AGE OF ENTRY AS DETERMINANT OF ACHIEVEMENT IN THE ELEMENTARY GRADES: A COMPARATIVE STUDY

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D ...

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APPROVAL SHEET

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DEDICATION

This humble output is a labor of love and sacrifices ultimately dedicated to my degrest and lovingwife

 $\mathcal{CHERRIE}$

and to our two bundle of love

NEILJOSEPH

ANGELICA SHANE

for their prayers, unfailing love and inspiration which made this thesis possible.

NELSON

ABSTRACT

The study attempted to look into the extent to which age of entry determines the achievement of elementary grade pupils in District I and II of Daram. The descriptive-comparative design was used in the conduct of the study. Data under household size reveal that most of the pupils belong to the 6-to-8 member households comprising 45.8% of the pupils. This group is followed by 26.8% of the pupils who live in families of 9-to-11 members, another 21.15 belonging to the 3 to 5 members, while the rest (6.4%) have 12 or more members. The mean size is 7.3. Nearly 54% of the pupils did not undergo day-care training. Most of them, around 86%, neither have attended kindergarten classes. For the conclusion, as far as their achievement in the learning areas is concerned, the pupils in each age group exhibited uniform performance across grade levels and across learning areas as evidenced by minimum dispersions of the grades from the mean. For the recommendation, a study on the correlates of drop-out rates among grade school pupils should be conducted to ascertain the factors that affect the incidence.

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Chapter 1

THE PROBLEM AND ITS SETTING

Introduction

A great Chinese philosopher once said, "If you want to reap for a year, plant rice. If you want to reap for ten years, plant a fruit tree. But if you want to reap for life, educate a child (Halsey: 1986: 204)."

Education, be it formal, non-formal or informal, is development. for human Ιt is the fundamental ingredient in the transformation of an individual into a productive and active member of a humane, democratic and participatory society (Health Commission Report, 1993). As Sutaria (1989:229) points out, education aims to develop the human potentials in terms of knowledge, self-actualization skills and attitudes for productivity that will eventually lead individuals to improve the quality of life of present and future generations.

Access to education, apparently, is the key to the development of the individual. It supports social mobility that empowers him to improve his living conditions. But who is tasked to educate the

individual? According to Gloria (1996:2) the goal of basic education to provide access, equity and quality is a shared commitment of all people. Yet while it is everybody's responsibility, the great bulk of the responsibility lies in the hands of teachers and school administrators in the elementary grades. A task of elementary educators, thus, is to provide opportunities for self-actualization at the earliest stage of a child's life. A greater part of the effort however is spent to answer the question: "At what age is a child ready for formal schooling?"

Several studies reflect that the mind of a child along with his body needs help to grow (Delos Angeles-Bautista:1998). Between the ages of zero to six, children develop their mental, social and physical skills. It is during this period that the foundations for school work and for learning the skills necessary in later life are laid.

Efforts to ensure readiness for school work are reflected by an increased attendance of younger children in schools. Parents realize the preparatory needs to ascertain the coping ability of their children in formal school. The edge of enrolling them young is

profoundly reflected by the findings of an impact study on the development of children and the change in children rearing practices of parents. The results revealed that children who availed of Day Care services performed better in school than those who did not (Navarro:1991:24).

The Philippine Educational System serves two million Grade One children every year, with the figure expected to double as entry age is lowered from seven to six years old (Roces:1995). Pursuant to DECS Order Number 65 series of 1994, six-year old children were admitted in all Grade One throughout the country starting School Year 1994-1995. Prior to the foregoing DECS Order, the age of entry in Grade One was seven years old.

Most of these children enter primary school with, a disadvantage. They do not have any preschool experience.

According to a report in the Philippine Star (1995:6), without early childhood stimulation, a first grader, especially from a poor family, has an 18 percent chance of dropping. The probability of a child leaving school is reduced to 12 percent if he has

attended pre-school. The findings become very significant considering that 60 percent of the dropouts in Philippine schools happen in Grade One and between Grades One and Two. It appears that, in rural and poor areas, admitting six-year old children in Grade One tends to impair rather than enhance teaching and learning in the elementary grades.

Bautista in The Modern Teacher (1996:6) opines that "while the intent of our policy makers was undoubtedly novel, they apparently failed to foresee certain problems attendant to its implementation which to some extent adversely affect the attainment of quality education."

His opinion can be attributed to the common observation that as children advance through the grades, they become more varied in interests, motivation, abilities and attitudes. This is compounded by the fact that the higher the grade level, the wider the range of difficulties there is.

The ability of younger children to demonstrate better scholastic performance depends to a certain extent on pre-school activities and exposure to educational media (Bautista:1998: 7-14). As more and

more younger children show readiness for school work, school officials thus are compelled to lower the age of entry.

The question of whether rural children without the benefit of pre-schooling can achieve fairly better in school if admitted at a younger age served as an added question of this study. Thus, the researcher also tried to look into the extent to which age of entry determines the achievement of elementary grade pupils in the light of the fact that the average children in rural Daram island do not enjoy pre-schooling.

Statement of the Problem

The study attempted to look into the extent to which age of entry determines the achievement of elementary grade pupils in Districts I and II of Daram. Specifically, it sought answers to the following problems:

1. What is the profile of the elementary grade pupils in the districts of Daram whose age of school entry is less than six or equal to six years old, more than six but less than seven years old, and equal to or more than seven years old, as regards

- 1.1 age of entry;
- 1.2 sex;
- 1.3 sources of family income;
- 1.4 household monthly income;
- 1.5 family size; and
- 1.6 pre-schooling?
- 2. What are the achievement levels of the elementary pupils in each grade level in the following learning areas:
 - 2.1 Good Manners and Right Conduct (GMRC);
 - 2.2 English;
 - 2.3 Mathematics;
 - 2.4 Science and Health;
 - 2.5 Heograpiya, Kasaysayan, at Sibika (HEKASI);
 - 2.6 Filipino;
 - 2.7 Musika, Sining, at Edukasyong Pangkatawan (MSEP); and
 - 2.8 Edukasyong Pantahanan at Pangkabuhayan (EPP)?
- 3. Are there significant differences in the level of achievement of elementary pupils in the foregoing learning areas among the three age group categories as they progress through the six grade levels?

