providing basic skill developing them with both general knowledge and specific

information to be used in their job. Schools also support structural hierarchy by serving as a sorting mechanism that selects the students for higher or lower positions based on their academic performance.

These various factors that affect the students' level of performance must be taken into full consideration since they are all valuable in any development in educational policy, teacher training, and the rational provision.

So, the teacher-factors and the student-factors affect student's physical analysis performance and that the two may interact with the effects of other variables in the teaching-learning process.

Related studies

In order to have a thorough analysis of the research problem, the researcher found it necessary to read unpublished materials on studies conducted which have bearing on the present study.

In the study of Calagos (2007) entitled "Correlates of Elementary Teachers' Performance in the Districts of Sta. Margarita I and II". She said, "Quality implies competence on performance of the teaching force, performance of pupils, improved instructional materials, equipment, laboratories, library acquisitions and the capabilities of the educational managers.

In this aspect Calago's study is related to the present one because both studies focused on performance, however, the present study concerned on

students' Physics / Science performance in the NAT and the NCAE while Calago's concern was on Elementary Teacher's Performance.

Palines (2005) conducted a study to determine the Correlation of Students' Academic Performance in Science and Technology in Oriented Schools in Eastern Visayas for S.Y. 2004-2005. She used the students' grades in the second grading period as basis for measuring students' academic performance; which were correlated to teacher - related, administrator - related, school - related and student-related factors. She found out that 1) faculty-related varies such as age, sex, civil status, income, teaching experience, relevant in-service trainings, performance rating and attitude towards Science and Technology curriculum were predictors of students' achievement in Science and technology, 2) the number of teachers and personnel, average class size and laboratories and equipment were predictors in Science and technology, and 3) the mothers educational background is related to students performance in Science and Technology.

The study of Palines is related to the present study since both assessed the performance of high school students in Science and Technology. However, the study of Palines considered students' performance in Science and technology in Seven Oriented Schools in Eastern Visayas while the present study considered the high school students of Secondary Schools in the Municipality of Paranas.

Jabinar (2005) in his study on "Administrators' Instructional Supervisory Skills, teachers' Instructional Skills and Pupils' Performance in the National

Achievement Test (NAT)" made the following recommendations: 1) the school district must undertake information programs which focus more on the improvement of pupils' academic performance in English, Science, Mathematics; 2) to improve the Administrators supervisory skills from very satisfactory to outstanding, DepEd officials should provide in-service trainings program and emphasis on the enhancement of school administrators competencies in school management and leadership, and 3) public elementary school administrators need to straighten their own school capacities in terms of teachers' instructional skills along content, instructional and communication.

The study of Jabiñar showed similarity to the present work in the sense that they emphasized on students' performance. However, Jabiñar's study focused on the students' performance in National achievement Test (NAT), while the present study was on the Students' Performance in Science and Technology in the NAT and NCAE for the last five years.

Arcuenco (2004) in her study, "Socio-Economic of Parent and Pupils' Academic Performance in the District of Mondragon Northern Samar: Basis for Instructional Redirection'', revealed that family income had the greatest effect on the academic performance of the pupils. Income determined the degree of support of the parents to the education of their children. These were needs in school that should be attained such as books, papers, pencil etc. only those who had a big income could afford to supply the school, the schooling of their children. She further stressed that low achievement rate, high incidence of

dropout rate and inability of pupils to rely imbibe correct cultural values could be related to economic reason.

The study of Arcuenco is related to the present study in the sense that both are concerned on academic performance of students. However, they differ on the subject under study.

Lonzaga (2004), in his study, "Relationship Students' Academic Performance and Perceived Role Model Attributes of the Teachers and Parents" stressed that the personal qualities which endeared a teacher to her student and made her teaching efficacious were not easy to define, but they were easy to recognize in her, as she went about her work discharging her manifold duties. These qualities consisted more or less characteristics such as good humor, friendliness, interest in the lives of the students, commanding respect, square dealing, patience with children, tastes in dress, and being both human and just. A teacher possessing these traits and attributes certainly lives in the minds and hearts of her students not only in the present, but in the years ahead and such gift from students is undoubtedly, the greatest satisfaction she can ever experience in her work. Enhancing this personal attributes of teachers is a means of improving teaching and learning.

Another important factor that greatly contributed to the effective learning outcomes of the students is the home or parents - factors. If parents in every home would only do their part in considering parenthood as a sacred trust and to the best of their abilities, would provide for their children's spiritual, material

and moral needs, along with everyday comforts of food and shelter, and clothing, if they would not leave the education of their children entirely to the school, then the school would succeed in realizing this important objective of improving quality education.

Furthermore, parents should evolve themselves in their children's academic lives by maintaining communication lines between their teachers. A good relationship with the teachers is vital in working together to nurture and educate the child. Teachers, though they may be the primary educators of the children, need parental support and cooperation to ensure well- recorded education for these youngsters. They simply cannot do without their parent's help.s

The study of Lonzaga is related to the present study because it is also aimed at improving the behaviour of students on their study habits thus making better performance in academic which is the primary goal of the study. It revealed that the academic performance of the children could be affected by the kind of supervision parents provide them in their studies and in other school-related activities. However, Lonzaga's study differs from the present because the present study includes variable on the profile of the secondary schools in Paranas which influence academic performance of the students.

Balicot (2003) assessed the teaching of science in public schools in Eastern Visayas during the S.Y. 2000-2001 and came up with a proposed training program based on the results of her study. Her study revealed that teachers in

public secondary schools possessed the required educational preparations in teaching science, yet they lack in- service training /seminars/ conference. Moreover, it was also revealed in the study that science facilities are wanting based on the assessment of administrative science teachers and students. She recommended that a continuous appraisal of science teaching and the curriculum be done to alleviate the teaching standards as well as to enrich the science curriculum. She likewise proposed a training program designed to upgrade and update science teaching with a new and modern trend, and that acquisition of additional facilities should be given priority.

The present study is related to the above mentioned study in as much as they both focus on the assessment of science teaching and determining the level of adequacy of facilities needed in science teaching. However, while the study of Balicot focused on the competence of science teachers and the assessment of adequacy of science facilities, this study tries to determine the factors affecting the academic performance in science of high school students of secondary schools in Paranas in the NAT and NCAE.

Delmonte (2003) in her study, "Factors Affecting Students Performance in Science and technology of Wright Vocational School: Basis for Instruction and Redirection", pointed that students' attitude toward Science and Technology is significant factor relative to their performance. She explained that students who perceived themselves, to have favorable or positive attitude towards Science and Technology showed higher level of performance in the subject. Likewise, those

who expressed unfavourable or negative attitude towards the subject showed lower level of performance.

She further recommended that a positive attitude of the students toward Science and Technology should be developed by providing various students activities that will make them more participative. Course content, teaching methods and strategies should be upgraded to make science learning more effective, meaningful and enjoyable to generate favorable attitude from the students.

A similarity is viewed since both study considered the students' performance in science. They differ because the former study focused on the first year students while the present study focus on the high school students' performance in the NAT and NCAE.

In the study conducted by Dumalaon, (2003) entitled, "The Competencies of Secondary School Teachers and Academic Performance of Fourth Year Students: Basis for Redirection", it was recommended that in order to improve further the competencies of secondary school teachers, provisions for books, school facilities and equipment should be considered. A realistic staff development program should be developed and / or implemented for the secondary school teachers of the Division of Samar to ensure that they are continuously updated and retrained through in-service trainings and/ or graduate studies. An intervention program should be developed to improve the competencies of fourth year high school students in Math, Science, English,

Filipino, and Social Studies. Administrators, in consultation with the teachers should prepare an action plan that should be made as basis for the evaluating teachers' performance every rating period. The Division of Samar should come up with a periodic in-house training to endeavour to further improve the competencies of Secondary school teachers along: 1) student development, 2) teachers competence, and 3) teachers' personality and human relations.

Miñozo (2002) conducted a study in the teachers' competencies and students' Performance in English in the City Division of Calbayog. Based on the findings of the study, he recommended the following: 1) the City Division of Calbayog City should implement a stiffer hiring procedures especially for English Teachers; 2) curriculum makers should formulate skills to be developed to students only those which the students need; 3) English teachers should be open to the idea that there is something good that they can get from having enrolled in the graduate program for academic and professional advancement purposes; 4) close supervision and monitoring of the English teachers should be attended right away to find commendable points, as well as to find the improvement needs of the teachers; and 5) not only outstanding teachers and master teachers shall be made to attend English – related in- service trainings but most specially those who have just started to practice the profession and have not attended much seminar similar to that of English.

In this aspect Minozo's study is related to the present one because both studies focused on performance, although the present study was on performance

in Science and Technology of High school students in the NAT and NCAE while Minozo's concern was on the teachers' competence and students' performance in English subject.

Dela Rosa (2001) conducted a study on "Discovery Learning through Practical Work in Science teaching: Effects on Pupils Academic Achievement Attitude and Psychomotor Skills". Results revealed that the experimental group out-performed the control group in their post test academic achievement. In terms of attitude toward science, the experimental group had a more favorable attitude than the control group. Likewise, in terms of psychomotor skills performance, the experimental group performed better than the control group.

In the light of the findings, the following conclusions were drawn: 1) discovery learning through practical work enhanced cognitive/affective and psychomotor domains of learning; 2) hands-on and minds-on activities seemed to be effective in promoting logical development and the development of some inquiry and problem - solving skills, 3) discovery learning through practical work is a method that could help in the development of manipulative and observational skills as well in the understanding of scientific concepts. Moreover, it can foster the development of psychomotor skills performance brought about by actual manipulation of materials in learning activities.

The present study has a bearing with the previous study considering that both studies pertained in Science Teaching. However, the two studies differed in the area of study. While the previous study focused on the discovery learning

through practical work in science teaching, the present study focused on the factors affecting the academic performance in science of students in the NAT and the NCAE.

As a whole, all related literatures and related studies presented in this chapter laid down the basic foundation for the present study since they dealt on the correlates of teachers' performance in the teaching- learning process.

METHODOLOGY

This chapter presents the comprehensive discussion of the methods and procedures used in the conduct of the study, including the research design, the instrumentation, the validation of instrument, the sampling procedure, the data - gathering procedure and the treatment of data, including the statistical measures that were used in hypothesis testing and their corresponding formulas.

Research Design

This study employed the descriptive–correlation research method which aimed to determine the significant relationship of the students' performance in the NAT and NCAE and some cited variables.

The data were gathered through a survey questionnaire. The data obtained were tallied, organized, statistically processed, analyzed, and interpreted. The descriptive statistical measures included the frequency count, percentage, mean, and SD. Inferential statistical tools include Pearson r, and Fisher's t-test.

Instrumentation

The research instruments used in the collection of pertinent data for this study was a survey-questionnaire for the teachers and their qualifications in the respondent-school, and data requested from the National Educational Testing

and Research Center (NETRC) for the NAT result and the NCAE for the last five years; enrolment data of the schools concerned from the EMIS of the school to crosscheck enrolment data (website, http://ebeis.deped.gov.ph.com) was also accessed; librarian of the school for the library holdings, the science laboratory, the science teachers, different legitimate school organization or clubs, bulletin boards, and ocular inspection of the school and its facilities. These instruments or the survey questionnaire, and the NCAE and NAT results and the checklist which was accomplished by the EMIS, the laboratory in-charge, the librarian, and the principal, head teacher, teacher-in-charge helped the researcher in finding answers to the specific problems of the study.

The researcher developed one set of questionnaire for the teacher-respondents of this study. Separate checklist questionnaires for the librarian, EMIS in-charge, principal/head teacher/teacher-in-charge, and the science teacher in-charge of the science laboratory, and teachers in-charge of student organizations and extra-curricular activities were distributed to them. This was aimed to have data on library holdings, facilities and equipment, extra-curricular activities and enrolment.

Validation of the Instruments

The main instrument used is the survey questionnaire which was developed by the researcher herself with the assistance of other adviser and other professionals.

To ensure the validity of the instrument, the draft was shown to the researcher's adviser for comments and suggestions. Worthwhile suggestions were incorporated in refining the instrument.

Since, the other instruments such as the result of the data requested from the National Educational Testing and Research Center (NETRC) for the NAT result and the NCAE for the last five years, and enrolment data of the schools from the EMIS of the school are primary data, it was no longer validated.

Sampling Procedure

The study involved four schools in Paranas, Samar, namely: Casandig National High School, Lawaan National High School, Tenani Integrated School, and the Wright National High School, so total enumeration sampling was used for schools.

The study treated on the enrolment profile of the school from first to fourth year for six years. Also, enrolment data were specified for sex. It started with SY 2004-2005, SY 2005-2006, SY 2006-2007, SY 2007-2008, SY 2008-2009, and SY 2009-2010. It surveyed on the teachers and their qualifications for teaching in these four schools which included their age, civil status, area of specialization, teaching load, length of service, highest educational attainment, subjects handled, and years in teaching Physics. Total enumeration was used since the population of the study consisted of 10 teachers from Casandig National High

School, five teachers from Lawaan National High School, four teachers from Tenani Integrated School, and 29 teachers from Wright National High School.

It also covered the science facilities and equipment, which included the apparatuses, supplies and materials, models/charts, science projects, and physical facilities.

The library holdings included textbooks, periodicals, journals and multi-media. The relevant extra-curricular activities included science fair, science camp, science excursion/field trips, established science museum, science club bulletin, school science parks and garden beautification, science film forum, science film showing, science club publication, forest reforestation and conservation, environmental protection and conservation, membership to science organization, or program of the school particularly in relation to science activities.

Data Gathering Procedure

To gather the needed data, the researcher secured permission from the Schools Division Superintendent of the Department of Education (DepEd), Division of Samar, to conduct the study. The approved request was forwarded to the principals, head teachers, teachers – in charge of the different public secondary schools in Paranas, Samar. The administrators and the teachers were provided a photocopy of the approved request attached to the questionnaire.

The researcher personally administered the questionnaire to the teacher-respondents of the schools covered in this study after a thorough explanation to insure accuracy, sincerity, honesty in their response and in order to get 100 percent retrieval of the questionnaire from the teacher-respondents.

The responses of the questionnaires were recorded, tabulated and analyzed statistically.

NAT and NCAE Result for the four schools was obtained from the National Educational Testing and Research Center (NETRC), Manila. The researcher wrote a letter to the National Educational Testing and Research Center (NETRC), Manila for the needed data.

Statistical Treatment of Data

The data gathered were tabulated, organized, analyzed and interpreted with the use of the following descriptive statistical tools such as frequency count, percentage, weighted mean, mean, standard deviation, and inferential statistical tools such as Pearson r, and Fisher's t-test.

Frequency Count. This descriptive statistical tool was used to present the data such as age, sex, civil status, among others as to the number of occurrence.

Percentage. This descriptive statistical tool was used to present the data such as age, sex, civil status, among others as to the magnitude of occurrence.

Mean. This statistical tool was employed to calculate the averages where the measure was applicable such as computation of the teachers' age, average

family monthly income, length of service, number of years in teaching Physics, and others.

