SCHOLASTIC RESPONSES OF GRADE VI PUPILS TO HOMOGENOUS AND HETEROGENOUS GROUPINGS IN ELEMENTARY SCHOOLS

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APPROVAL SHEET

This thesis entitled **"SCHOLASTIC RESPONSES OF GRADE VI PUPILS TO HOMOGENOUS AND HETEROGENOUS GROUPINGS IN ELEMENTARY SCHOOLS"** has been prepared and submitted by SOFIA LOPEZ RUTOR, who having passed the comprehensive examination, is hereby recommended for oral examination.

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D E D I C A T I O N

Though you did not

make it to see

this book,

this is for you,

NANAY

ABSTRACT

This study attempted to find out the scholastic responses of the grade VI pupils of Catbalogan III and Catbalogan IV Central Elementary Schools to the homogeneous and heterogeneous groupings for school year 1996-1997. This study used the analytical descriptive method of research with documentary analysis and questionnaire as the main instruments in gathering data. The assumption that one group is better than the other in terms of scholastic achievement is false. Hence, it is implied that emphasis in teaching must be made towards the mastery of learning skills required in a certain grade level. Likewise it is implied that variations in the learning activities and instructional methodologies suited to the capabilities, interests and needs of pupils should be carried out strictly in the teaching process if increased scholastic achievement and productive and successful outputs are the targets of education. The employed parents dominated both groups, an indication that the parents can't give full time assistance to their school children in the academic work. The average monthly family income of the respondents is on or below the poverty threshold, an indication that the education of children is not affected by poverty. The study revealed very minimal evidence for the two groups of pupils to be significantly different in terms of scholastic achievement in the five subject areas. The study further revealed very minimal evidence for the two groups to be significantly different in terms of their grand scholastic achievement. The scholastic achievement of pupils does not depend on the grouping scheme used by the school.

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Chapter 1

THE PROBLEM: ITS BACKGROUND

Introduction

Society looks at the school as the most outstanding institution that can contribute to the fullest development of the children's potentials. In fact this has been given the primary concern by the national leadership through the promulgation of Batas Pambansa 232, the Education Act of 1982, which mandated in Section 21, the objectives of Elementary Education in part as: "To provide the knowledge and develop the skills, attitudes and values essential to personal development and necessary for living in contributing to a developing social milieu."

In view of this, the school, the teacher in particular is expected to do this enormous task of producing desirable outputs because of the idea that the teacher has the responsibility for creating conditions for better learning in the classroom. Every phase of the teaching-learning process is addressed towards the development of the learner in all aspects of his physical, social, mental, emotional and moral well-being. A teacher therefore, must not only be grounded on the subject matter to be taught but must also understand as completely as possible, the individual's

nature, potentials, interests, and personal, and social characteristics in order to direct learning effectively.

In actual process, education today is geared towards the recognition of the children's potentials and the possibility of harnessing these potentials into abilities and capabilities, versatile in characteristic. This is a departure from the traditional process such as the subject centered, teacher-centered and pupil-centered processes to usher in the ability-centered process. To meet the aptitude and abilities of the pupils so as to enable them to get the best result from the educational programs, the school or the teacher adopt various ways and grouping of pupils is a means towards this end. Jameson and Hicks (1978:99) are emphatic that: "Grouping to meet the abilities and needs of pupils as they reach the different stages of development, is mandatory if we are to teach our best."

Essentially, grouping is the process by which children are organized into manageable class for instruction. The two common methods are the homogenous grouping, where pupils with more or less similar mental ability or academic aptitude are considered to a group and the heterogenous grouping, which groups pupils at random with widely different mental abilities (Clark, 1975:309). Elsbree and Mcnally (1978:219) stated that: "The objective of grouping

is to place each individual within a group in which he will work better, where he will have a sense of belonging and status and where his mental health will be safeguarded and improved.

In most barangay schools where pupils are available for only one section, grouping is not a problem because the teacher has just to place all pupils into one section. The pupils, on the otherhand, have no choice where and which section to go. But in many central schools, such as Catbalogan III and Catbalogan IV Central Elementary Schools, where several sections for a certain grade warrant, the grouping of pupils becomes a problem. There are those teachers who will select and enroll in their class the bright pupils only or pupils who are known to give less or no problem to the teacher in terms of behaviour and there are those teachers who content themselves with the excess enrolment of other sections or the "leftover" and later on justify the low performance of their class or pupils for their being the "leftover" of the other sections. On the part of the pupils, those who have more or less the same interests and abilities and tend to go along well together, prefer to group themselves in one common section while others, who maybe somewhat different or probably "indifferent" towards a certain group or other pupils may

prefer to stay in another section or class.

To have an order or system in assigning pupils to a class, school managers adopt a particular grouping plan, the homogenous and heterogenous groupings of pupils. Catbalogan III Central Elementary School adopted the homogenous scheme or grouping the pupils according to the their aptitude and abilities basing on their general average in the report cards. Catbalogan IV Central Elementary School on the contrary adopted the heterogenous scheme, where pupils are assigned to a section using the "Cafeteria method" or the "first come first serve" basis wherein the first 40 to 50 enrollees go to the first section; the next 40 to 50 go to the next section and so on. With these grouping schemes practiced in these two schools representing the research environment, still there are teachers who condemn the adoption of one scheme in favor of the other or vice versa.

A desired outcome of grouping for instruction is increased achievement. Achievement which is usually measured by means of teacher made tests that suit specific purpose, to determine the amount and quality of learning that had taken place in a specific area.

This researcher, therefore attempted to observe, analyze and compare these two grouping methods used in these two central schools of Catbalogan, Samar with a view of

determining which procedure gives the best result in terms of achievement. Hopefully, the result of this study will provide educators with valuable information which will be useful to them in the overall planning, concerning education and instruction.

Statement of the Problem

This study attempted to find out the scholastic responses of the grade VI pupils of Catbalogan III and Catbalogan IV Central Elementary Schools to homogenous and heterogenous groupings for school year 1996-1997

Specifically, it sought answers to the following questions:

1. What is the profile of the grade VI pupils in Catbalogan III and Catbalogan IV Central Elementary Schools as to:

    1.1 age ?

    1.2 sex ?

    1.3 educational qualification of parents ?

    1.4 employment status of parents ?

    1.5 average monthly family income ?

2. What is the scholastic response of the grade VI pupils by subject area under the:

    2.1 homogenous group?

    2.2 heterogenous group?

3. Is there a significant difference between the scholastic responses of the grade VI pupils by subject area under the homogenous group and those under the heterogenous group?

4. Is there a significant difference between the general scholastic achievement of the homogenous group and that of the heterogenous group?

5. What is the implication of this study to education?

Null Hypotheses

This study attempted to test the following null hypotheses:

1. There is no significant difference between the scholastic responses of the Grade VI pupils under the homogenous group and those under the heterogenous group in the different subject areas specifically in English, Mathematics, Science, Filipino and Social Studies.

2. There is no significant difference between the general scholastic responses of the Grade VI pupils under the homogenous group and those under the heterogenous group.

Theoretical Framework

This study is anchored on the theory of Burr D. Coe (1974:93), which states that "homogenous grouping is

considered the best form of grouping where learning is the primary objective, but when social outcomes are the concern, the heterogenous plan may work best."

This theoretical basis stems from the fact that when pupils are classified into ability groups, they have a fairly uniform range of mental ability. Hence the teaching-learning process is not so complicated for the children have almost the same rate of intellectual progress. Such practice is supported by Wrightstone (1978:16), "Children who have approximately the same achievement level may form the basis for a group that can be helped to gain specific skills through common experiences or through the use of similar materials. For example, the good readers in a class may be formed into a group and given practice in outlining a selection they have read. A group of less competent readers may be given practice in specific word recognition skills."

Generally, in comprising instructional groups in the elementary schools consideration is given to the scholastic achievement of pupils, although other factors important to successful teaching and learning are reviewed before assigning a child to a class. These other factors are the chronological ages, physical development, behavior and emotional problems and interests. A satisfactory pupil-teacher relationship is also considered in the grouping

plan.

Those who favor homogenous grouping almost universally favor a criterion of ability or achievement usually expressed in general ratings of pupils. Precisely this is why it is called "ability grouping." However, this issue on ability grouping has not gained popularity among those involved in the educational process both locally and abroad. The heterogenous advocates are loud in their condemnation of the ability plan because according to them, general intelligence is not a single criterion to be considered.

Notwithstanding the disagreement on the grouping procedure lies a question of interest: Which group leads to greater achievement?

Conceptual Framework

Guided by the theoretical framework, the researcher conceptualize her study clearly in a schema which shows an interplay of the factors involved.

At the base are the two central elementary schools of Catbalogan, Catbalogan III and Catbalogan IV, which practices the homogenous and heterogenous groupings of the grade VI pupils. They represent the research environment. From each of these two groups, an arrow extends to the center, the New Elementary School Curriculum instruction.

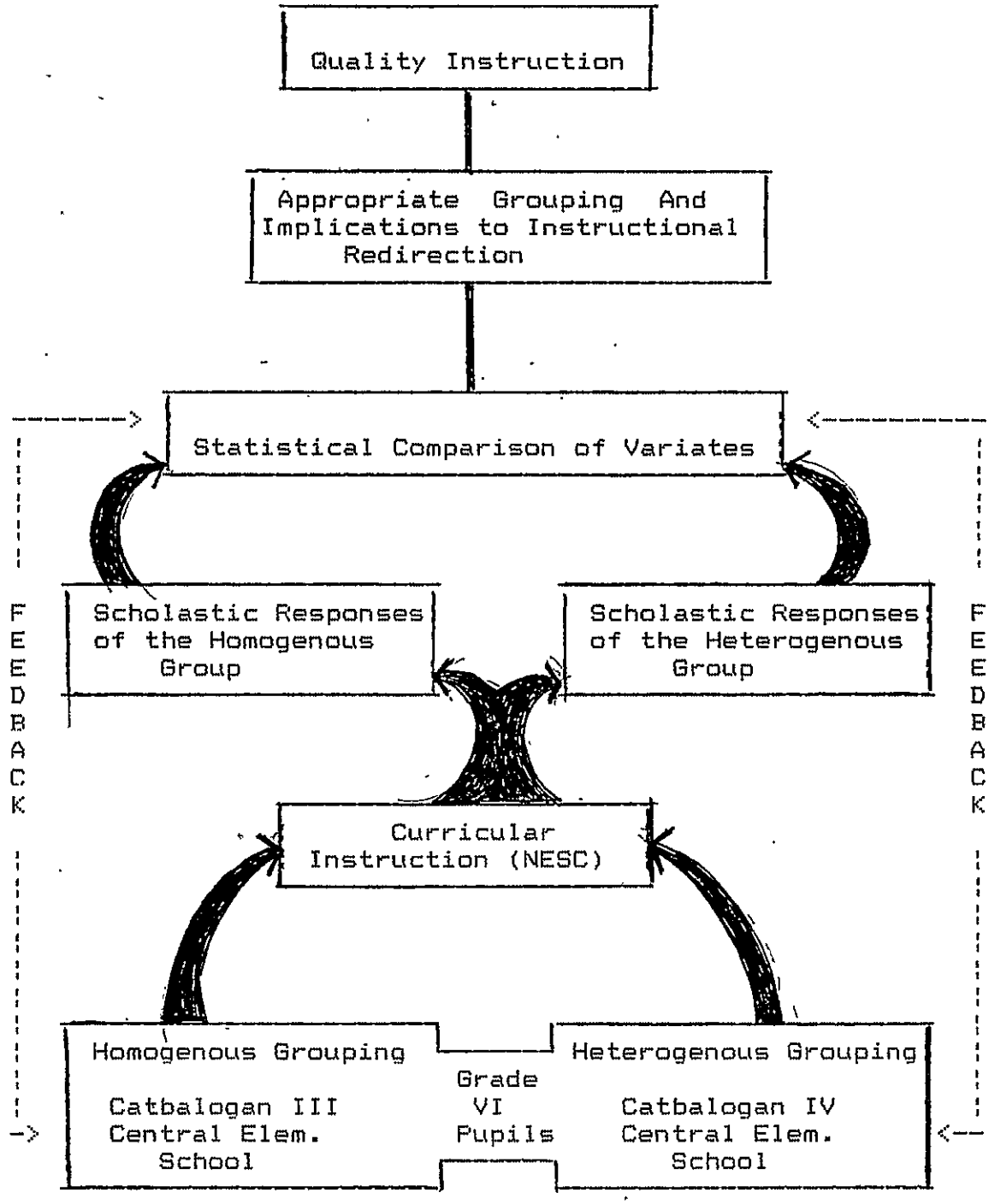

Figure 1. The Conceptual Model of the Study

Both groups undergo or use the same curriculum in their respective schools. The scholastic responses of the homogenous group and the heterogenous group to the curricular instruction where both groups have undergone, are the variates which provided the basis for comparison and subjected to statistical treatment; the findings of which provide feedback to the school, where the administrators and teachers may decide for a school reorganization through the adoption of an appropriate type of grouping that will eventually facilitate the attainment of a better quality instruction.

This concept is illustrated in a schema in figure 1.

Importance of the Study

There seems to be a controversy regarding the grouping of pupils in the elementary schools because advocates of either type claim that one is better than the other in terms of pupils's scholastic performance.

This study is therefore conducted to ascertain the scholastic responses of the grade VI pupils to homogenous and heterogenous grouping.

The result obtained from this study will give school administrators insights in deciding which type of grouping plan they may subscribe to for an improved instruction and

produce quality outputs. With an ascertained grouping plan of pupils, the school can devise a suitable and effective instructional program to adjust the curriculum content to the needs, abilities and interests of pupils so that a much better output is expected.

