

PROFICIENCY IN ENGLISH AS A CORRELATE  
OF GRADE V PUPILS' PERFORMANCE  
IN SCIENCE AND MATHEMATICS

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A Master's Thesis  
Presented to  
The Faculty of the Graduate Studies  
Samar State Polytechnic College  
Catbalogan, Samar

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In Partial Fulfillment  
of the Requirement for the Degree  
Master of Arts in Education

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March 2000

## APPROVAL SHEET

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## ACKNOWLEDGMENT

The writer wishes to acknowledge her debt of gratitude to the following persons, who in one way or another had contributed to the realization of this manuscript. This research work would have been impossible without the unselfish help of the teachers, school administrators, pupils, relatives, brothers and sisters, nephews, nieces, children, husband, colleagues and friends, hence this acknowledgment.

Debt of gratitude to Dr. Alfredo D. Dacuro, Assistant Schools Division Superintendent, Division of Eastern Samar, Borongan, her thesis adviser for his untiring encouragement, scholarly support, guidance and patience in shaping this study.

A special debt of gratitude is also given to the panel of examiner chaired by Dr. Eusebio T. Pacolor, Dean Graduate Studies, Dr. Marilyn D. Cardoso, her statistician, Professor Norma A. Ricafort, Professor Hermogenes N. Cairo and Rowena Uy, secretary for their scholarly advice, constructive criticism and suggestions which contributed to the refinement of this manuscript.

Sincere of gratitude to our beloved, understanding Schools Division Superintendent, Division of Samar, Dr. Jesusita L. Arteche for granting the researcher permission

to conduct the achievement test of English, Science and Mathematics and field her questionnaires to respondent schools in Wright I and II districts.

To Dr. Yolanda M. Marañon, Secondary School Head Teacher, Tarangnan National High School for her unlimited assistance and moral support of this study.

Sincere gratitude to Madam Mila O. Rebosura, District Supervisor of Wright I District and Madam Corazon D. Davantes, District Supervisor of Wright II District for their encouragement, patience, guidance and moral support to finish this study and for granting the researcher permission to conduct the achievement test and field the questionnaires through the School Division Superintendent.

To Mrs. Jocelyn P. Macapañas, for her untiring encouragement and moral support to finish this study.

Debt of gratitude to the school administrators of Wright I and II District, namely: Mrs. Gemma D. Llauder, Principal II Wright I Central School, Mrs. Anunciacion Bru, Head Teacher, Binugho Elementary School, Mrs. Adela M. Aragon, Head Teacher, Bato Elementary School, Mrs. Erlinda Abadiano, Principal I, Pabanog Elementary School, Mrs. Rosario O. Abawag, Head Teacher, Pequit Elementary School, Mrs. Manuela T. Abegonia, Head Teacher, Lokilokon Elementary School, Mrs. Teresita A. Mabingnay, Principal I Wright II Central Elementary School, Mrs. Rosa A. Fabillar,

Head Teacher, Lawaan Elementary School and Mrs. Esperanza G. Babon, Head Teacher, Tutobigan Elementary School for granting the researcher permission to conduct the achievement test and field the questionnaires to their respondent pupils and teachers of their school.

Debt of gratitude to all Grade V teachers of Wright I and II Districts for their unselfish assistance during the data gathering namely: Mrs. Dolores L. Aragon, Mrs. Paz A. Menda and Mr. Jovencio Fabrao of Wright I Central Elementary School; Mrs. Basilia Gabon, Mrs. Zorina Calades and Mr. Anacilito Radaza of Binogho Elementary School; Mrs. Melinda A. Pabunan, Mrs. Priscila C. Dabuet and Mrs. Teodora B. Abaigar of Bato Elementary School; Mr. Francisco Babon, Mr. Manuel Dabuet and Mrs. Rebecca Acutim of Pabanog Elementary School; Mrs. Virginia A. Abadiano, Mrs. Rowena L. Babon and Mr. Armando Lontes of Pequit Elementary School; Mrs. Gloria G. Labrague, Mrs. Jocelyn Casilla and Mr. Hilario Abalos of Lokilokon Elementary School; Mrs. Alicia D. Ramos, Mrs. Felicidad Mahinay and Mrs. Carmen D. Dabuet of Wright II Central Elementary School; Mrs. Agapita M. Obiena, Mrs. Maria Dioneza and Mr. Edwin Cobreros of Casandig Elementary School; Mrs. Virginia A. Pagarao of Lawaan Elementary School; and Mrs. Ligaya D. Ventabal, Mr. Nardo Baccol and Mrs. Esperanza Babon of Tutobigan Elementary School.

To all grade V pupil-respondents of the 10 complete schools in Wright I and II Districts for their full cooperation during the testing period and answering the questionnaires.

To my dear teachers of Casandig Elementary School, namely: Charry B. Bacarra, Alma A. Abarratigue, Rose Alcantara, Pacing Ballena, Rosie Pombo, Mana Fe de Mayo, Babie (Ester) Canillas, Edwin Cobreros, Mana Deding Obiena, Mana Benny Banasta, and Mary G. Dioneza for their full cooperation and moral support during the data gathering and maintaining the school and doing their function very well while I was busy.

To Dr. Marilyn D. Cardoso, Professor of Graduate Studies and Dean of College Education Department, Samar State Polytechnic College, Catbalogan, Samar, for sharing with the researcher her knowledge in statistics.

Debt of gratitude to Mr. Arnoldo A. Ramos, Jr. for his special time and extra efforts in encoding this manuscript.

Most and foremost to Amy B. Tizon, Grade V teacher, and teaching the HEKASI subject for extending her full assistance in time of the researchers' needs and Mrs. Virgie A. Abadiano for her moral and financial support.

Special debt of gratitude to her loving brother Francis A. Pabunan and her loving sister Fe P. Tamunan and to her loving niece Josie B. Pabunan, for their financial

assistance to pursue the challenge.

Finally, special acknowledgment to her ever dearest husband Mar, William, my loving son, Matet, my loving daughter, to her loving parents, both deceased, Brigido M. Pabunan and Antonina A. Pabunan, brothers and sisters, who gave the researcher inspiration, morally and financially.

Above all to our God Almighty for the bountiful graces and divine guidance bestowed to the researcher which made her work a success.

*T. P. B.*

## DEDICATION

*This humble output is a labor of love and sacrifices  
ultimately dedicated to . . . . .*

*Marcos N. Baco*

*My loving Husband,*

*William P. Baco*

*My loving son*

*Marites P. Baco*

*My loving daughter*

*My supportive brother, sister and niece*

*Francis A. Pabunan,*

*Fe P. Tamunan and*

*Josie B. Pabunan*

*And most specially to  
our late Parents,*

*Brigido M. Pabunan*

*☽*

*Antonina A. Pabunan,*

*Close relatives and Friends  
and above all  
to our Lord Jesus Christ.*

*Trining*



## **ABSTRACT**

This study assessed the achievement of grade V pupils in English-taught subjects like Science and Mathematics with the end of determining the relationship between English proficiency and the pupils' performance in these subjects. This investigation employed the descriptive-correlational method of research using the Division Achievement Test and questionnaire as the instruments for data-gathering. The teacher-made questionnaire was subjected to expert validation by her adviser, specialists and some members of the panel of examiners; peer validation by five teachers from the District of Hinabangan, and clientele validation by five grade V pupils from the same District. The achievement level of the grade V pupils from the District of Wright I and II in English in terms of mean score was 23.253 equivalent to a mean percentage score (MPS) of 52.273 with a standard deviation (SD) of 5.1532. Out of the 10 schools tested, five schools obtained class means above the grand mean and five schools scored lower than the grand mean. Considering the equivalent mean percentage score of the three learning areas: English (52.273), Science (55.265) and Mathematics (48.127) against the mastery level of 75%, the achievement level of the grade V pupils in the district of Wright I and II is far below it. It can be concluded the pupil-respondents had not achieved the targeted proficiency level. The teachers should intensify their teaching of Mathematics. Innovation and effective teaching strategies should be utilized and should be reinforced with instructional aids.

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## Chapter 1

### THE PROBLEM AND ITS BACKGROUND

#### Introduction

At present, our schools have two official languages used as media of instruction namely: English and Filipino (Sutaria, 1989:29). In the Philippine Educational System, English is one of the media of instruction. This is seen as an access language to learning areas like Science, Mathematics, History, Geography, Culture and Arts which enables students to become proficient in English. This is well enunciated in Article XIV of the 1987 Constitution and in the DEC Order No. 52 S. 1987. This department order provides that the general goal of the bilingual education program in the country is to bring about competence in both English and Filipino (Sutaria, 1989:29). This department order provides that specific goals of bilingual policy are: (1) Enhance learning through two languages to achieve quality education as called for in the 1987 Constitution; and (2) Maintain English as language of Science and Technology.

As time goes by, almost all sectors of society feel that English language is deteriorating. The implementation of bilingual education policy deteriorates English proficiency (Yman, 1991:27). A proof of this is the result

of pretest, posttest and class performance. Test scores of grade V pupils are particularly low in Science and language subjects (Guerero, 1988:103). So, in order to ensure a better instruction in the field, seminar trainings and workshops have been conducted, so that teachers would be provided with broader and deeper knowledge of the course and be able to adopt new method and technique that would help the teachers in the teaching of English and other content subject such as Science.

This researcher observes that student's achievement varies among schools and across grades. From this actual observation, the researcher finds out that there are students who are good in English but poor in Science. There are also students who are good in Science but poor in English. This observation is also true between English and Mathematics. There are students who show equal proficiency in both subjects but there are cases where some pupils are adept in English but poor in Mathematics. Likewise, there are those who lag in English but they excel in Mathematics. While there is a shared belief among teachers as well as school administrators that English more often than not affects the efficiency of pupils in Mathematics and Science, this researcher discovered sporadic cases where this is not so.

With this situation the researcher was motivated to

undertake this study to verify, confirm or negate this observation of determining whether English proficiency has something to do with the performance of some pupils in English-taught subjects like Science and Mathematics.

### Statement of the Problem

This study assessed the achievement of grade V pupils in English-taught subjects like Science and Mathematics with the end of determining the relationship between English proficiency and these subjects.

Specifically, it sought to answer the following questions:

1. What is the profile of the grade V pupils in the districts of Wright I and Wright II, Division of Samar, in terms of their achievement in English, Science and Mathematics as revealed by the Division Achievement Test?

2/ Is there a significant relationship between the overall performance of the respondents and their achievement in English, Science and Mathematics?

3. Is there a significant relationship between the proficiency in English and achievement in Science and Mathematics?

4. What are the problems encountered by the pupil-respondents and their teachers relative to the use of English as medium of instruction?

5. What are the suggested solutions of the pupils and

teachers to the perceived problems?

6. What intervention schemes or redirections on the implementation of the Bilingual Education Policy can be recommended based on the findings of the study?

### Hypotheses

The following hypotheses were tested in this study:

1., There is no significant relationship between grade V pupils' overall performance and their achievement in:

- 1.1 English;
- 1.2 Science; and
- 1.3 Mathematics.

2. There is no significant relationship between the grade V pupils' proficiency in English and their achievement in:

- 2.1 Science; and
- 2.2 Mathematics.

### Theoretical Framework

This study is anchored on the theory of Edward Lee Thorndike known as the theory of connectionism or stimulus-response theory (Sutaria, 1989:128). According to this theory, human activity is based on association between stimuli and responses. Any activity is seen as: First, a situation which influences or affects the individual; Second, a response which the individual makes to the



situation; and Third, a connection between the situation and the response in which the former enables the production of the latter. This connection has been called the S-R bond. The term signifies a tendency or predisposition to respond in a particular manner to a given stimulus.

Another theory which underlies this study is Thorndike's theory of transfer of learning, particularly the theory of identical elements (Gregorio, 1988:376-377). According to this theory, the amount of transfer depends upon the identical elements of the similarity present in both situations. It is based on the hypothesis that learning consists of the establishment of a specific element; whatever bonds are established in one situation may also be found in the other. The identical elements are said to be association and ideas of method and general principles. Thorndike came to the conclusion that transfer from one situation to another depends upon the identical elements of content, method, aim or attitude which are present in both situations. In the case of English used as medium of instruction in Science and Mathematics, shows the language as the identical element - English as a subject where the nuances of the language are learned. The proficiency of the pupil in this language entirely depends on how well the skills are taught via an effective procedure in language teaching. The proficiency of the

pupil in English somehow influences his achievement in an English-taught subject like Science and Mathematics which use English as the language of teaching them. With this proficiency, the pupil is expected to demonstrate understanding of the content of both subjects. Milambiling (1996:28) opined such identical elements facilitate learning.