- 4. What is the drop-out rate, and repetition rate of the elementary pupils in the three age group categories per grade level?
- 5. Are there significant relationships among the age of entry and the drop-out rate and repetition rate of the elementary pupils in the three age group categories?
- 6. What implications can be derived from the findings of this study?

Null Hypotheses

In view of the specific problems posed in this study, the following null hypotheses were tested:

- 1. There is no significant difference in the level of achievement in GMRC, English, Mathematics, Science and Health, HEKASI, and Filipino of the respondents of the three age group categories as they progress through the six grade levels.
- 2. There is no significant relationship in the age of entry and the drop-out rate and repetition rate of the elementary pupils in the three age group categories.

Theoretical Framework

This study is primarily anchored on the theory of the Cumulative Nature of Intellectual Development developed by psychologist R. C. Thorndike (Amastasi:1997: 324-325), which posits that as age increases, stability of intelligence improves.

Thorndike (1990:326) likewise, attributes intellectual stability to the child's accumulated skills and knowledge at each age level including an increment of new acquisitions. He argues that even if the annual increments bear no direct relation to the competencies being developed in the child, a growing consistency of performance level will emerge because his earlier acquisitions constitute an increasing proportion of total skills and knowledge as age increases.

It will determine if age is a factor in the scholastic performance of elementary pupils. The study will likewise investigate if the foregoing theory applies to children without pre-schooling and living in rural areas.

Related to the theory on Cumulative Nature of Intellectual Development is the theory on Child

Cognitive Development by Swiss psychologist Jean Piaget (Anderson, 1985:402-403). According to Piaget, a child enters a series of four major stages of development, namely, sensory motor stage, pre-operational stage, concrete operational period, and formal operational period. While the child chronologically enters into each stage, his intellectual development is mainly related to his ability to conceptualize abstract thoughts systematically. The sequential nature of learning is likewise implied in the Piagetian approach to learning.

The study will take into account Piaget's stages of intellectual development and ascertain if in the pupils' grade advancement, age is a factor to consider.

The study likewise considers the implications of Vygotsky's (Werstch:1985) social development theory to its framework. The major theme of its theoretical paradigm is that social interaction plays a fundamental role in the development of cognition. Vygotsky contends that every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first between people

(interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. In effect, it precludes that all higher human functions originate as actual relationships between individuals.

A second aspect of Vygotsky's theory that is highly related to the present study is the idea that the potential for cognitive development is limited to a certain time span which he calls the "zone of proximal development (EZP)." It implies that cognitive development is limited to a certain range at any given age. The second aspect of the theory supports the claims of the proposed study that varied achievement levels among children are affected by chronological age differences.

Conceptual Framework

The schematic diagram shown in Figure 1.1 served as the conceptual blueprint which guided the conduct of the study.

The bottom box represents the research environment and respondents of the study which were the elementary

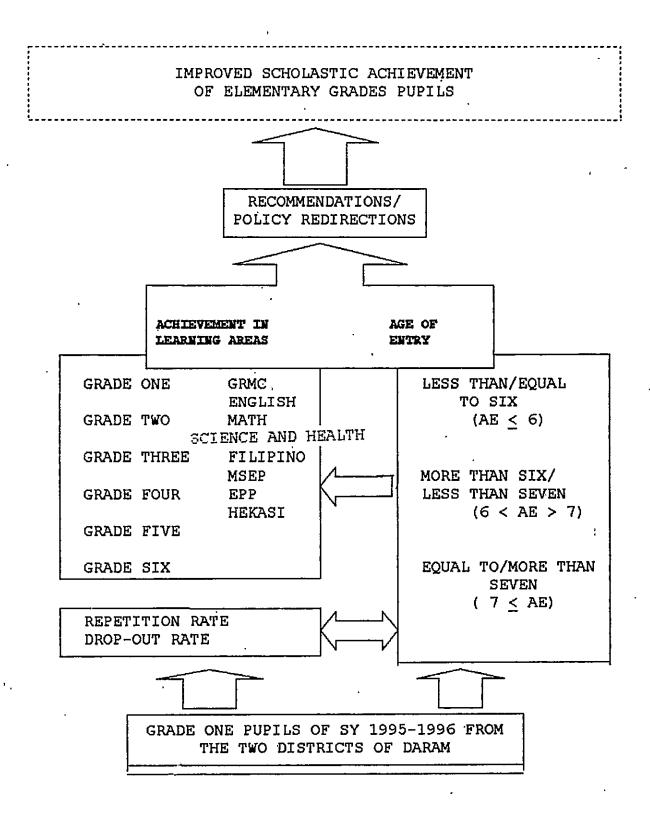


Figure 1.1 The Conceptual Framework of the Study

grade pupils of the eleven elementary schools in the districts of Daram I and II.

The respondents were divided into three groups based on their age of entry (AE), namely, the under/equal-to-six-year old group (AE<6), the more-than-six/less-than-seven-year old group (6<AE<7), and the equal-to/more-than-seven-year-old group (AE>7).

The boxes in the next level represent the pupils' performance in terms of their scholastic abilities in eight learning areas namely, GMRC, English, Mathematics, Science and Health, HEKASI, MSEP, EPP and Filipino (left box), and their drop-out and repetition rates (right box).

The scholastic achievements of pupils in the six grade levels were compared to determine significant differences among the three groups of pupils, while drop-out and repetition rates were correlated to establish significant relationship between ages of entry and the foregoing rates.