To the teachers, the result of this study will guide them to create a learning environment that will lead to a healthful group growth and pupils morale. With certainty, a healthful situation will inspire teachers to initiate new and improved methodologies and procedures in teaching and also in evaluating pupils learning.

To the pupils the result of this study will encourage them to strive with more effort in the pursuit of excellence in the different learning areas and educational endeavors.

To the parents, the study will serve as guide in the choice of career opportunities for their children and motivate them in the development of desirable values and attitudes so that they may serve as models not only in their schools but in the community as well.

To future reseachers, this study will serve as reference for further studies of similar nature.

Scope and Delimitation of the Study

This study is focused on the scholastic responses of the Grade VI pupils to homogenous and heterogenous groupings

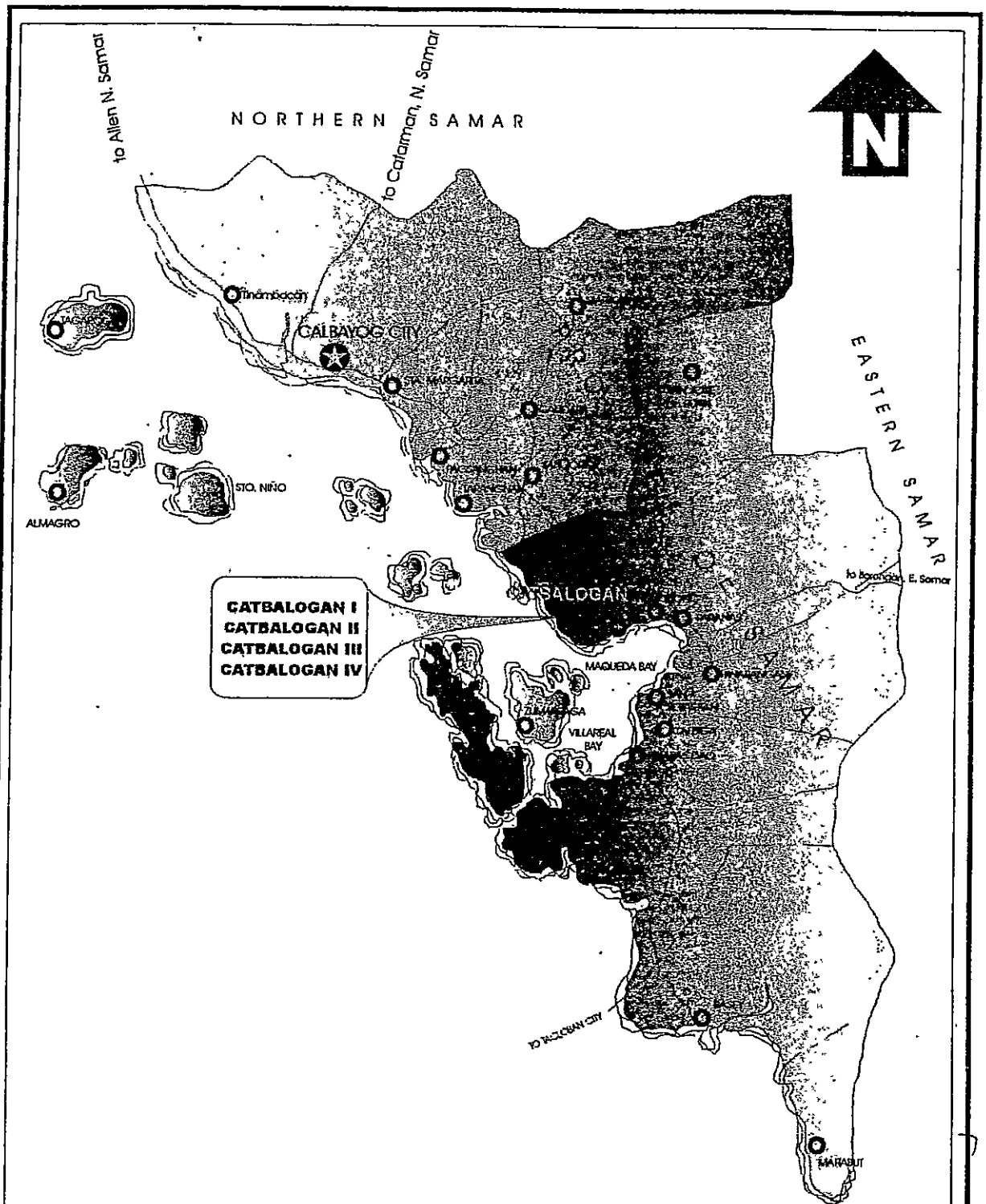

Figure 2. Map of Samar depicting the location of the Research Environment

in two central elementary schools of Catbalogan, Samar, namely Catbalogan III Central Elementary School, and Catbalogan IV Central Elementary School (refer to figure 2 for the location). The samples consisted of 200 grade VI pupils, 100 of which came from Catbalogan III, and 100 from Catbalogan IV, enrolled in school year 1996-1997.

Definition of Terms

The following terms are hereby defined to have a vivid understanding as they are used in this study.

Ability. This term refers to the actual power present in an organism to carry to completion any given act or to make adjustment (Good 1978:11). In this study, ability is measured in terms of previous academic records of the child.

Ability group. This term is used synonymously with homogenous group. (see definition of homogenous group).

Academic Subjects. This term refers to the core subjects in the elementary curriculum (PJE, 1985:221) In this study, the term refers to the five subjects in the elementary grades which are English, Mathematics, Science, Filipino and Social Studies.

CENTREX. The term came from the words "Center of Excellence." It is a DECS project intended to identify schools in every division as the center of excellence to showcase special classes that are well provided with

instructional materials, highly motivated teachers, conducive learning environment and provided with full supervisory, administrative and instructional support. As used in this study, the term refers to specially homogenously grouped classes in schools wherein high average rating in the learning areas were made as a basis for grouping the pupils.

Educational Attainment. Generally this term refers to the academic or vocational education attained by a person (NSO, 1997:XIV). In this study, the term refers to the highest grade or year completed in a learning institution as of September 1, 1996.

Elementary School. The term refers to the first ladder or level in the Philippine educational system. It consists of six grades, from grades I to VI.

Employed. This refers to a person who works in a private, government or religious entity for pay, in cash or in kind (NSO, 1997:xix). In this study, the term refers to the parents of the respondents who work for pay to support the family.

Grouping. This refers to a flexible kind of classroom organization for adjusting the curriculum to the needs and abilities of the class members (Wrihtstone, 1978:27). In this study, the term refers to the process of segregating

the grade VI pupils into homogenous and heterogenous groups.

Heterogenous group. This term refers to a group of pupils with widely different mental abilities (Clark, 1975:309). As used in this study, the term refers to the grade VI pupils in Catbalogan IV Central Elementary School with a wide and different ranges of mental ability as reflected in their academic ratings.

Homogenous group. This refers to a group of pupils with more or less similar mental ability and academic aptitude for purposes of instruction (Clark, 1975:303). It is oftentimes referred to as the ability group. In this study the term is used to refer to the grade VI pupils of Catbalogan III Central Elementary School with a similar or very narrow range of mental ability as reflected in the academic ratings.

Poverty Line. This term refers to the per capita income of 8,865 pesos each month as for year 1995 (NSO, 1995). As used in this study, the term refers to families whose monthly average income is 8,865 pesos and/or below and are considered poverty stricken.

Poverty threshold. This term is used synonymously with poverty line.

Quality Education. The term implies the attainment of certain predetermined standards of achievement, the

utilization of quality faculty facilities and other resource inputs brought to bear on pupils who have the aptitude to succeed in whatever educational program they may have considered (Laya, 1984:3). In this study the term is associated with the students' very satisfactory output through the grades indicated in their report card.

Scholastic achievement. This term refers to the accomplishment in the school subjects usually designated by test scores or by marks assigned by the teacher (Good, 1978:18). In this study, the term refers to the grades obtained by the grade VI pupils in the five academic subjects (English, Mathematics, Science, Filipino, Social Studies) in the elementary level of education.

Scholastic Response. This term is used synonymously with scholastic achievement.

Self-employed. This refers to a person who works for profit in his own business, farm, profession or trade without any paid employee. This includes workers who work purely on commission basis and may not have regular working hours (NSO, 1997:xx). As used in this study, the term refers to the parents of the respondents who earn a living in his own business, farm, profession or skill and have a monthly income.

SPED. This came from the words "Special Education."

It is a DECS project which groups homogenously children of special cases - example a group of physically handicapped; a group of specially gifted/talented children based on a mental ability test given; a group of slow learners based also on a mental ability test etc.

Unemployed. This term refers to a person who is not engaged in any paid activity (NSO, 1997 xiv). As used in this study, the term refers to the parents of respondents who are not hired for any paid activity or who has no income derived from an activity.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

The researcher reviewed several books, unpublished theses and other reading materials to gather relevant information to the problem under study. In no instance had she came across a particular study in Samar dealing definitely with the scholastic responses of grade six pupils to homogenous and heterogenous groupings.

Related Literature

Much have been written about grouping of pupils in schools and in this portion, the researcher presents some related literature so carefully selected to substantiate the present study in a way or two.

According to Wrightstone (1978:27-29), grouping is a flexible kind of classroom organization for adjusting the curriculum to the needs and abilities of pupils. He emphasized it is not a method of teaching a subject, rather it is essentially a phase of classroom management. It is a means to an end, not an end in itself'. The two common methods are the homogenous and the heterogenous groupings.

Studies on homogenous or ability grouping versus heterogenous grouping have been conducted in the United States at the elementary school level. One of the chief

problems has been to find a suitable basis for homogenous grouping. Various measures such as intelligence, test scores, reading achievement, teachers' marks have been used as criteria but research has shown that any one of these facts, when considered alone was unsatisfactory. No plan of grouping pupils had given over-all satisfaction.

According to Neagley (1983:124-126), in his Handbook for Effective Curriculum Development, classroom teachers have varied opinions about ability grouping, but several studies revealed that majority of the teachers preferred it. They claim that the range of variation within the group is reduced making it possible to teach the group as a whole. With ability grouping, the more able pupils are not held back by the less able pupils for each has their own group. In the ability group, there is no unfair competition unlike in the heterogenous group where the average and below average pupils are discouraged by the brighter ones'. Pupils in their own level of ability are challenged because of competition with peers of similar range of ability and this may lead to result in better learning.

On the otherhand, the heterogenous believers have the contention that it is not possible to group pupils homogenously except for one characteristic at a time. For instruction purposes, general intelligence is not a single

characteristic. A student might be excellent in Communication Arts but poor or average in Arithmetic or vice versa. Besides, the individual differences of pupils are ignored because in homogenous grouping the pupils grouped are believed to be similar in learning capacities and interests. To the teaching staff, ability grouping causes low morale and friction because teachers assume that the ability level of which they are assigned is indicative of their administrators estimate of their own teaching ability.

Attention is called by Struck (1981:33) to the fact that when pupils are grouped to any given ability as measured, let us say by intelligence test, they may still be far from homogenous as regards to maturity, past experience or traits or abilities other than those measured. It frequently happens that pupils in Work Education classes are grouped on the basis of intellectual ability. For purpposes of academic instruction this is at least a start towards homogenous classification, but for work or shop instruction, it is not. Classes so grouped are not likely to be homogenous for Work Education classes. The arrangement, however, maybe desirable and even necessary for scholastic administration.

A report made by Crowbach (1973:102-103) revealed that pupils grouped homogenously in one respect differ in other

dimensions as much as unselected pupils. Within a group of selected pupils all were above average in mental ability, but there were differences in Reading and Mathematics ability that required adaptation in teaching. The superior group was homogenous in reading ability but its members vary from superior to poor in Mathematics. In ability grouping , individual differences must be given due consideration because one maybe good in one area but slow in another or vice versa.

As was observed and accepted, Goodlad (1974:33) cited that teachers attitudes towards homogenous grouping has a very significant result or had a better output. Teachers are more comfortable teaching a class with a narrowed range of ability.

Some attempts were made to link ability grouping to gains in pupil's achievement. In a summary report of findings by an American psychologist, Frandseth (1982:24) although contradictory findings have come from many studies, a summary of evidences slightly favors ability grouping as contrasted with heterogenous grouping in academic learning. Standard Tests in academic achievement showed that pupils make slightly larger gains under ability grouping. The evidence for ability grouping indicated greatest relative effectiveness in academic learning for dull children, next

greatest for average children and least for bright children. The conclusion must be regarded tentative though.

Associating academic gains or achievement with some other factors, Birch (1985:68) discussed internal and external factors that influence the development of the individual characteristics important for academic achievement. External factors are defined as conditions which influence a child's scholastic achievement by direct means through the effect upon the school or the home or upon the development of individual child factors.

Internal factors are defined as characteristics of the individual pupil which have some direct bearings upon his scholastic achievement. Birch also cited further some factors affecting achievement which are also known as the environmental and biological development of the individual.

Scar and Wimberg (1978:33-34) shed light on the influence of family background on academic achievement. They discussed the long term effects of family background influences on adult intellectual, occupational and economic outcomes. Family environment and genetic difference can account for some differences in adult achievement. Half or more of the long term effects of family background on children's intellectual attainment depend upon genetic, not environmental transmission.