### Conceptual Framework

Figure 1 presents the schematic diagram of the conceptual framework giving the idea or picture of what the study is all about. It illustrates among others the research environment or physical and geographical coverage of the study which embraces the selected grade V pupils coming from the 10 complete elementary schools in the District of Wright I and II as depicted in the base frame. The second layer of frames contains the variates which are the results of the achievement test - the overall performance represented by average of the class means in the three learning areas, English, Science and Mathematics and their achievement in the three subjects represented by the class means. These are correlated to determine whether or not the overall performance was influenced by the pupils achievement in the three learning areas. This is indicated

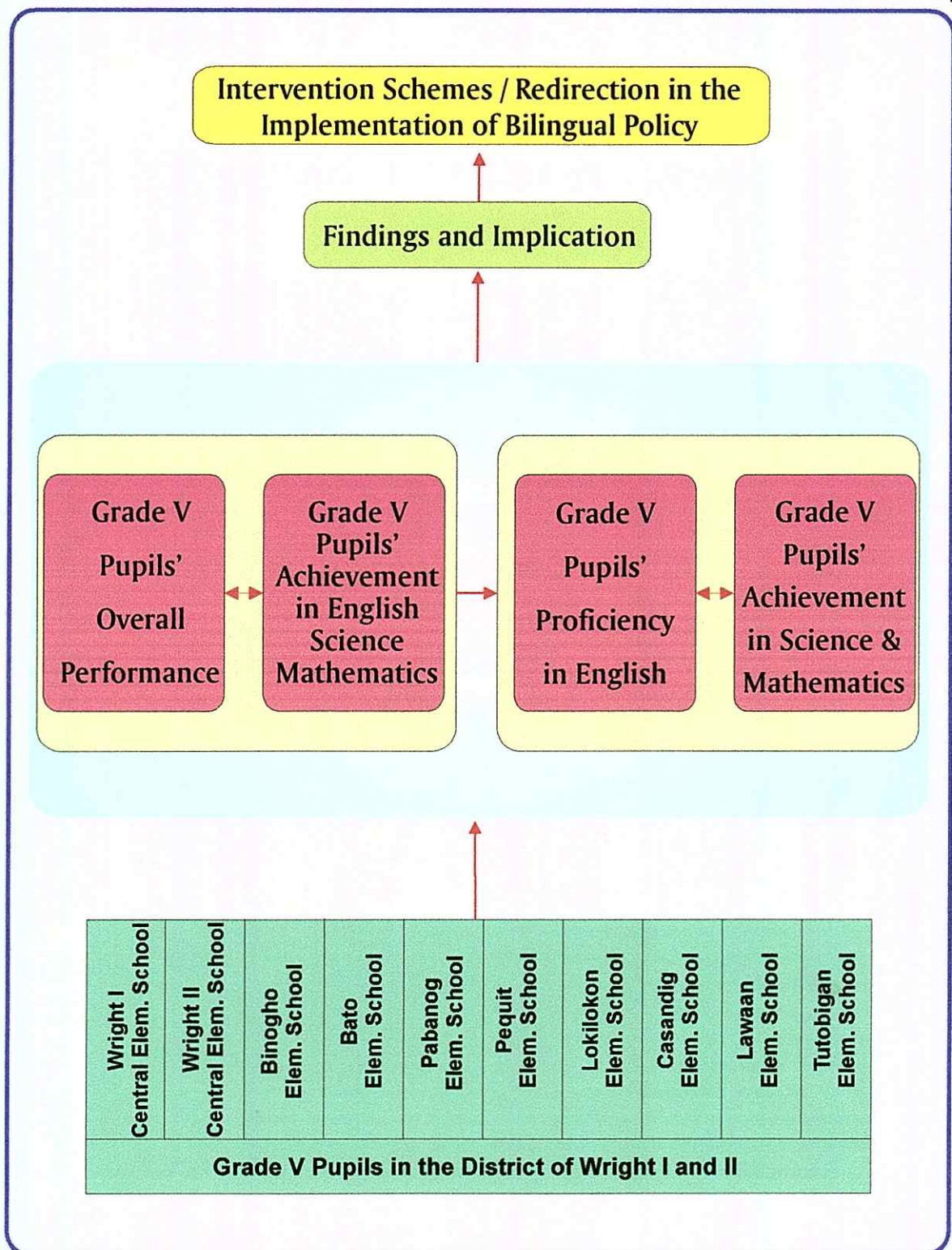


Figure 1. The Conceptual Model of the Study Showing The Hypothesized Relationship Between the Grade V Pupils' Overall Performance and Their Achievement in English, Science and Mathematics.

by a two-way arrow. Then, the grade five pupils' proficiency in English is correlated with their achievement in the two subjects as shown in the opposite pairs of boxes. English proficiency is represented by the pupils' mean performance in the English achievement test. These, again, are correlated to find out whether or not proficiency in English affects performance in Science and Mathematics. This is indicated by a two-way arrow. The one-way arrow between the two pairs of boxes merely shows the sequence of activities done by the researcher. These analyses result in findings and implications for the teachers, administrators and the Bilingual Education Policy of the country. Thus, recommendations are proposed by the researcher with end in view of improving performance of pupils in the three learning areas: English, Science and Mathematics.

#### Importance of the Study

The result of this study is expected to provide basis for an improved instruction with the end in view of increasing the overall performance of grade V pupils in Wright I and II Districts.

To the Pupils. The findings of this study would encourage them to strive for excellence. Being aware of their class standing, they can restructure their study schedule by emphasizing the subjects where they get the

lower ratings. It would also direct them to redirect their focus so that balance in terms of quantitative and qualitative learning would be attained. The pupils who are the beneficiaries of the total efforts of the school program would achieve better and improve their performance.

To the Teachers. This study would inspire them to initiate and apply improved methodologies and procedure in evaluating students' learning, strive to avail of in-service training and seminars which schools provide for the realization of its educational goal. This study would give the teacher an idea as to what and how they should teach, so that their students would perform better in English, Science and Mathematics, respectively.

To the School Administrators. This study would provide information to the administrators of the performance of the pupils in the aforesaid learning areas. Knowing this, he or she can initiate strategies such as articulation among subject area teachers and complementation as they plan their lessons, so that the teaching staff would strengthen one another, thereby concerting all efforts towards one direction. The result of this study would help the administrators in assessing the teachers' competence in relation to the requirements of quality education.

To the Parents. The findings of this study would serve as an eye opener to the parents, so that they would be truly supportive of the studies of their children. The improved performance of their children would inspire them to work harder for the sake of their children's education.

To the Future Researchers. The results of this study would inspire the future researchers to conduct future research on the elementary pupils' performance in other subject areas. Furthermore, the findings would give them baseline data in conducting studies in the future.

#### Scope and Delimitation of the Study

This study focused on the assessment of grade V pupils' achievement in English, Science and Mathematics in terms of their performance in achievement test in three learning areas and correlating these with their overall performance.

The participating schools in Wright I District were: Wright I Central Elementary School, Bato Elementary School, Binogho Elementary School, Pabanog Elementary School, Pequit Elementary School and Lokilokon Elementary School.

The schools in Wright II District involved Wright II Central Elementary School, Casandig Elementary School, Lawaan Elementary School and Tutubigan Elementary School.

Using a sampling formula, the desired number of

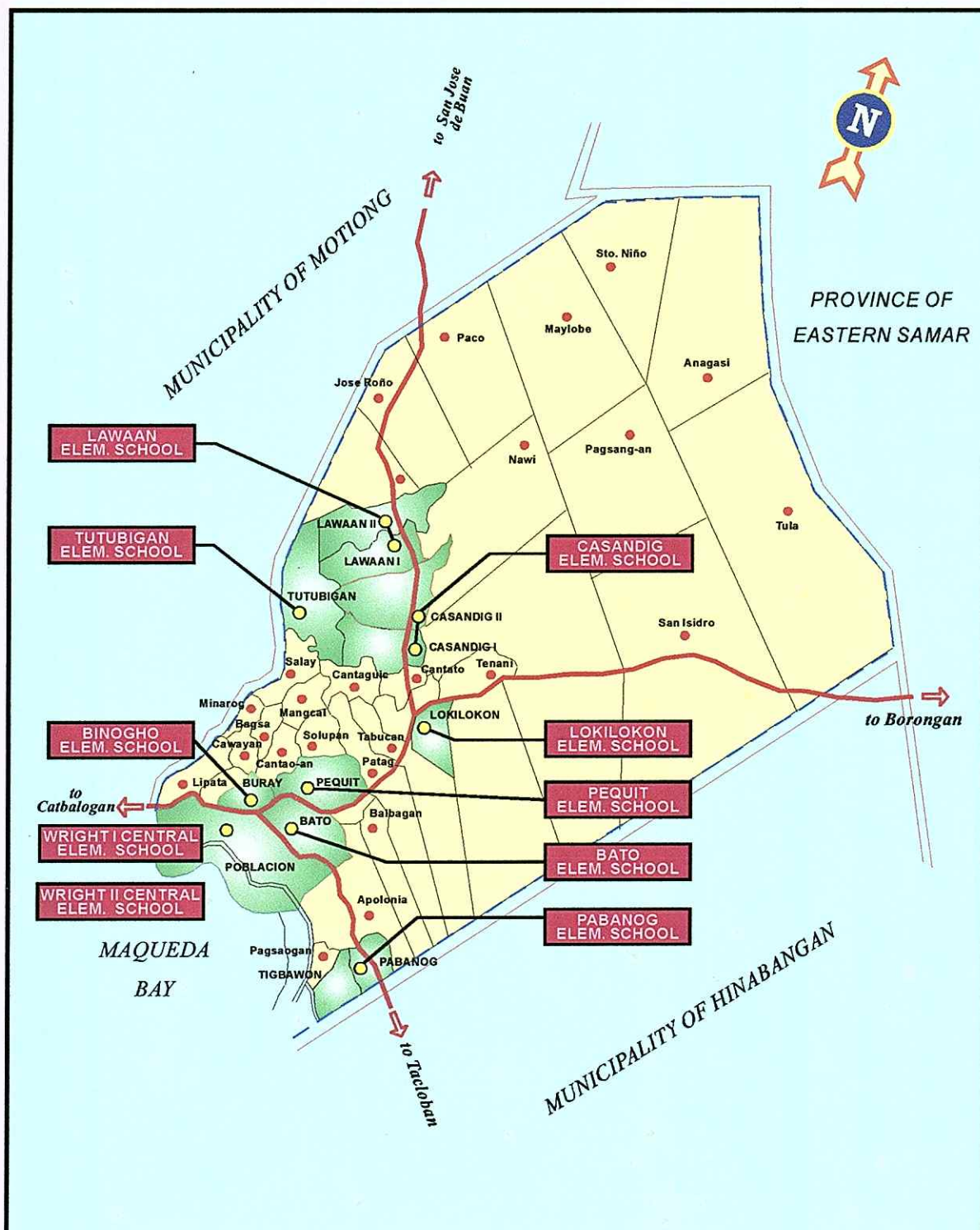


Figure 2. Map of the Municipality of Wright (*Paranas*) showing the location of the different elementary schools included in the study.



respondents from each respondent-school were taken to comprise the sample-respondents of this study. A total of 394 pupil-respondents and 23 teacher-respondents were involved in the study.

Since the study was conducted during the first semester of school year 1999-2000, the Division Achievement Test was administered on special schedule, when teachers were just half-way in their lesson budget.

### Definition of Terms

To facilitate understanding, the following words are hereby defined.

Achievement. This refers to the accomplishment or proficiency of performance in a given skill or body of knowledge. (Bustos, 1985:26) In this study, it refers to the performance of grade V pupils in Wright I and II Districts particularly the performance in Science, English and Mathematics and their general average rating.

Achievement Test. This is a test designed to measure the grade V pupils' knowledge, skills, values etc. in a given field taught in school (Bustos, 1985:26). Particularly, this test refers to the Division Achievement Test prepared and utilized by the Division of Samar, Region VIII as a measure of performance of grade V pupils. This refers to the DECS Order No. 54, S. 1974 which provide for the use of English and Filipino as medium of instruction in



certain learning areas. English, Science and Mathematics are taught in English and Filipino, Social Studies and the rest of the subject areas are taught in Filipino.

Administrators. A generic term referring to the person responsible for the total administration of an educational system institution or division or either; may refer to state superintendents or district supervisor, principals or deans or chancellor and presidents (Good, 1973:15). Operationally defined, they are the District Supervisors, Elementary School Principals, Elementary School Head Teachers and the Teacher-in-Charge of the concerned respondent-schools in the District of Wright I and II.

Assessment. The process by which as many data as possible are gathered and used to come up with the qualitative and quantitative profile of a given aspect (Good, 1973:43). Operationally defined, it is the data gathered and used to evaluate the pupils' achievement in Science, English and Mathematics.

Bilingual Education Policy. This refers to the DECS Order No. 54, S. 1974 which provide for the use of English and Filipino as medium of instruction in certain learning areas, English, Science and Mathematics are taught in English and Filipino, Social Studies and the rest of the subject areas are taught in Filipino.

Correlate. It is the tendency for corresponding observation or on two or more series to vary together from the average of their respective series that is to have similar relative position; or to put in relation with each other (Good, 1973:141). Operationally defined, it is the term used in this study to refer to English proficiency which exerts influence or affect on the achievement of grade V pupils in Science and Mathematics.

Instruction. The kind of teaching that obligates the instructor to furnish the learner with some lasting direction. It is accountable for pupils' performance commensurate with the precise statement of educational objective (The New Webster Dictionary of the English Language, 1995:9).

Overall Performance. Operationally, it refers to the average of the class means and the average of the corresponding MPS as a result of the Division Achievement Test.

Performance. This refers to the actual performance or actual accomplishments as distinguished from potential ability (Good, 1973:375). Operationally defined, it refers to the performance of grade V pupils in the Division Achievement Test for English, Science and Mathematics expressed in mean scores.

Proficiency. It is the skill in a comprehensive sense

including not only motor or manual activities but also activities such as language, bookkeeping, economics and mathematics etc. (Good, 1973:441). Operationally, it refers to the advanced state of attainment in some knowledge or skill of the grade V pupils' achievement in English, Science and Mathematics.

Proficiency in English. In this study, it refers to the mean score or the equivalent MPS of the grade V pupils in the Division Achievement Test in English.

Quality Education. An educational thrust which implies an upgrading of educational standards which is similar to the attainment of excellence in education as well as in life (Sutaria, 1989:29).

Scholastic Performance. In this study, it is the actual final rating of grade V pupils in English, Science and Mathematics obtained by the pupils during the division achievement test in Wright I and II districts, school year 1999-2000.

## Chapter 2

### REVIEW OF RELATED LITERATURE AND RELATED STUDIES

This chapter contains ideas and information relevant to this study. These ideas and information are categorized into two, namely: related literature and related studies, otherwise known as conceptual literature and research literature, respectively. Conceptual literature are those obtained from books, periodicals, documents and speeches, while research literature are those taken from the findings of completed researches.

#### Related Literature

According to Isidro (1989:45) language is one of the greatest achievement of man. In his long evolution, he has developed language to communicate his ideas and to transmit what he has achieved to succeeding generations. Through language, men today write their literature, keep their records, compose their songs, invent formulas, advance Science and otherwise enhance human progress. On account of importance to individual and social life, language occupies a foremost position in the curriculum. In many curricula, language is the core. It is usually divided, for instructional purposes, into several parts writing, oral language including phonics, reading, composition, common usage, grammar and literature.