Standard deviation. This tool was used to determine the variability of each set of data with reference to the mean.

Pearson r. To determine the relationship between variables: 1) school - respondents' performance in the NAT and the following variables, namely: enrolment, teachers and their qualifications, facilities and equipment, library, and extra-curricular activities, and 2) school - respondents' performance in the NCAE and the following variables, namely: enrolment, teachers and their qualifications, facilities and equipment, library, and extra-curricular activities. The formula by Downnie and Hart (1984: 99) was used.

$$r = \frac{N \sum XY - (\sum X)(\sum Y)}{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}$$

r - correlation coefficient

N - number of cases

$\sum X$ – sum of the values in the 1st set of independent variables

$\sum Y$ – sum of the values in the 2nd set of independent variables

$\sum XY$ – sum of product of X and Y

$\sum X^2$ – sum of the squared X- values

$\sum Y^2$ – sum of the squared Y – values

The reliability of the computed correlation was interpreted using the following scale from Ebel (1965: 202):

Reliability	Degree of Reliability
0.95 – 0.99	Very High, rarely found among teachers made test
0.90 – 0.94	High, equaled by few test
0.80 – 0.89	Fairly high, adequate for individual measurement
0.70 – 0.79	Rather low, adequate for group measurement but not very satisfactory for individual measurements.
Below 0.70	Low entirely inadequate for individual measurement although useful for group average and school survey.

Fisher's t-test. To test for the significance of the coefficient of correlation between a set of paired variables, the Fisher's t-test was used. The formula given by Walpole was applied to wit:

$$t = \frac{r\sqrt{N-2}}{\sqrt{1-r}}$$

where:

r = computed correlation coefficient

N = number of paired data

The Fishers t- values was computed with the tabular/critical t-value at a= 0.05 level of significance and degree of freedom = N-2. The hypothesis was accepted if the former turn out lesser than latter. Otherwise, the hypothesis was rejected.

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This section presents and interprets the data gathered through the different instruments administered to the respondents of this study. The data were presented in tabular form with their corresponding statistical analysis and interpretation. The discussion focuses in determining the Physics performance of fourth year high school students in Paranas in the NCAE and the NAT.

Profile of the School – Respondents in Paranas

The profile of the school – respondents in terms of enrolment, teachers and their qualifications, facilities and equipment, library, and relevant co-curricular activities is presented in this section.

Table 1

Enrolment Profile of the School – Respondents

School	School Year						Total
	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	
Casandig NHS	325	327	375	381	337	368	2113
Lawaan NHS	122	165	165	163	160	178	954
Tenani IS	0	57	107	127	196	189	619
Wright NHS	1035	1160	1219	1369	1283	1390	7456

Enrolment. As to enrolment of the school – respondents in Paranas, which included Casandig National High School, Lawaan National High School, Tenani Integrated School, and the Wright National High School, Table 1 presented the data. The enrolment of the school – respondents was presented in six successive school year. It started with enrolment for SY 2004-2005, SY 2005-2006, SY 2006-2007, SY 2007-2008, SY 2008-2009, and SY 2009-2010.

In Casandig National School the total enrolment representing from first to fourth year, in the SY 2004-2005 was 325 students; in the SY 2005-2006 was 327 students; in the SY 2006-2007 was 375 students; in the SY 2007-2008 was 381 students; in the SY 2008-2009 was 337 students; and in the SY 2009-2010 was 368 students.

It can be gleaned from the data in the Table 1 that there were more enrolments in the lower years than the upper years. This is true for the six school years as indicated in the grand total wherein there are more enrolment in the first and second year and less in the third year and fourth year. It can be inferred based on the data in the Table that those who enrolled in first year did not end up graduating in fourth year; that there are hindrances to finishing the secondary education. Also, there were almost equal number of males and females in each year level showing further that there was an almost equal distribution of male and female students in school.

In Lawaan National High School, the total enrolment from first to fourth year in the SY 2004-2005 was 122 students; in the SY 2005-2006 was 165 students;

in the SY 2006-2007 was 165 students also; in the SY 2007-2008 the enrolment was 164 students; in the SY 2008-2009 the enrolment was 160 students; and in the SY 2009-2010 was 178 students. It can be gleaned from the data in the Table that there were more enrolments in the lower years than in the upper years. This is true for the six school years as indicated in the grand total wherein there were more enrolment in the first and second year and less in the third year and fourth year. It can be inferred based on the data in the Table that those who enroll in first year did not end up graduating in fourth year in Lawaan National High School and that there are hindrances to finishing secondary education in this school. Also, there were more females enrolled than males in the six school year based on the total females as compared to the total males in the six school year in this school.

Based on the enrolment data, Tenani Integrated School accepted for the first time first year students in SY 2005-2006. There was no enrolment in SY 2004-2005 from first to fourth year, in SY 2005-2006 the total enrolment for first year was 57 students; in SY 2006-2007 the total enrolment for first to second year was 107 students. From the data gathered from the School Report Card (SRC) there were the same number of first year students who are enrolled, but there was a decrease in the number of enrollees for second year. This means that not all those who enrolled in first year were promoted to second year. Also, there was an increase in the female enrollees in the second year which indicated that there have been students who were enrolled as first year in other school and transferred to Tenani Integrated School. In SY 2007-2008 the total enrolment from first to third year was

127 students. Based on the data in the Table, there was again a decrease in enrolment of the third year from their second year enrolment in SY 2006-2007. In SY 2008-2009, the total enrolment from first to fourth year was 196 students signifying that Tenani Integrated High School had now an enrolment from first to fourth year. In SY 2009-2010, the total enrolment in this school from first to fourth year was 189 students. This was the second year that the school had enrolment from first year to fourth year. It can be gleaned from Table 1 that there were more enrolments in the lower years than the upper years even in the year that the school was not a complete high school. This is true for school years 2006-2007, 2007-2008 up to 2009-2010 based on the entry in each year level. It can be safely inferred based on Table 1 that those who enroll in first year did not end up graduating in fourth year; that there are hindrances to finishing their secondary education. Also, there were almost equal number of males and females in each year level showing that there was an almost equal distribution of male and female students in school.

As reflected in Table 1, in Wright National High School the total enrolment from first to fourth year in SY 2004-2005 was 1035 students; in SY 2005-2006 was 1160 students; in SY 2006-2007 was 1219 students; in SY 2007-2008 was 1369 students; in SY 2008-2009 was 1283 students; and in SY 2009-2010 was 1390 students. It can be gleaned from Table 1 that there were more enrolments in the lower years than the upper years. This was true for the six school years as indicated in the grand total where there were more enrolment in the first and second years and less in the third and fourth years. It can be inferred based that

those who enrolled in first year did not end up graduating in fourth year and that there were hindrances to finishing their secondary education. There were almost equal number of males and females in each year level showing that there was an almost equal distribution of male and female students in school. Also, the data indicated that there were year levels with two or more sections as indicated in the total number of students from first to fourth year. The total enrolment was more than 1000 for the four year levels with 50 students in a class and that were at least 10 sections which meant that there were year levels with more than two sections of 50 students in a class. The data indicated that there were more sections in the first year in Wright National School in SY 2004-2005, but based on the enrolment data, there was a decrease in the first year enrolment in the succeeding year.

Teachers and Their Qualifications

The teachers and their qualifications were discussed in terms of age, civil status, area of specialization, teaching load, length of service, highest educational qualification, subjects handled, and years in teaching Physics. These are presented in Table 2.

Casandig National High School. This school - respondent had 10 high school teachers. Table 2 presents their age, civil status, area of specialization, teaching load, length of service, highest educational qualification, subjects handled, and years in teaching Physics.

Table 2

Teachers and their Qualifications of the School -Respondents

School - Respondents	Age	Civil Status	Area of specialization	Load	Length of service	Highest Educ. Qualification	Subjects' Handled	Years in Teaching Physics
Casandig NHS Summary	21=1 22=1 29=1 30=3 31=1 35=1 37=1 43=1	S=1 M=9	Math = 3 Eng.=2 Fil= 1 History-2 Phys/Chem= 2	3=2 4=1 5=4 6=3	Less 1= 2 1=2 2=1 3=1 6=2 12=1 15=1	BSED = 4 Ma UNITS = 6	A.P. =2 I.S.=1 Biology=1 Chemistry=1 Math=3 English = 2 Filipino=2 MAPEH=3 Values = 3 Physics = 1	15= 1 0 = 9
Mean	30.8 yrs.			5 loads	4.74 yrs.		-	1.5 yrs.
SD	6.53			1 load	5.09 yrs.		-	4.74 yrs.
Lawaan NHS Summary	28=1 30=1 47=1 48=1 52=1	S=2 M=3	Eng = 1 Physics =2 Math = 1 TLE = 1	4=2 5=1 6=1 7=1	3=1 5=1 7=1 15=1 16=1	BSED =2 MA units =2 MA Grad = 1	A.P. =2 IS=1 Biology=1 Chemistry=1 Math=2 Eng = 1 Fil=2 TLE=1 Values = 3 Physics = 1 MAPEH=1	0=3 1= 1 4 =1
Mean	41 yrs.			5 loads	9.2 yrs.		-	1 yr.
SD	11.14 yrs.			1 load	5.93 yrs.		-	1.73 yrs.
Tenani IS Summary	22=1 23=1 25=1 29=1	S=2 M=2	Math = 1 Biology=1 Chem=1 T.H.E. =1	4=1 6=2 7=1	1=1 2=1 2.5=1 3=1	BSED=2 MA units =2	Math=2 Eng =1 Biology=1 Chem.=1 IS=1 Phys=1 Fil. =1 MAPEH=1 Values=1	0=3 1=1
Mean	24.75 yrs.	-	-	6 loads	2.125 yrs.	-	-	.25 yr.

School - Respondents	Age	Civil Status	Area of specialization	Load	Length of service	Highest Educ. Qualification	Subjects' Handled	Years in Teaching Physics
Wright NHS								
	20s=2 30s=13 40s=10 50s=3 60s=1	S=4 M=25	Math – 4 English – 6 Gen. Science - 1 Physics-chem. – 3 MAPEH - 2 Soc. Scie. – 4 P.E. – 1 Garments – 1 T.L.E. - 5	5=6 6=10 7=8 8=2 9=1	1-5=7 6-10=7 11-15=3 16-20=6 21-25=4 25-30=2	BSED=6 MA units=19 MA Degree=3	A.P. =5 Integrated Science= Biology=2 Chemistry= Math=3 English = 2 Filipino=2 MAPEH=3 Values = 3 Physics = 1	0 =27 7=1 10=1
Mean	40.48 yrs.			7 loads			-	1.5 yrs.

As to age, the youngest teacher was 21 years old and the oldest was 43 years old. The mean age was 30.8 years old and the SD value was 6.53 years, which showed that the teachers in this school - respondent were in their early 30s.

As to civil status, the 10 teachers' civil statuses were distributed as follows: one was single, and nine of them were married. The data showed that the majority of the respondents were married.

As to area of specialization, of the 10 teachers in the school – respondent, one of them was major in Filipino; two were major in English; three were major in Mathematics; two were major in Physics-Chemistry; one was a major in Social Studies; and one was a major in History. It can be gleaned in the summary from Table 2 that there were more major in math, followed by English and Physics-Chemistry. None was a major in Music, Arts, Physical Education and Health (MAPEH).

As to subject load, some of the teachers were given three, four, five and six loads. Three of them had six loads; four with five loads; one with four loads, and finally, two of them had three loads. Table 2 also reflects that, three of the teachers carried the maximum number of six loads while the rest have five and less loads which can be classified as under loaded.

As to length of service, majority of the teachers in the school – respondent were new to their job. The oldest had a length of service of 15 years; followed by 12 years; two with six years, and the youngest had a length of service of less than a year. Two of them had less than a year (three months and nine months), two had taught for one year and one for two years. The mean length of service for the teachers in the respondent–school is 5.8 years, which shows that they were still new to their work.

As to highest educational qualification, six teachers earned units leading to a master's degree, and four of them were in their undergraduate degree Bachelor of Secondary Education (BSED). The data manifested that the majority of the teachers in the school – respondent were not motivated to upgrade their teaching competence by studying towards earning for a master's degree since, not one of them had a graduate degree. They must be encouraged to pursue graduate studies.

As to subjects handled, some teachers taught 3 subjects, others two, some, one only. It can be implied from the subjects handled or subject load plus enrolment of the different year levels that the subject(s) handled by one teacher, if for example it is Filipino, and he/she has six loads, that the teacher concerned

handled all the Filipino subjects from first year to fourth year and also that there were year levels with more than one section.

As to years in teaching Physics, the Table 2 further shows that only one teacher taught the subject for 15 years, while the rest of the teacher-respondents never taught Physics. The mean obtained for years of teaching Physics for the teachers in the school – respondent was 1.5 years and the SD value was 4.74 years.

Lawaan National High School. This school – respondent had five high school teachers. Table 2 presents their age, civil status, area of specialization, teaching load, length of service, highest educational qualification, subjects handled, and years in teaching Physics.

As to age, the youngest teacher was 28 years old and the oldest was 52 years old. The mean age was 41 years old and the SD value was 11.14, which shows that the teachers in this school – respondent were middle aged.

As to civil status, the five teachers' civil status was distributed as follows: two were single and three of them were married. The data on Table 2 shows that the majority of the respondents were married.

As to area of specialization, of the five teachers in the school – respondent, one of them was a major in English, one was a major in Mathematics, one a major in Technology and Livelihood Education (TLE) and two of them were majors in Physics. The data showed that no teacher was major in Filipino, Chemistry, History, Social Studies, and MAPEH. This data indicated that there were teachers who taught subjects in this school which were not their major.

As to subject load, two teachers were given four loads each, each one had either five, six, and seven loads. As reflected in the enrolment in Table 2, there were four – year - level classes of one section for every year level. Because of the small enrolment, the teachers were unloaded.

As to the length of service, the teachers in the school – respondent were not new to their job. The oldest length of service was 16 years, and the youngest was three years. The mean length of service for the teachers in the school – respondent was 9.2 years, which showed that they were not new to their work having taught for nearly 10 years for majority of them. The SD for length of service was 5.93 years which means that their length of service varied from the mean length of service.

As to highest educational qualification, one teacher had a master's degree, two had earned units leading to a master's degree, and two were in their undergraduate degree (BSED). The data showed that the majority of the teachers in the school – respondent were working towards attaining a master's degree, but two of them must be encouraged to pursue graduate studies.

As to subjects handled, one teacher taught all of the mathematics subjects from first to the fourth year; one teacher taught all the TLE subjects, another taught five subjects namely: Biology, Chemistry, Araling Panlipunan 1 and 4, and Values or handled five high school subjects, and others, handled three subjects. It can be gleaned from Table 2 that not one of the teachers was a major in Filipino, and MAPEH, but they handled these subjects, which implied that the teachers teaching

these subjects were not their field of specialization. This would mean that they should be trained to teach these subjects by at least attending seminars or in-service training or taking advance studies.