Meanwhile Kapunan (1978:48) cited some environmental

factors possible to have influenced scholastic performance: that city children were found to be better than country children because of the availability of educational facilities; that parents occupation has an influence on scholastic achievement; that children in isolated and backward sections do not acquire the kind of experience in their home, school and community more than children in urban or progressive section do; that children of well-to-do parents have greater accessibility to libraries, places of culture and other facilities than those of poor parents.

Related Studies

Realizing the need for further researches and investigations on grouping procedures and factors other than particular grouping which may affect the differences in pupils achievement gains the following studies were collated to the present problem to shed light on the relation and influence that they may contribute to the present study.

In the study of Frandsen (1980) among equated groups of fifth and sixth graders selected for homogenous and heterogenous groups, it revealed that the gain in Reading was slightly greater for a wide range group or the heterogenous group than the narrow range group or homogenous group of pupils, a result which lead to a conclusion that narrowing the range of ability in a class

did not result in an increased academic achievement of the pupils. The greatest achievement gains were made in a broad range or heterogenously grouped class. The two groups were exposed to the same reading curriculum.

This study of Frandsen is very much parallel to the present study in the procedural idea of equating the groups of pupils to homogenous and heterogenous groupings involving grade six pupils, exposing the classes to the same curriculum and looking into the academic gains of each group for comparison. However, Frandsen's study differs with the present in the sense that his respondents were grade five and six pupils unlike in the present one which focused on grade six pupils alone. Furthermore, Frandsen was only after the academic achievement in Reading whereas the researcher in this study is interested in the academic achievement of the grade six pupils in the five academic subjects in the elementary level of education wherein Reading is only a part of one subject.

To shed light on the influence of factors other than the grouping process on the achievement of pupils, environmental factors were cited in other studies. The study of D.S. Santos (1980) between college students from rural and urban areas, indicated a significant difference in achievement motivation. It further revealed that

environmental climate forms a dynamic linkage to scholastic achievement. City children were found to be better than country children because of the availability of educational facilities. The school therefore, must be supportive in creating and providing an environmental climate which will enhance learning for a better achievement.

This study of Santos is relevant to the present study because both studies dealt with the scholastic achievement of students or pupils. A comparative emphasis on the scholastic achievement of students was noted although the grouping process separated the respondents in Santos' study as those coming from the rural and urban areas and in the present study the researcher centered on the homogenous and heterogenous schemes based on the ratings of the respondents. The researcher occupied herself in two research environment in one town which is more or less the same in terms of school climate, educational facilities offered, curriculum, equipments and learning materials used in the instructional process.

In another study, Cosselle (1981),in her study of non-intellectual variables that are related to academic achievement among students from low socio-economic background included in her investigation an experimental group of 25 female freshmen from families of low socio-

economic status and a comparison of 25 males and 25 females in the upper and middle class level. The findings revealed that those from the low socio-economic background were not significantly different from those in the middle and upper income groups. From the findings, socio-economic background does not affect academic performance; attitude and intelligence determine it. In fact, pupils from low socio-economic background were deligent in their studies while those from the upper class level were somewhat truant and delinquent because they were always moneyed.

Consistent to the findings of Cosselle, the study of Torres (1981) on the relationship between academic achievement and socio-economic status among high and low achievers, the following findings came about, the economic status of the students does not necessary predict their achievement level. There were high achievers coming from low socio-economic status and vice versa. Because of these findings, Torres emphasized that pupils, whoever and whatever they are must be given equal opportunities both in academic and school offerings and activities.

The two studies abovementioned have some bearing with the present study in considering the socio-economic status of the respondents as a factor which may influence the academic performance of the respondents. Though it was

disclosed in the two studies mentioned that the socio-economic background of the respondents did not affect their academic performance, the present study still considered the factor in the profile of the two groups of respondents for comparison.

However, the present study differs with those of Cosselle and Torres in the selection of the respondents involved in the study for Cosselle studied the high school freshmen and Torres used grade IV, V and VI pupils. The present study dealt with Grade VI pupils.

Another factor, the gender factor of the respondents was the focus of Mendoza's (1983) study on "Factors Associated with Mathematics Achievement of College Entrants of Philippine Union College". The respondents were equated in number and in sex and found out that sex is not significantly related to Mathematics achievement. That males perform equally with females in Mathematics.

This study of Mendoza was singled out to relate in some aspect with the present study because both took into account the scholastic achievement of the respondents and the relation of the gender factor to the study. The researcher in the present study, purposely equated the two groups (homogenous and heterogenous) according to sex and number and so as with the ratings of the respondents to create the

baseline of the study. The difference lies in the subject concentration and level of the respondents because the present study was interested in the academic achievement of the respondents in the five academic subjects in the elementary level and find out which of the two groups fared better, whereas Mendoza's study concentrated on Mathematics achievement only of the male and female college entrants to get a valid result as to who among the two genders was smarter in Mathematics skills.

Similarly, in the study of Villegas (1985) which correlated mental ability, socio-economic status and personality factors in the academic achievement of secondary students, the findings came out as: 1. mental ability and certain personality factors influenced academic performance although age and socio-economic status did not, 2. factors which significantly correlated with academic achievement were mental ability, extroversion, activity enthusiam, sociability, vigor, self-assurance, self-control and relaxation from tension. This judgement is supported by Esguerra (1983), in her Correlation of the Study Habits, General Intelligence and Achievement of Fourth Year Students of Mapa High School, school year 1981-1982, which revealed that there is a marked relationship between intelligence and achievement and between study habits and achievement.

Pupils' mental ability depends upon their intelligence and attitude towards their studies. High mental ability or high academic performance is coupled with high intelligence and better study habits.

These studies of Villegas and Esquerra which both cited different factors associated to the academic achievement of pupils/students is relevant to the present study because they all dealt with the performance of students. Differences however, were noted on the educational level of the respondents and the factors considered to influence the academic performance of the respondents.

Another research study which seems to be parallel with the present study is that of Laluan (1983), on the performance of college students in the State University of Region I. In her study she used the general averages of the students based on the type of school they graduated from. The general average of each college student was obtained by summing up the students grades in all subjects from the first to second semester and its summation was divided by the number of subjects. The college grades were analyzed using the Analysis of Variance for the purpose of verifying the result of the previous findings indicated in the Duncan Multiple Range Test (DMRT) where graduates from barangay high schools showed lower performance than the students from

other types of high schools. The result of the study revealed an insignificant difference among students graduated from other types of schools. It showed that students had equal level of performance as compared to the other graduates from other schools; an indication that equal opportunities were provided by the state institution in terms of faculty and facilities.

Similarly, the present study also deals with the performance of pupils which was obtained by summing up the students' grades in all subjects. The summation of the grades in the different subjects in the two groups were compared and subjected to statistical treatment, just like that of Laluan. However, Laluan involved four groups of college respondents and therefore find the Analysis of Variance or ANOVA for each group, whereas the present study used the t-test to determine the significant difference of the homogenous and heterogenous groups of respondents being compared.

Pacolor (1983), which compared the mathematical achievement of four-year technical students and teacher education students in Samar State Polytecnic College, had purposely selected and equated in number 64 respondents in his study making their NCEE rating in Mathematics as his basis. He paired a Technical Education student with a

Teacher Education student whose rating in Mathematics NCEE was so nearly the same as the former. The statistical measures used were the mean, standard deviation, and t-test of significance to determine the significance between the Mathematics achievement of the two groups of students in Mathematics 101. The findings showed that the Technical student respondents performed just as well as the Teacher Education students in Mathematics 101.

This study of Pacolor bears so much similarity with the present study in the sense that both studies compared students achievements. Apparently, the similarity started from the purposive selection of the respondents basing on ratings, equating the number of respondents in the two groups of respondents to the statistical measures used to determine the significant difference between the achievement of the two groups. However, Pacolor dealt with first year college students and compared Mathematics achievement between the Technical Education respondents and the Teacher Education respondents. The present study on the other hand concentrated with the grade VI pupils in the elementary grades grouped in homogenous and heterogenous procedure and compared their achievement in the five learning areas in the elementary level.

Associating scholastic performance with factors related

to curriculum content, the study of Porcare (1984) conducted among college students of VISCA, showed that students from vocational high schools and presently enrolled in vocational colleges achieved better than those from general high schools or general secondary curriculum. This result may be due to the fact that preparation in high school was more or less related to the orientation they received in college.

The study of Porcare and the present study are alike because both compared academic achievements of two groups of respondents. They differ in the statistical tests wherein the former tested the observed result using the Chi-square while the latter tested the significant difference between the performance of the two groups using the t-test. Moreover, Porcare anchored his study on college students while this researcher centered in the elementary pupils.

The study of Jerdivicha (1987) centered on two schools offering the same vocational courses. It disclosed that the Nakornpathom Technical College, under the Department of Vocational Education was rated higher in tools, equipments and facilities. Furthermore, it showed a higher vocational achievement of students when compared with Sampranttiwaya under the Department of General Education. Such difference was significant at 0.05 and 0.01 level. It concluded that the increase or high scholastic achievement was the result

of an effective instruction which depended primarily on the adequacy of equipments and learning materials that students utilized to satisfy that desire to manipulate, create, beautify and express themselves through purposive activities.

It recommended therefore, that schools, regardless of type, have to equip students with the necessary facilities, equipments and materials needed for the development of the skills required to become productive citizens.

Jerdivicha's study resembles in a way to the present study because it also compared the achievement of students in two schools offering the same courses. The present study too, compared two schools offering the same elementary courses under the same curriculum, the NESC (New Elementary School Curriculum). However, the level of the respondents once again differ between the two studies. In addition, Jerdivicha delved on the vocational achievement of the respondents contrary to the academic achievement in the present study. The vocational achievement of pupils in this study was not made a matter of comparison because grouping of the respondents was made on the basis of their intellectual ability expressed in their marks in the five academic learning areas rather than their vocational know-how or skills and experiences.

Sabalza (1989) in her study, disclosed that there is no significant difference between the scholastic achievement of college students in SSPC, who came from or have graduated from the vocational and general high schools. The college respondents enrolled in different courses in SSPC, who came from general high schools, yielded a satisfactory achievement and so with the respondents coming from vocational high schools. The difference in their rating was far less than the tabular value of t which meant that the difference in the scholastic ratings was not significant and therefore the type of school where the students graduated from had no influence over their scholastic achievement while in the Samar State Polytechnic College.

Apparently, Sabalza's study is considered alike to the present study in many ways. Both compared the scholastic achievement of selected respondents based on their scholastic ratings. The research design and statistical treatment of the data were alike too using the t-test of significance at 0.05 level. The difference lies with the level of respondents. One was in the elementary level and the other in the tertiary level. Sabalza's study treated two groups of students enrolled in SSPC or in one school under different courses and exposed to different curricula whereas the present study had two groups of respondents in

two different schools but exposed to a single and the same curriculum, using the same books as learning materials and the same skills developed as arranged and contained in the Minimum Learning Competencies for grade six.

The studies cited in this chapter resembles to the present study because they all dealt with the scholastic achievement of students/pupils. The emphasis of comparison on the scholastic achievement of the respondents were noted to be very much similar to the present study, the fact that the ratings of the students were used as basis. Some factors mentioned in the reviewed studies associated to influence the scholastic achievement such as grouping procedures, sex and the socio-economic status are the same factors considered in the present study. Differences however were noted in the educational level of the respondents wherein most studies cited were conducted in the secondary and tertiary level and if ever the study was on the elementary level, it was on other grade levels and not particularly the grade VI. The statistical measures used in some few studies reviewed were different from the present because the ANOVA and Chi-square were used and not the mean and the t-test of significance.

Chapter 3

METHODOLOGY

This chapter presents the methods and procedures employed in the conduct of this study. This also includes the research design, instruments used in gathering the needed data, the selection and description of the samples and the statistical measures used in the treatment of the data.

Research Design

This study on the scholastic responses of the grade VI pupils to homogenous and heterogenous groupings used the analytical descriptive method of research with documentary analysis and questionnaire as the main instruments in gathering data. This research thus involved more than just fact gathering and tabulation. It deals with the analysis and interpretation of the data which have been gathered for a specific purpose for the understanding and solution of significant problems.

Instrumentation

The essential instruments which are the appropriate and reliable sources for the needed data in this study were the DECS form 137-E, questionnaire and personal interview with the samples.

Documentary Analysis. The DECS form 137-E is the official permanent record of the pupils. In these records the scholastic responses of the pupil respondents expressed in numerical ratings were reflected.

The Questionnaire. This study made use of some data elicited through the questionnaire. The closed form or fixed alternative form was utilized. Part I of the questionnaire was designed to elicit personal data for the profile of the respondents as: age, sex, address, date of birth and name of both parents or guardian. Part II called for the data on the economic profile of the parents or family of the respondents which answered the educational qualification of the parent-respondents, their employment status and the average monthly income of the family.

Interview. There was a necessity to have a personal interview with the pupil-respondents to either supplement the data of their true identity or to support the reliability of the responses gathered through the questionnaires.

Validation of Questionnaire

To validate the questionnaires used in this study the researcher distributed the questionnaires to grade VI pupils

of Catbalogan I and II Central Elementary Schools. The responses together with the comments and suggestions were collated and considered in the final copies distributed to the respondents to this study in Catbalogan III and Catbalogan IV Elementary Schools.

Sampling Procedure

Looking into the form 137-E of the grades VI pupils, the researcher computed for the average of the grade V ratings in English, Mathematics, Science, Filipino and Social Studies of the previous school year, 1995-1996. Through purposive sampling based in these ratings, 100 samples were selected for the homogenous group and 100 samples were selected for the heterogenous group.