Results of these comparisons are inputted to the next box which represents the findings and recommendations of the study. The foregoing

recommendations were used to guide policy redirection in terms of age of entry of grade school pupils.

The aim of the study, to improve the achievement level of grade school pupils, occupies the topmost box in the conceptual paradigm. It is reflected in dotted lines inasmuch as it is not an integral part but a vision of the study.

Significance of the Study

The study was envisioned to benefit not only the people who are directly involved in educating the young but also those people who are indirectly affected by the achievement of pupils in the grade schools.

As stakeholders in the educational system, the following groups will find the study beneficial:

The pupils. By ensuring readiness for scholastic endeavors, the results of the study will help the pupils adjust better to a new environment outside the safety of their homes. The results will allow them to develop their faculties at the most opportune time in their young lives, avoiding early frustrations brought about by unrealized potentials.

The parents. The results of the study will help the parents realize the need to enroll their children at the right age for their children to significantly achieve better grades in school.

The teachers. The study will sensitize teachers to cater to the needs of pupils of varying ages of entry. By answering specific needs, the teachers will hopefully lower the drop-out and repetition rates, and increase the promotion rate of pupils.

The school administrators and policy makers. The study will help school officials and policy makers formulate policies and guidelines which will promote the well-being of pupils of varying ages of entry. By focusing on age of entry as determinant of scholastic achievement, resources can be conserved and channeled to achieve maximum results.

The general public. Finally, the results of the study will help produce an efficient educational system where pupils' potentials are maximally realized to develop better and responsive individuals who will become assets of society.

Scope and Delimitation of the Study

The study aimed to determine the relationship between age of entry and achievement of grade school pupils using the descriptive-comparative design.

Respondents of the study were pupils of Grade One who were enrolled during the school year 1995-1996 in the eleven elementary schools of the two districts of Daram. The respondents were categorized into three groups according to their age of entry in Grade One.

The permanent record or Form 137 of the respondents served as the primary source of data. Documentary analysis was employed to categorize the respondents and ascertain their scholastic achievement. Reports on enrollment were also used to determine the performance status of the three groups of respondents.

Descriptive statistics such as the average mean, standard deviation, and percentages were used to describe the characteristics of the groups of subjects. To establish any significant difference between the achievement of the subjects and their age of entry, the one-way Analysis of Variance (ANOVA) was used. Fisher's t-test was employed to determine the extent of

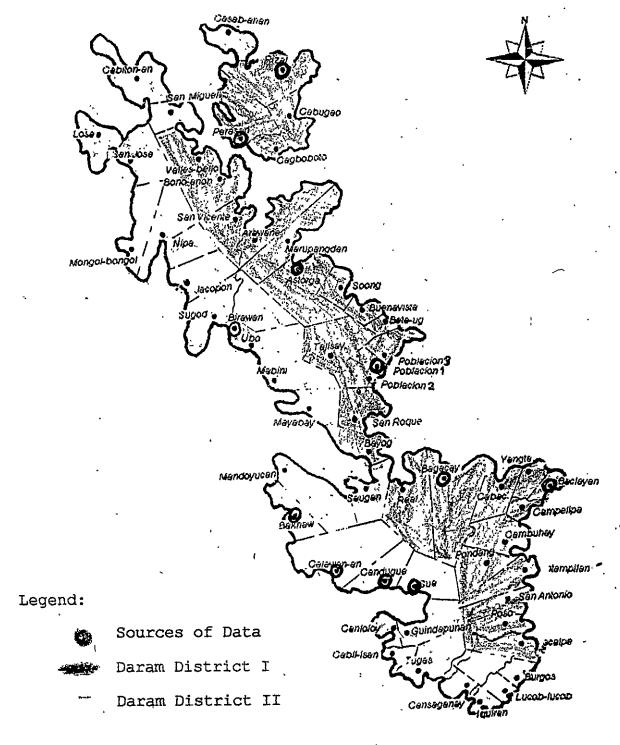


Figure 1.2 The research environment indicating the 11 Elementary school respondents of Daram Districts I and II selected in the study.

differences among the variables, while Pearson's coefficient of correlation r was used to establish the relationship of drop-out and repetition rates with age of entry.

The study was conducted during the first semester of school year 2000-2001 in Daram, Samar.

Figure 1.2 shows the Map of Daram island and the location of the eleven elementary schools where the respondents were enrolled.

Definitions of Terms

The following terms and concepts are contextually and operationally defined to achieve a common frame of reference and for ease of comprehension in reading the study:

Achievement. This refers to the accomplishment or proficiency of performance level in a given skill or body of knowledge, skills, values, etc. in a given field taught in school (Good, 1973:7). In the proposed study, the term refers to the grades of the pupils in areas of Good Manners and Right Conduct (GRMC), English, Mathematics, Science and Health, HEKASI, MSEP,

EPP and Filipino as reflected in their permanent records.

Age of entry. This refers to the qualified age to be accommodated in Grade One. It also refers to the age of a child who is ready for proper schooling in the elementary grade.

Comparative study. This refers to a study which contrasts similarities and differences among phenomena to determine what factors bear causally on one another (Aureada, 1997:47).

Completion rate. This refers to the percentage of first year entrants in a cycle of education completing to the end of the cycle {Proceedings of the Division Basic Data Collection Seminar (PDBDCS: 2000).

<u>Determinant</u>. This refers to the predictor or variable which affects or influence pupils' achievement (Kerlinger: 1986: 154). In this study, the determinant is age of entry.

Drop-out rate. It is the ratio of pupils who leave school during the year as well as those who complete the grade level but fail to enroll in the next grade level the following school year to the total number of

pupils enrolled during the previous school year (PDBDCS: 2000).

English. This refers to a curricular language subject in the New Elementary School Curriculum (NESC).