As to years in teaching Physics, Table 2 further shows that there were two Physics majors, one teacher has taught Physics for one year and the other one has taught Physics for four years. The Table showed that at present, one of the Physics teachers did not teach Physics. The mean obtained for years of teaching Physics for the teachers in the school – respondent was one year and the SD value was 1.73 years.

Tenani Integrated School. This school – respondent had four high school teachers. Table 2 presented their age, civil status, area of specialization, teaching load, length of service, highest educational qualification, subjects handled, and years in teaching Physics.

As to age, the youngest teacher was 22 years old and the oldest was 29 years old. The mean age was 24.75 years old and the SD value was 3.10 years, which showed that the teachers in this school – respondent were in their 20s for all of them.

As to the civil status, the four teachers' civil status was distributed as follows: two were single and the other two were married. The data further shows that the four teacher-respondent's civil status were divided equally into two civil statuses, single and married as two of them were single and two were married.

As to the area of specialization, of the four teachers in the school – respondent, with one major in Mathematics, another major in Biology, and still another major in Chemistry, and the fourth a Technology Home Economics) (T.H.E.) major. There were no major in Filipino, English, History, and MAPEH. This data implied that some of the teachers taught this high school subjects which were not their major.

As to the subject load, the four teacher-respondents were given a minimum of four loads and a maximum of seven loads. As seen in the Table 2, two teachers had six loads, while one had seven loads, and one had four loads only. Since, the Tenani Integrated School was new completed high school, the other subjects were taught by the elementary teachers as indicated that there were only 23 loads and the Revised Basic Education Curriculum (RBEC) in the high school had eight subjects, with the special high school curriculum having add–on subjects.

As to length of service, the teachers in the school – respondent were new to their job. The oldest length of service was three years, and the youngest length of service was one year. The mean length of service for the teachers in the school – respondent, was 1.26 years, which further shows that they were new to their work.

As to the highest educational qualification, two of the four teachers had earned units leading to a master's degree, and two were in their undergraduate degree (BSED). The data further shows that majority of the teachers in the school – respondent, must be encouraged to pursue graduate studies.

As to the subjects handled, all of the four teachers handled two or more high school subjects. Some of them handled the same subjects from first to fourth year, while others handled different subjects in different year level.

As to years in teaching Physics, Table 2 shows that only one teacher taught the subject and his/her experience was for one year. The mean obtained for years of teaching Physics for the teachers in the school – respondent, was 0.25 year and the SD value was 0.5 year.

Wright National High School. This school – respondent, had 29 high school teachers. Table 2 presents their age, civil status, area of specialization, teaching load, length of service, highest educational qualification, subjects handled, and years in teaching Physics.

As to age, the youngest teacher was 24 years old and the oldest was 62 years old. The mean age was 40.48 years old and the SD value was 9.36, which showed that the teachers in this school – respondent, were quite young.

As to civil status, from the 29 teachers, four were single, and 25 of them were married. The data showed that the majority of the respondents were married.

As to area of specialization, of the 29 teachers in the school – respondent, two were major in Filipino, six were major in English, four were major in Mathematics, three were major in Physics-Chemistry, four were major in Social Studies, one was major in General science, two were major in MAPEH, one was major in P.E., one was major in Garments, and five were major in T.L.E.

As to subject load, some teachers were given seven loads each, many were given the regular six loads. There were others who had five loads, four loads and three loads. This must be because these teachers were given other school-related assignments.

As to length of service, the teachers in the Wright National High School were not new to their job. The oldest had been servicing for 29 years, and the youngest had less than a year. The mean for the length of service for the teachers in the school – respondent, was undetermined.

As to highest educational qualification, four teachers had master's degree, nineteen had earned units leading to a master's degree, and six had undergraduate degree (BSE/BSTE/BSIE). The data shows that the majority of the teachers in the Wright National High School were pursuing graduate degrees.

As to subjects handled, one teacher handled Biology subject; two teachers handled Chemistry; six teachers handled English; five teachers handled Filipino; three teachers handled Integrated Science; three teachers handled MAPEH; five teachers handled MATH; only one taught Physics; five teachers taught Araling Panlipunan; three teachers teaches T.L.E.; three handled Values; one taught research as an add-on subject in their school curriculum. This add – on subject was special curriculum offered in Wright National High School. It can be implied too, that the subjects handled and subject load plus enrolment at the different year levels, the subject(s) handled by one teacher, if for example it was Physics, and he/she had six loads that teacher concerned handled all the Physics or Science

subjects from first year to fourth year and also that there were year level with more than one sections.

As to years in teaching Physics, the same table shows that two teachers had taught the subject for 10 years and seven years respectively. At present, there was only one teacher who taught the subject, while the rest of the teacher-respondents never taught Physics. The mean obtained for years of teaching Physics for the teachers in the school – respondent, was 1.5 years and the SD value was 4.74 years.

Facilities and equipment. Table 3 presents the facilities and equipment of the school – respondents, in Paranas.

In Casandig National High School, the following apparatus were present: two alcohol lamps, five beakers, five beam balance, one dissecting set, five Erlenmeyer flask, one evaporating dish, four funnels, five graduated cylinder, six iron clamp, six iron stand, four medicine dropper, two microscope, one mortar and pestle, one petri dish, 15 spring balance, five stirring rod, 25 test tube, five test tube holder, six test tube rack. However, the following apparatus were not available: prism, magnifying lens, reagent bottle, Bunsen burner, thermometer, and distilling flask, apparatuses that are required in Physics class.

As to supplies, Table 3 reveals that there was no supply in the school – respondent, as indicated in the response of zero.

As to models and charts, the school – respondent, had five models and five charts.

As to science projects, the school – respondent, had six science projects.

With respect to physical facilities the following were present in the school – respondent: ceiling fan/ wall fan - 30 pcs, classroom size-7x8, overhead projector-one piece, computer-11 units, LCD projector-one unit, and 2 units DVD player. it was noticed that there were no air conditioning unit, laboratory table, demonstration table, water sinks, graphing board, emergency lamp, generator, restrooms, shower room, lightings (wattage), cassette player and gas outlet.

In Lawaan National High School, the following apparatus were present: one pc alcohol lamp, one pc evaporating dish, two pcs medicine dropper, one microscope, one stirring rod, one test tube and thermometer. However, the following apparatus were not available: beaker, beam balance, dissecting sets, Erlenmeyer flask, funnel, graduated cylinder, iron clamp, iron stand, mortar and pestle, petri dish, spring balance, test tube holder, test tube rack, prism, magnifying lens, reagent bottle, Bunsen burner, thermometer, and distilling flask.

As to supplies, the Table revealed that there was no supply in the school – respondent, as indicated in the response of zero.

As to models and charts, the school – respondent, had one pc. model and five charts as indicated in their response.

As to science projects, the school – respondent, has two science projects.

With respect to Physical facilities the following were present in the school – respondent: two ceiling fan/wall fan, 11 computers, one demonstration table , graphing board, and classroom size-7x8. It was noticed that there were no air

Table 3

Facilities and Equipment of the School -Respondents

Facilities and Equipment									
	School -Respondents					School -Respondents			
A.1 Apparatus	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS	A.2 Supplies	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS
1. Alcohol Lamp	2	1	0	5	1. Acetone	0	0	0	0
2. Beaker	5	0	0	5	2. Acetic Anhydride	0	0	0	0
3. Beam Balance	5	0	0	0	3. Ammonium Chloride	0	0	0	0
4. Bunsen burner	0	0	0	0	4. Ammonium Hydroxide	0	0	0	0
5. Distilling Flask	0	0	0	0	5. Ammonium Phosphate	0	0	0	0
6. Dissecting Sets	1	0	0	0	6. Benzene	0	0	0	0
7. Erlenmeyer flask	5	0	0	5	7. Borax Powder Tech	0	0	0	0
8. Evaporating Dish	1	1	1	0	8. Calcium Carbonate	0	0	0	0
9. Funnel	4	1	1	0	9. Calcium Chloride	0	0	0	0
10. Erlenmeyer flask	5	0	0	5	10. Calcium Sulfate	0	0	0	0
11. Iron Clamp	6	0	0	25	11. Chloroform	0	0	0	0
12. Iron Stand	6	0	0	25	12. Copper Sulfate	0	0	0	0
13. Magnifying lens	0	1	1	1	15.Iron Filings	0	0	0	0
14. Medicine dropper	4	2	3	0	16. Ferric Oxide	0	0	0	0
15. Microscope	2	1	0	0	17. Feric Sulfate	0	0	0	0
16. Mortar and pestle	1	0	0	2	18. Feric Sulfide	0	0	0	0
17. Petri Dish	1	0	0	2	19.Glycerin	0	0	0	0
18. Prism	0	0	0	0	20. Glycerol	0	0	0	0
19. Reagent Bottle	0	0	0	0	21. Glucose	0	0	0	0
20. Spring Balance	15	0	0	5	22. Hydrogen Peroxide	0	0	0	0
21. Stirring rod	5	1	0	0	23. Hydroquinone	0	0	0	0
22. Test Tube	25	1	0	20	24. Iodine Crystals	0	0	0	0
23. Test Tube holder	5	0	0	10	25. Isopropyl Alcohol	0	0	0	0
24. Test tube rack	6	0	0	10	26. Lead Acetate Trihedral	0	0	0	0
25.Thermometer	0	1	0	5	27. Lead Nitrate	0	0	0	0

Facilities and Equipment								
	School -Respondents					School -Respondents			
A.1 Apparatus	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS	A.2 Supplies	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS
B. Models/ Charts	5	5	4	0	28. Magnesium Acetate	0	0	0	0
C. Science Projects	6	2	3	0	29. Magnesium Chloride	0	0	0	0
D. Physical Facilities					30. Mercury	0	0	0	0
1.Laboratory Table	0	0	1	1	31. Mercuric Oxide	0	0	0	0
2.Demonstration Table	0	1	1	1	32. Methyl Alcohol	0	0	0	0
3.Water Sinks	0	0	1	0	33.Petroleum Ether	0	0	0	0
4.Graphing Board	0	1	1	0	34. Plastic of Paris	0	0	0	0
5.Emergency Lamp	0	0	0	0	35.Potassium Dichromate	0	0	0	0
6.Generator	0	0	0	0	36.Potassium Permanganate	0	0	0	0
7.Restrooms	0	0	0	2	37.Potassium Sulfate	0	0	0	0
8.Shower room	0	0	0	0	38. Silver Nitrate	0	0	0	0
9.Ceiling Fan/ Wall Fan	3	2	1	2	39. Soda Ash	0	0	0	0
10.Air Condition	0	0	0	3	40.Sodium Chloride	0	0	0	0
11. Lightings (Wattage)	0	0	40w	40	41. Sodium Hydrogen Phosphate	0	0	0	0
12. Classroom size	7x8	7x8	7x8	7x8	42. Sodium hydroxide	0	0	0	0
13. Overhead projector	0	0	0	0	43. Sodium Peroxide	0	0	0	0
14. Computer	11	11	11	21	44.Tin Chloride	0	0	0	0
15. LCD Projector	0	0	0	0	45.Urea (Solid Crystal)	0	0	0	0
16. DVD player/	2	0	0	0	46. Zinc Sulfate	0	0	0	0
17. Cassette player	0	0	0	0					
18. Gas Outlet	0	0	0	0					

conditioning unit, laboratory table, generator overhead projector, LCD projector, DVD player, water sinks, emergency lamp, restrooms, shower room, lightings (wattage), cassette player and gas outlet.

In Tenani Integrated School, the following apparatus were present: one evaporating dish, one funnel, one magnifying lens, and three medicine dropper. However, the following apparatuses were not available: alcohol lamp, prism, reagent bottle, Bunsen burner, and distilling flask. beaker, beam balance, microscope, stirring rod, test tube and thermometer, dissecting sets, Erlenmeyer flask graduated cylinder, iron clamp, iron stand, mortar and pestle, petri dish, spring balance, test tube holder, and test tube rack.

As to supplies, Table 3 revealed that there was no supply in the school - respondent as indicated in the response of zero.

As to models and charts, the school – respondent had four models and three charts.

As to science projects, the school - respondents had three science projects.

With respect to physical facilities, the following were present in the school – respondent: one ceiling fan/ wall fan, classroom size-7x8, 11 computer, one laboratory table, one demonstration table, and one graphing board. It was noticed that there were no air conditioning unit, water sinks, emergency lamp, generator, overhead projector, LCD projector, and DVD player, restrooms, shower room, lightings (wattage), cassette player and gas outlet.

In Wright National High School, the following apparatuses were present: five alcohol lamp, five beaker, five Erlenmeyer flask, four funnel, five graduated cylinder, 25 iron clamp, 25 iron stand, four medicine dropper, one magnifying lens, two mortar and pestle, two petri dish, five spring balance, 20 test tube, 10 test

tube holder, and 10 test tube rack. However, the following apparatuses were not available: prism, reagent bottle, Bunsen burner, thermometer, distilling flask beam balance, dissecting sets, evaporating dish, microscope, and stirring rod.

As to supplies, Table 3 reveals that there was no supply in the school - respondent as indicated in the response of zero.

As to models and charts, the school – respondent had five models and five charts.

As to science projects, the respondent-school had six science projects.

With respect to physical facilities, the following were present in the school – respondent: two ceiling fan/wall fan, three air conditioning unit, classroom size-7x8, one laboratory table, one demonstration table, two restrooms, lightings (wattage)-40w, and 21 computer. It was noticed that there were no overhead projector, LCD projector, DVD player, water sinks, graphing board, emergency lamp, generator, shower room, cassette player and gas outlet.

Library holdings. Table 4 presents the library holdings of the school - respondents in Paranas.

In Casandig National High School, the following textbooks were present: English I-50 copies, English II-56 copies, English III- 56 copies, English IV-45 copies, Science I-133 copies, Science II-94 copies, Science III-86 copies, Science IV-60 copies, Math I-133 copies, Math II-86 copies, Math III- 86 copies, Math IV-60 copies, Filipino I-50 copies, Filipino II-56 copies, Filipino III- 56 copies, Filipino IV-

Table 4

Library Holdings of the School -Respondents

	Library Holdings									
	School -Respondents						School -Respondents			
A. Textbooks	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS	B.	Periodicals	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS
1. English I	50	50	0	464	1.	Newspaper	0	0	0	0
2. English II	56	50	0	309	2.	Tabloid	0	0	0	0
3. English III	56	50	0	171	3.	Magazines	0	0	0	0
4. English IV	45	50	0	208	C.	**Journals**				
5. Science I	133	45	20	422	1.	Teachers' journals	0	0	0	0
6. Science II	94	45	0	364	2.	Bato Balani	0	0	0	0
7. Science III	86	45	0	338	D.	**Multimedia**				
8. Science IV	60	45	0	202	1.	Computers	11	11	11	21
9. Mathematics I	133	50	0	266	2.	Others	0	0	0	1
10. Mathematics II	86	50	0	561	3.	Video CDs and DVD	1	1	0	2
11. Mathematics III	86	50	0	460	4.	Cassette Player	0	0	0	1
12. Mathematics IV	60	50	0	415	5.	TV set	1	1	0	2
13. Filipino I	50	0	0	0						
14. Filipino II	56	0	0	0						
15. Filipino III	56	0	0	0						
16. Filipino IV	45	0	0	0						
17. Social Studies I	66	0	0	464						
18. Social Studies II	90	0	0	319						
19. Social Studies III	50	0	0	0						
20. Social Studies IV	49	0	0	0						
21. T.L.E. I	0	0	0	0						
22. T.L.E. II	0	0	0	0						
23. T.L.E. III	0	0	0	0						
24. T.L.E. IV	0	0	0	0						
25. MAPEH I	25	50	30	414						
26. MAPEH II	25	50	10	0						
27. MAPEH III	25	50	10	338						
28. MAPEH IV	25	50	0	189						
29. VALUES I	0	0	0	0						
30. VALUES II	0	0	0	0						
31. VALUES III	0	0	0	0						
32. VALUES IV	0	0	0	0						

49 copies, Social Studies I- 66 copies, Social Studies II-90 copies, Social Studies III-

50 copies, Social Studies IV-49 copies, MAPEH I-25 copies, MAPEH II-25 copies,

MAPEH III-25 copies, and MAPEH IV-25 copies. It was revealed from the table that there were no textbooks in T.L.E. and Values in all year levels as indicated in school – respondent's response.