In Catbalogan III Central Elementary School, 25 grade VI pupils, whose grade V average rating in the five academic subjects ranges from 90 to 95 were purposively selected from the grade VI-1 class. Another 25 grade VI pupils, whose grade V average rating in the five academic subjects ranges from 85 to 89, were purposively selected from the grade VI-2 class; 25 more grade VI pupils, whose average grade V rating in the five academic subjects ranges from 80 to 84 were purposively selected from the grade VI-3 class and lastly, 25 grade VI pupils whose average grade V rating in the five academic subjects ranges form 75 to 79

were purposively selected from the grade VI-4 class. These 25 pupils in each of the four sections of the grade VI classes of Catbalogan III Central Elementary School make up the 100 pupil respondents representing the homogenous group. They comprise 51 percent of the total 198 grade VI enrollees of the school for school year 1996-1997.

Similarly, in Catbalogan IV Central Elementary School, 25 grade VI pupils whose grade V average rating in the five academic subjects ranges from 75 to 95 were selected purposively from the grade VI-Rose class. Another 25 grade VI pupils whose grade V average rating in the five academic subjects ranges from 75 to 95 were selected purposively from the grade VI-Camia class; while 25 more grade VI pupils whose grade V average rating in the five academic subjects ranges from 75 to 95 were purposively selected from the grade VI- zenia class; and lastly, 25 grade VI pupils whose grade V average rating in the five academic subjects ranges from 75 to 95 were selected purposively from the grade VI-Ilang-ilang class. These 25 grade VI pupils from each of the four sections of the grade VI classes of Catbalogan IV Central Elementary School make up the 100 pupil respondents representing the heterogenous group. They comprise 54 percent of the 185 grade VI enrolment of the school for school year 1996-1997.

Table I

Pupil Respondents in Catbalogan III and IV Elementary Schools

Grade/Section	Catbalogan III	Catbalogan IV
VI - 1 / Rose	25	25
VI - 2 / Camia	25	25
VI - 3 / Zenia	25	25
VI - 4 / Ilang-ilang	25	25
Total	100	100

To finalize the selection of the respondents for the homogenous and heterogenous groups, the grade V ratings of the 100 grade VI pupils in the homogenous group and the 100 grade VI pupils in the heterogenous group were summed up by section and computed to get the mean of each section. The four means of the four sections in the homogenous groups and the four means in the four sections of the heterogenous group were computed again to get the grand mean of each group. These two grand means, the grand mean of the homogenous group and the grand mean of the heterogenous group, were equated to serve as the base of the study.

Gathering of Data

When the 100 pupil samples representing the homogenous group and the 100 pupil samples representing the heterogenous group were finally determined , the researcher distributed a set of questionnaires composed of two parts, to the pupil-samples, to look into the profile of the respondents. The first part, which calls for the identification data of the respondents, were answered by the respondents themselves and the second part, which looked into the educational attainment and employment status of the parents as well as the average monthly income of the family, was addressed to the parents of the respondents. To ascertain the reliability and to supplement the data collected from these questionnaires, a personal interview with the respondents was conducted; the responses of which were classified, tallied, tabulated, analyzed and interpreted in narrative form.

At the end of school year 1996-1997, the grade VI final ratings in English, Mathematics, Science, Filipino and Social Studies of the 25 grade VI-1 respondents were computed by subject area to get the five subject means for the grade VI-1 class. These five subject means were added and computed to get the grade VI-I class mean. To be specific, the final ratings in English of the 25 grade VI-1

pupil samples, were added and divided by 25 or the number of pupils to get the mean in English of the grade VI-1 class. The same procedure was done to find the mean in Mathematics, Science, Filipino and Social Studies of the same section. Then these five subject means of grade VI-1 were added again divided by five to find the class mean of grade VI-1 class. This same process was undertaken to get the different subject means and class means of the grade VI-2, grade VI-3, and grade VI-4 classes. In this manner, the scholastic achievement of the grade VI pupils in the homogenous group was determined by subject area and by section.

Furthermore, the different subject means of the four sections of the grade six classes representing the homogenous group were added and computed to find the scholastic achievement of the grade VI pupils in the homogenous group by subject area. The class means of the four sections of the grade VI classes representing the homogenous group were summed up too to get the grand mean of the homogenous group which represents their general scholastic achievement.

The scholastic data for the heterogenous group of grade VI pupils distributed to grade VI Rose, grade VI-Camia, grade VI-Zenia and grade VI Ilang-ilang were gathered in the

same manner as the gathering of the data for the homogenous group which was described in detail in the preceeding paragraphs.

Treatment of Data

The statistical measures used in this study were the mean, standard deviation and the t-test of significance of the difference between the two grand means of the two independent samples.

The mean was used in determining the average scholastic rating of the pupils in the different subjects in the two groups. This measure was also used in determining the general achievement of the pupils in each group through the grand mean of each group. The formulas adopted were:

$$\bar{X} = \frac{E\,x}{n_x} \qquad \bar{Y} = \frac{E\,y}{n_y}$$

Where:

$\bar{X}$ - the grand mean for the homogenous group

$\bar{Y}$ - the grand mean for the heterogenous group

Ex - summation of all the grades in the homogenous group

Ey - summation of all the grades in the heterogenous group

n_x - total number of classes in the homogenous group

n_y - total number of classes in the heterogenous group

The standard deviation was used as a measure of variability which was paired with the mean to get a reliable result. The formulas used were:

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n(n-1)}} \qquad SDy = \sqrt{\frac{nEy^2 - (Ey)^2}{n(n-1)}}$$

Where:

SDx - the standard deviation or measure of variability paired with the mean of the homogenous classes.

SDy - the standard deviation or measure of variability paired with the mean of the heterogenous classes

$E\bar{X}$ - mean of the averages of pupils in the homogenous classes

$E\bar{Y}$ - mean of the averages of pupils in the heterogenous classes

n - number of classes

The t-test of significance was used to determine if the difference between the scholastic performance of the two groups was significant or not. This measure determined whether the hypothesis holds true or not. The alpha level of significance used was at 0.05 level and six degree of

freedom.

The formula adopted was: (Garett,1970:304-333)

$$t = \frac{\bar{X}_1 - \bar{Y}_2}{\sqrt{\frac{(n_X-1)SDx^2 + (n_Y-1)SDx^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$\bar{X}$ --> the mean for the homogenous group

$\bar{y}$ --> the mean for the heterogenous group

n_X --> total number of samples for the homogenous group

n_y --> total number of samples for the heterogenous group

SDx --> standard deviation of the homogenous group

SDy --> standard deviation of the heterogenous group

Chapter 4

PRESENTATION AND INTERPRETATION OF DATA

This chapter presents in tabulated form, the data gathered from the questionnaires distributed to the respondents, the interview and documents scrutinized to answer the specific questions posed in chapter 1, particularly under the statement of the problem. Every tabulation is accompanied with a critical analysis and the qualitative and quantitative interpretation of the data presented.

Profile of the Grade VI Pupils

The characteristics of the pupil respondents in this study such as age, sex, educational qualification and employment status of the parents and the average monthly family income of the respondents were looked into, studied, analyzed and collated in relation to the study.

Age and Sex of Respondents. In this study the respondents in the two central schools of Catbalogan were 11 1/2, 12, 12 1/2 and 13 years of age in school year 1996-1997. The reason for this is that the pupils accepted in grade I five years ago were 6 1/2, 7, 7 1/2 and some 8 years old. Their school records showed that none of them left

school within the period of 6 years that is from grades 1 to VI, and none failed or repeated a grade level. In other words all respondents entered school as grade I pupils in year 1991-1992; were promoted year after year till they reached grade VI on school year 1996-1997.

Table 2 reveals the age and sex distribution of the respondents in Catbalogan III and Catbalogan IV Central Elementary Schools representing the homogenous and heterogenous groups respectively. In Catbalogan III there is a total of 75 respondents who are 12 years old; 14 are 12 1/2 years old; 6 are 13 years old and 5 are 11 1/2 years

Table 2

Age and Sex Profile of Respondents in Catbalogan III and Catbalogan IV Central Elementary Schools

AGE	Catablogan III				Catbalogan IV				Total Pupils	Ages
	M	F	Total Pupils	Total Ages	M	F	Total Pupils	Total Ages		
11 1/2	0	5	5	57.5	0	3	3	34.5	8	92
12	38	37	75	900	38	35	73	875	148	1776
12 1/2	8	6	14	175	8	8	16	200	30	375
13	4	2	6	78	4	4	8	104	14	182
Total	50	50	100	1210.5	50	50	100	1214.5	200	2425
Average				12.105				12.145		12.125

old. The average age in the homogenous group is 12.105. In Catbalogan IV there is a total of 73 respondents who are 12 years old; 16 are 12 1/2 years old; 8 are 13 years old and 3 are 11 1/2 years old. The average age in the heterogenous group is 12.145. It is evident that the 12 year old respondents dominate both groups and the average age of all respondents in both groups is 12.125.

Since the respondents were selected through purposive sampling, the researcher had the opportunity to purposely equate the respondents according to sex. This was possible because of the big population of the grade VI pupils in the two central schools representing the research environment. So from a population of 198 grade VI pupils in Catbalogan III Central Elementary School, there were 50 males and 50 females to represent the homogenous group. In Catbalogan IV Central Elementary School with 185 grade VI enrollees, 50 males and 50 females were also selected to represent the heterogenous group.

<u>Educational Attainment of Pupils' Parent.</u> Data on the highest educational attainment furnished a material for a comparison of the educational levels of the pupil respondents' parents. In this study, the educational attainment is categorized as: Elementary - Grade I to grade VI, High School - first year to fourth year but did not

graduate the final year, High school graduates, College undergraduates- first year college to sixth year college but did not earn a baccalaureate degree and College graduates - finished at least a four year baccalaureate degree.

Table 3 reveals the highest educational attainment of the parents of the pupil respondents in Catbalogan III and Catbalogan IV Central Elementary Schools representing the homogenous and heterogenous groups.

Under Catbalogan III Central Elementary School, the data shows 86 parents who are college graduates. They comprise 43 percent of the 200 parents of the respondents. The high school graduates follow with a sum of 43 parents or 21.5 percent of the number of parents in the group. The post secondary and college level are 30 parents or 15 percent of the parents. The high school category has 21 parents or 10.5 percent of the number of parents in the group and finally, the elementary category are 20 parents who make up 10 percent of the 200 parents of the respondents representing the homogenous group. Looking at the data, it can be deduced that a great number of parents in the homogenous group are college graduates (43 percent).

In Catbalogan IV Central Elementary school, there are 76 parents or 38 percent of the 200 parent respondents who are high school graduates. This is followed by the post

Table 3

Educational Attainment of the Respondent's Parents

Educational Qualification	Schools					
	Catbalogan III		Catbalogan IV		Total	
	N	%	N	%	N	%
Elementary	20	10.00	12	6.00	32	8.00
High School	21	10.50	23	11.50	44	11.00
High School Graduates	43	21.50	76	38.00	119	29.75
Post Sec/ college	30	15.00	49	24.50	79	19.75
College Graduates	86	43.00	40	20.00	126	31.50
Total	200	100.00	200	100.00	400	100.00

secondary or college level category with a total of 49 parents or 24.5 percent. The college graduates follow them with a total of 40 parents or 20 percent of the parents. The high school category level has a sum of 23 parents or 11.5 percent of the number of parents and finally, the elementary level consisted of 12 parents or 6.0 percent of the total number of parents. It is evident that the highest percentage in the educational attainment of the respondents' parents is the high school graduate category (38 percent).

This is because most of the parents in the heterogenous group are soldiers, whose educational qualification requirement for the job is at least high school graduate.

The overall total shows that 126 college graduate parents dominate at 31.5 percent; followed by the high school graduates with a total of 119 or 29.75 percent; then the post secondary and college level which is 79 or 19.25 percent; the high school level comes next with a total of 44 or 11 percent and the least are parents in the elementary level which is 32 in number or 8.00 percent. These data imply that the parents of the respondents in both groups have at least undergone formal education and none of them is considered illiterate to be incapable of assisting their school children when necessary.

Employment Status of Parent-Respondents. The economic activity of the parent respondents to generate income or as a means of livelihood are classified in this study into three categories: the employed, the self-employed and the unemployed.

Table 4 reveals the data pertaining to the occupational placement of the parents of the respondents in Catbalogan III representing the homogenous group and Catbalogan IV representing the heterogenous group.

Table 4

Employment Status of the Parent Respondents

Employment Status	Schools				Total	
	Catbalogan III		Catbalogan IV			
	N	%	N	%	N	%
Employed	103	51.50	115	57.50	218	54.50
Self-employed	38	19.00	36	18.00	74	18.50
Unemployed	59	29.50	49	24.50	108	27.00
Total	200	100.00	200	100.00	400	100.00

Under Catbalogan III Elementary School, the employed parents either in the government service or in private entities, are 103 parents or 51.5 percent of the 200 parents of the 100 respondents. The unemployed are 59 parents or 29.5 percent of the 200 parents of the respondents and lastly, the self-employed category has 38 parents or 19.00 percent of the parents.

In Catbalogan IV Elementary School the employed parents are 115 or 57.5 percent of the number of parents, the unemployed are 49 parents or 24.5 percent of the parents and the self-employed are 36 parents or 18.00 percent of the number of parents.

The overall data on the employment placement of the two groups of parents, yielded 218 parents or 54.50 percent in the employed category; 108 parents or 27.00 in the unemployed category and the least is 74 parents or 18.5 percent in the self-employed category. The data shows that majority of the parents (54.50) of both groups are employed which implies that majority of them cannot give full time assistance to their school children in their academic work.