Cruz (1992:102) pointed out that language policy in education which the education department announced in Department Order No. 9 series of 1973 is for the Filipino to continue to learn English side by side with learning his national language Filipino. This Department Order, explicitly states that one of the aims of Philippine education is to produce bilingual Filipinos who can communicate with equal proficiency in both languages Filipino and English.' Corollary to this is the conceptual framework of the 1989 Secondary Curriculum which reads:

The Philippines needs English for access to information as well as cultural materials that will enhance the quality life in the nation. Significantly, the implementation of the language policy has been approached in a manner devoid of passion.

De la Cruz (1992:102) stressed that "unfortunately, our national language needs further development since it is obviously inadequate for intellectual subjects like Science, Mathematics, Philosophy, Logic, Medicine, the world classics and belles-lettres. To wait for indefinite number of years for the intellectualization of Filipino would be for Philippine education to go limping and for every Filipino citizen to be deprived of the refinements of life. During these years of waiting, we and the future generations shall be confined to "Filipino" alone and therefore we shall be out of touch with the outside world

because our constitution mandates."

Cortes (1992:102) observed that ill-prepared teachers, inadequate funding, curriculum irrelevance, lack of instructional materials, poor facilities, poverty and depressed home background are often cited to explain the unsatisfactory performance of pupils/students in school. Poor academic achievement is hardly ascribed to the language of instruction in the Philippines.

Public discussion on the medium of instruction has focused more on the issue of whether Filipino is a language that can adequately meet the requirements of formal schooling and intellectual discourse in higher education. English as the recognized universal language of diplomacy, commerce and science, is the best argument for retaining its dominant place in Philippine education.

Sibayan (1990:152), fruitfully discussed some ideas in language planning that a language to be used in education on all levels must be intellectually modernized. A language may be modernized but it may not be intellectualized. Example: much of the language of popular entertainment in television is modern/modernized but it can hardly be called intellectualized. It cannot be used for the higher cognitive processes such as those required in subjects and disciplines in higher education, science and technology, etc. There are four skills that need to be

developed in language, namely, those of speaking, listening, reading and writing. Languages may have spoken and written forms; and some primitive languages only have spoken forms requiring only speaking and listening skills. As stated earlier, of the two forms, the more important and primary in education and all the controlling domains of language is the written form. Simple proof: even Germans, Americans, and Frenchmen, who speak in their languages from the time they begin to talk have to go to school to learn the written form to have access to and acquire the world's knowledge especially that used in the controlling domains of language. It is writing that makes the present civilization possible.

The implication is tremendous; a language deficient in the written form in the various domains and registers cannot be used successfully for education in the schools and universities. One of the most important activities or programs that need to be instituted therefore is a program on writing and making the world's fund of knowledge available and accessible in Filipino. This means that there must be supportive agencies such as a thriving publishing industry and network for distribution. There must be teachers who can speak, read and write the language.

English in the domain of education, science and

technology is used as medium of instruction in Science, English and Mathematics, at all levels as provided in the 1987 Bilingual Policy. Most of the library materials are in English. Teacher training programs and conferences are still predominantly in English (Pascasio, 1996:42). It is the language of social mobility and aspiration. For global cooperation, international negotiation, tourism, English will continue to be used. In the "information highway," all rules of operation are in English. Computer basic are predominantly in English.

At the moment, English is still the language of power, the medium through which much of the bureaucracy conduct itself, it is also perceived as the language could open door to economic opportunities here and abroad, the medium of global cooperation. With the advancement of Science and Technology, the world is getting smaller as the adage goes, thus we need English which seems to fulfill the role of global language. As Oreta (1984:189) had said, we must play a constructive role in moving this world toward the full exchange of both ideas and the means of production so that we the people of the world today, may enjoy the fruits of a truly global society. English as the language facilitates global interdependence.

As a basic tool of learning in communication, psychologists and teachers agreed on the fact that students



who cannot communicate could not learn (Leal, 1979:97). In this regard, it seems that students achievement in Science is somewhat associated with their performance in English. Students who are proficient in English are expected to perform well in English and can associate the skills to other subject areas which are taught in English.

The study uses association learning; this learning involves the development of associative patterns by which ideas and experiences are recognized, retained and recalled through the process of establishing relationships among ideas and experiences. So, the outcome taught in associative learning is the acquisition and retention of facts and information.

Significance of Attitudes. Attitudes are fundamental determinants of one's perfection of an action towards all aspects of his environment. They also serve to defend and enhance one's self-esteem in general, make sense of, and help adjust oneself to one's environment. They shape one's perceptions and judgment of other person's and of things. Attitudes therefore, influence what one learns, remembers, and believes (Lupdag, 1984:55).

Aptitude. Aptitudes refers to one's capacity to learn in a specific field (Lupdag, 1984:55). This is measured by an aptitude test. The aptitude of a person vary. He may have high aptitude for verbal ability but have low aptitude

for numerical ability. Thus, he may get high grades in English but get low grades in Science and vice versa.

Intelligent quotient (I.Q.). Studies suggest that as I.Q. increase, academic performance in terms of grades also increase (Lupdag, 1984:55). A learner with high I.Q. increase academic performance in terms of grades also increase. A learner with high I.Q. who gets low grades is underachieving. A high I.Q. is not an insurance for high grades however, for I.Q. is just one of the determinants of grades.

Intelligence and other factors. According to Pascasio (1996:42), indices of intelligence correlated highly with language achievement and academic performance measures and that aptitude and motivation are necessary factors for successfully acquiring a second language. Parents attitudes are found to exert considerable influence on children's attitude towards language learning. Children seem to share their parents' orientations. Attitudes towards language and their mixed orientations are deterrents to success in English (Lupdag, 1987:57)

### Related Studies

Giving more depth to this inquiry, the following completed researches are herein reviewed.

Pacolor's study (1993) determined the teacher- and learner-factors directly related with student achievement

in Mathematics and their extent of influence with the end of evolving a training design for Mathematics teaching. He found out that the knowledge in content of teachers teaching Mathematics IV in terms of mean percentage score (MPS) was average. On the other hand, the weighted mean scholastic ratings in Mathematics IV of the fourth year secondary students was, likewise, average. But in terms of MPS, the students in the four types of schools in the Samar Island fell under the low achievement level. Hence, the training of Mathematics teachers in content, teaching strategies and assessment techniques was recommended. Too, the researcher recommended an in-depth evaluation and review of the present multi-lateral learning content of Mathematics IV to determine its possible effects on students' retention and transfer of basic mathematical learning.

The present study is similar to the above-named study of Pacolor in that both studies considered student achievement in Mathematics as one of the variables. However, it differed from Pacolor's inquiry on the following: 1) This study involved elementary pupils, grade V while his study involved secondary school students, 4th year; 2) In the present study, Mathematics achievement was correlated with the overall performance of grade V pupils in the Division Achievement Test while that of Pacolor's,

it correlated with the identified teacher- and learner-factors; 3) The present study determined the influence of English proficiency on Mathematics achievement while the above-cited study determined the influence of teacher- and learner-factors on the Mathematics achievement.

Another study which had some semblance with the present study was that of Acong (1998). He investigated the relationship between academic performance of grade IV pupils and their mastery learning levels. He found out that pupil-respondents had an average academic performance in the learning areas considered in the study. In terms of mastery learning, the study proved it to be average. When both variables were correlated, the finding showed that there was a low or slight correlation between the two. With the aforesaid findings, the researcher recommended the following: 1) That a more intensive supervision be conducted; 2) That differentiated tasks be given to pupils in complete and incomplete schools; and 3) Enrichment programs may be provided augment the academic performance and mastery levels of the grade IV pupil-respondents.

The present study was somehow related to the above-cited study in the sense that both students probed into the academic performance of pupils in Mathematics, English and Science and Health. However, they differed on the following points: 1) In the present study, Mathematics

achievement was correlated with English proficiency of the grade V pupils; in the study of Acong, he correlated it with the mastery level of the pupils; 2) The present study did not make any distinction between the preference of the respondents whether in complete or incomplete elementary schools; Acong compared the academic performance of grade IV pupils in complete and incomplete elementary schools; 3) This study involve grade V pupils while Acong made use of grade IV pupils.

Apacible (1992) undertook a research on the learning difficulties in Elementary Mathematics of grade six pupils in the District of Zumarraga, Division of Samar during the school year 1991-1992. Based on his findings, the mean score was 21.83 and the mean percentage score was 49% which showed that the pupils' level of mathematical achievement was low. The standard deviation was 7.35. This implied that the subjects who were grouped heterogeneously had different abilities and characteristics, but the mathematical achievement as a whole did not reach the standards set by the New Elementary School Curriculum (NESC) at 75% competency level. This study provided evidence that there was a significant difference between the mathematical achievement of the pupils who found the test difficult and the mathematical achievement of the pupils who found the test easy. Another, he provided a

sufficient evidence that there was a significant difference between the pupils' expected mathematical achievement and the pupils' actual mathematical achievement. So in this study, teachers who were handling elementary mathematics, should give more emphasis in class instruction, a remediation program based on the needs and weaknesses of the learners as identified in this study.

The present study was similar to that of Apacible, since both dealt on the achievement of pupils. They differed however, in the learning areas studied on, because the present study involved three learning areas such as English, Science and Mathematics, while that of Apacible (1992) was only on Elementary Mathematics. They differed also on the respondents and location, because Apacible's respondents were grade six pupils in Zumarraga District, while the present study are grade V pupils in Wright I and II districts.

Bacho's (1991) study attempted to determine the degree of influence the seven factors had on the NCEE performance of students in the selected coastal high schools during the school year 1988-1989, with two hundred ten (210) fourth year high school students. She found out that NCEE performance and the seven factors associated with it, denoted a high correlation and thus, it was concluded that there was a high relationship between the NCEE performance

and the seven factors associated with it. Based from her findings, Bacho (1991) concluded that the NCEE performance of the students in the five selected high school was highly affected by the seven factors as: Socio-economic status of the family, student factor, school facilities, geographical condition, weather condition, teacher factor and peace and order situation. In order to help students achieve better and acquire quality education, Bacho recommended the following: They should be provided with school building in order to have them in well structured rooms, fully equipped with adequate seats and other facilities, competent teachers should teach their minor and major only. Thorough NCEE review classes should be conducted regularly. School administrators should regularly supervise and assist teachers, so that they will be aware of their deficiencies and their strength and finally, she recommended that the school should tie up with the community in instituting some measures which would hopefully improve community life.

This study was similar to the study of Bacho, because both dealt on probing into the factors which caused academic failures and poor performance, use the same treatment of data which was Pearson Product Moment ( $r$ ) Correlation. They differed on the respondents, because the present study has grade V pupils in the elementary level, while Bacho used high school students from five selected

coastal high schools in Samar.

Cananua (1988) made a study on the performance of Grade II pupils in the school, District of Catbalogan I, Catbalogan, Samar with the end in view of determining whether the performance of the pupils satisfied the expected mean percentage scores established for the school, district and division level for the school year 1986-1987. She found, taking all the subjects collectively, the general pupils' performance met the performance target set by the school, the district and the division as indicated by the insignificant differences between the expected and the actual MPS. Cananua recommended the following: There should be a similar study conducted in all grade level in the New Elementary School curriculum so as to determine the strengths and weaknesses in the achievement of pupils. Mastery learning should be given more emphasis on the development of pupils' performance in all the learning areas of the New Elementary School curriculum. The teacher should be well acquainted with the school, district and division targets at the start of the year, so that their teaching may be directed towards the attainment of the targets. The school and the district tests must be conducted objectively under close supervision to prevent anyone from assisting the pupils during examination time.

This study was similar to that of Cananua's, because



it also measured the achievement in English and Mathematics. They differed on the variables compared - Cananua compared the Mathematics of grade II pupils expected and actual mean percentage scores. This study compared overall performance of grade V pupils and their achievement in English, Science and Mathematics and pupils' proficiency in English and their achievement in the three learning areas.

Donadillo's (1991) study centered on the relationship between the learned values of grade six pupils and their mathematics and English achievement during the school year 1990-1991. Based on her findings, the grade six pupils' Mathematics and English achievement was below average. The pupils' learned values were ranked as follows: Nationalism and Patriotism, rank no. 1, Social Responsibility rank no. 2, Knowledge/Trust no. 3, Economic Self-sufficiency rank no. 4, Health rank no. 5, Love rank no. 6, and Spirituality rank no. 7. This finding showed that the pupils had more learned values related to Nationalism/Patriotism and less learned values related to spirituality. Of the seven core values which were correlated to Mathematics and English performance of the pupils, the core values on Nationalism and Patriotism was ranked no. 1. This meant that the pupils had more learned values which were related to Nationalism and Patriotism. On the other hand the core

value on Spirituality was ranked no. 7, which meant that the pupils learned few values related to Spirituality. Based on her findings, Donadillo (1991) concluded that the grade six pupils in the District of Sta. Margarita had below average achievement in Mathematics and in English. There was no significant relationship between the learned values in the seven core values and the pupils' achievement in Mathematics. Finally, learned values had something to do with English achievement. Based from her conclusions, she recommended that more emphasis and attention be given to Mathematics, English and Values Education by the teachers as well as school administrators in their district, so as to improve pupils' performance; that the Values Inventory Test be given to all Grade Six pupils at the beginning of the school year as pre-test and at the end of the school year as post test to evaluate pupils' performance in Values Education, and that opportunities for integrating values be provided for children through school activities, programs and celebrations to be planned and implemented by school officials with maximum pupils' participation, thereby giving chances for pupils to put into actual practice the values they have learned and further studies be made on the relationship of learned values with other subjects like HEKASI, Science and Music, Arts and Physical Education.

The aforesaid study was similar to the present study, in the sense that: 1) Both are correlational studies involving two variables being compared; and 2) Both involved achievements of pupils in English and Mathematics as the other variable being compared with. They differed in the following: Donadillo's study correlated learned values with achievement in English and Mathematics, while this study correlated English proficiency with achievement in English, Science and Mathematics; 2) The former utilized grade VI pupils as respondents while in the present study, it utilized grade V pupils; and 3) Donadillo used a teacher-made test and a questionnaire as her instruments while this researcher used Division Achievement Test.