EPP. This is an acronym for Edukasyong Pantahanan at Pangkabuhayan. It refers to a subject in the NESC that teaches home economics and industrial arts.

<u>Filipino</u>. Per DECS Order No. Series of 1974, this refers to one of the languages used as a medium of instruction in Philippine schools. It likewise refers to a learning area in languages under the NESC.

GMRC. This is an acronym for Good Manners and Right Conduct. It refers to a learning area under the NESC.

HEKASI. The term is an acronym for Heograpiya, Kasaysayan, at Sibika. It refers to a subject in the NESC that teaches history and current events.

Mathematics. This refers to the learning area under the NESC that focuses skills and calculations.

MSEP. The term is an acronym for Musika, Sining at Edukasyong Pangkatawan. It refers to a subject in the NESC that focuses on music, art and physical education.

Participation rate. This term refers to the ratio between the entrants to the grade level and the total population of the age level to the grade level (PDBDCS:2000).

<u>Pre-schooling</u>. This refers to the method and theory of guiding young children in a group, generally referring to education demonstrated in nursery school (Good:1973:435).

Repetition rate. This refers to the proportion of pupils who enrolled in the same grade more than once to the total number of pupils enrolled in that grade during the previous year (PDBDCS:2000).

Science and Health. This refers to the learning area under the NESC that teaches natural and physical sciences as well as personal hygiene, sanitation, care of body, and other health practices.

Chapter 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presents an extensive review of literature and research undertakings relevant to the present study. It includes a consolidation of theories, concepts, summaries and comparisons from books, journals, documents, and recent studies on achievement and its correlates.

Related Literature

Learning cannot be effective unless maturation or ripening exists. This view has been the focal point of several authors and literature when they ascribe learning as the fruit of maturation.

In this regard, Lardizabal (1991:7) surmises that individuals mature at different rates. Parents and teachers should not expect the same degree of development in children. In the same class of pupils with the same chronological age, there are individual differences. Teachers, therefore, should not try to push the children to attain the same performance as the bright ones. Parents should not try to compare their

children with one another and expect the same level of performance from all.

Piaget (1981) defines intelligence functionally as a process of adaptation and organization. Adaptation is seen as an equilibration in the organism's interaction with his environment while organization is a concept that is structural and involves constant organization, reorganization and integration of what is called as schemas. Schemas are defined as essentially repeatable, psychological units or intelligent action. The best interpretation of this definition is that schemas are types of "programs" or "strategies" that individuals have at their disposal when interacting with the environment.

Piaget theory is based on biological functioning which stresses that the sequential development of the variant cognitive structures from the sensory-motor stage to the formal operational stage is the result of the organism's progressive development to more equilibrium states of adaptation to the environment through assimilation and accommodation.

Owen (1981:27) defines assimilation as the incorporation of the environment into present patterns

of behavior while accommodation is the change in the intellectual structures, called schemas, that is necessary in order for the pupil to adjust to the demands that the external environment makes on him.

The process of adjustment, according to Pulaski (1980:38), consists of two broad phases. He opines that during the first two or three years, the child applies his new-found representational ability to his everexpanding world, and by doing so, progressively looks more pre-operational to the observer in all the ways he is described. In this sense, it could be said that preoperational thought proliferates and becomes more florid during the early pre-operational years, the preconceptual phase. But then, as the child moves to the translation phase, those pre-operational traits give ground to traits characteristic of concrete operations. However, the child's "thawing out" process moves very slowly or not at all and is dependent upon the degree of his experience and the amount of meaning he has had the chance to amass around a given symbol. In other words, a child has the option to move to the next stage or to stay in place. Whether movement occur or not depend on his educational experience at that time.

A significant implication of this view is presented by Sprinthall (1981: 122). He opines that growth at any stage depends on activity. The development of brain power is not fixed at birth, but is the function of the appropriate activities during a particular stage. Therefore, he concludes, children must engage in appropriate activities in order to move to the next stage.

Through these activities and experiences, it is believed that the child would be more able to address himself to a specified task - he would be able to retrace his steps mentally and to think inductively and deductively - and he would become more flexible and mobile in his thought processes and take account of other correcting aspects of his perceptions. Thus, the onset of the next stage becomes more definite since environmental stimulation has been provided at the right time of the child's development.

These views are significant to the present study because they support the thesis that a child undergoes cognitive development at different periods of maturation depending on his exposure to activities or experiences that stimulate growth.

Furthermore, the foregoing literature support the view that a child's cognitive development is dependent on maturation. His advancement is linked to his exposure to varied experiences and the intensity of his preparation for the next stage of development.

The present study investigated whether the age of entry of a pupil is related to his scholastic performance as he advances through the elementary grades.

Related Studies

To gain better a understanding and provide direction to the conduct of the proposed study, a number of recent researches on pupils' achievement, preschool effects, and indicators of pupils' scholastic performance were read and analyzed. Comparisons and contrasts between these studies and the proposed work serve as points of redirection to the existing research structure of the present undertaking.

The study of Quilaga (1994) on pre-operational training task program for children yielded the following findings:

- 1. Preoperational thoughts were manifested by the fourto-nine year old pupils. These preoperational characteristics declined as age increased.
- 2. The decline of preoperational thoughts among the seven-to-nine year-olds ushered in transitional thought, meaning that among the seven year-olds, 15% could correctly answer the last six items in the Interview Guide, although they could not explain their correct answers.
- 3. These transitional thoughts were also seen in 16% of the eight year-olds and 32% of the nine year-olds.
- 4. The four-to-nine year-olds follow the sequential stages of cognitive development. Four-to-six year-olds are in the pre-conceptual sub-stage of pre-operations and the seven-to-nine year-olds are in the transitional sub-stage of pre-operations.