The Average Monthly Family Income of the Parents. The researcher deemed it pertinent to look into the average monthly income of the family from the economic activities indulged in by the parents.

Table 5 presents the average monthly family income of the parent respondents of Catbalogan III and Catbalogan IV Central Elementary Schools. The numerical entries are the number of families in a specific income bracket expressed in peso.

In Catbalogan III, there are 53 families whose average income is 6,001 to 9,000 pesos; 19 families have an income of 3,001 to 6,000; 13 families have an income of of 9,001 to 12,000; 10 families have an income of 3,001 to 6,000; and 5 families have an income of 12,001 or more.

In Catbalogan IV Central Elementary School, there are

Table 5

Average Monthly Family Income of Parents

Average Monthly Income	Catbalogan III N	Catbalogan III %	Catbalogan IV N	Catbalogan IV %	Total	Percentage
P 3,000 or below	10	10	21	21	31	15.5
3,001 to 6,000	19	19	28	28	47	23.5
6,001 to 9,000	53	53	35	35	88	44.0
9,001 to 12,000	13	13	14	14	27	13.5
12,001 or more	5	5	2	2	7	3.5
Total	100	100	100	100	200	100.00

35 families whose average monthly income is 6,001 to 9,000 28 families have an income of 3,001 to 6,000; 21 families have an income of 3,000 and below; 14 families have an income of 9,001 to 12,000; and two families have an income of 12,001 and over.

Taking the overall data on the average family income of parents in the two schools, it can be noted that the greatest number of families or 44 percent of the families

of both groups earn from P 6,001 to 9,000 income bracket, where lies the poverty threshold of 8, 865 (NSO,1995:25). Following these number of families whose average income is still below the poverty threshold is 23,5 percent belonging to the 3,001 to 6,000 income bracket and 15.5 percent of the families are in the 3,000 or below income bracket. These families whose average monthly income lies on or below the poverty threshold comprise 83 percent of the 200 families involved in this study and only 17 percent of the families are above the poverty line/threshold. This indicates that a great number of families in this study are living on or below the poverty line which implies that poverty was not a hindrance to the education of the respondents especially so that elementary education is free in these two government schools.

The Mean Scholastic Achievement of the Grade VI Pupils in the Homogenous and Heterogenous Groups by Section and by Subject Area.

The mean scholastic achievement of the grade VI respondents of Catbalogan III Central Elementary School representing the homogenous group are presented by section and by subject area in table 6. (refer to appendices H, I, J, K for details).

Table 6 presents the mean scholastic achievement of the grade VI pupils under the homogenous group by subject area. In English the total of the four subject means in the four sections is 337.64 with a mean of 84,41; in Mathematics the total of the four subject means is 337.48 with a mean of 84.37; in Science the total of the subject means is 334.68 and the mean is 83.67; in Filipino the total of the subject means is 338.44 and the mean is 84.61; in Social Studies the total of the subject means is 335.76 and the mean is 83.94. The total of the four class means is 336.80 and the grand mean is 84.2, which represents the scholastic achievement level of the 100 grade VI pupils in the

Table 6

Mean Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group by Subject Area

Grade & Sec.	English	Math	Science	Filipino	Social Studies	Mean
VI-1	90.68	90.52	89.88	90.92	90.00	90.40
VI-2	86.28	86.96	85.88	86.44	85.84	86.28
VI-3	82.40	82.28	81.32	82.72	82.08	82.16
VI-4	78.28	77.72	77.60	78.36	77.84	77.96
Total	337.64	337.48	334.68	338.44	335.76	336.80
SA	84.41	84.37	83.67	84.61	83.94	84.20

SA - Scholastic Achievement

homogenous group.

The mean scholastic achievement of the grade VI respondents of Catbalogan IV Central Elementary School representing the heterogenous group are presented in Table 7 by subject area and by section. (refer to appendices L, M, N, O for details).

Table 7 presents the scholastic achievement of the grade VI pupils under the heterogenous group by subject area. In English the total of the four subject means of the four classes is 333.20 with a mean of 83.3; in Mathematics the total of the four subject means is 333.88 and the mean

Table 7

Scholastic Achievement Level of the Grade VI Pupils in the Heterogenous Group

Grade & Sec.	English	Math	Science	Filipino	Social Studies	Mean
VI-Rose	82.72	82.84	82.56	83.56	83.12	82.96
VI-Camia	82.84	83.44	82.08	84.88	83.36	83.32
VI-Zenia	83.56	83.60	82.48	84.48	83.48	83.52
VI-Ilang-ilang	84.08	84.00	84.72	84.92	84.08	84.36
Total	333.20	333.88	331.84	337.84	334.04	334.16
SA	83.30	83.47	82.96	84.46	83.51	83.54

SA - Scholastic Achievement

is 83.47; in Science the total of the four subject means is 331.84 and the mean is 82.96; in Filipino the total of the subject means is 337.84 and the mean is 84.46 and in Social Studies the total of the subject means is 334.04 and the mean is 83.51. The total of the four class means is 334.16 and the grand mean is 83.54 which represents the scholastic achievement level of the grade VI pupils in the heterogenous group.

The Difference Between the Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group & the Grade VI Pupils in the Heterogenous Group in English

The mean difference between the scholastic achievement of the grade VI pupils of Catbalogan III Central Elementary School, representing the homogenous group and the grade VI pupils of Catbalogan IV Central Elementary School, representing the heterogenous group in every subject area is compared in the foregoing tables, Table 8 for English, Table 9 for Mathematics, Table 10 for Science, Table 11 for Filipino and Table 12 for Social Studies.

Table 8 shows the four sections of the grade VI pupils in the homogenous group with a mean scholastic rating in English of 84.41 and the four sections of the grade VI pupils in the heterogenous group with a mean scholastic rating in English of 83.3. The mean difference between them

Table 8

Difference Between the Scholastic Achievement Level in English of the Homogenous & the Heterogenous Groups

Homogenous Group Section/	Mean (X)	Heterogenous Group Section/Class	Mean (Y)
VI-1	90.68	VI- Rose	82.72
VI-2	86.28	VI- Camia	82.84
VI-3	82.40	VI- Zenia	83.56
VI-4	78.28	VI - IlangIlang	84.08
Total	337.84		332.20
Mean	84.41		83.3
Mean Difference			1.11
t-computed			0.415
Critical t-value			2.45
degree of freedom			6
Level of Significance			0.05
Interpretation			Not significant

is equal to 1.11 (refer to Appendix P for the computation). The t-computed is 0.415 and the number of the degree of freedom is 6. At 6 degree of freedom, the t-value is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.415, which is less than the tabular value of 2.45, it can be said that the difference of 1.11 between the scholastic achievement in English of the Grade VI pupils in the homogenous group and in the heterogenous group is not significant. This means

that the scholastic achievement in English of the Grade VI pupils in the homogenous group is as good as that of the Grade VI pupils in the heterogenous group.

The Difference Between the Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group & the Grade VI Pupils in the Heterogenous Group in Mathematics

Table 9 shows the four sections of the grade VI pupils in the homogenous group with a mean scholastic rating in Mathematics of 84.37 and the four sections of the grade VI pupils in the heterogenous group with a mean scholastic rating in Mathematics of 83.47. The mean difference between them is equal to 0.9 (refer to Appendix Q for the computation). The t-computed is 0.322 and the number of the degree of freedom is 6. At 6 degree of freedom, the t-value is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.322, which is less than the tabular value of 2.45, it can be said that the difference of 0.9 between the scholastic achievement in Mathematics of the Grade VI pupils in the homogenous group and in the heterogenous group is not significant. This means that the scholastic achievement in Mathematics of the Grade VI pupils in the homogenous group is as good as that of the Grade VI pupils in the heterogenous group.

Table 9

Difference Between the Scholastic Achievement Level in Mathematics of the Homogenous & the Heterogenous Groups

Homogenous Group Section/	Mean (X)	Heterogenous Group Section/Class	Mean (Y)
VI-1	90.52	VI- Rose	82.84
VI-2	86.96	VI- Camia	83.44
VI-3	82.28	VI- Zenia	83.60
VI-4	77.72	VI - IlangIlang	84.00
Total	337.48		333.88
Mean	84.37		83.47
Mean Difference			0.90
t-computed			0.322
Critical t-value			2.45
degree of freedom			6
Level of Significant			0.05
Interpretation			Not significant

The Difference Between the Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group & the Grade VI Pupils in the Heterogenous Group in Science

Table 10 shows the four sections of the grade VI pupils in the homogenous group with a mean scholastic rating in Science of 83.67 and the four sections of the grade VI pupils in the heterogenous group with a mean scholastic rating in Science of 82.96 The mean difference between them is equal to 0.71 (refer to Appendix R for the computation).

Table 10

Difference Between the Scholastic Achievement Level in Science of the Homogenous & Heterogenous Groups

Homogenous Group Section/	Mean (X)	Heterogenous Group Section/Class	Mean (Y)
VI-1	89.88	VI- Rose	82.56
VI-2	85.88	VI- Camia	82.08
VI-3	81.52	VI- Zenia	82.48
VI-4	77.60	VI - IlangIlang	84.82
Total	334.68		331.84
SA Mean	83.67		82.96
Mean Difference			0.71
t-computed			0.259
degree of freedom			6
Tabular t-value			2.45
Level of Significance			0.05
Interpretation			Not significant

computation). The t-computed is 0.259 and the number of the degree of freedom is 6. At 6 degree of freedom, the t-value is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.259, which is less than the tabular value of 2.45, it can be said that the difference of 0.71 between the scholastic achievement in Science of the Grade VI pupils in the homogenous group and in the heterogenous group is not significant. This means

that the scholastic achievement in Science of the Grade VI pupils in the homogenous group is as good as that of the Grade VI pupils in the heterogenous group.

The Difference Between the Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group & the Grade VI Pupils in the Heterogenous Group in Filipino

Table 11 shows the four sections of the grade VI pupils in the homogenous group with a mean scholastic rating in Filipino of 84.61 and the four sections of the grade VI pupils in the heterogenous group with a mean scholastic rating in Filipino of 84.46. The mean difference between them is equal to 0.15 (refer to Appendix S for the computation). The t-computed is 0.056 and the number of the degree of freedom is 6. At 6 degree of freedom, the t-value is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.056, which is less than the tabular value of 2.45, it can be said that the difference of 0.15 between the scholastic achievement in Filipino of the Grade VI pupils in the homogenous group and in the heterogenous group is not significant. This means that the scholastic achievement in Filipino of the Grade VI pupils in the homogenous group is as good as that of the Grade VI pupils in the heterogenous group.

Table 11

Difference Between the Scholastic Achievement Level in Filipino of the Homogenous & Heterogenous Groups

Homogenous Group Section/	Mean (X)	Heterogenous Group Section/Class	Mean (Y)
VI-1	90.92	VI- Rose	83.56
VI-2	86.44	VI- Camia	84.88
VI-3	82.72	VI- Zenia	84.48
VI-4	78.36	VI - IlangIlang	84.92
Total	338.44		337.84
Mean	84.61		84.46
Mean Difference			0.15
t-computed			0.056
Tabular t-value			2.45
degree of freedom			6
Level of Significance			0.05
Interpretation			Not significant

The Difference Between the Scholastic Achievement Level of the Grade VI Pupils in the Homogenous Group & the Grade VI Pupils in the Heterogenous Group in Social Studies

Table 12 shows the four sections of the grade VI pupils in the homogenous group with a mean scholastic rating in Social Studies of 83.94 and the four sections of the grade VI pupils in the heterogenous group with a mean scholastic rating in Social Studies of 83.51 The mean difference between them is equal to 0.43 (refer to Appendix T for

Table 12

Difference Between the Scholastic Achievement Level in Soc. Studies of the Homogenous & Heterogenous Group

Homogenous Group Section/: Mean (X)	: Heterogenous Group Section/Class	Mean (Y)
VI-1 90.00	: VI- Rose	83.12
VI-2 85.84	: VI- Camia	83.36
VI-3 82.08	: VI- Zenia	83.48
VI-4 77.84	: VI - IlangIlang	84.08
Total 335.76		334.04
Mean 83.94		83.51
Mean Difference		0.43
t-computed		0.165
Tabular t-value		2.45
degree of freedom		6
Level of Significant		0.05
Interpretation		Not significant

the computation). The t-computed is 0.165 and the number of the degree of freedom is 6. At 6 degree of freedom, the t-value is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.165, which is less than the tabular value of 2.45, it can be said that the difference of 0.43 between the scholastic achievement in Social Studies of the Grade VI pupils in the homogenous group and in the heterogenous group is not significant. This means that the scholastic achievement in Social Studies

of the Grade VI pupils in the homogenous group is significantly the same as or as good as that of the Grade VI pupils in the heterogenous group of pupils.

The Difference Between the Grand Means of the Scholastic Ratings of the Grade VI Pupils in the Homogenous Group and in the Heterogenous Group.