Jabonete's (1988) study dealt on Science club activities: Their relationship to academic achievement in Science IV, among one hundred twenty six (126) fourth year high school from four vocational schools in the Division of Samar during the school year 1986-1987. She concluded that Science club activities contribute to the intellectual development of students. Based on her conclusion, she recommended that all students should be encouraged to engage actively in Science club activities, and the higher degree of involvement the better.

This study was similar to that of Jabonete's, since both dealt on the achievement of students' performance.

They highly differed on the learning area studied on, the respondents and the instrument used, because the present study dealt on three subject areas which were English, Science, and Mathematics while that of Jabonete's involved the achievement in Science. She used the questionnaire checklist, Spearman rank coefficient correlation as her treatment of data, while the present study used the Pearson Product Moment ( $r$ ) Correlation as her statistical treatment and the respondents were taken from 10 complete elementary school of grade V pupils in Wright I and II districts.

Mustacisa (1985) conducted an "An Assessment of the National College Entrance Examination (NCEE)." The study focused on the high school graduates who took the National College Entrance Examination during the school year 1984-1985. He found out that there was a significant relationship between the student's scholastic rating in the high school to that of NCEE. It affirmed that said examination could be a reliable measure of one's academic performance as they pursue college courses. Based on his conclusions, Mustacisa recommended the following: There must be a varied exposure of high school students to different types of tests. Each college must adopt a test admission program before a student enters his chosen course. The NCEE must continue to give chances for everyone to select the appropriate course and assess one's

academic performance. And parents should be convinced of the real performance of their children in school and in examinations. They should not insist on letting them take college courses that are not within their capacities, interests and achievement so as to evade frustrations and regrets.

This study was similar to that of Mustacisa's, since both focused on assessment of achievement. Both used Pearson Product Moment correlation as statistical tool. They differed, however, in the level of respondents and the instruments used in gathering the data, because the former study centered on the performance of fourth year high school students on the national level tests while the present study centered on the achievement of grade V pupils in Science, English and Mathematics. The respondents in the former study came from the high school in Eastern Visayas, while in this study, the respondents were elementary school in the districts of Wright I and II.

Nono's (1998) study dealt on the assessment of Filipino and HEKASI Performance and Scholastic Achievement of Grade V Pupils in the division of Samar during the school year 1996-1997. Based on her findings, Nono concluded that, in the achievement test, the grade V pupils performed equally well in Filipino and HEKASI. She explained that language facility in Filipino influenced

their performance in HEKASI, this subject being taught in Filipino. In both subjects Filipino and HEKASI, the grade V pupils had higher scholastic performance than their performance in achievement test. This finding, she said, was inconclusive since both measures differed in criteria in order to arrive at a desired performance level. Achievement test was a written assessment, where as, the grade point average was based not only on written assessment but it considered composite factors like oral assessment, projects, assignment and the like to arrive at a desired grade point average. With the aforesaid findings and conclusions, Nono recommended the following: A similar study should be undertaken with increased number of subjects or respondents using different measures of achievement; Filipino is the most appropriate medium to teach HEKASI which embody our culture, ideals and heritage as Filipinos; It is recommended that it be continued to be the language of instruction inspite of the emphasis to develop English, Mathematics and Science for global competitiveness.

The present study was similar to that of Nono's study, since both focused on the assessment of achievement. Both studies used the same grade level of respondents. They highly differed, however, on the instruments used in gathering the data where the former study used a teacher-

made test and questionnaire, while the present study used a Division Achievement Test. Both differed also on the subject areas involved - Nono compared Filipino and HEKASI achievement with scholastic grade of the pupils, this researcher compared achievement in English, Science and Mathematics with English proficiency and overall performance.

Perez's (1987) study attempted to determine the relationship between the mathematical and the language abilities of 120 grade six pupils of the central elementary schools of three districts in Catbalogan, Samar. The descriptive-analytical method of research was used in this study involving one hundred twenty grade VI pupils which 60 of them were males and 60 were females. The selection of the subject schools was based on the school in each district having the highest enrolment in grade six during the school year. Twenty males and 20 females were taken from each of the subject school. A random sampling was employed so that each grade VI pupils may have the chance to be included in this study. To determine the samples, the "fish bowl" technique was used. Two boxes containing the rolled sheet of papers some of which with numbers 1-20, while the rest were blank. Test questions and Form 138 were used as her instruments. This was studied during the school year 1984-1985. Regarding her statistical

treatment, she used the Pearson-Product moment correlation in order to treat the achievement result and the scholastic achievement rating of the grade VI pupils. The t-test of significance at .05 level with two degrees of freedom was employed to find out whether the obtained correlation falls within the region of acceptance or rejection. Based on her findings, the obtained mean achievement scores of the pupil-respondents in elementary mathematics and communication arts English were shown by school. Regarding her conclusion, her study provides a moderate or substantial evidence of significant relationship between the achievement scores and the scholastic achievement in mathematics and so with the communication arts English. She recommended that the schools should make provision for the continuous study of the results of the division achievement test in elementary mathematics and communication arts English, so that the progress of the school with regards to classroom instruction could be improved. Teachers who would like to improve the achievement in elementary mathematics of pupils should first improve the reading comprehension skills and the mastery learning should be given more emphasis on the development of pupils' performance in elementary mathematics and in communication arts English, for it is the foundation towards higher mathematics and English.



Perez's study had similarity with the present study since both used the Pearson Product Moment correlation with the same .05 level of significance and the same assessment of pupils achievement, but they differ however, on the level of respondents, because the former were the grade VI while the present study were the grade V pupils. The former study focused on Mathematics and English, while the present study focused on the three learning area which were English, Science and Mathematics.

## Chapter 3

### METHODOLOGY

This chapter discusses in detail the research methodology with focus on research design, instrumentation, sampling procedure, data gathering procedure and statistical treatment of data.

#### Research Design

This study employed the correlational method of research using the Division Achievement Test as the main instrument in gathering data. The researcher administered the test to grade V pupils in the sample respondent-schools and obtained their overall performance and achievement in English, Science and Mathematics. Relationship was determined by comparing the pupils' overall performance and their achievement in the three subjects and the pupils' proficiency in English with their performance in Science and Mathematics. The findings yielded some implications for teachers, administrators and the bilingual education policy.

#### Instrumentation

The study made use of the Division Achievement Test used by the Division of Samar, teacher-made questionnaire and documentary analysis to gather the necessary data.

Division Achievement Test. This study employed the Division Achievement Test used by the Division of Samar during the school year 1998-1999. The tests in English, Science and Mathematics consisted of 45 items each using the multiple-choice type. It was evolved from a pool of 150 items each and went through item analysis to come up with a total of 45 items per subject. When tested for its reliability the computed reliability coefficient was pegged at 0.77 which indicated high reliability.

Questionnaire. Questionnaire was developed by the researcher through the help of her adviser to determine the possible problems and suggested solutions to the perceived problems on the use of English as medium of instruction. The researcher was requested by her adviser to list the problems encountered by teachers and pupils in the use of English as language of teaching. She was asked to write any problem that came to mind at random order. Likewise, the researcher interviewed some of her colleagues on the problems they experienced relative to the use of English. These were consolidated and arranged logically for final reprint. For the solutions, the same procedure was used but focusing on the listed problems as they appeared in the final listing. Handouts about reading came in handy to structure the content of the questions relative to problems and solutions. This instrument was composed of two parts:

Part I composed of 10 possible problems with five scale equivalent that teachers and pupils encounter on the use of English as medium of instruction. Scale equivalent ranging from 5 equivalent to Very Much Felt (VMF) to 1 equivalent to Not Felt (NF); and Part II consisted of seven (7) suggested solutions to the perceived problems that may be employed by the pupils and teachers respondents especially the teachers who are handling English, Science and Mathematics. A scale ranging from 5 to 1: 5 - Strongly Agree (SA), 4 - Agree (A), 3 - Undecided (U), 2 - Disagree (DA) and 1 - Strongly Disagree (SD).

Documentary Analysis. To determine the total number of grade V pupils in 10 complete elementary school involved in this study, enrolment reports and Forms 2 and 3 in the District of Wright I and II were examined. Moreover, the intermediate program of these schools were scrutinized to identify the teachers teaching English, Science and Mathematics.

### Validation of Instruments

The draft of the questionnaire was shown to the researcher's adviser for comments and suggestions for improvement. To further improve the questionnaire, the researcher requested five teachers and 10 grade V pupils from the District of Hinabangan to validate it. They were directed to answer the questionnaire and raise their hands

if they had problems answering it. Overall impressions were asked from them by this researcher. After scrutinizing the answered forms and their suggestions, this researcher incorporated them in her revised form. The teacher and pupil-validators were not included as samples in the final administration of the instrument.

### Sampling Procedure

The investigation involved all 10 elementary schools under the District of Wright I and Wright II as enumerated in the Scope and Delimitation. To determine the needed samples from these respondent-schools, the Sloven's Formula (Pagoso, 1960:18) was used:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n - sample size

N - total number of the population

1 - constant

e - margin of error

As soon as the sample size was determined, the sample proportion was computed by using the following formula:

$$p = \frac{n}{N} \times 100$$

Where:

- p - sample proportion
- N - total number of population
- n - sample size
- 100 - constant

The sample proportion which was expressed in percentage was the constant value in computing the actual number of sample for each school. Thus, the total number of respondents was 394.

To determine the specific samples from each school, lottery technique in sampling was used. The researcher rolled small pieces of paper and assigned numbers corresponding to the alphabetical list of the pupils. These pieces of paper were placed inside a box and the researcher shook the box repeatedly every time she picked out a rolled piece of paper. Each number was recorded until the desired number of pupils was obtained.

Total enumeration was used to determine the teacher-respondents. A total of 33 teachers were involved in the study.

#### **Data Gathering Procedure**

After the pre-oral examination, the researcher sought the approval of the Schools Division Superintendent upon recommendation of the Dean of the SSPC Graduate School. Meanwhile, the researcher prepared a letter of introduction and had it signed by the superintendent and addressed to

the District Supervisor.

After getting the approval of the superintendent, the researcher gave the letter of introduction to the District Supervisor who indorsed the letter to the school heads of the ten elementary schools involved in the study. She, then, conducted the sampling and the administration of the achievement test and questionnaire.

Before the administration of the test, she explained them its purpose and that there was no cause to worry. She encouraged them to do their best as the results were very significant for the research work.

The test papers were then checked and class means and mean percentage score for each subject was computed. Average means and mean percentage scores were likewise computed to get the over-all performance of the grade V pupils. This was done by adding the means and MPS (separately) in the Mathematics, Science and Health and English divided by three. The subject achievement was represented by the computed mean and MPS in every subject.

In the administration of the questionnaire to find out the problems of the teachers and pupils on the use of English as language of instruction, and the corresponding solutions, the researcher also gave a brief remark about the content of the questionnaire. For the pupils, particularly, she explained the problems and solutions

thoroughly using Filipino and Waray when necessary, since the questionnaire was written in English. This was purposely done to check comprehension of the pupils because one of the variables in this study was the pupils' proficiency in English. The researcher was alert in explaining the statements in the questionnaire once she found out that the respondents had difficulty in understanding.

The responses of the respondents to the questionnaire were consolidated and weighted means were computed. These were used to determine the extent to which the problems in the use of English as medium of instruction was felt. Also, these weighted means were utilized to ascertain the extent to which the respondents agree to the given solutions to the identified problems.

### Statistical Treatment

The researcher used both descriptive and inferential statistics in the analysis and treatment of the gathered data. Among the descriptive statistics the following were used: means, mean percentage scores and weighted means.

For the inferential statistics the following were used:

Pearson Product Moment Correlation Coefficient. This statistic was used to establish relationship between the



overall performance of the respondents in the three subjects and their achievement in each of the three subjects tested and the relationship between English proficiency and achievement of pupils in Science and Mathematics.

The formula of Guilford (1973:108) was used as follows:

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

Where:

- $r_{xy}$  = correlation between x and y
- $\sum X$  = Sum of test X
- $\sum Y$  = Sum of test Y
- $\sum XY$  = Sum of the product of X and Y
- $N$  = Number of cases
- $\sum X^2$  = Sum of squared X score
- $\sum Y^2$  = Sum of squared Y score

Fisher's t. This was used to determine the significance of the computed correlation coefficient (Walpole, 1982:220):

$$\text{Fisher's } t = \frac{r \sqrt{N - 2}}{\sqrt{1 - r^2}}$$

Where  $r$  - refers to the computed correlation coefficient

$N$  - refers to the number of pairs

$r^2$  - refers to the square of the computed  $r$

The alpha level of significance was set at .05 level at certain degree of freedom.

## Chapter 4

### PRESENTATION AND INTERPRETATION OF FINDINGS<sup>\*</sup>

This chapter discusses and interprets the findings revealed in this study. Among others, it presents the academic profile of the respondents; relationship between the overall performance of grade V pupils and their achievement in English, Science and Mathematics; relationship between English proficiency and achievement in Science and Mathematics; and the problems and solutions perceived by the respondents relative to the use of English as medium of instruction.

#### Academic Profile of Pupil-Respondents

Table 1 discloses the achievement of the grade V pupils in the districts of Wright I and II in English, Science and Mathematics based on the given Division Achievement Test.

English. As shown in the table, the grand mean of the pupil-respondents was 23.253 equivalent to the mean percentage score (MPS) of 52.273 with a standard deviation of 5.1532. Grade V pupils from five schools obtained class means above the grand mean. The highest obtained mean was 31.24. The rest of the schools registered class means lower than the grand mean. The lowest obtained mean was 15.76.