As to periodicals, the school – respondent had no periodicals such as newspaper, tabloid, and magazines.

As to journals, the respondent-school has no journals such as the Teachers' Journals and Bato Balani.

As to multimedia, the school – respondent had 11 units of computers, one unit-Video CDs and DVD, and 1-TV set. However, the school – respondent had no cassette player and LCD projector.

In Lawaan National High School, the following textbooks were present: English I-50 copies, English II-50 copies, English III- 50 copies, English IV-50 copies, Science I- 45 copies, Science II- 45 copies, Science III- 45 copies, Science IV-45 copies, Math I-50 copies, Math II-50 copies, Math III- 50 copies, Math IV-50 copies, MAPEH I- 50 copies, MAPEH II- 50 copies, MAPEH III- 50 copies, and MAPEH IV- 50 copies. As revealed from the same Table 3 that there were no textbooks in Filipino, T.L.E., Araling Panlipunan, and Values in all year levels as indicated in school – respondent's responses.

As to periodicals, the school – respondent had no periodicals such as newspaper, tabloid, and magazines.

As to journals, the school – respondent had no journals such as the Teachers' Journals and Bato Balani.

As to multimedia, the school – respondent had 11-computers, one-Video CDs and DVD, and TV set-one. However, the school – respondent had no cassette player and others such as LCD projector.

In Tenani Integrated School, the following textbooks were present: Science I-20 copies, MAPEH I-30 copies, MAPEH II-10 copies, and MAPEH III-10 copies. It was revealed from the table that there were no textbooks in English, Filipino, Math, T.L.E. Social, and Values in all year levels and Science II-IV, as well as MAPEH IV as indicated in school responses.

As to periodicals, the school – respondent had no periodicals such as newspaper, tabloid, and magazines.

As to journals, the school - respondents had no journals such as the Teachers' Journals and Bato Balani.

As to multimedia, the school – respondent had computers -11. However, the school – respondent had no cassette player video CDS, DVD, and TV set and others such as LCD projector.

In Wright National High School, the following textbooks were present: English I -464 copies, English II- 309 copies, English III- 171 copies, English IV-208 copies, Science I-422 copies, Science II-364 copies, Science III-338 copies, Science IV-202 copies, Math I-266 copies, Math II-561 copies, Math III- 86 copies, Math IV-460 copies, Social Studies I- 464 copies, Social Studies II-319 copies, MAPEH I-414 copies, MAPEH II- 338 copies, and MAPEH IV-189 copies. It was

revealed from the table that there were no textbooks in MAPEH III, Social Studies III, Social Studies IV, and T.L.E., Filipino, Values in all year levels as indicated in school responses.

As to periodicals, the school – respondent had no periodicals such as newspaper, tabloid, and magazines.

As to journals, the school – respondent had no journals such as the Teachers' Journals and Bato Balani.

As to multimedia, the school – respondent had the following multimedia: computers -21, Video CDs and DVD -two, and TV set-two, cassette player -one, and LCD projector.

Relevant co-curricular activities. Table 5 presents the relevant co - curricular Activities of the four school - respondents in Paranas.

Table 5 showed the relevant co-curricular activities of the school – respondents. As to seminar – workshops conducted and participated by the school – respondents, the Casandig National High School and the Wright National High School occasionally participated in environmental watching while the Lawaan National High School and the Tenani Integrated School never participated in. In the science clubbing, the Casandig National High School and the Tenani Integrated School occasionally participated, while the Lawaan National High School and the Wright National High School never participated in the science clubbing. In the out – of - school science education program, all of the school –

Table 5

Relevant Co - Curricular Activities of School - Respondents

Extra-Curricular Activities	FREQUENCY			
	Casandig NHS	Lawaan NHS	Tenani IS	Wright NHS
1. SEMINAR – WORKSHOPS				
Environmental watching	(3)OC	(1)N	(3)OC	(1) N
Science clubbing	(3)OC	(1)N	(3)OC	(1) N
Out of school science education Program	(1)N	(1)N	(1) N	(1)N
Symposium on environmental protection	(2)S	(1)N	(3)OC	(3) OC
Science Journalism	(1)N	(1)N	(1)N	(1)N
2.SCIENCE FAIR				
School	(1)N	(1)N	(3)OC	(5) A
Division	(1)N	(1)S	(1)N	(1)N
Regional	(1)N	(1)N	(1)N	(1)N
National	(1)N	(1)N	(1)N	(1)N
3.SCIENCE CAMP				
School	(5)A	(5)A	(5)A	(5)A
Division	(3)OC	(1)N	(1)O	(5) A
Regional	(1)N	(1)N	(1)N	(4)O
National	(1)N	(1)N	(1)N	(1)N
4.SCIENCE EXCURSION/ FIELD TRIPS	(3)OC	(2)S	(1)N	(4)O
5.ESTABLISHING SCIENCE MUSEUM	(1)N	(1)N	(1)N	(1)N
6.SCIENCE CLUB BULLETIN	(5)A	(5) A	(3)OC	(5)A
7.SCHOOL SCIENCE PARKS & GARDEN BEAUTIFICATION	(2) S	(5)A	(5)A	(5)A
8.SCIENCETIFIC FILM FORUM	(1)N	(1) N	(3)OC	(1) N
9.SCIENCE FILM SHOWING	(4)O	(3) OC	(3) OC	(4) O
10.SCIENCE CLUB PUBLICATION				
School	(1)N	(1)N	(1)N	(1)N
Division	(1)N	(1)N	(1)N	(1)N
Regional	(1)N	(1)N	(1)N	(1)N
National	(1)N	(1)N	(1)N	(1)N
11.FOREST REFORESTATION AND CONSERVATION				
Tree Planting	(4)O	(2)S	(3)OC	(5)A
Contour farming	(1)N	(1)N	(2)S	(1)N
12.ENVIRONMENTAL PROTECTION &CONSERVATION				
Community clean –up drive	(4)O	(4)O	(3)OC	(5)A
Coastal clean – up drive	(1)N	(1)N	(1)N	(1)N
Hillside Riprapping	(1) N	(1)N	(1)N	(1)N
13.MEMBERSHIP TO SCIENCE ORGANIZATION	(5)A	(5)A	(1)N	(3)OC
Weighted Mean	2.07	1.75	2.17	2.31
Interpretation	Seldom	Seldom	Seldom	Seldom
$\sum Xw$	60	51	63	67

Legend: Weight   Description/Interpretation
      (5)   A – Always
      (4)   O – Often
      (3)   OC – Occasionally
      (2)   S – Seldom
      (1)   N – Never

respondents never participated. In the symposium on environmental protection, the Tenani Integrated School and the Wright National High School occasionally participated, while the Casandig National High School seldom participated and the Lawaan National high school never participated. In the science journalism, all of the school - respondents never participated. In the science fair, the Wright National High School always participated and conducted at the school level, the Tenani Integrated School occasionally participated, and both the Casandig National High School and the Lawaan National High School never participated nor conducted science fair at school level. For the division, regional and national levels, all of the school - respondents never participated science fairs.

As reflected by the Table 5, the co - curricular activity always conducted by the school - respondents which was related to science was science camp at school level. For the division level, the Wright National High School always participated; the Casandig National High School occasionally participated; the Lawaan National High School seldom participated; and the Tenani Integrated School never participated in the science camp. For the regional level, only the Wright National High school often participated in science camp while the other three school - respondents never participated. For National level, all of the school - respondents never participated in the science camp.

As to science excursions/ field trips, the Wright National High School often participated; the Casandig National High School occasionally participated; the

Lawaan National High School seldom participated; and Tenani Integrated School never participated in science excursion / field trips.

As to establishing science museum, all of the school – respondents never established one.

As to science club bulletin, the Casandig National High School, the Lawaan National High School, and the Wright National High School always prepared science club bulletin while the Tenani Integrated School occasionally prepared science bulletin.

As to school science parks and garden beautification, the Lawaan NHS, the Tenani IS and the Wright NHS always underwent, while the Casandig NHS seldom did the school Science parks and garden beautification.

As to scientific film forum, the Tenani IS occasionally conducted, while the Lawaan NHS, the Wright NHS and the Casandig NHS never conducted scientific film forum.

As to science film showing, the Casandig NHS and the Wright NHS often conducted science film showing, while, the Lawaan NHS and the Tenani IS occasionally conducted science film showing.

As to science club publication, all of the school – respondents never participated nor put up any science publication in school, division, regional, and national level.

As to forest reforestation and conservation, such as Tree Planting, the Wright NHS always conducted, the Casandig NHS often conducted, the Lawaan

NHS seldom conducted and the Tenani IS occasionally conducted. For contour farming, only Tenani IS conducted while the other three school – respondents never conducted contour farming.

As to Environmental Protection and Conservation, such as Coastal Clean – Up Drive, the Wright NHS always conducted, the Casandig NHS and the Lawaan NHS often conducted, and the Tenani IS occasionally conducted Coastal Clean-Up Drive. For Community Clean –Up Drive and Hillside Riprapping, all of the school – respondents never had one.

As to membership to science organization, the Casandig NHS and the Lawaan NHS always participated in the membership to science organization, while the Wright NHS occasionally conducted and the Tenani IS never participated.

Student –Respondents Performance in the National Achievement Test (NAT) for the Last Five Years

The performance of the student-respondents in the school - respondents in the NAT for the last five years were as follows:

For the Casandig NHS, the MPS results for the last five years fluctuated. In School Year 2005-2006, the MPS obtained was 72.83 percent; for School Year 2006 2007, the MPS obtained was 73.00 percent; for School Year 2007-2008 was 76.63 percent; for S.Y. School Year 2008-2009 was 68.74 percent; and for School Year 2009-2010 was 69.63 percent. The results showed that there was an increase and a

decrease in MPS of the school in the NAT. This reflected in Table 6 that for five school years, in four of these, the school was not able to reach the target MPS of 75.00 percent.

Table 6

Student –Respondents Physics Performance in the National Achievement Test (NAT) and National Career Assessment Examination (NCAE) for the Last Five Years

School Years	Performance in Physics							
	Casandig NHS		Lawaan NHS		Tenani IS		Wright NHS	
	NAT	NCAE	NAT	NCAE	NAT	NCAE	NAT	NCAE
SY 2005-2006	Mean=72.83 SD= 4.95 n=40	NAD	Mean=82.92 SD= 4.89 n=20	NAD	NAD	NAD	Mean=75.34 SD= 10.21 n=144	NAD
SY 2006-2007	Mean=73.00 SD = 7.25 n=95	Mean=41.05 SD= 23.84 n=57	Mean=92.06 SD= 7.53 n=38	Mean=73.08 SD= 6.22 n=30	NAD	NAD	Mean=53.11 SD= 16.06 n=328	Mean=75.01 SD= 4.95 n=185
SY 2007-2008	Mean=76.63 SD= 11.02 n= 101	Mean=87.50 SD= 3.16 n=56	Mean=79.46 SD= 11.90 n= 31	Mean=70.22 SD= 3.45 n=23	NAD	NAD	Mean=75.37 SD= 17.47 n=292	Mean=41.79 SD= 16.26 n=166
SY 2008-2009	Mean=69.63 SD= 11.91 n=103	Mean=64.60 SD= 23.94 n=88	Mean=54.10 SD= 9.16 n=26	Mean=27.67 SD= 6.26 n=30	NAD	NAD	Mean=35.59 SD= 15.89 n=310	Mean=45.26 SD= 20.69 n=309
SY 2009-2010	Mean=68.74 SD= 4.95 n=62	Mean=71.95 SD= 9.73 n=86	Mean=55.69 SD= 4.62 n=36	Mean=37.50 SD= 3.61 n=24	NAD	NAD	Mean=66.74 SD= 11.56 n=261	Mean=49.41 SD= 6.36 n=259
SY 2010-2011	NAD	Mean=25.81 SD= 6.41 n=86	NAD	Mean=64.91 SD= 3.30 n=28	NAD	NAD	NAD	Mean=75.33 SD= 7.85 n=269

Legend: NAD – No Available Data

For Lawaan NHS, the MPS results for the last five years also fluctuated. In School Year 2005-2006, the MPS obtained was 82.92 percent; in School Year 2006 2007, the MPS obtained was 92.06 percent; in School Year 2007-2008 was 79.46 percent; in S.Y. School Year 2008-2009 was 54.10percent; and for School Year 2009-

2010 was 55.69 percent. The results as shown in Table 5 there was an increase and a decrease in MPS of the school in the NAT. It can be noted in the table that for two school years of the five school years, the school was not able to reach the target MPS of 75.00 percent.

For Tenani IS there was no data available since the school for the past few years was not yet a complete secondary school.

For Wright NHS, the MPS results for the last five years also fluctuated. In School Year 2005-2006, the MPS obtained was 75.34 percent; in School Year 2006 2007, the MPS obtained was 53.11 percent; in School Year 2007-2008 was 75.37 percent; for S.Y. School Year 2008-2009 was 35.59 percent; and in School Year 2009-2010 was 66.74 percent. The results as shown by Table 5 there was an increase and a decrease in MPS of the school in the NAT. It can be noted from the table that for three school years of the five school years, the school was not able to reach the target MPS of 75.00 percent.

Student –Respondents Performance National Career Assessment Examination (NCAE) for the Last Five Years

The performance of the student-respondents in the school - respondents in the NCAE (Table 6) for the last five school years are as follows:

For the Casandig NHS, the MPS results for the last five school years fluctuated. In School Year 2005-2006, the MPS obtained was 41.05 percent; for School Year 2006 2007, the MPS obtained was 87.50 percent; for School Year 2007-

2008 was 64.60 percent; for S.Y. School Year 2008-2009 was 71.95 percent; and for School Year 2009-2010 was 25.81 percent. The results as shown by the Table 5 there was an increase and a decrease in MPS of the school in the NCAE. It can be noted in the table that for five school years, at four of these years, the school was not able to reach the target MPS of 75 percent.