Table 13 shows the class mean of each of the four sections of the grade VI classes representing the homogenous group with a grand mean of 84.2 and the class mean of each of the four sections of the grade VI classes representing the heterogenous with a grand mean of 83.54. The difference between the grand mean of the homogenous group and the grand mean of the heterogenous group is 0.66. (refer to Appendix U for the computation). The t-computed is 0.245 and the degree of freedom 6. At 6 degree of freedom, the value of t is 2.45 for the result to be significant at 0.05 level of probability. Since the obtained t is 0.245 which is less than the tabular value of 2.45, it can be said that the difference of 0.66 between the grand means of the scholastic achievement ratings of the grade VI pupils in the homogenous group and the heterogenous group is not significant. Hence the hypothesis that the scholastic achievement of the homogenous and the heterogenous groups of pupils of Catbalogan III and Catbalogan IV Central Elementary Schools

Table 13

Difference Between the Grand Means of the Homogenous & the Heterogenous Group

Homogenous Group Section/	Mean (X)	Heterogenous Group Section/Class	Mean (Y)
VI-1	90.40	VI- Rose	82.96
VI-2	86.28	VI- Camia	83.32
VI-3	82.16	VI- Zenia	83.52
VI-4	77.96	VI - IlangIlang	84.36
Total	336.80		334.16
G. Mean	84.20		83.54
Grand Mean Difference			0.66
t-computed			0.245
Tabular t-value			2.45
degree of freedom			6
Level of Significant			0.05
Interpretation			Not significant

respectively are significantly the same, is accepted. In other words, the scholastic achievement of the homogenous group of grade VI pupils is as good as the scholastic achievement of the heterogenous group of grade VI pupils.

The Implication to Education

The academic performance of the homogenous and heterogenous groups of pupils is the same in English, Mathematics, Filipino and Social Studies and as a group

which simply shows that the homogenously grouped pupils is as good as the heterogenously grouped pupils in terms of scholastic performance. The grouping process employed by the school does not necessarily affect their scholastic performance and therefore the contention that one group is superior than the other is disproved. Hence, the school or the teachers, has a need to focus its attention on factors other than grouping such as the values and attitudes of both pupils and teachers, abilities and health of pupils and the pedagogical aspect of education if the objective is to foster academic achievement. The school should show concern towards these aspects through a careful analysis on some measures of educational performance not only on pupils achievement but his potential as well for success in life. However, homogenous grouping may have a great educational value especially among "special instruction groups" like SPED or CENTREX classes, which could be used for other special purposes.

The factor on teachers' morale must be reckoned with in a school where pupils are grouped by ability. School administrators may find it difficult to secure the cooperation and support of some teachers in some pupil development projects for they may resent the fact that they were placed in the lowest ability group believed to be their administrators estimate of their teaching ability.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

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

Findings

After a thorough analysis of the documents of the respondents and collating the responses of the parents to the questionnaire, the following salient findings came about and answered the questions raised in the first chapter.

1. The average age of the respondents in both groups is 12.125 with 75 pupils in the homogenous group and 73 pupils in the heterogenous group.

2. The gender distribution of the respondents in the homogenous and heterogenous groups were purposely equated, that is 50 boys and 50 girls in each group.

3. A total of 126 or 31.5 percent of the parents of both groups were college graduates; 119 or 29.75 percent were high school graduate; 79 or 19,5 percent were college level; 44 or 11 percent were high school level and 12 or 6 percent were elementary level.

Parents of all respondents in both groups have undergone formal education and none is considered illiterate. This means that they are capable of assisting

their elementary school children in their school work or lessons when need arises.

4. The employed parents dominated both groups at 54.5 percent which means that most parents can not give a full time assistance to their children in their home studies that may affect the scholastic achievement of pupils.

5. Taking all the 200 families of both groups, 83 percent were living on or below the poverty threshold and only 17 percent were a little above the threshold, an indication that poverty was not a hindrance to the education of their children.

6. The obtained mean scholastic achievement of the 100 pupils in the homogenous group computed by subject were as follows: English - 84.41; Mathematics - 84.37; Science - 83.67; Filipino - 84.61; Social Studies - 83.94. Overall it yielded a grand scholastic rating of 84.2 for the homogenously grouped grade VI pupils

7. The obtained mean scholastic achievement of the 100 pupils in the heterogenous group computed by subject were as follows: English - 83.3; Mathematics - 83.47; Science - 82.96; Filipino - 84.46; Social Studies - 83.51. Overall, it yielded a grand scholastic rating of 83.54 for the heterogenously grouped grade VI pupils.

8. In English, the obtained value of the difference

between the scholastic responses of the homogenous and heterogenous groups was 0.415 which is too small than the critical value of 2.45 at 0.05 level of significance. Therefore, the researcher has basis for accepting the null hypothesis that there is no significant difference between the scholastic responses of the homogenous and heterogenous groups of pupil in English.

In Mathematics, the obtained value of the difference between the scholastic responses of the homogenous and heterogenous groups was 0.322 which is too small than the critical value of 2.45 at 0,05 level of significance. Therefore, the researcher has basis for accepting the null hypothesis that there is no significant difference between the scholastic responses of the homogenous and the heterogenous groups of pupil in Mathematics.

In Science, the obtained value of the difference between the scholastic responses of the homogenous and heterogenous groups was 0.259, which is too small than the critical value of 2.45 at 0.05 level of significance. Therefore, the researcher has basis to accept the null hypothesis that there is no significant difference between the scholastic responses of the homogenous and heterogenous groups of pupils in Science.

In Filipino, the obtained value of the difference

between the scholastic responses of the homogenous and heterogenous groups was 0.056 which is too small than the critical value of 2.45 at 0.05 level of significance. Therefore, the researcher has basis to accept the null hypothesis that there is no significant difference between the scholastic responses of the homogenous and heterogenous groups of pupils in Filipino.

In Social Studies, the obtained value of the difference between the scholastic responses of the homogenous and heterogenous groups was 0.165, which is too small than the critical value of 2.45 at 0.05 level of significance. Therefore, the researcher has basis to accept the null hypothesis that there is no significant difference between the scholastic responses of the homogenous and heterogenous groups in Social Studies.

As a summary, the null hypothesis that there is no significant difference between the scholastic responses of the grade VI pupils under the homogenous and heterogenous groups in the different subject areas, is accepted based on the findings.

9. The obtained value of the difference between the grand scholastic achievement of the homogenous group and the heterogenous group was 0.245 which is too small than the critical value of 2.45 at 0.05 level of significance. The

researcher, therefore has a basis for accepting the null hypothesis that there is no significant difference between the grand mean or general scholastic achievement of the grade VI pupils under the homogenous and the heterogenous groups.

10. The result that the academic performance of the homogenous group and the heterogenous group of pupils were not significantly different meant that grouping of pupils into homogenous and heterogenous groups have no effect on their academic achievement. Therefore, the claim that one group is better than the other is disaproved. Hence it is implied that educators have to focus its attention on factors other than grouping to foster its objective in increasing or improving academic achievement. Likewise it is implied that the emphasis in teaching must be made towards the mastery of learning skills required for a productive and successful life.

Conclusions

With the findings presented, the following conclusions were drawn.

1. Respondents are all within the age range from 11 1/2 to 13 years old, the ideal age bracket for grade VI pupils in the elementary grades for school year 1996-1997. Neither of the respondents was considered too young nor too

old for the grade level for the average age was 12.125.

2. The number of male respondents and female respondents in the homogenous group was the same as the number of male and female respondents in the heterogenous group. Therefore the gender factor could not be considered to affect the result of this study.

3. The parents of the respondents in both groups have all undergone formal education which means that none is illiterate to be incapable of assisting their school children in their academic work when the need arises.

4. The number of employed parents dominated both groups with 54.5 percent of the total number of parents involved in the study. This means that most parents could not give a full time assistance to the academic work of the school children that may affect their achievement in school.

5. For the average monthly family income of the respondents, 83 percent of the respondents families were living or on below the poverty threshold which implies that poverty was not a hindrance to the education of children in the elementary level.

6. The scholastic achievement in English, Mathematics, Science, Filipino and Social Studies of Grade VI pupils in the homogenous group and in the heterogenous group revealed no significant difference. This means that the homogenously

grouped pupils was as good as the heterogenously grouped pupils in terms of scholastic achievement in the different subject areas.

7. The general scholastic achievement of the grade VI pupils in the homogenous group and in the heterogenous group revealed no significant diference. This means that the homogenously grouped pupils was as good as the heterogenously grouped pupils in terms of general scholastic achievement.

8. The kind of grouping procedure, homogenous or heterogenous, did not significantly affect the scholastic achievement of pupils. This means that the scholastic achievement of the pupils did not depend on the grouping scheme used. Factors other than the grouping process may account for the differences in achievement gains when they occur between children grouped homogenously and those grouped heterogenously.

Recommendations

After a thorough study on the scholastic achievement of the grade VI pupils in both groups, the researcher strongly recommends the following:

1. With the findings that the performance is not affected by grouping, schools have to decide how best to organize its classes to meet each child's need for

instruction and the class organization should be flexible as condition demands.

2. Regardless of the type of grouping practiced in school, teachers should still provide for the individual needs, interest and abilitues of pupils to facilitate learning and or improve scholastic achievement.

3. Whatever grouping scheme is practiced in a school or class, emphasis in teaching must be made towards the mastery of the learning skills required in the elementary learning continuum for the grade and subject area.

4. Instead of depending upon grouping procedure, schools should adapt the content of the course and methods of instruction to the learning capacity of the children to improve or increase their scholastic responses.

5. Grouping of pupils should be based on a need or a purpose. More than one basis for grouping may operate in the classroom simultaneously. There may be general ability group, interest group and friendship group all working in the classroom at one time.

6. The following studies are hereby recommended:

6.a An Analysis of the effects of grouping pupils in relation to their scholastic performance.

6.b Factors that affect the scholastic achievement of pupils in the elementary schools.

6.c Homogenous and Heterogenous Groupings: Their effects to the achievement of pupils.

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APPENDICES

APPENDIX A

SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

June 20, 1990

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

Sir:

In my desire to start writing my thesis proposal anytime this year, I have the honor to submit for approval one of the following research problems, preferably topic number one:

1. SCHOLASTIC RESPONSES OF THE GRADE VI PUPILS OF CATBALOGAN I AND III CENTRAL ELEMENTARY SCHOOLS TO HOMOGENOUS AND HETEROGENOUS GROUPINGS.

2. FACTORS THAT AFFECT THE SCHOLASTIC ACHIEVEMENT OF PUPILS IN THE CENTRAL SCHOOLS OF CATBALOGAN.

3. THE PROGRESS OF TEACHING-LEARNING PROCESS AS DETERMINED BY THE KIND OF INSTRUCTIONAL MATERIALS USED.

Early and favorable action on this matter will be highly appreciated.

Very truly yours,

(SGD) SOFIA L. RUTOR
Researcher

Recommending Approval:

(SGD) ALEJANDRO E. CANANUA, M. Ed.
Head, Research and Development

Approved:

(SGD.) DOMINADOR Q. CABANGANAN, Ed. D.
Dean, Graduate Studies

APPENDIX B

SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

GRADUATE SCHOOL

APPLICATION FOR ASSIGNMENT OF ADVISER

NAME: RUTOR (Surname) SOFIA (First Name) LOPEZ (Middle Name)

CANDIDATE FOR DEGREE IN: Master of Arts in Education

AREA OF SPECIALIZATION: Administration and Supervision

TITLE OF PROPOSED THESIS: The Scholastic Responses of the Grade VI Pupils to Homegenous and Heterogenous Grouping in the Two Central Schools of Catbalogan Samar.

NAME OF REQUESTED ADVISER: Rizalina M. Urbiztondo Ph. D.

APPROVAL OF ADVISER: _____ DISAPPOVAL: _____

(SGD.) RIZALINA M. URBIZTONDO, Ed. D
Adviser

Date: 11 - 4 - 95

APPROVED:

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

APPENDIX C

Republic of the Philippines
SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

June 2, 1996

The Principal
Catbalogan III Central Elementary School
Catbalogan, Samar

Madam:

I have the honor to request permission to scrutinize the Form 137-E of the grade VI pupils enrolled this school year 1996-1997 and select 100 samples for my research study on the "Scholastic Responses of the Grade VI Pupils to Homogenous and Heterogenous Groupings in Catbalogan III and Catbalogan IV Central Elementary Schools."

The foregoing research activity shall start on June 15 to June 30, 1996 and on March 25 to April 5, 1997.

Very truly yours,

(SGD) SOFIA L. RUTOR
Researcher

Approved:

(SGD.) Mrs. PRECIOSA M. BABON
Principal, Catbalogan III

APPENDIX D

Republic of the Philippines
SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

June 2, 1996

The Principal
Catbalogan IV Central Elementary School.
Catbalogan, Samar

Madam:

I have the honor to request permission to scrutinize the Form 137-E of the grade VI pupils enrolled this school year 1996-1997 and select 100 samples for my research study on the "Scholastic Responses of the Grade VI Pupils to Homogenous and Heterogenous Groupings in Catbalogan III and Catbalogan IV Central Elementary Schools."

The foregoing research activity shall start on July 1, to July 15, 1996 and on April 6, to April 15, 1997.

Very truly yours,

(SGD) SOFIA L. RUTOR
Researcher

Approved:

(SGD.) Mrs. BEATRIZ L. ORBESO
Principal, Catbalogan IV

APPENDIX E

Republic of the Philippines
SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

March 8, 1998

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

Madam:

I have the honor to request permission that I be scheduled on March 25, 1998 to defend my thesis entitled: The Scholastic Responses of the Grade VI pupils to Homogenous and Heterogenous Grouping in Catbalogan III and Catbalogan IV Central Elementary Schools.