Table 1

## Academic Profile of the Pupil-Respondents

Name of School	English		Science		Mathematics		Overall Performance	
	Mean	MPS	Mean	MPS	Mean	MPS	Mean	MPS
Wright I District								
1. Wright I Central School	23.14	51.42	26.49	58.87	23.64	52.53	24.42	54.27
2. Bato Elementary School	20.79	46.20	26.36	58.58	18.86	41.91	22.00	48.90
3. Binogho Elementary School	31.24	69.42	24.84	55.20	19.96	44.36	25.35	56.33
4. Lokilokon Elementary School	18.04	40.09	22.42	49.82	17.83	36.62	19.43	42.18
5. Pabanog Elementary School	18.28	40.62	21.59	47.98	28.74	63.87	22.87	50.82
6. Pequit Elementary School	26.69	59.31	26.98	59.96	18.81	41.80	24.16	53.69
Wright II District								
1. Wright II Central School	28.34	62.98	26.25	58.33	24.98	55.51	26.52	58.94
2. Casandig Elementary School	25.18	55.96	23.93	53.18	20.86	46.36	23.32	51.83
3. Lawaan Elementary School	27.77	61.71	28.26	62.80	29.11	64.69	28.38	63.07
4. Tutobigan Elementary School	15.76	35.02	21.57	47.93	15.13	33.62	17.49	38.86
Grand Total	235.23	522.73	248.69	552.65	217.92	481.27	233.95	518.89
Grand Mean	23.253	52.273	24.869	55.265	21.792	48.127	23.395	51.89
SD	5.1532	11.452	2.3858	5.3027	4.6809	10.723	3.2134	7.2842

Science. In Science, the grand mean was 24.869 equivalent to the MPS of 55.265 with SD = 2.3858. Five of the 10 schools tested had class means above the grand mean. The other five schools got class means lower than the grand mean. The highest obtained mean was 28.26 while the lowest obtained mean was 21.57.

Mathematics. The grade V pupils from both districts obtained a grand mean of 21.792 or a MPS of 48.129 with a standard deviation of 4.6809. Out of the ten schools involved in the study, four attained class means higher

than the grand mean. Six schools registered class mean lower than the grand mean. The highest obtained mean was pegged at 29.11 and the lowest obtained mean was 15.13.

Taking the three subjects combined, the grand mean registered at 23.395 or a MPS of 51.89 with a standard deviation of 3.2134. It can be gathered that of the ten schools tested, five schools scored above the grand mean. Their means range from 24.16 to 28.38. Likewise, five schools obtained class mean that fell below the grand mean ranging from 17.49 to 23.32.

Subject-wise, it appears that the grade V pupils in the districts of Wright I and II scored highest in Science with a grand mean of 24.862 or a mean percentage score of 55.265. Close second was English with 23.253 or a MPS of 52.273, followed by Mathematics which had a grand mean of 21.792 or a MPS of 48.127. Considering the mastery level set by the New Elementary School Curriculum (NESC) of 75%, it can be said that the grade V pupils in both districts were far from achieving the mastery level in the three considered learning areas.

#### Comparison Between the Respondents' Overall Performance and Subject Achievement

The study probed into the relationship between the grade V pupils' overall performance and their achievement in English, Science and Mathematics using the Division

Achievement Test. Tables 2-4 depicts the results of the analysis.

Table 2 presents the comparison between the overall performance of the grade V pupils and their achievement in English. It is shown that they have an overall grand mean of 23.40 and a MPS of 51.89 while their subject grand mean was 23.253 and a MPS of 52.253. Computing the correlation coefficient, it resulted to 0.85428 which indicated a high correlation. To test the significance of the computed  $r$ , Fisher's  $t$  was applied. The computed  $t$  was pegged at 4.659 which was greater than the tabular  $t$ -value of 2.306 at .05 level of significance with  $df = 8$ . This led to the rejection of the hypothesis which stated that "there is no significant relationship between the overall performance of grade V pupils and their achievement in English." It meant that the pupils' subject achievement influenced their overall performance.

The comparison of the pupils' overall performance and their achievement in Science can be seen in Table 3. The overall grand mean was computed at 23.295 and the subject grand mean was 24.869. The analysis showed a correlation coefficient of 0.77327 which indicated a high correlation. Testing the significance of the computed  $r$ , the computed  $t$ -value was pegged at 3.450 at .05 level of significance with 8 degrees of freedom. It proved higher than the critical

Table 2

Pupil-Respondents' Overall Performance  
and Their Performance in English

Name of School	English		Overall Performance	
	Mean	MPS	Mean	MPS
Wright I District				
1. Wright I Central School	23.14	51.42	24.42	54.27
2. Bato Elementary School	20.79	46.20	22.00	48.90
3. Binogho Elementary School	31.24	69.42	25.35	56.33
4. Lokilokon Elementary School	18.04	40.09	19.43	42.18
5. Pabanog Elementary School	18.28	40.62	22.87	50.82
6. Pequit Elementary School	26.69	59.31	24.16	53.69
Wright II District				
1. Wright II Central School	28.34	62.98	26.52	58.94
2. Casandig Elementary School	25.18	55.96	23.32	51.83
3. Lawaan Elementary School	27.77	61.71	28.38	63.07
4. Tutobigan Elementary School	15.76	35.02	17.49	38.86
Grand Total	235.23	522.73	233.95	518.89
Grand Mean	23.253	52.273	23.40	51.89
Pearson r	0.85478	Tabular t-value: 2.306		
Fisher's t-test	4.659	at df = 8 & L = .05		
Evaluation	Significant/Reject Ho			

t-value of 2.306. Thus, the hypothesis which stated that "there is no significant relationship between the overall performance of grade V pupils and their achievement in Science" was rejected. This meant that the pupils' overall performance was influenced a great deal by their achievement in the subject.

Table 3

Pupil-Respondents' Overall Performance  
and Their Performance in Science

Name of School	Science		Overall Performance	
	Mean	MPS	Mean	MPS
Wright I District				
1. Wright I Central School	26.49	58.87	24.42	54.27
2. Bato Elementary School	26.36	58.58	22.00	48.90
3. Binogho Elementary School	24.84	55.20	25.35	56.33
4. Lokilokon Elementary School	22.42	49.82	19.43	42.18
5. Pabanog Elementary School	21.59	47.98	22.87	50.82
6. Pequit Elementary School	26.98	59.96	24.16	53.69
Wright II District				
1. Wright II Central School	26.25	58.33	26.52	58.94
2. Casandig Elementary School	23.93	53.18	23.32	51.83
3. Lawaan Elementary School	28.26	62.80	28.38	63.07
4. Tutobigan Elementary School	21.57	47.93	17.49	38.86
Grand Total	248.69	552.65	233.95	518.89
Grand Mean	24.869	55.265	23.395	51.89
Pearson r	0.77327	Tabular t-value: 2.306		
Fisher's t-test	3.450	at df = 8 & L = .05		
Evaluation	Significant/Reject Ho			

In Table 4, the grade V pupils' overall performance is compared with their achievement in Mathematics. It reveals a higher overall performance of 23.395 over the pupils' achievement in the subject which is 21.792. The computed r resulted to 0.72434 indicating a high correlation between the two variables. Testing the significance of the



Table 4

Pupil-Respondents' Overall Performance  
and Their Performance in Mathematics

Name of School	Mathematics		Overall Performance	
	Mean	MPS	Mean	MPS
Wright I District				
1. Wright I Central School	23.64	52.53	24.42	54.27
2. Bato Elementary School	18.86	41.91	22.00	48.90
3. Binogho Elementary School	19.96	44.36	25.35	56.33
4. Lokilokon Elementary School	17.83	36.62	19.43	42.18
5. Pabanog Elementary School	28.74	63.87	22.87	50.82
6. Pequit Elementary School	18.81	41.80	24.16	53.69
Wright II District				
1. Wright II Central School	24.98	55.51	26.52	58.94
2. Casandig Elementary School	20.86	46.36	23.32	51.83
3. Lawaan Elementary School	29.11	64.69	28.38	63.07
4. Tutobigan Elementary School	15.13	33.62	17.49	38.86
Grand Total	217.92	481.27	233.95	518.89
Grand Mean	21.792	48.127	23.395	51.89
Pearson r	0.72434	Tabular t-value: 2.305		
Fisher's t-test	2.971	at df = 8 & L = .05		
Evaluation	Significant/Reject Ho			

computed r using the Fisher's t, it came up to 2.971 which was greater than the critical t-value of 2.305 at .05 level of significance with df = 8. Therefore, the hypothesis which stated that "there is no significant relationship between the overall performance of grade V pupils and their achievement in Mathematics" was rejected. It proved that

the pupils' overall performance was affected by their achievement in the subject. The low mean score of the respondents in this subject tend to lower their overall performance. Among the three subjects tested, it was on this subject that means of schools were lower than in the other two subject areas.

#### Comparison Between the Respondents' Proficiency in English and Their Subject Achievement

The study also investigated the relationship between the grade V pupils' proficiency in English and their achievement in Science and Mathematics. The result of the comparison is presented in Tables 5-6.

As gleaned from Table 5, the pupils' proficiency in English in terms of mean scores is 23.253 and a MPS of 52.273, while their achievement in Science is 24.869 and a MPS of 55.265. The computed  $r$  came up to 0.7003 which denotes a direct relationship. The test of significance resulted in a  $t$ -value of 2.775 which proved higher than the critical  $t$ -value of 2.306 at .05 level of significance with 8 degrees of freedom. This is enough evidence to reject the hypothesis which stated that "there is no significant relationship between the grade V pupils' proficiency in English and their achievement in Science." This finding indicated that pupils' competence in English influenced their performance in Science. This can be explained by the

Table 5

Pupil-Respondents' Proficiency in English  
and Their Performance in Science

Name of School	English		Science	
	Mean	MPS	Mean	MPS
Wright I District				
1. Wright I Central School	23.14	51.42	26.49	58.87
2. Bato Elementary School	20.79	46.20	26.36	58.58
3. Binogho Elementary School	31.24	69.42	24.84	55.20
4. Lokilokon Elementary School	18.04	40.09	22.42	49.82
5. Pabanog Elementary School	18.28	40.62	21.59	47.98
6. Pequit Elementary School	26.69	59.31	26.98	59.96
Wright II District				
1. Wright II Central School	28.34	62.98	26.25	58.33
2. Casandig Elementary School	25.18	55.96	23.93	53.18
3. Lawaan Elementary School	27.77	61.71	28.26	62.80
4. Tutobigan Elementary School	15.76	35.02	21.57	47.93
Grand Total	235.23	522.73	248.69	552.65
Grand Mean	23.253	52.273	24.869	55.265
Pearson r	0.7003	Tabular t-value: 2.306		
Fisher's t-test	2.775	at df = 8 & L = .05		
Evaluation	Significant/Reject Ho			

fact that language skills can be readily applied in learning Science concepts since the medium of instruction in the subject is English. It can be said, further, that the more proficient a child in English, the more likely will be his achievement in Science.

Table 6 shows the comparison between the grade V

Table 6

Pupil-Respondents' Proficiency in English  
and Their Performance in Mathematics

Name of School	English		Mathematics	
	Mean	MPS	Mean	MPS
Wright I District				
1. Wright I Central School	23.14	51.42	23.64	52.53
2. Bato Elementary School	20.79	46.20	18.86	41.91
3. Binogho Elementary School	31.24	69.42	19.96	44.36
4. Lokilokon Elementary School	18.04	40.09	17.83	36.62
5. Pabanog Elementary School	18.28	40.62	28.74	63.87
6. Pequit Elementary School	26.69	59.31	18.81	41.80
Wright II District				
1. Wright II Central School	28.34	62.98	24.98	55.51
2. Casandig Elementary School	25.18	55.96	20.86	46.36
3. Lawaan Elementary School	27.77	61.71	29.11	64.69
4. Tutobigan Elementary School	15.76	35.02	15.13	33.62
Grand Total	235.23	522.73	217.92	481.27
Grand Mean	23.253	52.273	21.792	48.127
Pearson r	0.3023	Tabular t-value: 2.306		
Fisher's t-test	0.897	at df = 8 & L = .05		
Evaluation	Not Significant/Accept Ho			

pupils' proficiency in English and their achievement in Mathematics. It reflects that their proficiency in English is 23.253 or a MPS = 52.273 while Mathematics achievement is 21.792 or a MPS = 48.127. The computed r for this pair of variables was pegged at 0.3023 which denoted a negligible relationship. Testing its significance using

the Fisher's  $t$  the computed  $t$ -value was 0.897 which was obviously lesser than the critical  $t$ -value of 2.306. With this, the researcher had sufficient evidence to accept the hypothesis which stated that "there is no significant relationship between the grade V pupils' proficiency in English and their achievement in Mathematics." This conclusion can be supported by the fact that while English is the medium of teaching in Mathematics, numbers and their operation dominate the Mathematics program. It can be said that there is a distinct language for Mathematics - the language of numbers. Even if the linguistic skill of the pupils is less adequate but their logical and mathematical competence is good, this is enough to enhance the pupils' performance in the subject. Gardner (1986:23) in his theory of multiple intelligences opined that aside from linguistic intelligence, a child possesses logical and mathematical intelligence; hence, there are pupils who are good in language but poor in computational skills and vice versa.

#### Problems Encountered by Respondents Relative to English as Medium of Instruction

With the use of a questionnaire, the teacher- and pupil-respondents were asked of their problems in the use of English as medium of instruction. Their perceptions are reflected in Tables 7 and 8.

Perceived Problems of Pupil-Respondents. As seen in Table 7, four of the given problems were rated "much felt" by the pupils. These were: 1) Reading materials in English, Science and Mathematics are difficult; 2) Inadequacy of teachers in using English as language in teaching English, Science and Mathematics; 3) The teachers' communication skills need improvement; 4) There are few textbooks and references in English, Science and Mathematics with weighted means of 3.91, 3.78, 3.57 and 3.52, respectively. The remaining six (6) problems were assessed as "moderately felt." Top in the list was "Frequent shifting of teachers from English to Filipino or Waray while teaching" with a weighted mean of 3.43 and the least was "Pupils cannot understand and follow written directions in English" which got a weighted mean of 3.19. On the whole, the pupil-respondents rated the problems as "moderately felt" as evidenced by the grand weighted mean of 3.50.