For the Lawaan NHS, the MPS results for the last five school years also fluctuated. In School Year 2005-2006, the MPS obtained was 73.08 percent; for School Year 2006 2007, the MPS obtained was 70.22 percent; for School Year 2007-2008 was 27.67 percent; for S.Y. School Year 2008-2009 was 37.50 percent; and for School Year 2009-2010 was 64.91 percent. The results as shown by the Table 5, there was an increase and a decrease in MPS of the school in the NCAE. It can be noted in the table that for the five school years, the school was not able to reach the target MPS of 75 percent.

For the Tenani IS there was no data available since the school for the past few years was not yet a complete secondary school.

For the Wright NHS, the MPS results for the last five school years also fluctuated. In School Year 2005-2006, the MPS obtained was 75.01 percent; in School Year 2006 2007, the MPS obtained was 41.79 percent; in School Year 2007-2008 was 45.26 percent; for S.Y. School Year 2008-2009 was 49.41 percent; and for School Year 2009-2010 was 75.33 percent. The results showed in the Table 5, there was an increase and a decrease in MPS of the school in the NCAE. It can be noted

in the table that for three school years of the five school years, the school was not able to reach the target MPS of 75 percent.

Relationship between Student-Respondents
    Physics Performance in the National
    Achievement Test (NAT) and
    Profile of School-
    Respondents

The relationship between student –respondents' performance in the National Achievement Test (NAT) and the profile of the school - respondents (Table 7) revealed the following:

Enrolment. As to enrolment, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and enrollment was -0.38. The negative r value denoted an inverse relationship. This means that as enrolment of the school increased, the performance in the NAT of the school decreases. The computed t-value was -2.67 which absolute value was greater than the critical t-value that equaled 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Achievement Test (NAT) and enrollment" was rejected. This meant that the students' performance in the National Achievement Test (NAT) was related to school enrolment. The schools with more enrolment had low performance in the NAT.

Age. With respect to the teachers and their qualifications as to age, the computed r between the student –respondents' performance in the

Table 7

Relationship between Student –Respondents Physics Performance
in the National Achievement Test (NAT) and
Profile of School-Respondents

Physics Performance in the NAT VS Profile of Respondent-Schools as to:	r_{xy}	Fisher's t-value	$t_{tab;}$ $\alpha = 0.05$ df=42	Evaluation
Enrolment	-0.38	-2.67	2.02	S/Reject Ho.
Teachers and their Qualifications				
Age	-0.19	-1.28	2.02	NS/Accept Ho.
Civil Status	0.04	0.29	2.02	NS/Accept Ho.
Area of Specialization	0.26	1.77	2.02	NS/Accept Ho.
Teaching Load	-0.41	-2.90	2.02	S/Reject Ho.
Length of Service	-0.43	-3.06	2.02	S/Reject Ho.
Highest Educational Attainment	-0.15	-1.00	2.02	NS/Accept Ho.
Subjects Handled	0.28	1.89	2.02	NS/Accept Ho.
Years in Teaching Physics	0.13	0.86	2.02	NS/Accept Ho.
Facilities and Equipment				
Apparatus	-0.24	-1.60	2.02	NS/Accept Ho.
Supplies	0.07	0.44	2.02	NS/Accept Ho.
Models/Charts	0.45	3.30	2.02	S/Reject Ho.
Science Projects	0.45	3.30	2.02	S/Reject Ho.
Physical Facilities	-0.08	-0.54	2.02	NS/Accept Ho.
Library Holdings				
Textbooks	-0.54	-4.16	2.02	S/Reject Ho
Periodical		No Correlation		
Journal		No Correlation		
Multi-media	-0.27	-1.82	2.02	NS/Accept Ho.
Relevant Co-Curricular Activities				
Seminars & Workshop	0.03	0.21	2.02	NS/Accept Ho.
Science Fair	-0.43	-3.05	2.02	S/Reject Ho.
Science Camp	-0.39	-2.76	2.02	S/Reject Ho.
Science Excursion/ Field Trips	-0.89	-12.71	2.02	S/Reject Ho.
Establishing Science Museum		No Correlation		
Science Club Bulletin	-0.54	-4.21	2.02	S/Reject Ho.
School Science Parks & Garden Beatification	-0.45	-3.30	2.02	S/Reject Ho.
Scientific Film Forum		No Correlation		
Science Film Showing	-0.54	-4.21	2.02	S/Reject Ho.
Science Club Publication		No Correlation		
Forest Reforestation and Conservation	-0.37	-2.58	2.02	S/Reject Ho.
Environmental Protection & Conservation	-0.10	-0.64	2.02	NS/Accept Ho.
Membership to Science Organization	1.00	124.09	2.02	S/Reject Ho.

National Achievement Test (NAT) and age of the teachers was -0.19. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the school decreases as the teachers became older. The computed t-value was -1.28 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and age of the teachers" was rejected. This meant that the students' performance in the National Achievement Test (NAT) was related to age of the teachers.

Civil status. With respect to the teachers and their qualifications as to civil status, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the civil status of the teachers was 0.04. The computed t-value wa 0.29 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. This meant that the NAT performance of students under married teachers was higher than those under single teachers. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Achievement Test (NAT) and the civil status of the teachers" was accepted. This meant that the students' performance in the National Achievement Test (NAT) was related to the civil status of the teachers.

<u>**Area of specialization**</u>. With respect to the teachers and their qualifications as to area of specialization, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the area of specialization of the teachers was 0.26. This meant that NAT performance of students under teachers who were not major in science, handling the science subjects was poor, while those under the teachers with majors in science, had higher performance in the NAT. The computed t-value was 1.77 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Achievement Test (NAT) and the area of specialization of the teachers" was accepted. This meant that the performance in the National Achievement Test (NAT) was related to area of specialization of the teachers.

<u>**Teaching load**</u>. With respect to the teachers and their qualifications as to teaching load, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and teaching load of the teachers was -0.41. The negative r value denotes an inverse relationship. This meant that the performance in the NAT of the school decreased as the teachers were loaded with subjects. The computed t-value was - 2.90 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant

relationship between the student -respondents' performance in the National Achievement Test (NAT) and the teaching load of the teachers" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to teaching load of the teachers.

Length of service. With respect to the teachers and their qualifications as to length of service, the computed r between the student -respondents' performance in the National Achievement Test (NAT) and the length of service of the teachers was -0.43. The negative r value denoted an inverse relationship. This meant that schools' performance in the NAT increased under teachers who were new in the service, while schools with teachers who had more experience due to longer length of service, their NAT performance was poor or low. The computed t-value was - 3.06 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student -respondents' performance in the National Achievement Test (NAT) and the length of service of the teachers" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the length of service of the teachers.

Highest educational attainment. With respect to the teachers and their qualifications as to highest educational attainment, the computed r between the student -respondents' performance in the National Achievement Test (NAT) and highest educational attainment of the

teachers was -0.15. The negative r value denoted an inverse relationship. This means that schools' NAT performance was poor under teachers who were pursuing advance studies, while those under teachers who were in their under graduate degrees only had better performance. This must be because, even if the teachers were pursuing advance studies if their master's degree was not related to science, this would not contribute to the NAT performance of the students on the subject. The computed t-value was – 1.00 which absolute value wa less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the highest educational attainment of the teachers" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to highest educational attainment of the teachers.

Subjects handled. With respect to the teachers and their qualifications as to subjects handled, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the subjects handled of the teachers was -0.28. The negative r value denoted an inverse relationship. This meant that the more subjects handled by the teachers, the poorer was the school NAT performance, while the lesser the number of subjects, teachers handle the better the school NAT performance. The computed t-value was 1.89 which absolute value was less than the

critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the students –respondents' performance in the National Achievement Test (NAT) and subjects handled of the teachers" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to the subjects handled of the teachers.

Years in teaching Physics. With respect to the teachers and their qualifications as to years in teaching Physics, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the years in teaching Physics of the teachers was 0.13. This meant that the performance in the NAT of the schools was dependent on the number of years of the teachers teaching science, this was because experience counts. The computed t-value was 1.86 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the students –respondents' performance in the National Achievement Test (NAT) and years in teaching Physics" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to the years in teaching Physics of the teachers.

Apparatus. With respect to the facilities and equipment of the school as to apparatus, the computed r between the students – respondents' performance in the National Achievement Test (NAT) and the apparatus

was -0.24. The negative r value denoted an inverse relationship. This meant that the performance in the NAT decreased in schools with more apparatus and vice versa. This could mean that the teachers teaching science used demonstrations method than those with few apparatus and those with more apparatus had the same performance in the NAT. The computed t-value was -1.60 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the students –respondents' performance in the National Achievement Test (NAT) and apparatus" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to apparatus of the respondents-schools.

Supplies. With respect to the facilities and equipment of the school as to supplies, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the supplies was 0.07. This meant that the supplies of the school increased and the NAT performance. The computed t-value was 0.44 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and supplies" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to the supplies of the school – respondents.

<u>**Models /charts**</u>. With respect to the facilities and equipment of the school as to models/charts, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the models and charts was 0.45. The r value denoted an inverse relationship. This meant that the performance in the NAT of the schools with more models and charts was better than those of the schools with few models/charts. The computed t-value was 3.30 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the models / charts of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the number of models/charts of the school - respondents, so schools with more models and charts performed better than those with few.

<u>**Science projects.**</u> With respect to the facilities and equipment of the school as to science projects, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the science projects was 0.45. This meant that schools with more science projects had better NAT performance than the schools with few. The computed t-value was 3.30 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The

null hypothesis, "There is no significant relationship between the student –
respondents' performance in the National Achievement Test (NAT) and the
science projects of the school - respondents" was rejected. This meant that
the performance in the National Achievement Test (NAT) was related to
the science projects of the school - respondents. This implied that science
projects of the students helped in their performance in science in the NAT
because they used what they learned in the classroom in terms of science
concepts in their science projects.

    Physical facilities. With respect to the facilities and equipment of the
school as to physical facilities, the computed r between the student –
respondents' performance in the National Achievement Test (NAT) and the
physical facilities was -0.08. This meant that the performance in the NAT of
the schools with better science facilities was higher than those schools with
poor physical facilities. The computed t-value was -0.54 which absolute
value was less than the critical t-value that equaled to 2.02 at df = 42, α =
0.05 two tailed test. The null hypothesis, "There is no significant
relationship between the students –respondents' performance in the
National Achievement Test (NAT) and the physical facilities of the school -
respondents" was accepted. This meant that the performance in the
National Achievement Test (NAT) was not related to physical facilities of
the school- respondents. This implied that schools with better physical
facilities and those with poor, had the same performance in the NAT.

Textbooks. With respect to the library holdings of the school as to textbooks, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the textbooks was -0.54. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the schools with more textbooks was poorer than those with few textbooks. This could only imply that the textbooks in the library were adequate in number for the students, but they were not textbooks in science. The computed t-value was -4.16 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the textbooks of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the textbooks of the school - respondents that the more science textbooks the schools had, the better the NAT performance of the schools. This implied that there was a need for the school to purchase science textbooks for students' use.

Periodicals. With respect to the library holdings of the school as to periodicals, there was no correlation between the student –respondents' performance in the National Achievement Test (NAT) and the periodicals. This must be because one of the variables, periodicals, was constant. The schools had no periodicals per records.

Journals. With respect to the library holdings of the school as to journals, there was no correlation between the student –respondents' performance in the National Achievement Test (NAT) and the journals. This must be because one of the variables, journals, was constant. The schools had no journals per records.

Multimedia. With respect to the library holdings of the school as to multimedia, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the multimedia was - 0.27. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the school decreased as the number of multimedia increased. This implied that the available multimedia was not used in teaching science by the teachers. The computed t-value was -1.82 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the multimedia of the respondent -schools" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to multimedia of the school - respondents.

Seminars and workshops. With respect to the relevant co-curricular activities of the school as to seminar and workshops, the computed r between the student –respondents' performance in the National

Achievement Test (NAT) and the seminar and workshops was 0.03. This meant that the more teachers teaching science were sent to seminars, the better was the performance in the NAT. The computed t-value was 0.21 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the seminar and workshops of the school - respondents" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to the seminars and workshops of the teachers, hence, the schools with teachers who were sent to attend seminars and workshops in science had the same performance in the NAT with schools whose teachers were not sent to attend seminars and workshops.

Science Fair. With respect to the relevant co-curricular activities of the school as to science fair, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the science fair was -0.43. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the schools decreased as the schools had several scheduled science fairs. The computed t-value was -3.05 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in

the National Achievement Test (NAT) and the science fair of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to science fairs conducted/participated by the school - respondents. This implied that the number of science fairs of the schools should be limited because the students' and teachers' time for lectures and classes were used up from the conduct of these activities.

Science Camp. With respect to the relevant co-curricular activities of the school as to science camp, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the science camp was - 0.39. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the schools decreased as the schools conducted more science camp activities. This must be because classes were missed due to conduct of this activity. The computed t-value is -2.76 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Achievement Test (NAT) and the science camp of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the science camp of the school - respondents. This implied that the science camp

activities were one of the ways where students apply their knowledge in science concepts to concrete situations.

Science Excursion and Field Trips. With respect to the relevant co-curricular activities of the school as to science excursion and field trips, the computed r between the student – respondents' performance in the National Achievement Test (NAT) and the science excursion and field trips was -0.89. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the school decreased as the number of field trips/science excursions increased. This must be because classes were missed in preparation for the science excursions and the conducted science field trips. The computed t-value was -12.71 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the science excursions and field trips of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the science excursions and field trips of the school - respondents. This implied that the schools should expose their students to science excursions and field trips to have more learning in science.

Establishing Science Museum. With respect to the relevant co-curricular activities of the school as to establishing a science museum

resulted to no correlation between the student –respondents' performance in the National Achievement Test (NAT) and establishing a science museum. This must be because one of the variables, establishing a science museum was constant. The schools had no science museum per records.

Science Club Bulletin. With respect to the relevant co-curricular activities of the school as to science club bulletin, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the putting up of a science club bulletin was -0.54. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the school decreased as the number of science club bulletin increase. This implied that students did not read what was in the science bulletin. The computed t-value was -4.21 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the science club bulletin of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the number of club bulletin of the school - respondents.

School Science Parks and Garden Beautification. With respect to the relevant co-curricular activities of the school as to School Science Parks and Garden Beautification, the computed r between the student –

respondents' performance in the National Achievement Test (NAT) and the School Science Parks and Garden Beautification was -0.45. The negative r value denoted an inverse relationship. This meant that the schools that engaged in science parks and garden beautification had poorer performance in the NAT and vice versa. This must be because classes were missed out by students and teachers as they focused in the beautifications of science parks and garden. The computed t-value was -3.30 which absolute value was greater than the critical t-value that equaled 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the school science parks and garden beautification of the school - respondents" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to school science parks and garden beautification of the school - respondents. This implied that schools should engaged in science parks and garden beautification because this co – curricular activity was one way for students to apply their knowledge in science.