In this connection I am submitting herewith six copies of my thesis for review by my adviser and the chairman and members of the panel of examiners for defense,

Very truly yours,

(SGD) SOFIA L. RUTOR
Researcher

Approved:

(SGD.) RIZALINA M. URBIZTONDO Ph. D
Adviser

Republika ng Pilipinas
Departamento ng Edukasyon, Kultura, at Isports
Rehiyon VIII
SANGAY NG SAMAR

PALAGIANG TALAAN SA MABABANG PAARALAN
(ELEMENTARY SCHOOL PERMANENT RECORD)

I. Pangalan ______________________ Sangay ____________ Paaralan ____________
(Name) Apelyido Unang ngalan M.I. (Division) (School)

Kasarian ______ Petsa ng Kapanganakan ____________ Pook ____________ Petsa ng Pagpasok ____________
(Sex) (Date of Birth) (Place) Bayan/Lalawigan/Lungsod (Town/Province/City) (Date of Entrance)

Magulang/Tagapag-alaga ____
Pangalan (Name) Tirahan (Address) Hanapbuhay (Occupation)

II. PAG-UNLAD SA MABABANG PAARALAN
(ELEMENTARY SCHOOL PROGRESS)

School ____________ Grade ________
School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

Eligible for Admission to Grade ____________
School ____________ Grade ________

School ____________ Grade ________
School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

Eligible for Admission to Grade ____________
School ____________ Grade ________

School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

Eligible for Admission to Grade ____________
School ____________ Grade ________

School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

Eligible for Admission to Grade ____________
School ____________ Grade ________

School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

School Year ____________

Learning Areas	Periodic Rating				Remarks
	1	2	3	4	

APPENDIX G

QUESTIONNAIRE TO RESPONDENTS

Part I Personal Data
(to be filled by the grade VI pupil respondents)

Name of Pupil: _____

Age:_____ Date of Birth:_____

Sex (Please Check) [ ] Male [ ] Female

Grade and Section:_____

School:_____

District;_____

Home Address:_____

QUESTIONNAIRE TO PARENTS

Dear Parents

Your son/daughter, enrolled in grade VI at Catbalogan III/IV Central Elementary School has been purposely selected as one of the 100 samples in a research study being conducted about "The Scholastic Responses of the Grade VI Pupils to Homogenous and Heterogenous Groupings in Elementary Schools."

In this regard, the researcher would like to seek your cooperation for the completion of the needed data by sincerely supplying answers to the different items called for in this questionnaire. Be assured that these data will be treated confidentially and used for this research only.

Thank You.

The Researcher

Part II - Socio-Economic Profile of the Family (to be answered by the parents of the pupil respondent).

1. Father of Pupil respondent:_____

2. Mother of Pupil respondent:_____

3. Educational Attainment; (Please check box [F] for Father; box [M] for mother and specify when applicable.

   a. No Schooling: [F] [M]

   b. Elementary: [F] Specify grade level:_____

      [M] Specify grade level:_____

   c. High School [F] Specify Year level:_____

      [M] Specify Year level:_____

   d. High School Graduate [F] [M]

   e. Post Secondary/ College [F] Specify (year) level:_____

      [M] Specify (year) level:_____

   f. College Graduate [F] [M]

4. Employment Status

   a. Employed:

      Government Private

      [F] Specify Nature_____ [F] Specify Nature_____

      [M] Specify Nature_____ [M] Specify Nature_____

   b. Self-employed

      [F] Specify Nature_____ [M] Specify Nature_____

   c. Unemployed: [F] [M]

5. Monthly Income of family: (Include income from aggregate sources).

[ ] 3,000 and/or below

[ ] 3,001 to 6,000

[ ] 6,001 to 9,000

[ ] 9,001 to 12,000

[12,001 and/or over

Thank You!

Appendix H

Mean Scholastic Ratings of the Grade VI-I Pupils Under the Homogenous Grouping by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Average Rating
1	88	85	88	90	89	88
2	88	85	88	90	89	88
3	90	87	87	88	88	88
4	90	88	87	88	87	88
5	89	89	89	89	89	89
6	90	90	88	89	88	89
7	88	88	89	90	90	89
8	89	89	89	89	89	89
9	89	89	88	90	89	89
10	89	89	88	90	89	89
11	90	90	90	90	90	90
12	89	92	89	90	90	90
13	89	92	89	91	89	90
14	91	90	90	90	90	90.2
15	91	90	89	90	90	90
16	90	92	90	93	90	91
17	91	90	91	91	91	90.8
18	89	92	92	92	90	91
19	93	91	92	94	90	92
20	93	94	90	92	91	92
21	94	95	92	93	91	93
22	93	95	93	93	91	93
23	94	95	92	92	92	93
24	95	92	94	95	94	94
25	95	94	93	94	94	94
Total	2267	2263	2247	2273	2250	2260
Mean	90.68	90.52	89.88	90.92	90.60	
Class Mean						90.40

Appendix I

Mean Scholastic Ratings of the Grade VI-2 Pupils Under the Homogenous Grouping by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Average Rating
26	77	83	82	85	83	82
27	82	85	83	83	77	82
28	83	85	83	83	82	83.2
29	83	83	83	83	83	83
30	83	83	82	83	83	82.8
31	85	85	83	85	83	84.2
32	84	83	84	84	84	83.8
33	85	85	85	84	84	84.6
34	84	85	85	84	84	84.4
35	90	90	85	85	85	87
36	85	85	85	85	85	85
37	85	85	84	86	85	85
38	85	85	84	86	85	85
39	85	89	85	86	85	86
40	85	85	85	85	85	85
41	89	89	89	89	89	89
42	89	89	89	89	89	89
43	89	91	87	88	90	89
44	88	87	87	88	88	87.6
45	87	87	87	88	88	87.4
46	89	90	91	87	88	89
47	92	89	89	90	90	90
48	94	91	90	90	90	91
49	90	90	90	92	88	90
50	89	95	90	93	93	92
Total	2157	2174	2147	2161	2146	2157
Mean	86.28	86.96	85.88	86.44	85.84	
Class Mean						86.28

Appendix J

Mean Scholastic Ratings of the Grade VI-3 Pupils Under the Homogenous Grouping by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Average Rating
51	79	79	78	78	79	78.6
52	79	79	78	80	79	79
53	75	77	77	82	79	78
54	79	78	78	79	78	78.4
55	80	80	80	80	80	80
56	80	80	82	80	80	80.4
57	80	80	80	80	80	80
58	81	81	81	81	81	81
59	80	81	81	81	80	80.6
60	85	81	80	79	80	81
61	82	82	82	82	82	82
62	82	82	82	82	82	82
63	80	82	80	82	81	81
64	82	84	82	82	82	82.4
65	85	82	81	81	81	82
66	84	84	84	84	84	84
67	84	83	84	84	84	83.8
68	84	83	83	83	83	83.2
69	83	83	83	83	83	83
70	85	84	84	85	85	84.6
71	85	85	85	85	85	85
72	90	80	80	90	85	85
73	86	90	82	88	84	86
74	86	90	82	84	88	86
75	84	87	84	93	87	87
Total	2060	2057	2033	2068	2052	2054
Mean	82.40	82.28	81.32	82.72	82.08	
Class Mean						82.16

Appendix K

Mean Scholostic Ratings of the Grade VI-4 Pupils Under the Homogenous Grouping by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Average Rating
76	76	75	76	77	76	76
77	76	75	76	76	76	75.8
78	75	75	75	75	75	75
79	75	75	75	75	75	75
80	75	75	75	75	75	75
81	76	76	76	76	76	76
82	75	75	75	75	75	75
83	78	77	77	77	77	77.2
84	77	77	77	77	77	77
85	78	78	78	79	78	78.2
86	78	76	77	77	77	77
87	78	78	78	78	78	78
88	78	78	78	78	78	78
89	78	78	78	80	76	78
90	80	80	80	81	81	80.4
91	80	80	76	78	76	78
92	80	76	76	80	78	78
93	80	78	78	80	79	79
94	79	78	79	79	79	78.8
95	80	80	78	78	79	79
96	78	78	80	82	82	80
97	81	80	80	81	81	80.6
98	80	80	80	80	80	80
99	84	80	82	84	80	82
100	82	85	80	81	82	82
Total	1957	1943	1940	1959	1946	1949
Mean	78.28	77.72	77.60	78.36	77.84	
Class Mean						77.96

Appendix L

Mean Scholastic Ratings of the Grade VI-Rose Pupils Under the Heterogenous Group by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Mean
1	77	75	75	79	79	77
2	75	75	75	75	75	75
3	78	75	77	80	80	78
4	76	75	76	79	79	77
5	79	79	79	79	79	79
6	80	80	80	80	80	80
7	78	80	78	81	78	79
8	82	78	80	80	80	82
9	82	82	82	82	82	82
10	81	81	81	81	81	81
11	82	80	80	83	80	81
12	80	84	80	81	80	81
13	82	83	83	83	83	82.8
14	82	83	83	83	83	82.8
15	83	83	83	83	83	83
16	85	85	86	90	89	87
17	86	86	86	87	87	86.4
18	85	85	85	85	85	85
19	84	85	84	84	84	84.2
20	83	85	83	83	83	83.4
21	91	89	90	91	90	90.2
22	87	90	88	88	87	88
23	89	88	89	89	89	88.8
24	90	91	90	91	91	90.6
25	91	94	91	92	91	91.8
Total	2068	2071	2064	2089	2078	2074
Mean	82.72	82.84	82.56	83.56	83.12	
Class Mean						82.96

Appendix M

Mean Scholastic Ratings of the Grade VI-Camia Pupils Under the Heterogenous Group by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Mean
26	77	75	76	78	79	77
27	75	75	76	77	77	76
28	75	75	76	77	77	76
29	78	78	78	79	77	78
30	78	75	78	80	79	78
31	78	84	81	82	80	81
32	80	80	80	80	80	80
33	78	80	78	80	79	79
34	79	79	79	79	79	79
35	82	78	80	80	80	80
36	79	83	83	85	85	83
37	83	83	78	81	80	81
38	85	85	80	88	87	85
39	84	82	83	86	85	84
40	84	88	80	87	86	86
41	82	82	84	86	86	84
42	84	86	82	90	88	86
43	88	86	82	90	85	88
44	88	89	88	90	85	88
45	83	88	85	90	89	87
46	90	91	88	91	85	89
47	88	89	88	90	85	88
48	90	89	89	93	89	90
49	90	93	90	91	91	91
50	93	93	90	92	92	92
Total	2071	2086	2052	2122	2048	2083
Mean	82.84	83.44	82.08	84.88	83.36	
Class Mean						83.32

Appendix N

Mean Scholastic Ratings of the Grade VI-Zenia Pupils Under the Heterogenous Group by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Mean
51	77	77	77	78	78	77.4
52	75	75	75	75	75	75
53	75	75	76	76	76	75.6
54	78	76	78	80	78	78
55	79	79	79	79	79	78.2
56	79	78	79	79	79	78.8
57	79	80	80	81	80	80
58	79	79	79	80	78	79
59	81	81	81	82	81	81.2
60	82	81	82	82	82	81.2
61	85	85	78	84	83	83
62	82	82	80	84	82	82
63	85	81	80	86	83	83
64	84	86	84	84	84	84.4
65	86	81	81	86	86	84
66	84	84	84	84	84	84
67	85	85	82	85	86	84.6
68	90	88	86	86	80	86
69	85	91	87	87	85	87
70	93	86	89	91	91	90
71	85	92	86	90	88	88.2
72	86	92	86	92	88	88.8
73	93	87	92	95	93	92
74	93	95	95	95	95	94
75	90	95	95	95	95	94
Total	2089	2090	2062	2112	2087	2088
Mean	85.56	83.60	82.48	84.48	83.48	
Class Mean						83.52

Appendix O

Mean Scholastic Ratings of the Grade VI-Ilang-ilang Pupils Under the Heterogenous Group by Subject Area

Pupil	English	Math	Science	Filipino	Social Studies	Mean
76	75	78	76	78	78	77
77	76	75	76	77	76	76
78	75	78	76	78	78	77
79	75	78	77	80	80	78
80	80	80	80	78	77	79
81	81	81	81	81	81	81
82	81	81	81	81	81	81
83	81	81	81	81	82	81.2
84	80	80	82	80	78	80
85	83	83	83	83	83	83
86	82	82	82	82	82	82
87	83	80	83	82	82	82
88	83	84	83	83	82	83
89	84	84	85	85	82	84
90	85	85	88	87	85	86
91	85	85	85	85	84	84.8
92	89	85	87	87	87	87
93	89	85	87	87	87	87
94	90	88	90	92	90	90
95	89	89	90	90	87	89
96	88	88	90	88	86	88
97	92	90	92	94	92	92
98	90	90	95	95	95	93
99	90	95	93	94	93	93
100	96	95	95	95	94	95
Total	2102	2100	2118	2123	2102	2109
Mean	84.08	84.00	84.72	84.92	84.08	
Class Mean						84.36