In a relationship study, Kingsland (1990) studied the comprehension of metaphor in Grades Three to Six pupils and the extent to which such comprehension was constrained by the intersection of classes operation, basic combinatorial logic, and proportional reasoning. All results reported as significantly meeting or exceeding the p < 0.05 confidence level. The

implication was that the ability to perform some linguistic skills, specifically metaphor, is constrained by the availability of prerequisite cognitive operations. The curriculum sequence and instruction in metaphor designed for the study is effective only after the intersection of classes operation has developed.

Kingsland study is related to the present undertaking since it supports the view of prerequisite skills to cognitive learning. While the foregoing study focuses on the third through six grades, the present study investigated readiness at entry level as determinant of scholastic achievement.

In the study of Acong (1997) on the performance and mastery of Grade IV pupils in Jiabong, he strongly recommended for an enrichment program to upgrade the academic performance and mastery level not only of the average pupil but likewise of younger pupils to optimize proficiency. His recommendations were brought about by the necessity and imperativeness for a program that will include remediation and review.

Acong's study supports the present study considering that both studies focus on achievement of

pupils in the elementary grades but while Acong's study concentrated on pupils in incomplete and complete elementary schools, the present study investigated on the effect of age of entry on pupil performance.

Quilaga's and Acong's studies are significantly related to the present study because they describe the differences in cognitive development among four-to-six year-olds and seven-to-nine year olds. The present study differed with the foregoing study as to locale and methodology.

Another similar study is that of Weiss (1990) whose aim was to compare the achievement and adjustment of bright and mature early-age children and normal age kindergarten children under experimental conditions. The comparison was based on IQ, personality adjustment and sex.

Weiss' study resulted in the following conclusions:

1. When placed in a regular kindergarten class, earlyage children of above-average IQ are expected to
achieve and adjust approximately at the level of the
class as average.

2. The early age children of below average IQ are expected to achieve below the level of children of comparable IQ who enter kindergarten as the oldest group.

These findings may be interpreted to mean that if the early-age children entered kindergarten a year later in the formal pattern they would have achieved a higher level.

Similarly, McKay (1990) conducted a study on the influence of the Summer Head Start Program to determine the achievement of first grade children. A comparison was made between those who attended Head Start Program and those who did not. The findings of the study indicated that there was a significant difference in favor of the Head Start Group in word knowledge, reading, and arithmetic.

The foregoing studies are related to the present study as far as focus on achievement is concerned. However, while the reviewed studies were limited to pre-schooling as factor for achievement, the present study attempted to investigate the extent to which age of entry determines achievement.

Padillo (1994) made an investigation on the relationship between reading preferences and achievement in English and Mathematics among Grade VI pupils of Tacloban City Division. He found out that while the extent of pupils' exposure to books as a form of print media does not influence achievement in English and Mathematics, pupils of varying age differ in reading preference.

Padillo's study is related to the present study because it deals with pupils' achievement as influenced by reading preferences. Yet, while her study focused on reading preferences as determinant of achievement, the proposed study tries to look as age of entry as an achievement factor.

In her study on pre-school training, Jalayajay (1991) attempted to find out the effect of summer preschool training on the academic achievement of Grade One pupils of Calbayog City. Significant findings of her study include:

1. Those who had the summer pre-school training or experimental group had an average achievement profile while those who did not undergo such

- training or the control group showed a below average achievement;
- 2. There was a significant relationship between the academic achievement and intelligence for both the experimental and the control groups. The findings showed that pupils who have high mental abilities also got high academic performance, whereas those having low mental abilities manifested low academic performances;
- 3. There was no significant relationship between the academic achievement and the socio-economic status of both the experimental group and the control group which meant that socio-economic status did not affect the pupils' academic performance;
- 4. There was no significant mean difference between the boys' and the girls' academic performance;
- 5. There was a significant mean difference in the achievement of the Grade One pupils with summer preschool training. This means that the summer preschool training had an effect on the academic achievement of the Grade One pupils.

In a similar study, Macalalag (1998) investigated several factors related to the English achievement of

Grade Six pupils in carigara I District. Her study considered parents' education, parents' occupation, parents' joint income, parental support on pupil's assigned task, family size, educational facilities at home, home location, study habits and attitudes, attitude towards the subject, reading ability, reading preferences, teacher's attitude towards the subject as determinants of pupil's achievement.

The present study underscored intelligence, socioeconomic status, sex, and pre-schooling as correlates
of achievement among pupils which are independent
variables in Jalayajay's study. While her study is
limited to Grade One pupils, the present study
investigated the performance of pupils from Grade One to
Grade Six.

Another study which has bearing on the present study is that of De Jesus (1991) which focused on the adjustment problems of Grade VI pupils in relation to selected variables such as academic achievement, self-concept, age, socio-economic, and sex. Most important in her findings are that academic achievement of the pupils is significantly related to interpersonal problems and self-concept which can be traced back to home, family,

and the pupil's maturity and age. On the other hand, socio-economic status and sex are slightly correlated to academic achievement.

The foregoing study is similar to the present study because both are concerned with achievement of pupils in the elementary grades. However, they differ in focus since the former is concerned with the adjustment problems, while the latter deals with age of entry.

On the whole, the reviewed literature and studies provided relevant background for the present study by enriching its focus through their significant findings in the areas of cognitive development, scholastic achievement, and apparent relationship between pupil's age of entry and his achievment which are the conerns of the present study.

Chapter 3

METHODOLOGY

This chapter presents the methods and procedures of the research endeavor. It discusses the research design, instrumentation and validation of instruments, sampling procedures, data collection techniques, and statistical treatment of the data collected.

Research Design

The descriptive-comparative design was used in the conduct of the study since it is the commonly used design to obtain information concerning the current status of relationships among variables identified in the phenomena and is directed towards determining the nature of their situation. It also allows establishing correlation between the variables while describing their common class characteristics, and contrasting similarities and differences to determine the factors that bear causally on each of the factors.