It can be noted that the problems which were deemed "much felt" by the grade V pupils in the two districts of Wright centered on the difficulty of reading materials in the three subjects and inadequacy of textbooks and references and the teachers' inadeptness of using English as medium of instruction.

The first perceived problem can be explained by the

Table 7

## Problems Encountered by the Pupil-Respondents

Problems	Responses					Total	Weighted Mean/Inter- pretation
	5 (VMF)	4 (MF)	3 (ModF)	2 (SF)	1 (NF)		
1. Inadequacy of teachers in using English as language in teaching English, Science and Mathematics.	(955) 191	(276) 69	(108) 36	( 58) 29	( 60) 60	(1457) 385	3.78 MF
2. The teachers' communication skills need improvement.	(610) 122	(436) 109	(177) 59	(122) 61	( 36) 36	(1381) 387	3.57 MF
3. Frequent shifting of teachers from English to Filipino or Waray while teaching.	(575) 115	(244) 61	(357) 119	( 98) 49	( 38) 38	(1312) 382	3.43 ModF
4. Teachers' use of "mix-mix" kind of English in teaching.	(580) 116	(400) 100	(150) 50	(140) 70	( 50) 50	(1320) 386	3.42 ModF
5. Pupils do not participate during recitation because of poor English.	(550) 110	(388) 97	(237) 79	(122) 61	( 45) 45	(1342) 392	3.42 ModF
6. Pupils cannot understand and follow written directions in English.	(510) 102	(360) 90	(186) 62	( 92) 46	( 86) 86	(1234) 386	3.19 ModF
7. Pupils cannot express their ideas in speaking and writing.	(535) 107	(348) 87	(243) 81	(132) 66	( 47) 47	(1305) 388	3.36 ModF
8. Pupils cannot understand what teachers are saying in English.	(570) 114	(392) 98	(210) 70	( 86) 43	( 67) 67	(1325) 372	3.38 ModF
9. Reading materials in English, Science and Mathematics are difficult.	(845) 169	(396) 99	(174) 58	( 62) 31	( 28) 28	(1505) 385	3.91 MF
10. There are few textbooks and references in English, Science and Mathematics.	(820) 164	(256) 64	(132) 44	( 84) 42	( 74) 74	(1366) 388	3.52 MF
Grand Total	-	-	-	-	-	-	34.98 -
Grand Mean	-	-	-	-	-	-	3.50 ModF

## Legend:

4.51 - 5.00	-	Very Much Felt	(VMF)
3.51 - 4.50	-	Much Felt	(MF)
2.51 - 3.50	-	Moderately Felt	(ModF)
1.51 - 2.50	-	Slightly Felt	(SF)
1.00 - 1.50	-	Not Felt	(NF)

fact that more often than not pupils feel that the textbooks they are using are difficult. Since these textbooks are pilot-tested all over the country for readability, suitability and workability, a possibility surfaces that pupil-respondents may not be grade V in ability level. On the second problem, the pupils feel that their teachers are not good in English. Or, it may be said that teachers cannot adequately discuss their lessons with them using the language.

It is interesting to note that the grade V pupils rated the problems that relate to them as only "moderately felt." It seems that the pupils do not realize their own shortcomings. This is a natural reaction - that of self-preservation. It is a common belief that no one sees his own mistakes or inefficiency.

Perceived Problems of Teacher-Respondents. As seen in Table 8, teachers, on the other hand, rated nine out of 10 problems as "much felt." Among the top five were as follows: 1) There are few textbooks and references in English, Science and Mathematics which obtained a weighted mean of 4.10; 2) Pupils cannot express their ideas in speaking and writing with a weighted mean of 3.85; 3) Pupils cannot understand and follow written directions in English with a weighted mean of 3.77; 4) The teachers' communication skills need improvement, the weighted mean of



Table 8

## Problems Encountered by the Teacher-Respondents

Problems	Responses					Total	Weighted Mean/Inter- pretation
	5 (VMF)	4 (MF)	3 (ModF)	2 (SF)	1 (NF)		
1. Inadequacy of teachers in using English as language in teaching English, Science and Mathematics.	( 20) 4	( 44) 11	( 18) 6	( 10) 5	( 2) 2	( 94) 28	3.36 ModF
2. The teachers' communication skills need improvement.	( 45) 9	( 32) 8	( 21) 7	( 10) 5	- -	( 108) 29	3.72 MF
3. Frequent shifting of teachers from English to Filipino or Waray while teaching.	( 40) 8	( 40) 10	( 21) 7	( 10) 5	- -	( 111) 30	3.70 MF
4. Teachers' use of "mix-mix" kind of English in teaching.	( 40) 8	( 40) 10	( 18) 6	( 10) 5	( 1) 1	( 109) 30	3.63 MF
5. Pupils do not participate during recitation because of poor English.	( 30) 6	( 32) 8	( 33) 11	( 2) 1	( 1) 1	( 98) 27	3.63 MF
6. Pupils cannot understand and follow written directions in English.	( 40) 8	( 28) 7	( 27) 9	( 2) 1	( 1) 1	( 98) 26	3.77 MF
7. Pupils cannot express their ideas in speaking and writing.	( 40) 8	( 28) 7	( 30) 10	( 2) 1	- -	( 100) 26	3.85 MF
8. Pupils cannot understand what teachers are saying in English.	( 35) 7	( 36) 9	( 24) 8	( 8) 4	( 1) 1	( 104) 29	3.59 MF
9. Reading materials in English, Science and Mathematics are difficult.	( 30) 6	( 36) 9	( 36) 12	( 6) 3	- -	( 108) 30	3.60 MF
10. There are few textbooks and references in English, Science and Mathematics.	( 60) 12	( 40) 10	( 21) 7	( 2) 1	- -	( 123) 30	4.10 MF
Grand Total	-	-	-	-	-	-	36.95 -
Grand Mean	-	-	-	-	-	-	3.70 MF

## Legend:

4.51 - 5.00	-	Very Much Felt	(VMF)
3.51 - 4.50	-	Much Felt	(MF)
2.51 - 3.50	-	Moderately Felt	(ModF)
1.51 - 2.50	-	Slightly Felt	(SF)
1.00 - 1.50	-	Not Felt	(NF)

which was of 3.72; and 5) Frequent shifting of teachers from English to Filipino or Waray while teaching which registered a weighted mean of 3.70. The only problem which was "moderately felt" was "Inadequacy of teachers in using English as language in teaching English, Science and Mathematics" which had a weighted mean of 3.36. On the whole, the teachers assessed the problems with a weighted mean of 3.70 which was interpreted as "much felt."

It can be observed that the common problems that stood out among the teacher-respondents were those that relate to the insufficiency of textbooks and references in English, Science and Mathematics; those that relate to pupils' inability to communicate in English; and the teachers' own inadequacy in the language of instruction.

This researcher who heads an elementary school observes and concurs the first finding that there is only one title each of the books in English, Science and Mathematics. Even with this, the 1:1 pupil-textbook ratio is not met. On the second finding, the teachers' assessment of pupils' inability to use English is confirmed by the result of the achievement test administered to the grade V pupils. Although it ranked second to Science, the MPS was only 52.273 which is quite a departure from the targeted mastery level of 75%. On the third finding, it is quite interesting that the teacher-respondents realized

their own inadequacies relative to their use of English as medium of instruction because three teacher-related problems were considered by them as "much felt." This is a revelation which necessitate serious attention of language supervisors and school administrators for this inefficiency to be overcome and addressed to. This has implications on staff development programs of every school and the whole school division.

#### Solutions Perceived by Respondents to the Aforesaid Problems

For purposes of getting the perceptions of the pupil- and teacher-respondents on the possible solutions to the identified problems, the researcher used a checklist for the respondents to rate on. The results of their assessment are found in Tables 9 and 10.

Perceived Solutions of Pupil-Respondents. Table 9 reflects that the pupils "agree" on all the suggested solutions. Numbers 3, 4, 1 and 5 scored the highest with weighted means of 4.44, 4.24, 4.05 and 4.04, respectively. They correspond to: 1) Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects; 2) Enlarge the vocabulary of pupils by employing varied method as picture clues;

Table 9

## Solutions as Perceived by the Pupil-Respondents

Solutions	Responses					Total	Weighted Mean/Inter- pretation
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)		
1. Minimize shifting from English to Filipino or Waray by practicing constantly; studying one's lesson thoroughly; using and committing to mastery a lesson outline; preparing instructional aids to unlock difficult concepts; increasing one's stock of functional vocabulary.	(1125) 225	(236) 59	(138) 46	( 46) 23	( 38) 38	(1583) 391	4.05 A
2. Encourage pupils' participation during recitation prodding pupils to answer a simple sentence; allowing/accepting one-word answers; being patient and tolerant of pupils' attempt to recite; assisting pupils in reciting by cueing.	(945) 189	(336) 84	( 99) 33	( 88) 44	( 32) 32	(1500) 382	3.93 A
3. Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects.	(1230) 246	(328) 82	( 93) 31	( 14) 7	( 12) 12	(1677) 378	4.44 A
4. Enlarge the vocabulary of pupils by employing varied method as: picture clues; synonym and antonym clues; context clues; structural analysis; gestures; etc.	(1125) 225	(300) 75	( 99) 33	( 38) 19	( 22) 22	(1584) 374	4.24 A
5. Choose from a wide selection of multi-level materials those that are suited to the pupils; use the next lower level of materials for the grade; unlock difficult concepts before attempting to teach the lesson; adapt the existing materials to the pupils' level by making a rewrite of the selection.	(915) 183	(356) 89	(153) 51	( 34) 17	( 28) 28	(1486) 368	4.04 A

Table 9 (Cont'd.)

Solutions	Responses					Total	Weighted Mean/Inter- pretation	
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)			
6. Teachers should speak to the level of the pupils' ability in the language; speak in a clear and audible simple English; complement what you say with gestures or other forms of cueing.	(1000) 200	(278) 67	(105) 35	( 52) 26	( 47) 47	(1472) 375	3.93	A
7. Remedy scarcity of reading materials in English, Science and Mathematics by duplicating source materials; adopting materials used by private schools; requesting book donations from foundations and organizations like Asia Book Foundation; using related materials from other grade or year levels.	(935) 187	(328) 82	(126) 42	( 64) 32	( 32) 32	(1485) 375	3.96	A
Grand Total	-	-	-	-	-	-	28.59	-
Grand Mean	-	-	-	-	-	-	4.08	A

## Legend:

4.51 - 5.00	-	Strongly Agree	(SA)
3.51 - 4.50	-	Agree	(A)
2.51 - 3.50	-	Uncertain	(U)
1.51 - 2.50	-	Disagree	(D)
1.00 - 1.50	-	Strongly Disagree	(SD)

synonym and antonym clues, context clues, structural analysis, gestures, etc.; 3) Minimize shifting from English to Filipino or Waray by practicing constantly, studying one's lesson thoroughly, using and committing to mastery a lesson outline, preparing instructional aids to unlock difficult concepts and increasing one's stock of functional vocabulary; 4) Choose from a wide selection of multi-level materials those that are suited to the pupils; use the next

lower level of materials for the grade; unlock difficult concepts before attempting to teach the lesson; adapt the existing materials to the pupils' level by making a rewrite of the selection. The overall assessment of pupil-respondents of the given solutions yielded a weighted mean of 4.08 which is equivalent to "Agree."

Although, the solutions have varying weighted means and the perceived problems and solutions are not in one-to-one correspondence, it is interesting to note that there exists a congruency between the identified problems and the perceived solution. It can be said that the perceived solutions are deemed valid by the pupils for the problems they perceived.

Perceived Solutions of Teacher-Respondents. The teachers, on the other hand, "strongly agree" with solutions 4 and 3 giving them weighted means of 4.67 and 4.53, respectively (See Table 10). They correspond to: 1) Enlarge the vocabulary of pupils by employing varied method as picture clues, synonym and antonym clues, context clues, structural analysis, gestures, etc.; and 2) Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects. The teachers "Agree" with the remaining five (5) solutions. Among them,

Table 10

## Solutions as Perceived by the Teacher-Respondents

Solutions	Responses					Total	Weighted Mean/Inter- pretation
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)		
1. Minimize shifting from English to Filipino or Waray by practicing constantly; studying one's lesson thoroughly; using and committing to mastery a lesson outline; preparing instructional aids to unlock difficult concepts; increasing one's stock of functional vocabulary.	( 85) 17	( 44) 11	( 6) 2	- -	- -	( 135) 30	4.50 A
2. Encourage pupils' participation during recitation prodding pupils to answer a simple sentence; allowing/accepting one-word answers; being patient and tolerant of pupils' attempt to recite; assisting pupils in reciting by cueing.	( 80) 16	( 40) 10	( 12) 4	- -	- -	( 132) 30	4.40 A
3. Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects.	( 85) 17	( 48) 12	( 3) 1	- -	- -	( 136) 30	4.53 SA
4. Enlarge the vocabulary of pupils by employing varied method as: picture clues; synonym and antonym clues; context clues; structural analysis; gestures; etc.	(110) 22	( 24) 6	( 6) 2	- -	- -	( 140) 30	4.67 SA
5. Choose from a wide selection of multi-level materials those that are suited to the pupils; use the next lower level of materials for the grade; unlock difficult concepts before attempting to teach the lesson; adapt the existing materials to the pupils' level by making a rewrite of the selection.	( 85) 17	( 40) 10	( 9) 3	- -	- -	( 134) 30	4.47 A

Table 10 (Cont'd.)