APPENDIX P

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School in English

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	90.68	8222.8624	VI- Rose	82.72	6842.5984
VI-2	86.28	7444.2384	VI- Camia	82.84	6862.4656
VI-3	82.40	6789.7600	VI- Zenia	83.56	6982.2736
VI-4	78.28	6127.7584	VI- Ilang ilang	84.08	7069.4464
EX = 337.64			EY = 333.20		
EX^2 = 28584.6192			EY^2 = 27756.1840		

$$\bar{X} = \frac{EX}{n_X} \qquad \bar{Y} = \frac{EY}{n_Y}$$

$$= \frac{337.64}{4} \qquad = \frac{333.20}{4}$$

$$= 84.41 \qquad = 83.30$$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4\,(28584.6192) - (337.64)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(27756.7840) - (333.20)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{114338.4768 - 114000.7696}{12}} \qquad SDy = \sqrt{\frac{111027.136 - 111022.24}{12}}$$

$$SDx = \sqrt{\frac{337.7072}{12}} \qquad SDy = \sqrt{\frac{4.896}{12}}$$

$$SDx = \sqrt{28.14226666} \qquad SDy = \sqrt{0.408}$$

$$= 5.3049285 \qquad = 0.637488$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{84.41 - 83.3}{\sqrt{\frac{(4-1)(5.3049285)^2 + (4-1)(0.6387488)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{1.11}{\sqrt{\frac{(3)\,(28.142266) + (3)(0.408)}{8 - 2}} \sqrt{.25 + .25}}$$

$$t = \frac{1.11}{\sqrt{\frac{84.426798 + 1.224}{6}} \sqrt{.25 + .25}}$$

$$t = \frac{1.11}{\sqrt{\frac{14.275133}{6}} (0.707106781)}$$

$$t = \frac{1.11}{3.7782446\ (0.707106781)}$$

$$t = \frac{1.11}{2.671622}$$

$$= 0.415$$

df = nx + ny − 2 = 4 + 4 − 2 = 8 − 2 = 6

Tabular value of t at 6 df and 0.05 level = 2.45

Decision : Accepted, not significant

APPENDIX Q

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School in Mathematics

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	90.52	8193.8704	VI- Rose	82.84	6862.4656
VI-2	86.96	7562.0416	VI- Camia	83.44	6962.2336
VI-3	82.28	6769.9984	VI- Zenia	83.60	6988.9600
VI-4	77.72	6040.3984	VI- Ilang ilang	84.00	7056.0000
EX = 337.48			EY = 333.88		
EX^2 = 28566.309			EY^2 = 27869.659		

$$\bar{X} = \frac{EX}{n_Y} \qquad \bar{Y} = \frac{EY}{n_X}$$

$$= \frac{337.48}{4} \qquad = \frac{333.88}{4}$$

$$= 84.37 \qquad = 83.47$$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4(28566.309 - (337.48)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(27869.659 - (333.88)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{114265.236 - 113892.7504}{12}} \qquad SDy = \sqrt{\frac{111478.636 - 111475.8544}{12}}$$

$$SDx = \sqrt{\frac{372.4856}{12}} \qquad SDy = \sqrt{\frac{2.7816}{12}}$$

$$SDx = \sqrt{31.04066666} \qquad SDy = \sqrt{0.2318}$$

$$= 5.57139716 \qquad = 0.48145612468$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{84.37 - 83.47}{\sqrt{\frac{(4-1)(5.57139716)^2 + (4-1)(0.48145612468)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{0.90}{\sqrt{\frac{(3)\,(31.040466) + (3)(.231799)}{6}} \sqrt{.25 + .25}}$$

$$t = \frac{0.90}{\sqrt{\frac{93.8167999}{6}}\,(0.707106781)}$$

$$t = \frac{0.90}{\sqrt{15.6361333}\,(0.707106781)}$$

$$t = \frac{0.90}{(3.95425509207)\,(.707106781}$$

$$t = \frac{0.90}{2.7960805894}$$

$$= 0.322$$

df = nx + ny − 2 = 4 + 4 − 2 = 8 − 2 = 6

Tabular value if t at 6 df and 0.05 level = 2.45

Decision : Accepted, not significant

APPENDIX R

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School in Science

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	89.88	8078.4144	VI- Rose	82.56	6816.1536
VI-2	85.88	7375.3744	VI- Camia	82.08	6737.1264
VI-3	81.32	6612.9424	VI- Zenia	82.48	6802.9504
VI-4	77.60	6021.7600	VI- Ilang ilang	84.72	7177.4784
EX = 334.68			EY = 331.84		
	EX^2 = 28088.49			EY^2 = 27533.7088	

$$\bar{X} = \frac{EX}{n_x} \qquad \bar{Y} = \frac{EY}{n_y}$$

$$= \frac{334.68}{4} \qquad = \frac{331.84}{4}$$

$$= 83.67 \qquad = 82.96$$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4(28088.49 - (334.68)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(27533.7088 - (331.84)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{112353.96 - 112010.7024}{12}} \qquad SDy = \sqrt{\frac{110134.8352 - 110117.7856}{12}}$$

$$SDx = \sqrt{\frac{343.2576}{12}} \qquad SDy = \sqrt{\frac{17.1496}{12}}$$

$$SDx = \sqrt{28.6048} \qquad SDy = \sqrt{1.4208}$$

$$= 5.348345 \qquad = 1.19197$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{83.67 - 82.96}{\sqrt{\frac{(4-1)(5.348345)^2 + (4-1)(1.19197)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{0.71}{\sqrt{\frac{(3)(28.604799) + (3)(1.42799)}{6}} \sqrt{.25 + .25}}$$

$$t = \frac{0.71}{\sqrt{\frac{90.0767999}{6}} \sqrt{0.5}}$$

$$t = \frac{0.71}{\sqrt{\frac{90.0767999}{6}} (0.707106781)}$$

$$t = \frac{0.71}{(3.87633546)\ (.707106781)}$$

$$t = \frac{0.90}{2.739781010241}$$

$$= 0.259$$

df = nx + ny − 2 = 4 + 4 − 2 = 8 − 2 = 6

Tabular value of t at 6 df and 0.05 level = 2.45

Decision : Accepted, not significant

APPENDIX S

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School in Filipino

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	90.92	8266.4464	VI- Rose	83.56	6982.2736
VI-2	86.44	7471.8736	VI- Camia	84.88	7204.6144
VI-3	82.72	6842.5984	VI- Zenia	84.48	7136.8704
VI-4	78.36	6140.2896	VI- Ilang ilang	84.92	7211.4064
EX = 338.44			EY = 337.84		
EX^2 = 28721.208			EY^2 = 28535.1648		

$$\bar{X} = \frac{EX}{n_X} \qquad \bar{Y} = \frac{EY}{n_Y}$$

$$= \frac{338.44}{4} \qquad = \frac{337.84}{4}$$

$$= 84.61 \qquad = 84.46$$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4\,(28721.208) - (338.44)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(28535.1648) - (337.84)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{114884.8328 - 114541.6336}{12}} \qquad SDy = \sqrt{\frac{114140.659 - 114135.865}{12}}$$

$$SDx = \sqrt{\frac{343.1984}{12}} \qquad SDy = \sqrt{\frac{4.7936}{12}}$$

$$SDx = \sqrt{28.599866} \qquad SDy = \sqrt{0.3994666}$$

$$= 5.347884 \qquad = 0.6320337$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{84.61 - 84.46}{\sqrt{\frac{(4-1)(5.347884)^2 + (4-1)(0.6320337)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{0.15}{\sqrt{\frac{85.799599 + 1.1983999}{8 - 2}} \sqrt{0.25 + 0.25}}$$

$$t = \frac{0.15}{\sqrt{\frac{86.997999}{6}} \sqrt{.5}}$$

$$t = \frac{0.15}{\sqrt{(14.499666)\ (0.5)}}$$

$$t = \frac{0.15}{\sqrt{7.249833}}$$

$$t = \frac{0.15}{2.692551}$$

$$= 0.056$$

df = nx + ny − 2 = 4 + 4 − 2 = 8 − 2 = 6

Tabular value of t at 6 df and 0.05 level = 2.45

Decision : Accepted. not significant

APPENDIX T

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School in Social Studies

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	90.00	8100.0000	VI- Rose	83.12	6908.9344
VI-2	85.84	7368.5056	VI- Camia	83.36	6948.8896
VI-3	82.08	6737.1264	VI- Zenia	83.48	6968.9104
VI-4	77.84	6059.0656	VI- Ilang ilang	84.08	7069.4464

$EX = 335.76$ $\qquad$ $EY = 334.04$

$EX^2 = 28264.6976$ $\qquad$ $EY^2 = 27896.1808$

$$\bar{X} = \frac{EX}{n_X} \qquad \bar{Y} = \frac{EY}{n_Y}$$

$$= \frac{335.76}{4} \qquad = \frac{334.04}{4}$$

$= 83.94$ $\qquad$ $= 83.51$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4(28264.6776 - (335.76)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(27896.1808-(334.04)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{113058.7904 - 112734.7776}{12}} \qquad SDy = \sqrt{\frac{111584.7232- 111582.72}{12}}$$

$$SDx = \sqrt{\frac{324.0128}{12}} \qquad SDy = \sqrt{\frac{2.0016}{12}}$$

$$SDx = \sqrt{27.00106666} \qquad SDy = \sqrt{0.1668}$$

$$= 5.19625506173 \qquad = 0.40841155713$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{83.94 - 83.51}{\sqrt{\frac{(4-1)(5.196255)^2 +(4-1)(0.408411557)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{0.43}{\sqrt{\frac{(3)(27.001066) + (3)(.166799)}{6}} \sqrt{.25 + .25}}$$

$$t = \frac{0.43}{\sqrt{\frac{81.5035999994}{6}} (0.707106781)}$$

$$t = \frac{0.43}{(3.68563879581)(.707106781}$$

$$t = \frac{0.43}{2.60614018483}$$

$$= 0.165$$

df = nx + ny - 2 = 4 + 4 - 2 = 8 - 2 = 6

Tabular value of t at 6 df and 0.05 level = 2.45

Decision : Accepted, not significant

APPENDIX U

Computation for finding the Mean, Standard Deviation and the t-test of significance of the difference between the scholastic achievement of the homogenous group of pupils in Catbalogan III Elementary School and the Heterogenous group of pupils in Catbalogan IV Elementary School

Homogenous Group			Heterogenous Group		
Grade & Section	x	x^2	Grade & Section	Y	Y^2
VI-1	90.40	8172.1600	VI- Rose	82.96	6882.3616
VI-2	86.28	7444.2384	VI- Camia	83.32	6942.2224
VI-3	82.16	6750.2656	VI- Zenia	83.52	6975.5904
VI-4	77.96	6077.7616	VI- Ilang ilang	84.72	7116.6096
EX = 336.80			EY = 334.16		
EX^2 = 28444.4256			EY^2 = 27916.784		

$$\bar{X} = \frac{EX}{n_x} \qquad \bar{Y} = \frac{EY}{n_y}$$

$$= \frac{336.8}{4} \qquad = \frac{334.16}{4}$$

$$= 84.2 \qquad = 83.54$$

$$SDx = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}} \qquad SDy = \sqrt{\frac{nEx^2 - (Ex)^2}{n\,(n-1)}}$$

$$SDx = \sqrt{\frac{4(28444.4256 - (336.8)^2}{4\,(3)}} \qquad SDy = \sqrt{\frac{4(27916.784 - (334.16)^2}{4\,(3)}}$$

$$SDx = \sqrt{\frac{113777.7024 - 113434.24}{12}} \qquad SDy = \sqrt{\frac{111667.136 - 111662.9056}{12}}$$

$$SDx = \sqrt{\frac{343.4624}{12}} \qquad SDy = \sqrt{\frac{4.2304}{12}}$$

$$SDx = \sqrt{28.621866} \qquad SDy = \sqrt{.352533}$$

$$= 5.34994 \qquad = 0.593745$$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(nx-1)(SDx)^2 + (nx-1)(SDx)^2}{nx + ny - 2}} \sqrt{\frac{1}{nx} + \frac{1}{ny}}}$$

$$t = \frac{84.20 - 83.54}{\sqrt{\frac{(4-1)(5.349940)^2 + (4-1)(.593745)^2}{4 + 4 - 2}} \sqrt{\frac{1}{4} + \frac{1}{4}}}$$

$$t = \frac{0.66}{\sqrt{\frac{(3)(28.621866) + (3)(.352533)}{6}\left(.25 + .25\right)}}$$

$$t = \frac{0.66}{\sqrt{\frac{86.9231999994}{6}\left(0.707106781\right)}}$$

$$t = \frac{0.66}{\left(3.80620545949\right)\left(.707106781\right)}$$

$$t = \frac{0.66}{2.69139369028}$$

$$= 0.245$$

df = nx + ny − 2 = 4 + 4 − 2 = 8 − 2 = 6

Tabular value of t at 6 df and 0.05 level = 2.45

Decision : Accepted. not significant

CURRICULUM VITAE

NAME	:	SOFIA LOPEZ RUTOR
ADDRESS	:	Purok V, Maulong Catbalogan, Samar
DATE OF BIRTH	:	February 9, 1948
PLACE OF BIRTH	:	Guiwan E. Samar
PRESENT POSITION	:	Elementary School Head Teacher
STATION	:	Pupua Elementary School District of Catbalogan IV Catbalogan, Samar
CIVIL STATUS	:	Married

EDUCATIONAL BACKGROUND

Elementary	Gen. MacArthur Elem. School Gen. MacArthur, Eastern Samar Catbalogan I Central Elem. School 1953 - 1959
Secondary	Sacred Heart College Catbalogan, Samar 1959 - 1963
College	Sacred Heart College Catbalogan, Samar 1963 - 1967
Graduate	Samar State Polytechnic College Catbalogan, Samar
Curriculum Pursued. .	Master of Arts in Education
Major	Administration & Supervision.

CIVIL SERVICE ELIGIBILITY

Civil Service Teacher's Examination, September 24, 1967.

POSITIONS HELD

Elementary Grades Teacher	Tarangnan District, 1968-1980
	Catbalogan III District 1981 - 1990.
Elementary School Head Teacher. .	Rama Elem. School Catbalogan III, District 1991-93
	Buri Elementary School, Catbalogan IV District, 1994-1996.
	Pupua Elementary School Catbalogan IV District 1997 to the present
Division Trainor	Physical Education I to VI P.E Teachers Division of Samar 1995 - 1997
Member	EVRAA Regional Screening Committee, Region 8 1994 to present
Actg. Chairman	EVRAA Division Screening Committee, Division of Samar 1994 to present

List of Figures and Tables