Scientific Film Forum. With respect to the relevant co-curricular activities of the school as to scientific film forum, this had no correlation between the student –respondents' performance in the National Achievement Test (NAT) and did not conduct scientific film forum as one of the science activities. This must be because one of the variables,

conducting scientific film forum was constant. The schools did not conduct scientific film forum per records.

Scientific Film Showing. With respect to the relevant co-curricular activities of the school as to scientific film showing, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the scientific film showing was -0.54. The negative r value denotes an inverse relationship. This meant that the performance in the NAT of the school decreased as the number of scientific film showing increased. The computed t-value was -4.21 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the scientific film showing in the respondent-schools" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the conduct of the scientific film showing of the school – respondents.

Science Club Publication. With respect to the relevant co-curricular activities of the school as to science club publication, no correlation was found between the student – respondents' performance in the National Achievement Test (NAT) and the science club publication. This must be

because one of the variables, science club publication was constant. The schools had no science club publication per records.

Forest Reforestation and Conservation. With respect to the relevant co-curricular activities of the school as to forest reforestation and conservation, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the forest reforestation and conservation was -0.37. The negative r value denoted an inverse relationship. This meant that the performance in the NAT of the school decreased as the school engaged in the reforestation and conservation activities. The computed t-value was -2.58 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the forest reforestation and conservation of the school - respondent" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to the forest reforestation and conservation of the school - respondents. The schools should engage in this kind of activity because this is one way of training their students in applying their science learning.

Environmental Protection and Conservation. With respect to the relevant co-curricular activities of the school as to environmental protection

and conservation, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the environmental protection and conservation was -0.10. The negative r value denoted an inverse relationship. This meant that the more the schools engaged in environmental protection and conservation activities the poorer was the performance of their students in the NAT. This could imply that environmental protection and conservation activities was not included in the knowledge tested in the NAT. The computed t-value was -0.64 which absolute value was less than the critical t-value that equaled 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Achievement Test (NAT) and the status of the school - respondents" was accepted. This meant that the performance in the National Achievement Test (NAT) was not related to the environmental protection and conservation conducted by the school - respondents. This meant that schools, which conducted this kind of activity and schools which did not conduct this activity, had the same NAT performance.

Membership to Science Organization. With respect to the relevant co-curricular activities of the school as to membership to science organization, the computed r between the student –respondents' performance in the National Achievement Test (NAT) and the membership to science organization was 1.00. This meant that schools which were

members in the science organizations had better performance in the NAT compared to schools who were not members to science organizations. The computed t-value was 124.09 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Achievement Test (NAT) and the membership to science organization" was rejected. This meant that the performance in the National Achievement Test (NAT) was related to membership to science organization in the schools. This implied that schools should be members of science organizations for them to avail of the science seminars and trainings for teachers and students, scholarships for students and teachers, and other related science programs which would increase the performance of te students in the NAT and other related government tests.

Relationship between Student-Respondents Physics Performance in the National Career Assessment Examination (NCAE) and Profile of School-Respondents

The relationship between the student – respondents' performance in the National Career Examination (NCAE) and the profile of the school - respondent (Table 8) revealed the following:

Table 8

Relationship between Student –Respondents Physics Performance
in the National Career Assessment Examination (NCAE)
and Profile of Respondent-Schools

Physics Performance in the NCAE VS Profile of Respondent-Schools as to:	r_{xy}	Fisher's t-test	t-value $\alpha = 0.05$ df=42	Evaluation
Enrolment	0.040	0.26	2.02	NS/ Accept Ho.
Teachers & their Qualifications				
Age	-0.23	-1.54	2.02	NS/ Accept Ho.
Load	-0.01	-0.06	2.02	NS/ Accept Ho.
Subjects' Handled (1, 2, 3, 4, 5 Subjects)	-0.25	-1.67	2.02	NS/ Accept This.
Years Teaching Physics	0.02	0.16	2.02	NS/ Accept Ho.
Civil Status (M=2, S=1)	0.09	0.61	2.02	NS/ Accept Ho.
Area Of Specialization	-0.07	-0.44	2.02	NS/ Accept Ho.
Length Of Service	0.01	0.04	2.02	NS/ Accept Ho.
Highest Educ. Qualification	-0.15	-0.96	2.02	NS/ Accept Ho.
Facilities & Equipment				
Apparatus	0.33	2.23	2.02	S/ Reject Ho.
Supplies	-0.12	-0.78	2.02	NS/ Accept Ho.
Model	0.68	6.03	2.02	S/ Reject Ho.
Science Project	0.68	6.03	2.02	S/ Reject Ho.
Physical Facilities	0.15	1.01	2.02	NS/ Accept Ho.
Library Holdings				
Text	-0.54	-4.21	2.02	S/ Reject Ho.
Periodical		No Correlation		
Journal		No Correlation		
Multimedia	-0.27	-1.84	2.02	NS/ Accept Ho.
Extra-Curricular Activities				
Seminars & Workshop	0.47	3.43	2.02	S/ Reject Ho.
Science Fair	0.13	0.82	2.02	NS/ Accept Ho.
Science Camp	0.22	1.46	2.02	NS/ Accept Ho.
Science Excursion/ Field Trips	0.73	6.96	2.02	S/ Reject Ho.
Establishing Science Museum		No Correlation		
Science Club Bulletin	0.97	28.18	2.02	S/ Reject Ho.
School Science Parks & Garden Beautification	-0.68	-6.03	2.02	S/ Reject Ho.
Scientific Film Forum		No Correlation		
Science Film Showing	0.97	28.18	2.02	S/ Reject Ho.
Science Club Publication		No Correlation		
Forest Reforestation And Conservation	0.45	3.29	2.02	S/ Reject Ho.
Environmental Protection &Conservation	0.03	0.19	2.02	NS/ Accept Ho.
Membership To Science Organization	-0.29	-1.99	2.02	NS/ Accept Ho.

Enrolment. As to enrollment, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and enrollment was 0.04. This

meant that as enrolment of the school increased the performance in the NCAE of the school increased too. The computed t-value was 0.26 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the enrollment" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to the school enrolment. This implied that schools with more enrollment and schools with few enrollment had the same performance in the NCAE. This must be because NCAE is administered to the students of the schools to assess their inclination and abilities with regards to their scientific ability.

Age. With respect to the teachers and their qualifications as to age, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the age of the teachers was -0.23. The r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the teachers in the school - respondents became older. This implied that NCAE results of the schools with younger teachers were higher than schools with older teachers. This was because younger teachers were more active than the

older teachers. The computed t-value was -1.54 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the age of the teachers" was accepted. This meant that the performance in the National Career Examination (NCAE) was not related to age of the teachers. This implied that old and young teachers had students which had the same career inclination based on the NCAE result.

Civil Status. With respect to the teachers and their qualifications as to civil status, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the civil status of the teachers was 0.09. This meant that the NCAE performance of schools with more married teachers was better than those with single teachers. The computed t-value was 0.61 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the civil status of the teachers" was accepted. This meant that the performance in the National Career Examination (NCAE) was not related to civil status of the teachers. This

implied that single and married teachers had students with the same performance in the NCAE.

Area of Specialization. With respect to the teachers and their qualifications as to area of specialization, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the area of specialization of the teachers was -0.07. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the teachers taught the subjects which were not their majors. This must be because students who were under the teachers who taught the subjects which were not their major nor minor would not gain much in terms of content knowledge. The computed t-value was -0.44 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the area of specialization of the teachers" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to the area of specialization of the teachers. This meant too, that the NCAE result of the students under teachers teaching their field of specialization did not differ with those under the teachers teaching their field of specialization.

Teaching Load. With respect to the teachers and their qualifications as to teaching load, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the teaching load of the teachers was -0.01. The r value denoted an inverse relationship. This meant that the NCAE performance of the school decreased as the teachers' loaded increased. This meant that teachers with few teaching loads had students with better performance in the NCAE and vice versa. The computed t-value was -0.06 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the teaching load of the teachers" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to the teaching load of the teachers. This implied that teachers with more teaching loads and few teaching loads had students with the same NCAE performance.

Length of Service. With respect to the teachers and their qualifications as to length of service, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the length of service of the teachers was 0.01. This meant that the performance in the NCAE of the school increased as the length of service of the teachers increased. This implied that schools with teachers

who were more experienced because of their length of service had higher NCAE results. The computed t-value was 0.04 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the length of service of the teachers" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to length of service of the teachers. This meant that schools with teachers who had been in service for quite some time and those with teachers who were new to teaching have the same performance in the NCAE.

Highest Educational Attainment. With respect to the teachers and their qualifications as to highest educational attainment, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the highest educational attainment of the teachers was -0.15. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the teachers pursued higher educational attainment. This must be because if the teachers pursuing higher their education level, but not related to science, this would not influence the NCAE performance of the students. The computed t-value was -0.96 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed

test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the highest educational attainment of the teachers" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to highest educational attainment of the teachers. This implied that schools with teachers pursuing higher? degree of education attainment and those schools with teachers who were not motivated to take higher degree of education had the same performance in the NCAE.

Subjects handled. With respect to the teachers and their qualifications as to subjects handled, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the subjects handled by the teachers was -0.25. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the teachers handled several subjects. The computed t-value was -1.67 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, $\alpha = 0.05$ two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the subjects handled by the teachers" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to subjects handled by the teachers,

and that schools with more number of subjects' handled by the teachers and those with few, had the same performance in the NCAE.

Years in Teaching Physics. With respect to the teachers and their qualifications as to years in teaching Physics, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the years in teaching Physics of the teachers was 0.02. This meant that the performance in the NCAE of the school increased as the teachers teaching the Physics subject became more experienced due to increased years in teaching the subject. The computed t-value was 0.16 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the years in teaching Physics" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to years in teaching Physics of the teachers. This implied that schools with teachers having more number of years in teaching Physics and those with few, had the same performance in the NCAE.

Apparatus. With respect to the facilities and equipment of the school as to apparatus, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the apparatus was 0.33. This meant that the performance in the NCAE of

the school increased as the number of apparatus in the schools increased. This meant too, that schools with more science apparatus had better performance in the NCAE and vice versa. The computed t-value was 2.23 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the apparatus" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was related to apparatus of the school - respondent. This implied that schools should provide more science apparatus to be used in science teaching.

Supplies. With respect to the facilities and equipment of the school as to supplies, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and supplies was -0.12. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the science supplies increased. This must be because these supplies were not used in other science subject such as Physics. The computed t-value was –0.78 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the supplies"

was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to the supplies of the school - respondents. This implied that schools with more number of supplies and those with few, had the same performance in the NCAE.

Models / charts. With respect to the facilities and equipment of the school as to models / charts, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the models and charts was 0.68. This meant that the performance in the NCAE of the school increased as the number of models/charts of the schools increased. This must be because the models/charts helped in the concept - building in science among the students. The computed t-value was 6.03 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the models / charts of the school - respondents" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to models / charts of the school – respondents. This implied that the schools should purchase models/charts to enhance learning in science.

Science Projects. With respect to the facilities and equipment of the school as to science projects, the computed r between the student –

respondents' performance in the National Career Assessment Examination (NCAE) and the science projects was 0.68. This meant that the performance in the NCAE of the school increased as the number of science projects increased. The computed t-value was 6.03 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the science projects of the school - respondents" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was related to science projects of the school - respondents. This meant that schools with science projects must choose to those projects that would enhance the science knowledge and skills of students.

Physical facilities. With respect to the facilities and equipment of the school as to physical facilities, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the physical facilities was 0.15. This meant that the performance in the NCAE of the school increased as the number of physical facilities increased. The computed t-value was 1.01 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career

Examination (NCAE) and the physical facilities of the school - respondents"
was accepted. This meant that the performance in the National Career
Examination (NCAE) was not related to the physical facilities of the school
- respondents. This implied that schools with more number of physical
facilities and those with few, had the same performance in the NCAE.

Textbooks. With respect to the library holdings of the school as to
textbooks, the computed r between the student–respondents' performance
in the National Career Examination (NCAE) and the textbooks was -0.54.
The negative r value denoted an inverse relationship. This meant that the
performance in the NCAE of the school decreased as the number of
textbooks in the schools increased. This must be because some of the
textbooks in the school library were not science books and not used in
science teaching. The computed t-value was -4.21 which absolute value was
greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two
tailed test. The null hypothesis, "There is no significant relationship
between the student –respondents' performance in the National Career
Examination (NCAE) and the textbooks of the school - respondents" was
rejected. This meant that the performance in the National Career
Examination (NCAE) was related to the textbooks of the school -
respondents. This implied that schools should provide textbooks to be used
in science teachings.

Periodicals. With respect to the library holdings of the school as to periodicals, no correlation was found between the student –respondents' performance in the National Career Assessment Examination and those schools who did not have periodicals. This must be because one of the variables, periodicals, was constant. The schools did not have periodicals per records.

Journals. With respect to the library holdings of the school as to journals, no correlation was found between the student –respondents' performance in the National Career Assessment Examination and those schools did not have journals. This must be because one of the variables, journals is constant. The schools do not have journals per records.

Multimedia. With respect to the library holdings of the school as to multimedia, the computed r between the student –respondents' performance in the National Career Examination (NCAE) and the multimedia was -0.27. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the number of multimedia present in the schools increased. This must be because the multimedia in the schools was not used for instruction. The computed t-value was -1.84 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Career Examination (NCAE) and

the multimedia of the school - respondents" was accepted. This meant that the performance in the National Career Examination (NCAE) was not related to the multimedia of the school - respondents. This implied that schools with more number of multimedia and those with few, had the same performance in the NCAE.

Seminars and workshops. With respect to the relevant co-curricular activities of the school as to seminar and workshops, the computed r between the student –respondents' performance in the National Career Examination (NCAE) and the seminar and workshops was 0.47. This meant that the performance in the NCAE of the schools increased as the teachers attended more in seminars and trainings in science. The computed t-value was 3.43 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Examination (NCAE) and the seminar and workshops of the school - respondents" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was related to seminar and workshops of the school - respondents. This implied that schools should send more teachers in science seminars and trainings for them to acquire different strategies in teaching science and gain more knowledge.

Science Fair. With respect to the relevant co-curricular activities of the school as to science fair, the computed r between the student – respondents' performance in the National Career Examination (NCAE) and the science fair was -0.13. This meant that the performance in the NCAE of the school increased as the number of science fairs increased. The computed t-value was 0.82 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Examination (NCAE) and the science fair of the school - respondents" was accepted. This meant that the performance in the National Career Examination (NCAE) was not related to the science fair conducted by school - respondents. This implied that schools that conducted more science fairs and those with few, had the same performance in the NCAE.

Science Camp. With respect to the relevant co-curricular activities of the school as to science camp, the computed r between the student – respondents' performance in the National Career Examination (NCAE) and the science camp was -0.22. This meant that the performance in the NCAE of the school increased as the number of science camp conducted increased. and vice versa. The computed t-value was 1.46 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship

between the student –respondents' performance in the National Career Examination (NCAE) and the science camp of the school - respondent" was accepted. This meant that the performance in the National Career Examination (NCAE) was not related to the science camp conducted by the school - respondents. This implied that schools with more science camps conducted and those with few, had the same performance in the NCAE.