Solutions	Responses					Total	Weighted Mean/Inter- pretation
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)		
6. Teachers should speak to the level of the pupils' ability in the language; speak in a clear and audible simple English; complement what you say with gestures or other forms of cueing.	(100) 20	( 24) 6	( 9) 3	( 2) 1	- -	( 135) 30	4.50 A
7. Remedy scarcity of reading materials in English, Science and Mathematics by duplicating source materials; adopting materials used by private schools; requesting book donations from foundations and organizations like Asia Book Foundation; using related materials from other grade or year levels.	(100) 20	( 24) 6	( 9) 3	( 2) 1	- -	( 135) 30	4.50 A
Grand Total	-	-	-	-	-	-	31.57 -
Grand Mean	-	-	-	-	-	-	4.51 A

## Legend:

4.51 - 5.00	-	Strongly Agree	(SA)
3.51 - 4.50	-	Agree	(A)
2.51 - 3.50	-	Uncertain	(U)
1.51 - 2.50	-	Disagree	(D)
1.00 - 1.50	-	Strongly Disagree	(SD)

numbers 1, 6 and 7 obtained higher weighted means which correspond to: 1) Minimize shifting from English to Filipino or Waray by practicing constantly; studying one's lesson thoroughly; using and committing to mastery a lesson outline; preparing instructional aids to unlock difficult concepts; and increasing one's stock of functional vocabulary; 2) Teachers should speak to the level of the pupils' ability in the language; speak in a clear and



audible simple English; complement what you say with gestures or other forms of cueing; and 3) Remedy scarcity of reading materials in English, Science and Mathematics by duplicating source materials; adopting materials used by private schools; requesting for book donations from foundations and organizations; using related materials from other grade or year levels. All of these solutions have weighted means of 4.50. The teacher-respondents gave the solutions a grand weighted mean of 4.51 which was interpreted as "Strongly Agree."

Scrutinizing closely the responses of the teachers, it appears that all their identified problems were addressed to by the solutions they assessed. All solutions are valid since they all strongly agree with them.

### Implication of Findings

The aforestated findings yield significant implications to the teachers and administrators, the school system and the bilingual education policy of the country. The teachers, being at the forefront in the teaching-learning process, should endeavor to sharpen their teaching skills, not only in the three subjects, for that matter, but in other learning areas as well. They should seek better and effective strategies and instructional materials to promote and enhance learning. Teaching expertise cannot

be acquired overnight. It necessitates patience and industry on their part of searching and researching, learning and relearning and, trying and modifying them in their classes. However, experience tells us that these alone are not the be-all to remedy low achievement. It should be coupled with commitment, enthusiasm for teaching and compassion for work and the children under their charge. Without them, it only adds to the sum total of the emptiness and meaninglessness of their effort to develop the child.

The administrators play a significant role in providing a supportive environment of the teachers as well as in the procurement of appropriate instructional materials needed by the school. For the teachers, he is an instructional leader - a rich reservoir of knowledge, expertise and understanding and, therefore, should be ready to share these to the teachers. Supervision which is one of the more important functions of administrators deserves serious consideration by the administrators. Assisting teachers by way of classroom observation can help teachers achieve or acquire the much-needed competency, foster sound teacher-administrator relationships, boost their morale and identify further other learning needs. The extent of supervision rendered to teachers, the researcher believes, can spell a big difference in sharpening teachers' skill,

outlook and concern while on the job, for concerned administrators beget concerned teachers; in like manner, performance-oriented administrators beget performance-oriented teachers. Equally, teachers need assistance and guidance in the selection of textbooks and references, and in the preparation of instructional adjuncts. Administrators conversant of their role as instructional leaders can provide direction on textbook leveling, adjusting teaching materials to suit ability levels, textbook procurement to cater to multi-level grouping and preparation of other instructional aids such as practice exercises, charts, etc.. It implies that administrators should possess knowledge as well as managerial expertise.

Basically, the teaching-learning process is a communication process. The DECS present bilingual policy requires that English be the language of instruction for Science and Mathematics in the elementary schools. Significant, however, are the findings in this study that the achievement levels of English, Science and Mathematics are still far below the 75% mastery level which has long been the target proficiency since 1983 and that English proficiency does not affect the pupils' achievement in Mathematics. The present achievement level has not yet reached this mark - and it is 13 years, hence! It is no wonder, then, that Filipino pupils scored one of the lowest

from among several countries in the International Achievement Examination in Science and Mathematics. This situation boils down to a basic question of whether it is still worthwhile to continue to use English as language of instruction in Science and Mathematics. Or, is it that the concerned personnel has not yet given it a serious try.

## Chapter 5

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This part of the research report discusses the summary of findings, the conclusions arrived at on the basis of the findings and the recommendations resulting from the analysis of the conclusions.

#### Summary of Findings

The study revealed the following salient results:

1. The achievement level of the grade V pupils from the districts of Wright I and II in English in terms of mean score was 23.253 equivalent to a mean percentage score (MPS) of 52.273 with a standard deviation (SD) of 5.1532. Out of the 10 schools tested, five schools obtained class means above the grand mean and five schools scored lower than the grand mean.

2. The achievement level of the grade V pupils in Science was 24.869 equivalent to a MPS of 55.265 and a SD of 2.3858. Five of the 10 schools had class means above the grand mean and five schools were lower than the grand mean.

3. The achievement level of the grade V pupils in Mathematics resulted to a grand mean of 21.792 or a MPS of 45.129 with a SD of 4.6809. Four schools scored higher than the grand mean and six schools fell below the grand

mean.

4. The overall performance of the grade V pupils from the districts of Wright I and II in the three learning areas was 23.395 or a MPS of 51.89 with a SD of 3.2134. Five schools had an overall performance higher than the grand mean and five schools fell short of the grand mean.

5. The grade V pupils scored highest in Science, followed by English and Mathematics with the following class means and MPS: 24.862 (55.265); 23.253 (52.273); and 21.792 (48.127), respectively.

6. In relating the overall performance of the grade V pupils and their achievement in English resulted to a computed  $r$  of 0.8542 which indicated a high correlation. The test of significance revealed a  $t$ -value of 4.569 at  $\alpha = .05$ ,  $df = 8$  which proved greater than the critical value of 2.306. The hypothesis, "there is no significant relationship between the overall performance of grade V pupils and their achievement in English" was rejected.

7. In relating the overall performance of the grade V pupils and their achievement in Science posted a correlation coefficient of 0.77327 which indicated a high correlation. The test of significance showed a  $t$ -value of 3.450 at .05 level of significance,  $df = 8$  which was higher than the critical value of 2.306. The hypothesis, "there is no significant relationship between the overall

performance of grade V pupils and their achievement in Science" was likewise, rejected.

8. In relating the overall performance of the grade V pupils and their achievement in Mathematics showed a correlation coefficient of 0.72434 indicating a high correlation. The test of significance reflected a t-value of 2.971,  $\alpha = .05$ ,  $df = 8$  which proved higher than the critical value of 2.306. Therefore, the hypothesis which stated that "there is no significant relationship between the overall performance of grade V pupils and their achievement in Mathematics" was rejected.

9. In relating the proficiency of the grade V pupils in English and their achievement in Science came up with a correlation coefficient of 0.7003 which denoted direct relationship. The test of significance resulted to a t-value of 2.775 which was higher than the critical value of 2.306 at .05 level of significance,  $df = 8$ . The hypothesis, "there is no significant relationship between the grade V pupils' proficiency in English and their achievement in Science" was rejected.

10. The computed correlation coefficient between the proficiency of the grade V pupils in English and their achievement in Mathematics was 0.897 which turned out to be numerically lesser than the critical t-value of 2.306 at .05 level of significance and  $df = 8$ . The hypothesis,

"there is no significant relationship between the grade V pupils' proficiency in English and their achievement in Mathematics" was, therefore, accepted.

11. Among the pupil-respondents, four of the ten problems were assessed by them as "much felt." These were: 1) Reading materials in English, Science and Mathematics are difficult; 2) Inadequacy of teachers in using English as language in teaching English, Science and Mathematics; 3) The teachers' communication skills need improvement; 4) There are few textbooks and references in English, Science and Mathematics. The remaining six problems were considered "moderately felt." The grand weighted mean for all the problems was 3.50 which was interpreted as "moderately felt."

12. Among the teacher-respondents, nine of the ten problems were evaluated as "much felt." Leading the list were: 1) There are few textbooks and references in English, Science and Mathematics; 2) Pupils cannot express their ideas in speaking and writing; 3) Pupils cannot understand what teachers are saying in English; 4) The teachers' communication skills need improvement; and 5) Frequent shifting of teachers from English to Filipino or Waray while teaching. On the whole, all the given problems were assessed as "much felt."

13. Anent the solutions for the identified problems,



the pupil-respondents "agree" on all seven solutions. The top preferences were: 1) Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects; 2) Enlarge the vocabulary of pupils by employing varied method as picture clues; synonym and antonym clues, context clues, structural analysis, gestures, etc.; 3) Minimize shifting from English to Filipino or Waray by practicing constantly, studying one's lesson thoroughly; using and committing to mastery a lesson outline; preparing instructional aids to unlock difficult concepts; increasing one's stock of functional vocabulary.

14. In the same aspects, the teacher-respondents "strongly agreed" with two of the seven solutions. These were: 1) Enlarge the vocabulary of pupils by employing varied method as picture clues, synonym and antonym clues, context clues, structural analysis, gestures, etc.; and 2) Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects. They "agreed" on the remaining five of the solutions. On the whole, the teachers "strongly agreed" on

all solutions with a grand mean of 4.51.

### Conclusions

Based on the foregoing findings, the following conclusion were drawn:

1. Considering the equivalent mean percentage score of the three learning areas: English (52.273), Science (55.265) and Mathematics (48.127) against the mastery level of 75%, the achievement level of the grade V pupils in the districts of Wright I and II is far below it. It can be concluded the pupil-respondents had not achieved the targeted proficiency level.

2. Based on the grade V pupils' performance in the achievement tests in English, Science and Mathematics, it can be said that the grade V pupils performed higher in Science than in Mathematics as evidenced by the mean score of 24.869 (Science) as against 21.792 in Mathematics.

3. Inasmuch that  $H_{01.1}$ ,  $H_{01.2}$  and  $H_{01.3}$ , viz: "There is no significant relationship between the grade V pupils' overall performance and their achievement in English, Science and Mathematics" were rejected, it can be said that the overall performance of the grade V pupils is influenced or affected by their achievement in the three learning areas.

4. With the rejection of  $H_{02.1}$ , viz: "There is no significant relationship between the grade V pupils'

proficiency in English and their achievement in Science," it can be concluded that the pupils' competence in English influence their performance in Science. The more proficient a child in English the more likely that he will be good in Science since the English language is the medium of instruction in Science.

5. With the acceptance of Ho<sub>2.2</sub>, viz: "There is no significant relationship between the grade V pupils' proficiency in English and their achievement in Mathematics," it can be concluded the proficiency in communication skills does not influence or affect the pupils' achievement in Mathematics. It can be said that child may not be necessarily proficient in English in order to be competent in mathematical skills since Mathematics has its own unique language of numbers.

6. The problems that beset the grade V pupils in the districts of Wright I and II focused on the difficulty level and scarcity of reading materials, textbooks and references in English, Science and Mathematics, and the inadequacy of teachers in using English and the need to improve their communication skills.

7. The problems of the teachers in the two districts centered on: 1) the scarcity of textbooks and references in English, Science and Mathematics; 2) pupils' inadequacy in English; 3) teachers' need to improve their communication

skills; and 4) teachers' shifting from English to Filipino or Waray while teaching.

8. The perceived solutions by both pupil- and teacher-respondents were congruent and valid to the identified problems relative to the use of English as medium of instruction.

### Recommendations

In the light of the findings and conclusions, the following recommendations are hereby made:

1. Inasmuch as the achievement level of the grade V pupils in English, Science and Mathematics is low, it is recommended that double efforts on the part of the teachers be done in order to improve their performance levels. This should be complemented with frequent and intensive supervision of teachers by their administrators.

2. The teachers should intensify their teaching of Mathematics. Innovation and effective teaching strategies should be utilized and should be reinforced with instructional aids.

3. Realizing that proficiency in English affects achievement in Science, a Reading Enhancement Program particularly on Reading for Specific Purposes be conducted where teachers can be taught reading in content subjects like Science.

4. The fact that achievement level of the pupil-respondents in English-taught subjects like Science and Mathematics is still wanting through the years and the finding that English proficiency does not in any way influence achievement in Mathematics, it is recommended that a restudy of the bilingual education policy is very necessary. Teaching the subjects, Science and Mathematics using the national language, Filipino, on a pilot basis may be tried out to find out if it is an effective alternative as recommended by EDCOM and as found by local researchers.

5. The problems identified by the pupil- and teacher-respondents are prevalent among grade V pupils and English teachers; hence, administrators should take cognizance of them and remedy them through in-service trainings for teachers. Teachers, likewise, should try their best to address them in their capacity during classroom instruction by implementing the perceived solutions presented here in this study.

6. A study may be undertaken as a sequel to this study trying out the perceived solutions to solve the identified problems.

7. A study to determine the prospect of using Filipino as language of instruction in teaching Science and Mathematics may be pursued.

8. A set of instructional materials may be developed

to address some of the grade V pupils' deficiency in English.

9. Purchase of needed textbooks and references on other titles may be negotiated through the local school boards using the Special Education Fund (SEF) and appropriate amount from the maintenance and other operating expenses (MOOE) allocation for this purpose.

10. A sequel study is recommended to determine causes and correlates of low performance in Mathematics, English and Science aside from the medium of instruction.

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## APPENDICES

## APPENDIX A

Republic of the Philippines  
SAMAR STATE POLYTECHNIC COLLEGE  
Catbalogan, Samar

April 17, 1999

The Dean of Graduate Studies  
Samar State Polytechnic College  
Catbalogan, Samar

M a d a m :

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

1. PROFICIENCY IN ENGLISH AS A CORRELATE OF GRADE V PUPILS' PERFORMANCE IN SCIENCE AND MATHEMATICS.
2. PROPOSED INSTRUCTIONAL MATERIALS FOR DEVELOPING WORD RECOGNITION SKILLS AMONG GRADE I PUPILS IN PARANAS DISTRICT II-SJB.
3. PROBLEM ARISING FROM TEACHERS IN HIKING A LONG DISTANCE FROM CASANDIG TO TUTOBIGAN.

I hope for your early and favorable action on this request.