A total of 459 pupils from 11 elementary schools in the first and second districts of Daram served as the respondents of the study. The respondents represent the pupils enrolled during the school year 1995-1996,

the first school year of the implementation of DECS Order No. 65, series of 1994 which lowered the age of entry in Grade One from seven to six years old.

. A documentary analysis of their permanent records from Grade One through Grade Six was conducted to ascertain their achievement in six subject areas under the NESC.

In adopting the design, the researcher was able to compare the achievements in six subject areas of three age groups over a period of six years to ascertain if correlation existed between the age of entry and the academic achievements of the pupils in schools under Districts I and II of Daram island.

Instrumentation

The needed research data were elicited using the pupils' permanent records as principal instrument. A thorough scrutiny of the permanent records, specifically the grades of pupils in the eight subjects most commonly recited in the grade levels yielded the needed descriptions of the pupils' progress and achievement.

Permanent records. Basically, Form 137 or permanent record of the pupils were used as instrument in gathering information on the pupils' achievement during the last five years. Pupils' performance in eight learning areas namely GMRC, English, Mathematics, Science and Health, Filipino, MSEP, EPP and HEKASI were looked into to determine the status and scholastic standing of the pupils in the foregoing subjects during each grade level. Moreover, the permanent records likewise gave information as regards repetition and drop-out status of the pupils in each age category.

Questionnaire. To gather salient information on the profile of the pupil-respondents, a short questionnaire was constructed for their parents to respond to.

Validation of Instrument

In the documentary analysis, testing for validity and reliability of the instrument was not needed since it was a standard department form for public schools.

As regards the questionnaire, the instrument was presented to the adviser and to two other experts on questionnaire construction for content validation. A translation was made of the instrument that was

originally written in English. A try-out was conducted using the parents of Grade V pupils of the Daram Central Elementary School. Revisions were done based on the results of the try-out and suggestions of experts.

Sampling Procedure

The study, employing purposive sampling, involved 459 pupils coming from the eleven elementary schools in the first and second districts of Daram who enrolled Grade One during the school year 1995-1996. They represent the first batch of Grade One pupils whose minimum age of entry is six years old.

The respondents were categorized into three distinct groups according to their age of entry, as follows:

- 1. Less than or equal to six years old (AE<6);
- 2. More than six but less than seven years old (6<AE<7), and
- 3. Equal to or more than seven years old $(AE \ge 7)$.

The school records of the pupils were used to determine their categories and served as sources of data to determine pupils' progress over the past five years. Yearly enrollment of the respondents was

likewise inspected to establish drop-out and repetition ratios.

Randomization and equating respondents were not carried out in this setting inasmuch as the total population of the pupils was considered.

It was also obvious that the respondents vary in sex, age, family background and socio-economic status. Pre-school experiences were, however, determined and achievements of respondents were noted for pupils in each of the age categories.

Data Gathering Procedures

The data were the product of documentary analysis using the pupils' permanent records (Form 137) and the answers to the questionnaire.

To collate these records, assistance from the Schools Division Superintendent of Samar was sought to allow the researcher gain access to these data. The help of the district supervisors for Daram I and II and school administrators of the eleven complete elementary schools involved in the study were likewise requested.

The data for age of entry, individual performance in the eight subject areas considered in this study,

drop-out, and repetition rates were derived from the permanent records of the pupils investigated in the study.

The actual gathering of data started on October, 2000 and ended on January, 2001.

Statistical Treatment of Data

The gathered data were collated, analyzed and interpreted using descriptive and inferential statistics.

Means, standard deviations, percentages, and weighted means were used to describe the characteristics of the respondents in terms of age of entry, and achievement in the different learning areas.

To test the first hypothesis posed in the study, the one-way analysis of variance (ANOVA) was used. Individual grades in GMRC, English, Mathematics, Science and Health, Filipino, MSEP, EFF and HEKASI of the respondents from the three age-group categories as they progressed from Grades One to Five were compared to determine existing significant differences. The following formula was used:

For the second hypothesis, Pearson correlation coefficient (Pearson \underline{r}) was used to find out if relations exist between age of entry and the drop-out rate and repetition rate of the pupils in the three age-group categories.

The following formula was used:

$$r = \frac{N\Sigma XY - (\Sigma X) (\Sigma Y)}{------}$$

$$/ [N\Sigma X^2 - (\Sigma X)^2] [N\Sigma Y^2 - (\Sigma Y)^2]$$

To interpret the obtained values for the correlation coefficient, the following table of interpretation by Calmorin (1994:256) was followed:

	Val	це		Interpretation
+	0.00	-	<u>+</u> 0.20	Negligible Correlation
+	0.21	-	<u>+</u> 0.40	Low or Slight Correlation
<u>+</u>	0.41	-	<u>+</u> 0.70	Moderate Correlation
+	0.71	-	<u>+</u> 0.90	High Correlation
+	0.91	-	<u>+</u> 0.99	Very High Correlation
+	1.00			Perfect Correlation .

To determine the extent of differences among the variables when significant differences existed, Fisher's t-test was employed. Scheffe's test was also used to determine in what groups did the differences occur.

The hypotheses in the study were tested using 0.05 level of significance. Statistical software as contained in Microsoft Excel was employed to achieve accuracy and facilitate the efficient computations of needed data.

Chapter 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents, analyzes and interprets the data generated from the study. The significance and implications of the findings are discussed in the light of the research questions and hypotheses posed, and proceed according to the sequence in which the questions are compounded in the study.

Profile of the Respondents

Serving as subjects of the study were 472 pupils who enrolled as first graders in the 11 elementary schools in Daram island during the school year 1995-1996. Of this number, 296 pupils were accepted in the six schools of Daram I District while the remaining 176 were distributed in the five schools under Daram II District.