Science Excursions and Field Trips. With respect to the relevant co-curricular activities of the school as to science excursions and field trips had, the computed r between the student –respondents' performance in the National Career Examination (NCAE) and the science excursions and field trips was 0.73. This meant that the performance in the NCAE of the school increased as the number of science excursions and field trips conducted by the schools increased. The computed t-value was -6.96 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Examination (NCAE) and the science excursions and field trips had by the school - respondents" was rejected. This meant that the performance in the National Career Examination (NCAE) was related to science excursions and field trips of the school - respondents. This implied that schools should expose students to science excursions and fieldtrips since firsthand knowledge can be acquired in this kind of activity.

Establishing Science Museum. With respect to the relevant co-curricular activities of the school as to establishing science museum, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and establishing science museum was 0.

Science Club Bulletin. With respect to the relevant co-curricular activities of the school as to science club bulletin put up, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and science club bulletin put up was 0.97. This meant that the performance in the NCAE of the school increased as the science club bulletin put up was more enhanced. The computed t-value was 28.18 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the science club bulletin of the school - respondents" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to club bulletin of the school - respondents. This implied that schools should enhance the content of the science club bulletin for student information and consumption in science.

School Science Parks and Garden Beautification. With respect to the relevant co-curricular activities of the school as to School Science Parks

and garden Beautification, the computed r between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the School Science Parks and Garden Beautification was -0.68. The negative r value denoted an inverse relationship. This meant that the schools that engaged in science parks and garden beautification had poorer performance in the NAT and vice versa. This must be because classes were missed out by students and teachers as they focused in the beautifications of science parks and garden. The computed t-value was -6.03 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the school science parks and garden beautification of the teachers" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was related to School Science Parks and garden Beautification of the school - respondents. This implied that schools should engaged in science parks and garden beautification because this was one way for students to apply their knowledge in science.

Scientific Film Forum. With respect to the relevant co-curricular activities of the school as to scientific film forum, the computed r between the student –respondents' performance in the National Career Assessment

Examination (NCAE) and the scientific film forum conducted by the school - respondents was 0.

Scientific Film Showing. With respect to the relevant co-curricular activities of the school as to scientific film showing, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the scientific film showing was 0.97. This meant that the performance in the NCAE of the school increased as the number of times the schools conducted scientific film showing increased. The computed t-value was 28.18 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student – respondents' performance in the National Career Assessment Examination (NCAE) and the scientific film showing in the school - respondents" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to the conduct of scientific film showing of the school - respondents. This implied that schools should conduct scientific film showing relevant to science as often as possible to motivate the students to study more in the subject and get better performance in the NCAE.

Science Club Publication. With respect to the relevant co-curricular activities of the school as to science club publication, no correlation has been established between the student –respondents' performance in the

National Career Assessment Examination and on science club publication. This must be because one of the variables, science publication, was constant. The schools did not have science publication per records.

    <u>Forest Reforestation and Conservation</u>. With respect to the relevant co-curricular activities of the school as to forest reforestation and conservation, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the forest reforestation and conservation was 0.45. This meant that the performance in the NCAE of the school increased as the number of times the school - respondents conducted forest reforestation and conservation increased. The computed t-value was 3.29 which absolute value was greater than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the forest reforestation and conservation of the school - respondent" was rejected. This meant that the performance in the National Career Assessment Examination (NCAE) was related to the forest reforestation and conservation of the school - respondents. This implied that the school - respondents should conduct forest reforestation and conservation to develop students' awareness on the importance of environment and makes them motivated to study science subjects and get better performance in science NCAE.

Environmental Protection and Conservation. With respect to the relevant co-curricular activities of the school as to environmental protection and conservation, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the environmental protection and conservation was 0.03. This meant that the performance in the NCAE of the school increased as the number of times the schools conducted environmental protection and conservation increased. The computed t-value was 0.19 which absolute value was less than the critical t-value that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the environmental protection and conservation" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to environmental protection and conservation had by the school – respondents. This implied that schools that conducted more times on the environmental protection and conservation and those with few, had the same performance in the NCAE.

Membership to Science Organization. With respect to the relevant co-curricular activities of the school as to membership to science organization, the computed r between the student –respondents' performance in the National Career Assessment Examination (NCAE) and

the membership to science organization was -0.29. The negative r value denoted an inverse relationship. This meant that the performance in the NCAE of the school decreased as the number of membership to science organization increased. The computed t-value was -1.99 which absolute value was less than the critical t-value test that equaled to 2.02 at df = 42, α = 0.05 two tailed test. The null hypothesis, "There is no significant relationship between the student –respondents' performance in the National Career Assessment Examination (NCAE) and the membership to science organization" was accepted. This meant that the performance in the National Career Assessment Examination (NCAE) was not related to membership to science organization by the school - respondents. This meant that schools with more numbers of memberships to science organization and those with few, had the same NCAE performance.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the findings, the conclusions, and recommendations of the study.

Summary of Findings

The following were the findings of the study:

1.   Majority of theschool - respondent had more enrolment in the lower years than in the upper years and with more enrolled females than males;

2.   Majority of the teachers in the school - respondent were in their middle age aside from the Tenani IS case teachers were in their 20s because the school was quite newly opened; married; taught subjects which was not their major; carry the maximum number of seven loads; were working towards a master's degree; handled subjects which were not their field of specialization, and did not teach Physics;

3.   The school - respondents lack of facilities and equipment;

4.   The school - respondent were inadequate in library holdings;

5.   As to relevant extra-curricular activities, the school-respondents seldom conducted nor participated in some extra co-curricular activities like Seminar workshops, science fair, science camp, science excursions / field trips, establishing science museum, science club bulletin, school science parks and

garden beautification, scientific film forum, science film showing, forest reforestation and conservation, environmental protection and conservation, and membership to science organizations;

6. Most of the school - respondents had inconsistent performance in the NAT and NCAE for the last five years.

Conclusions

Based on the findings of this study, the following conclusions were drawn:

1. Those school – respondents whose enrollees in first year did not end up graduating in fourth year; that there were hindrances to finishing secondary education;

2. Only few of the teachers in the school- respondents, taught the subjects which were their major or minor;

3. Most of the teachers carried a regular load of 6 - 7. Some of the teachers were not loaded regularly because they were given other school- related assignments;

4. Most of the teachers were study or towards earning their master's degree;

5. All schools lacked in school facilities and equipment;

6. Library holdings of the school - respondents were limited, especially in science – related books like textbooks, periodicals, journals, and multimedia.

7.   Some of the extracurricular activities were relevant to students'
performance in the NAT and in NCAE; and

8.   The performance of the students in the NAT and in NCAE was
below the target MPS which was 75.00 percent.

Recommendations

In order to help students achieved better and acquire quality education the
following recommendations are advanced to improve the performance in the NAT
and in the NCAE in the secondary schools in Paranas based on the findings and
conclusions of the study, to wit:

1.   Teachers must teach their major and minor subjects only;

2.   Teachers must be allowed to improve their teaching competencies
by attending in - service training and enrolment in graduate courses that relate to
their regular teaching loads as competence – building strategy;

3.   School administrators should regularly supervise and asses their
teachers, so that they know and are aware of their strengths and weaknesses and
introduce ways to enhance their teachers 'capabilities;

4.   Preferences must be given to majors/ minors in Science or Physics
in giving the teaching loads in Science or Physics subject;

5.   The heads of the school should motivate and encourage the teachers
to attend trainings which are relevant to science teaching-learning competencies

by giving them incentives such as traveling expenses, other forms of financial and non- financial incentives;

6.   It is highly recommended that all science teachers must upgrade themselves professionally. They can do it by enrolling in graduate education, attending more trainings and work-shops to improve their teaching competencies;

7.   Schools should provide school facilities and equipment through purchase or solicitations and donations from alumni and NGOs;

8.   Schools should request from the DepEd the construction of at least one library in every secondary school, particularly in Paranas;

9.   Students should be exposed to some extra co-curricular activities related in science;

10.   Schools should conduct intervention programs to raise the level of performance of the students in the NAT and NCAE; and

11.   Future researchers are encouraged to conduct similar study or a parallel study which involve different variables from that of the present study.

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Calagos, Alma D. "*Correlates of Elementary Teachers' Performance in the Districts of Sta. Margarita I and II*", 2007.

Dela Rosa, Socorro V. "*Discovering Learning through Practical Work in Science Teaching: Effects on Pupils Academic Achievement, Attitude and Psychomotor Skills*". Unpublished Dissertation, Samar State University, March (2001).

Delmonte, Lourdes C. "*Factors Affecting Students Performance in Science and Technology of Wright Vocational School: Basis for Instructional Redirection*". Unpublished Master's Thesis, Samar State Polytechnic College, 2003.

Dumalon, Wayne V. "*The Competencies of Secondary School Teachers and Academic Performance of Fourth Year Students: Basis for Policy Redirection*". Unpublished Master's Thesis, Samar State Polytechnic College, 2003.

Jabiñar, Patricio G. "*Administrators' Instructional Supervisory Skills, Teachers' Instructional Skills and Pupils' Performance in the National Achievement Test (NAT)*". Unpublished Master's Thesis, Samar State Polytechnic College, 2003.

Miñozo, Zosimo, Jr. "*Teachers' Competencies and Students' Performance in English in the City of Calbayog: Basis for a Training Design Model*". Unpublished Master's Thesis, Samar State Polytechnic College, 2002.

Lonzaga, Edgar P. "*Relationship of Students' Academic Performance and Perceived Role Model Attributes of Teachers and Parents*". Unpublished Master's Thesis, Samar State University, March 2004.

Palines, Gina L. "*Correlates of Students' Academic Performance in ESEP Classes in Eastern Visayas*". Unpublished Dissertation, Samar State University, 2005.

D. ELECTRONIC SOURCE

http://en.wikipedia.org/wiki/Theory_of_multiple_intelligeances

http://www.google.com.ph/search?client=firefox-a&rls=org.mozilla%3Aen-US%3Aofficial&channel=s&hl=tl&source=hp&biw=&bih=&q=theories+on+multiple+intelligence&meta=&btnG=Hanapin+sa+Google

http://ebeis.deped.goe.ph

Microsoft Encarta Encyclopaedia, ONLINE ENCYCLOPEDIA, (2007)

APPENDICES

APPENDIX A

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City, Samar
Telephone Numbers: (055)-543-8394/(055)-251-2139
Website: www.ssu.edu.ph

April 28, 2011

MARILYN D. CARDOSO, Ph. D.
Dean, College of Graduate Studies
Samar State University
Catbalogan City, Samar

Madam:

In my desire to start writing my thesis, I have the honor to submit for approval, one of the following research problems, preferably No. 1:

1. PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT.

2. FACTORS AFFECTING THE ACADEMIC PERFORMANCE IN PHYSICS OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS.

3. THE EFFECTS OF THE TECHNOLOHY IN THE ENTHUSISAM OF FOURTH YEAR HIGH SCHOOL STUDENTS IN SCIENCE.

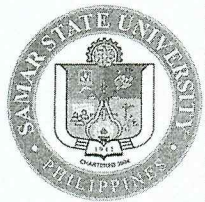Thank you for your favorable action on this matter.

Very truly yours,

(SGD.) ALIDA G. PACLITA
Researcher

APPROVED:

(SGD.) MARILYN D. CARDOSO, Ph. D.
Dean, College of Graduate Studies

APPENDIX B

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan City, Samar
Telephone Numbers: (055)-543-8394/(055)-251-2139
Website: www.ssu.edu.ph

ASSIGNMENT OF ADVISER

May 28, 2011

PROF. VICENTE SIMPLECIO M. VILLEGAS
Graduate School Faculty
This University
Catbalogan City, Samar

Sir :

Please be informed that you have been designated as adviser of **Ms. Alida G. Paclita,** candidate for the degree in **Master of arts in Teaching major in Physics** who proposes to write a thesis entitled "**PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT**".

Thank you for your cooperation.

Very truly yours,

(SGD.) MARILYN D. CARDOSO,

Ph. D.

Researcher

CONFORME:

(SGD.) VICENTE SIMPLECIO M. VILLEGAS
Adviser

APPENDIX C

LETTERS/DOCUMENTS SENT TO DepEd-NETRC REQUESTING PERMISSION TO USE THE NATAND NCAE RESULTS

Republic of the Philippines
SAMAR STATE UNIVERSITY
COLLEGE OF GRADUATE STUDIES
Catbalogan, Samar
Telephone Numbers: (055)-543-8394/ (055)-251-2139
Website: www.ssu.edu.ph

September 26, 2011

The Director
National Educational Testing and
Research Center (NETRC)
Second Floor, Mabini Building
DepEd Complex, Meralco Avenue
Pasig City
Madam:

Warmest greetings!

Ms. Alida G. Paclita is a bonafide student of this University pursuing Master of Arts in Teaching major in Physics in the College of Graduate Studies and a member of the Philippine Association for Graduate Education (PAGE)-Region VIII Chapter. She is presently conducting research entitled "Physics Performance of Fourth Year high School Students in Paranas in the NAT and NCAE", as part of the requirements of the aforesaid degree.

In view thereof, the undersigned is requesting from your good office to allow the aforesaid student to have access to your data on the National Achievement Test (NAT) and National Career Assessment Examination (NCAE) results of Secondary Schools in The Division of Samar for the past five school years. That is, from 2005-2006, 2006-2007, 2007-2008, 2008-2009, and 2009-2010.

Your preferential action in this matter will surely boast the morale of our graduate students who are conducting research and eventually enable them to the pursuance of quality education.

Thank you very much and more power!

Very truly yours,

(SGD.) **MARILYN D. CARDOSO, Ph. D.**
Dean, College of Graduate Studies

INDORSEMENT

December 17, 2011 **LAWAAN NATIONAL HIGH SCHOOL**
Paranas, Samar

Respectfully forwarded to the Director National Educational Testing and Research Center (NETRC)recommending approval of the herein request of MS. ALIDA G. PACLITA, a Secondary School Teacher II of Lawaan National High School, to allow her use the National Achievement Test (NAT) of Second Year students and National Career Assessment Examination of Fourth Year students results in the four secondary schools in Paranas (*Lawaan NHS, Casandig NHS, Tenani Integrated School and Wright NHS*) of Division of Samar, Region VIII for the last five years that is from SY 2005 – 20006, 2006-2007, 2007-2008, 2008-2009, and 2009-2010 for my study on "Physics Performance of Fourth Year High School Students in Paranas in the NCAE and NAT."