Very truly yours,

(SGD.) TRINIDAD P. BACO  
Researcher

APPROVED :

(SGD.) RIZALINA M. URBIZTONDO, Ed.D.  
Dean, Graduate & Post Graduate Studies

## APPENDIX B

Republic of the Philippines  
SAMAR STATE POLYTECHNIC COLLEGE  
Catbalogan, Samar  
SCHOOL OF GRADUATE STUDIES

## APPLICATION FOR ASSIGNMENT OF ADVISER

NAME : BACO TRINIDAD PABUNAN  
(Surname) (First Name) (Middle Name)

CANDIDATE FOR DEGREE : MASTER OF ARTS IN EDUCATION

AREA OF SPECIALIZATION : ADMINISTRATION AND SUPERVISION

TITLE OF PROPOSED THESIS: PROFICIENCY IN ENGLISH AS  
CORRELATE OF GRADE PUPILS' PERFORMANCE IN SCIENCE  
AND MATHEMATICS.

(SGD.) TRINIDAD P. BACO  
Applicant

ALFREDO D. DACURO, Ph.D.  
Name of Designated Adviser

APPROVED :

(SGD.) RIZALINA M. URBIZTONDO, Ed.D.  
Dean, Graduate Studies

CONFORME:

(SGD.) ALFREDO D. DACURO, Ph.D.  
Adviser

In 3 copies: 1st copy - for the Dean  
2nd copy - for the Adviser  
3rd copy - for the Applicant

## APPENDIX C

Republic of the Philippines  
SAMAR STATE POLYTECHNIC COLLEGE  
Catbalogan, Samar  
GRADUATE & POST-GRADUATE STUDIES

August 21, 1999

The Dean  
Graduate School  
Samar State Polytechnic College  
Catbalogan, Samar

Madam:

I have the honor to apply for Pre/Final Oral Defense  
of my Thesis/Dissertation entitled PROFICIENCY IN ENGLISH  
AS A CORRELATE OF GRADE V PUPILS' PERFORMANCE IN SCIENCE  
AND MATHEMATICS.

on the date convenient for your Office.

Very truly yours,

(SGD.) TRINIDAD P. BACO  
Graduate Student

Recommending Approval:

(SGD.) ALFREDO D. DACURO, Ph.D.  
Adviser

APPROVED:

(SGD.) RIZALINA M. URBIZTONDO, Ed.D.  
Dean, Graduate & Post-Graduate Studies

Date: Sept. 6, 1999

Time: 10:00 A.M.



## APPENDIX D

Republic of the Philippines  
Department of Education, Culture and Sports  
Region VIII  
Catbalogan, Samar

September 17, 1999

The Schools Division Superintendent  
Division of Samar  
Catbalogan, Samar

M a d a m :

In view of my desire to start gathering data for my proposed thesis entitled "PROFICIENCY IN ENGLISH AS A CORRELATE OF GRADE V PUPILS' PERFORMANCE IN SCIENCE AND MATHEMATICS," I have the honor to request permission from your good office to borrow the division achievement test in English, Science and Mathematics and to administer the same in ten (10) complete elementary schools in Wright I and II Districts, Paranas, Samar on September, 1999.

Rest assured that the researcher will do her best to protect the integrity of the test materials.

Very truly yours,

(SGD.) TRINIDAD P. BACO  
Researcher

Approved:

(SGD.) JESUSITA L. ARTECHE, Ed.D.  
Schools Division Superintendent

## APPENDIX E

Republic of the Philippines  
Samar State Polytechnic College  
Catbalogan, Samar  
GRADUATE & POST-GRADUATE STUDIES

February 22, 2000

The Dean  
Graduate School  
Samar State Polytechnic College  
Catbalogan, Samar

Madam:

I have the honor to apply for final oral examination  
of my thesis entitled PROFICIENCY IN ENGLISH AS A  
CORRELATE OF GRADE V PUPILS' PERFORMANCE IN SCIENCE AND  
MATHEMATICS.

on the date convenient for your Office.

Very truly yours,

(SGD.) TRINIDAD P. BACO  
Graduate Student

Recommending Approval:

(SGD.) ALFREDO D. DACURO, Ph.D.  
Adviser

APPROVED:

(SGD.) EUSEBIO T. PACOLOR, Ph.D.  
Dean, Graduate & Post-Graduate Studies

Date: March 10, 2000

Time: 1:00 P.M.

## APPENDIX F

Survey Questionnaire on Problems and  
Suggested Solutions on the Use of  
English as Medium of Instruction

District of Wright I and II  
Division of Samar

To the Respondents:

Greetings!

You have been selected as a respondents in this research study entitled "PROFICIENCY IN ENGLISH AS A CORRELATE OF GRADE V PUPILS' PERFORMANCE IN SCIENCE AND MATHEMATICS," District of Wright I and II, Division of Samar. The purpose of this questionnaire is to find out the problems that teachers and pupils encounter on the use of English as medium of instruction and the suggested solutions to the perceived problems that may be employed by the respondents. Rest assured your identity is held confidential.

Thank you very much for your anticipated cooperation.

(SGD.) MRS. TRINIDAD P. BACO  
Researcher

SURVEY QUESTIONNAIRE ON PROBLEMS AND SOLUTIONS ON THE  
USE OF ENGLISH AS MEDIUM OF INSTRUCTION

Name: \_\_\_\_\_

Category (Please Check): \_\_\_\_\_

Teacher : \_\_\_\_\_

Pupils : \_\_\_\_\_

I. PROBLEMS ON THE USE OF ENGLISH AS MEDIUM OF INSTRUCTION

Direction : Below are possible problems that teachers and pupils encounter in the use of English as medium of instruction. Please check the correct scale equivalent opposite the problems which you think are problems to you. Please feel free to add other problem which cannot be found in the list.

Scale :     5 \_\_\_\_\_ Very Much Felt (VMF)  
             4 \_\_\_\_\_ Much Felt (MF)  
             3 \_\_\_\_\_ Moderately Felt (Mod.F)  
             2 \_\_\_\_\_ Slightly Felt (SF)  
             1 \_\_\_\_\_ Not Felt (NF)

P R O B L E M S	S C A L E				
	5	4	3	2	1
	(VMF)	(MF)	(ModF)	(SF)	(NF)
1. Inadequacy of teachers in using English as language in teaching English, Science and Mathematics.					
2. The teachers' communication skills need improvement.					
3. Frequent shifting of teachers from English to Filipino or Waray while teaching.					
4. Teachers' use of "mix-mix" kind of English in teaching.					
5. Pupils do not participate during recitation because of poor English.					
6. Pupils cannot understand and follow written direction in English.					

P R O B L E M S	S C A L E				
	5 (VMF)	4 (MF)	3 (ModF)	2 (SF)	1 (NF)
7. Pupils cannot express their ideas in speaking and writing.					
8. Pupils cannot understand what teachers are saying in English.					
9. Reading materials in English, Science and Mathematics are difficult.					
10. There are few textbooks references in English, Science and Mathematics.					
Others (Please Specify) _____					
_____					
_____					

## II. SUGGESTED SOLUTIONS TO THE PERCEIVED PROBLEMS

Direction : Below are possible solutions that may be employed to solve the above problems. Please check ( / ) the appropriate scale opposite the correct solutions which you think will solve the problems. Please feel free to add the solution which are not found in the list.

Scale :     5 \_\_\_\_\_ Strongly Agree (SA)  
               4 \_\_\_\_\_ Agree (A)  
               3 \_\_\_\_\_ Undecided (U)  
               2 \_\_\_\_\_ Disagree (D)  
               1 \_\_\_\_\_ Strongly Disagree (SD)

S O L U T I O N S	S C A L E				
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)
1. Minimize shifting from English to Filipino or Waray by practicing constantly; studying one's lesson thoroughly; using and committing to mastery a lesson outline; preparing instructional aids to					

S O L U T I O N S	S C A L E				
	5 (SA)	4 (A)	3 (U)	2 (D)	1 (SD)
unlock difficult concepts; increasing one's stock of functional vocabulary.					
2. Encourage pupils' participation during recitation prodding pupils to answer a simple sentence; allowing/accepting one-word answers; being patient and tolerant of pupils' attempt to recite; assisting pupils in reciting by cueing.					
3. Coordinate with other teachers in addressing the difficulty of pupils in following written direction; explain and clarify written direction that they be understood; integrate the teaching of this skill in English-taught subjects.					
4. Enlarge the vocabulary of pupils by employing varied method as: picture clues; synonym and antonym clues; context clues; structural analysis; gestures; etc.					
5. Choose from a wide selection of multi-level materials those that are suited to the pupils; use the next lower level of materials for the grade; unlock difficult concepts before attempting to teach the lesson; adapt the existing materials to the pupils' level by making a rewrite of the selection.					
6. Teachers should speak to the level of the pupils' ability in the language; speak in a clear and audible simple English; complement what you say with gestures or other forms of cueing.					

S O L U T I O N S	S C A L E				
	5	4	3	2	1
	(SA)	(A)	(U)	(D)	(SD)
7. Remedy scarcity of reading materials in English, Science and Mathematics by duplicating source materials; adopting materials used by private schools; requesting book donations from foundations and organizations like Asia Book Foundation; using related materials from other grade or year levels.					
Others (Please Specify) _____					
_____					
_____					

Thank you very much.

(SGD.) TRINIDAD P. BACO  
Researcher

## CURRICULUM VITAE



## CURRICULUM VITAE

Name	:	Trinidad P. Baco
Date of Birth	:	December 9, 1947
Place of Birth	:	Paranas, Samar
Home Address	:	Pequit, Paranas, Samar
Civil Status	:	Married
Spouse's Name	:	Marcos N. Baco
Father	:	Brigido Mabulac Pabunan (deceased)
Mother	:	Antonina Abadiano Abaigar (Pabunan) (deceased)
Son	:	William P. Baco
Daughter	:	Marites P. Baco

### Educational Background

Primary	: Pequit Barangay School Pequit, Paranas, Samar 1955-1956
Elementary	: Wright Central Elementary School 1959-1960
Secondary	: Samar College Catbalogan, Samar 1969-1970
College	: Samar College Catbalogan, Samar May 1974
Graduate Studies	: Samar State Polytechnic College Catbalogan, Samar
Curriculum Pursued	: Master of Arts in Education
Major	: Administration and Supervision

### Civil Service Eligibility

Professional Board Examination for Teachers (PBET)  
72.63%, Tacloban City, May 25, 1980

### Position Held

Present Status : Elementary School Head Teacher

Present Station : Casandig Elementary School  
Casandig, Paranas, Samar  
July 1, 1999 up to the present

Previous Station : Tutobigan Elementary School  
Tutobigan, Paranas, Samar  
January 21, 1996 to June 30, 1999

### Grades Taught

Grade One : Pagsang-an Barangay School  
Pagsang-an, Paranas, Samar  
1974-1978

I-II-III-IV : Tabucan Primary School  
Tabucan, Paranas, Samar  
1978-80

Grade One : Pequit Elementary School  
Pequit, Paranas, Samar  
1980-1994

Grade Five : Pequit Elementary School  
Pequit, Paranas, Samar  
1994-1996

Grade Five : Tutobigan Elementary School  
Tutobigan, Paranas, Samar  
Jan. 22, 1996-Nov. 17, 1997

Elem. School Head Teacher: November 20, 1997

### Co-Curricular Activities

Adviser : Pag-asa Youth Movement  
1972-1978

Adviser : English Club & Science Club

Pequit Elementary School  
1981-1996

- Kawan Troop Leader : Pequit Elementary School  
Pequit, Paranas, Samar  
1980-1996
- Star Scout Leader : Pagsang-an Barangay School  
Pagsang-an, Paranas, Samar  
1974-1979
- Treasurer : Barangay Electric Cooperative  
Organization - 1990-1995
- Board of Director : Wright District Public School  
Teachers Association  
1985-1997

In-Service Trainings/Seminars/Workshop Attended

- District Re-echo in Department Training in Mathematics Instruction for Elementary Mathematics Teachers, Wright Central Elementary School, Paranas, Samar, November 17-18, 1992
- District Re-echo Seminar Workshop on Teaching Strategies in Elementary Mathematics, Wright Central Elementary School, Paranas, Samar, November 23-24, 1995
- In-House Workshop on Skills Competency Development in the Teaching of Sibika at Kultura and Heograpiya, Kasaysayan at Sibika, Division Office, Division of Samar, Catbalogan, Samar, July 16, 1993-January 11, 1994
- Two-Day Division-District Based Training of Teachers and Administrators on Time on Task, Catbalogan, Samar, June 16-19, 1994
- District-Based Division Training on Regional Reading Enhancement Program, Wright Central Elementary School, Paranas, Samar, July 29-30, 1994
- District Training on Corrective Reading, Wright Central Elementary School, Paranas, Samar, September 28, 1996
- District-Based Division Training for Teachers in English, Science and Mathematics, Wright Central Elementary School, Paranas, Samar, September 2-7, 1996

District Re-echo Seminar on Proper Dissemination Session on Information Drive on Basic Policies Governing Compensation, Wright Central Elementary School, Paranas, Samar, December 19, 1997

GSP Basic Training Course, Pabanog Elementary School, Paranas, Samar, September 5-7, 1997

Division Training of District Trainers in Physical Education for Grades V and VI, Catbalogan II Central Elementary School, Catbalogan, Samar, September 13, 1997

"Division-District Based Seminar Workshop on National Culture of Excellence," (NCE) Wright Central Elementary School, Paranas, Samar, November 20-21, 1997

District Re-echo Seminar (Workshop) on Proper Dissemination Session on Information Drive on the Basic Policies Governing Compensation, Wright Central Elementary School, Paranas, Samar, December 19, 1997

Division-Based Regional Training on Quality Instructional Leadership and Resource Management, Catbalogan IV Central Elementary School, January 15-16, 1998

Division Seminar-Workshop on Instructional Supervision for School Principals and Head Teachers, Redaja Hall, DECS, Division Office, Catbalogan, Samar, July 27-29, 1998

Pampurok na Gawaing-Kapulungan sa Filipino sa Paksang "Mga Mungkahing Gawain sa Binagong Kompetensi sa Elementarya," Pabanog Elementary School, Paranas, Samar, Oktubre 20-21, 1998

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