Of the number who originally enrolled in Grade One during the school year 1995-1996, however, 459 (97.2%) continued to reach Grade Six in school year 2000-2001. The 14 pupils who failed to continuously progress through the grade levels either dropped out early to

continue in later years, transferred to another school outside of the school districts of Daram, or permanently stopped schooling.

The data presented, analyzed and interpreted in this section as regards age, sex, sources of income, family income, household size and pre-school training represent the profile of the 459 subjects who continuously progressed through the grade levels.

Age and gender. As to age, 62.9% pupils composed the More-than/Equal-to-Seven Group, 30.1% belong to the More-than-Six/Less-than-Seven Group while the remaining 7.0% comprised the Equal-to/Less-than-Six Group.

The overall gender ratio between female and male pupils is 1.45. The More-than/Equal-to-Seven Group has 122 males and 167 females. The More-than-Six/Less-than-Seven Group has 55 males and 83 females, while the Equal-to/Less-than-Six Group has 10 males and 22 females.

The foregoing data indicate that in Daram, respondents start going to formal school at a later age as indicated by more than half of them belonging to the Greater-than/Equal-to-Seven Group. Moreover, females outnumber males by almost a half of their total number.

AGE GROUP	DIS	===== FRICT I	DISTRICT	II 8	UF TOTAL			
(AG)	M	F	М	F	М	F	TATOT	*
AG <u><</u> 6	6	13	4	9	10	22	32	7.0
6 < AG < 7	39	60	16	23	55	83	138	30.1
AG ≥ 7	57	107	65	100	122	167	289	62.9
TOTAL	102	180	85	132	187	272	459	100.0 %

Table 4.1 Pupil Distribution by Age and Sex

Table 4.1 shows the distribution of the pupils according to age and sex.

Sources of income. Of the 459 pupils, 37.2% belong to families whose main source of income is fishing, 29.2% rely on farming, while 14.8% are into retail selling, 7.2% in laundry wash and 5.4% engaged in animal raising. The remaining families are into other means of livelihood that include carpentry, ambulant vending, dried fish selling, and government employment. To augment their meager income, 34.5% of the families engage in hog, goat and poultry raising, while 30.6% are into vegetable and fruit planting.

As regards main source of income by age group, 32.2% of the pupils in the More-than/Equal-to-Seven Group belong to families who rely on fishing as their main source of income, 28.6% are into farming, while

the rest list other sources of income. Nearly 48% of those in the More-than-Six/Less-than-Seven Group claim fishing as their families' main source of income, 31.2% are into farming, and 8% depend on animal and poultry raising. Pupils from the Equal-to/Under-Six Group likewise indicated an income largely dependent on fishing (37.5%) and farming (25.1%).

Typical of rural families, the foregoing data on sources of income show heavy dependence on agriculture. Fishing is slightly favored over farming as most of the families are settled in the coastal areas. Income augmentation through other means likewise appear strong in almost a third of the families indicating that income from the main source may not be enough to meet family expenditures. Table 4.2 details the main income sources of pupils.

Table 4.2 Pupil Distribution by Main Source of Income

	AC ·	< 6	6 <	AG < 7	AG	> 7		
SOURCE OF INCOME	f	- <u>}</u>	£	*	f	_ [#]	TOTAL	
Fishing	12	37.5	66	47.8	93	32.2	171	37.2
Farming	8	25.1	43	31.2	83	28.6	134	29.2
Retailing	2	6.2	8	5.8	58	20.1	68	14.8
Hog Raising	1	3.1	4	2.9	10	3.5	15	3.3
Poultry Raising	1	3.1	3	2.2	6	2.1	10	2.2
Laundry Wash	5	15.6	8	5.8	20	6.9	33	7.2
Other Sources	3	9.4	6	4.3	19	6.6	28	6.1

Family income. On the whole, the largest number of pupils (71.0%) come from families whose monthly income ranges from PhP 3,000 to PhP 5,000. This is followed by pupils whose families earn monthly incomes of between PhP 10,000 and PhP 15,000. Families of the third group earn incomes of between PhP 10,001 and PhP 15,000. The remaining pupils are evenly distributed in families whose monthly incomes are almost evenly distributed between those earning below PhP 3,000 and those earning above PhP 15,000 monthly.

Data on family income by age group, however, reveal that the More-than/Equal-to-Seven Group has the highest number of pupils belonging to families with monthly incomes below PhP 3,000 (46.7%) and within the PhP 3,000 to PhP 5,000 range (52.3%). Among pupils of the Over-Six/Under-Seven Age Group, 63.0% have families whose monthly incomes are within the PhP 3,000 to PhP 5,000 range. This is followed by those in the Below PhP 3,000 and PhP 5,001 to PhP 10,000 brackets.

The data indicate that all pupil respondents in this study belong to households under the poverty line.

Table 4.3 illustrates the pupils' family monthly income by age group.

	=====		.======:	=======	======	===========		
AVERAGE MONTHLY	AE	<u>≺</u> 6	6 < A	E < 7	AE >	7	TOTAL	ž
NCOME	f	ŧ	f	*	f	¥	144	•
Below PhP 3,000							8	1.7
P 3,001-5,000	23	71.9	73	52.9	230	79.5	326	71.0
P 5,001-10,000	2	6.2	46	33.3	35	12.1	83	18.1
P 10,001-15,000	9	12.5	12	9.7	16	5.5	32	7.0
Above P 15,000	3	9.4	7	5.1	8	2.8	10	2.2

Table 4.3 Pupil Distribution by Family Monthly Income

Household Size. Data under household size reveal that most of the pupils belong to the 6-to-8 member households comprising 45.8% of the pupils. This group is followed by 26.8% of the pupils who live in families of 9-to-11 members, another 21.1% belonging to the 3 to 5 members, while the rest (6.4%) have 12 or more members.