(Sgd.) MERCEDES P. DACO, Ed. D.
School Principal II

SEP 0 2 2009

DepED ORDER
No. 91 , s. 2009

PRESCRIBING GUIDELINES AND REQUIREMENTS REGULATING THE USE OF NATIONAL EXAMINATION RESULTS

To: Undersecretaries
        Assistant Secretaries
        Bureau Directors
        Directors of Services/Centers and Heads of Units
        Regional Directors
        Schools Division/City Superintendents
        Heads, Public Elementary and Secondary Schools

1.   In line with the thrust to optimize the use and benefits from researches and studies conducted by private organizations, undergraduate and post-graduate students, and other individuals utilizing national examination results; and at the same time to safeguard and prevent the misuse, mishandling, misinterpretation, exploitation and manipulation of national test results, the Department of Education (DepED) through the National Education Testing and Research Center (NETRC) is prescribing the following guidelines and requirements regulating the use of national examination results:

    1.1   The researcher must present the following:

        a.   Two (2) valid identification cards and must show proof that he/she is qualified to do research work;

        b.   Letter specifying the requested data, e.g. name of test/s, year of administration, regions/divisions which are the subjects of the research/study;

        c.   Copy of his/her approved thesis/dissertation proposal signed by the Thesis Adviser; and

        d.   Endorsement letter signed by the Dean concerned.

    1.2   Further, the researcher must do the following:

        a.   Sign a Memorandum of Agreement (MOA) stating that he/she shall not compare regions, divisions, schools and examinees without taking into consideration other variables that may have substantial effect on the outcome of the test and that he/she shall furnish the Department a copy of the completed research/study; and

        b.   Pay corresponding amount for the requested data.

2.   The NETRC shall only provide and release ten percent (10%) of the actual number of examinees per testing program per year.

3.   All previous issuances inconsistent with this Order are hereby repealed, amended or modified accordingly.

4.   Immediate dissemination of and compliance with this Order is directed.

JESLI A. LAPUS
Secretary

Reference:
        N·o n e

Allotment: 1- - (D.O. 50-97)

To be indicated in the Perpetual Index
        under the following subjects:

        DATA
        POLICY
        RESEARCH or STUDIES
        RULES & REGULATIONS

Madel:Use of Exam Result
8-21-09

APPENDIX D

SURVEY CHECKLIST QUESTIONNAIRE

Dear respondents,

Greetings!

This survey checklist questionnaire is designed to gather the necessary data in connection with the thesis entitled "Physics performance of Fourth Year High School Students in Paranas in the NAT AND NCAE", which the undersigned is writing now.

Rest assured that all of your responses in this questionnaire will solely be used for this study and will be treated confidential.

Thank you very much.

(Sgd.) ALIDA G. PACLITA
Researcher

Republic of the Philippines
Department of Education
Region VIII
Division of Samar

LAWAAN NATIONAL HIGH SCHOOL
Lawaan Paranas, Samar

November 8, 2011

MERCEDES P. DACO, Ed. D.
School Principal I

Madam:

The undersigned is currently conducting the research study entitled, "PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT", the researcher may request from your good office that she may be allowed to conduct fielding her instrument to all the teachers in your school. Further, she requests that she will be allowed to borrow the copy of your school profile specifically of your enrolment data for the last seven (7) years.

You favorable approval and assistance on this matter will greatly contribute to the success of this undertakings.

Thank you and more power.

Very truly yours,

(Sgd.) ALIDA G. PACLITA
Researcher

Noted:
(Sgd.) VICENTE SM VILLEGAS
Adviser

Approved:
(Sgd.) MERCEDES P. DACO, Ed. D.
School Principal II

Republic of the Philippines
Department of Education
Region VIII
Division of Samar

TENANI INTEGRATED SCHOOL
Tenani Paranas, Samar

November 8, 2011

MARY GEM L. PAET
Head Teacher III

Madam:

The undersigned is currently conducting the research study entitled, "PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT", the researcher may request from your good office that she may be allowed to conduct fielding her instrument to all the teachers in your school. Further, she requests that she will be allowed to borrow the copy of your school profile specifically of your enrolment data for the last seven (7) years.

You favorable approval and assistance on this matter will greatly contribute to the success of this undertakings.

Thank you and more power.

Very truly yours,

(Sgd.) ALIDA G. PACLITA
Researcher

Noted:
(Sgd.) VICENTE SM VILLEGAS
Adviser

Approved:
(Sgd.) MARY GEM L. PAET
Head Teacher II

Republic of the Philippines
Department of Education
Region VIII
Division of Samar

WRIGHT NATIONAL HIGH SCHOOL
Wright Paranas, Samar

November 8, 2011

FELICIDAD RAMASASA
School Principal II

Madam:

The undersigned is currently conducting the research study entitled, "PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT", the researcher may request from your good office that she may be allowed to conduct fielding her instrument to all the teachers in your school. Further, she requests that she will be allowed to borrow the copy of your school profile specifically of your enrolment data for the last seven (7) years.

You favorable approval and assistance on this matter will greatly contribute to the success of this undertakings.

Thank you and more power.

Very truly yours,

(Sgd.) ALIDA G. PACLITA
Researcher

Noted:
      (Sgd.) VICENTE SM VILLEGAS
            Adviser

Approved:
      (Sgd.) FELICIDAD RAMASASA
            School Principal I

Republic of the Philippines
Department of Education
Region VIII
Division of Samar

CASANDIG NATIONAL HIGH SCHOOL
Casandig Paranas, Samar

November 8, 2011

MARITES B. DACLES
School Principal II

Madam:

The undersigned is currently conducting the research study entitled, "PHYSICS PERFORMANCE OF FOURTH YEAR HIGH SCHOOL STUDENTS IN PARANAS IN THE NCAE AND NAT", the researcher may request from your good office that she may be allowed to conduct fielding her instrument to all the teachers in your school. Further, she requests that she will be allowed to borrow the copy of your school profile specifically of your enrolment data for the last seven (7) years.

You favorable approval and assistance on this matter will greatly contribute to the success of this undertakings.

Thank you and more power.

Very truly yours,

(Sgd.) ALIDA G. PACLITA
Researcher

Noted:
    (Sgd.) VICENTE SM VILLEGAS
    Adviser

Approved:
    (Sgd.) MARITES B. DACLES
    School Principal II

Info Sheet 1.1

ENROLMENT INFORMATION SHEET

Name of School: _____

Address: _____

I. Direction: Please indicate your response to each of the following items by filing up the needed information in the table below.

Enrolment	School Year													
	2003-2004		2004-2005		2005-2006		2006-2007		2007-2008		2008-2009		2009-2010	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
FIRST YEAR														
SECOND YEAR														
THIRD YEAR														
FOURTH YEAR														
TOTAL														

TEACHERS' QUALIFICATION/INFORMATION SHEET

DIRECTION: Please write on the space or mark a check (/) on the boxes provided the answers needed as it apply to you.

1. **Name of Teacher:** (Optional) _____

2. **Load:** _____
   Subject/s Handled: **Number of Section/s:**

   ☐ Integrated Science   _____
   ☐ Biology   _____
   ☐ Chemistry   _____
   ☐ Physics   _____
   ☐ Mathematics   _____
   ☐ Others (pls. Specify)   _____

3. **Age (Years):** _____

4. **Number of years teaching Physics:** _____

5. **Civil Status:**
   ☐ Single

   ☐ Married

   ☐ Widow/Widower

   ☐ Separated

6. **Area of Specialization:** _____

7. **Length of Service (Years):** _____

8. **Highest Educational Qualification:**

   ☐ BSED/Undergraduate studies

   ☐ MA/ Masteral Units

   ☐ Full Pledged MA/MS

   ☐ MA/MS with Ph. D/ Ed. D. Units

   ☐ Ph. D. / Ed. D.

Info Sheet 1.3

PHSICAL FACILITIES AND EQUIPMENT DATA

DIRECTION: The following are the list of physical facilities and equipment found in your school. Please indicate the quantity of each item that corresponds to your answer.

A.1 Apparatus   **Quantity**   **Apparatus**   **Quantity**   **Apparatus**
Quantity

1. Alcohol Lamp _____   14. Ferric Oxide _____   6. Generator _____
2. Beaker _____   15. Feric Sulfate _____   7. Restrooms

3. Beam Balance _____   16. Feric Sulfide _____   8. Shower room _____
4. Bunsen burner _____   17. Glycerin _____   9. Electric fan/ _____
5. Distilling Flask _____   18. Glycerol _____   Ceiling Fan/ Wall Fan _____
6. Dissecting Sets _____   19. Glucose _____   10. Air Condition

7. Erlenmeyer flask _____   20. Hydrogen Peroxide_____   11. Lightings (Wattage) _____
8. Evaporating Dish _____   21. Hydroquinone_____   12. Classroom size

9. Funnel _____   22. Iodine Crystals_____   13. Over head projector

10. Graduated Cylinder_____   23. Isopropyl Alcohol_____   14. Computer _____
11. Iron Clamp_____   24. Lead Acetate Trihedral ____   15. LCD Projector

12. Iron Stand _____   25. Lead Nitrate_____   16. DVD player/

13. Magnifying lens_____   26. Magnesium Acetate _____   Cassette player _____
14. Medicine dropper _____   27. Magnesium Chloride ____   17. Gas Outlet _____
15. Microscope _____   28. Mercury _____   Others _____
16. Mortar and Pestle _____   29. Mercuric Oxide _____
17. Petri Dish _____   30. Methyl Alcohol _____
18. Prism _____   31. Petroleum Ether _____
19. Reagent Bottle _____   32. Plastic of Paris _____
20. Spring Balance _____   33. Potassium Dichromate ____
21. Stirring rod _____   34. Potassium Permanganate _____
22. Test Tube _____   35. Potassium Sulfate _____
23. Test Tube holder _____   36. Silver Nitrate _____
24. Test tube rack _____   37. Soda Ash _____
25. Thermometer _____   38. Sodium Chloride
26. Wire Gauge _____   _____ 39. Sodium Hydrogen Phosphate _____
A.2 Supplies _____   40. Sodium hydroxide _____
1. Acetone _____   41. Sodium Peroxide _____
2. Acetic Anhydride _____   42. Tin Chloride _____
3. Ammonium Chloride_____   43. Urea (Solid Crystal) _____
4. Ammonium Hydroxide_____   44. Zinc Sulfate _____
5. Ammonium Phosphate_____   **A. Models/ Charts** _____
6. Benzene _____   **B. Science Projects** _____
7. Borax Powder Tech _____   **C. Physical facilities**
8. Calcium Carbonate _____   1. Laboratory Table _____
9. Calcium Chloride _____   2. Demonstration Table _____
10. Calcium Sulfate _____   3. Water Sinks _____
11. Chloroform _____   4. Graphing Board _____

12. Copper Sulfate _____   5. Emergency Lamp _____
13. Iron Filings _____

Info Sheet 1.4

LIBRARY FACILITIES

DIRETION: The following are library facilities found in your school library.
Please indicate the quantity of each item that corresponds to your answer.

A. Textbooks   **Quantity**
   Quantity

1. English I _____   A. **Periodicals**

2. English II _____   1. Newspaper

3. English III _____   2. Tabloid

4. English IV _____   3. Magazines

5. Science I _____   B. **Journals**
6. Science II _____   1. Teachers' journals

7. Science III _____   2. Bato Balani

8. Science IV _____   3. Others

9. Mathematics I _____   C. **Multimedia**
10. Mathematics II _____   1. Video CDs and DVD

11. Mathematics III _____   2. Cassette Player

12. Mathematics IV _____   3. TV set

13. Filipino I _____   4. Computers _____
14. Filipino II _____   5. Others

15. Filipino III _____
16. Filipino IV _____

17. Social Studies I _____
18. Social Studies II _____
19. Social Studies III _____
20. Social Studies IV _____
21. T.L.E. I   _____
22. T.L.E. II   _____
23. T.L.E. III   _____
24. T.L.E. IV   _____
25. MAPEH I   _____
26. MAPEH II   _____

27. MAPEH III   _____

28. MAPEH IV   _____
29. VALUES I   _____
30. VALUES II   _____
31. VALUES III   _____
32. VALUES IV   _____

Info Sheet 1.5

RELEVANT CO-CURRICULAR ACTIVITIES

DIRECTION: Below is science –related activities which your school should conduct. Identify the activity/ activities your students have participated. Please indicate how often your school conducted the activities as follows:

Legend: A – Always   (5)
           O – Often   (4)
           OC – Occasionally (3)
           S – Seldom   (2)
           N – Never   (1)

Statement	Frequency				
	(5) A	(4) O	(3) OC	(2) S	(1) N
1. SEMINAR – WORKSHOPS					
Environmental watching					
Science clubbing					
Out of school science education program					
Symposium on environmental protection					
Science Journalism					
2. SCIENCE FAIR					
School					

Statement	Frequency				
	(5) A	(4) O	(3) OC	(2) S	(1) N
Division					
Regional					
National					
3. SCIENCE CAMP					
School					
Division					
Regional					
National					
4. SCIENCE EXCURSION/ FIELD TRIPS					
5. ESTABLISHING SCIENCE MUSEUM					
6. SCIENCE CLUB BULLETIN					
7. SCHOOL SCIENCE PARKS AND GARDEN BEAUTIFICATION					
8. SCIENCETIFIC FILM FORUM					
9. SCIENCE FILM SHOWING					
10. SCIENCE CLUB PUBLICATION					
School					
Division					
Regional					
National					
11. FOREST REFORESTATION AND CONSERVATION					
Tree Planting					
Contour farming					
12. ENVIRONMENTAL PROTECTION AND CONSERVATION					
Community clean –up drive					
Coastal clean – up drive					
Hillside Riprapping					
13. MEMBERSHIP TO SCIENCE ORGANIZATION					

CURRICULUM VITAE

CURRICULUM VITAE

Name	:	ALIDA GAGBO PACLITA
N-name	:	Ahlidz/Lhidz/Eday
B-date	:	Oct. 19, 1983
Status	:	Single
Parents	:	
Father	:	Leopoldo Cabubas Paclita
Mother	:	Maria Labong Gagbo
Address	:	Brgy. Tutobigan Paranas, Samar

EDUCATIONAL BACKGROUND

Elementary:

Tutobigan Elem. School
Tutobigan Paranas, Samar
1990-1996

Secondary:

Casandig National High School
Casandig, Paranas, Samar
1996-2000

Tertiary:

Samar State Polytechnic College
(Presently: Samar State University)
2000-2004

SEMINARS/TRAININGS ATTENDED

- Regional Mass Training for Second Year Teachers on UbD.
  RTT Candahug, Palo Leyte
  May 24-27, 2011

- Regional Mass Training of First Year Teachers on the 2010 Secondary Education Curriculum.
  Leyte National High School
  June 9-12, 2010

- Seminar-Workshop on Making Action Research.
  Redaja Hall, 1 Division Office, Catbalogan, Samar
  June 3-4, 2010

- Seminar-Workshop on the 2010 Secondary Mathematics Program.
  Samar National School, Catbalogan, Samar
  April 28-30, 2010

- Seminar-Workshop on My Computer, My Teaching Tool.
  Social hall, Samar National School,
  Catbalogan, Samar
  Nov. 20-22, 2009

- Seminar-Workshop on CFSS: an Avenue to Excellence.
  Redaja Hall, 1 Division Office, Catbalogan, Samar
  Nov. 27-29, 2009

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