A different pattern is observed when household size is analyzed by age groups. Families with 12 to 14 members dominate in the Less-than/Equal-to-Six Age Group (37.5%). In the More-than-Six/Less-than-Seven Age Group, families with 3 to 5 members rank first while in More-than/Equal-to-Seven Age Group, families with 6 to 8 members dominate (33.3% and 77%,

HOUSEHOLD	AG	<u>≺</u> 6	6 6 < AG > 7		AG	<u>></u> 7	TOTAL	<u>o</u>
SIZE	f	¥	£	*	f	*	10171	•
3-5	8	25.0	46	33.3	43	14.9	97	21.1
6 -8	5	15,6	43	31.2	162	56.1	210	45.8
9 - 11	7	21.9	44	31.9	72	24.9	123	26.8
12 - 14	12	37.5	4	2.9	10	3.5	26	5.7

Table 4.4 Pupil Distribution by Household Size

respectively). The data seem to imply that in moderately larger households, parents tend to send their children to school at an early age in contrast to small households where children begin first grade at a much later age.

Table 4.4 reflects the distribution of the pupils as to household size.

Pre-schooling. The pre-school experiences of the pupils include day-care training and kindergarten classes. Nearly 54% of the pupils did not undergo day-care training. Most of them, around 86%, neither have attended kindergarten classes. This implies that considering the household income data, a major factor for not enrolling most pupils in the kindergarten classes may have been the financial capabilities of the parents. The attendance of almost half of the pupils in the day-care training centers may be attributed to .

are mostly on-going projects of the barangays, LGUs and NGOs. Kindergarten classes, on the other hand, require the rural parents to pay an amount they cannot afford.

Pupils in the three age groups similarly compare in their attendance of day-care training centers. Attendance in kindergarten classes among age groups, however, largely contrast as many of the few who attended kindergarten classes belong to the Lessthan/Equal-to Six and More-than-Six/Less-than-Seven Age Group, 48% and 39%, respectively.

Table 4.5 shows the distribution of pupils relative to their pre-schooling experiences.

Table 4.5 Pupil Distribution by Pre-school Experiences

PRESCHOOL	AG ≥ 6		6 < AG > 7		AG ·≥ 7		TOTAL	ş
TRAINING	£	74	£	2	£	\$	TOTAL	•
With				<u></u>				<u>-</u> -
Daycare	4	12.5	61	44.2	147	50.9	212	46.2
Without					-			
Daycare	28	87 .5	77	55.8	142	48.1	247	53.8
With							-	
Kinder	2	6.2	19	13.8	40	13.8	61	13.3
Without Kinder	30	93.8	119	86.2	249	86.2	398	86.7

Achievement Levels of Pupils In the Different Learning Areas

of the original 472 who registered as first graders during the school year 1995-1996, only 97.2% of them were considered to represent the three age groups' scholastic performances as they moved from one grade level to another. Thus, the scholastic performances of the remaining 459 pupils who continuously progressed through the six grade levels were determined using the final grades as recorded in their individual Form 137 (see Appendix E).

Achievements in the seven learning areas namely English, Mathematics, Science and Health, Good Manners (GMRC), Filipino, Heograpiya, Right Conduct Sibika (HEKASI), Musika, Sining at Kasaysayan аt Edukasyong Pangkatawan (MSEP), and Edukasyong Pangkabuhayan (EPP), were collated, Pantahanan at compared and analyzed by age group.

It is noted that EPP grades of the pupils appear only in Grades IV, V and VI as reflected in Form 137 since EPP is offered only in these grade levels. Moreover, the reflected grades of the pupils in Grade VI represent only their average grades for the first two grading periods since at the time the research was

conducted, the pupils were still enrolled as Grade Six pupils.

Less-than/Equal-to-Six Age Group. The grades of 33 pupils under the less-than/Equal-to-Six Age Group in each of the seven learning areas were tabulated, summed up and averaged. The average means and standard deviations were computed, compared and analyzed.

Table 4.6 summarizes the scholastic performance of the pupils under this age group.

The average grades obtained by the group in the seven learning areas vary from as low as 78.17% (in Grade I English) to as high as 81.75% (in Grade V GMRC).

Table 4.6 Mean Achievement Level of Pupils in the Lessthan/Equal-to-Six Age Group

GRADE LEVEL EARNING AREA	I	II	III	IV .	V	VI	М	SD
ENGLISH	78.17	78.44	70.71	80.14	79.64	79.40	77.82	3.53
MATHEMATICS	78.03	78.69	78.96	79.97	79.22	80.53	79.40	0.90
SCI & HEALTH	80.91	78.74	79.58	79.63	79.87	79.90	79.77	0.70
GMRC	80.44	81.17	81.25	82.25	81.75	81.40	81.21	0.61
FILIPINO	78.52	79.78	80.09	80.66	80.46	81.43	80.16	0.98
HEKASI	78.40	79.46	79.97	80.67	79.93	81.20	79.94	0.97
MSEP	79.43	80.75	79.65	81.15	81.24	80.63	80.48	0.76
EPP				81.00	81.13	80.13	80.75	0.54
Mean	79.1	79,6	78.6	80.7	80.4	80.6		
SD	1.16	1.06	3.55	0.82	0.89	0.74		

Across learning areas, the pupils exhibit a relatively high proficiency in GMRC with a mean grade of 81.4% and a relatively low proficiency in English with a mean grade of 77.8%. Except in English where the standard deviation is 3.53, the pupils under this age group displayed deviated performance in the remaining six learning areas where the standard deviations were found to be less than unity.

On the other hand, across grade levels, the pupils performed relatively well in Grade IV with an average grade of 80.7% and relatively poor in Grade III with an average grade of 78.6%.

Consequently, deviation from the mean is high in Grade III (3.55) compared to the deviations from the mean of their grades in the other grade levels, implying that their performance in Grade III did vary from their performances in the other grade levels.

More-than-Six / Less-than-Seven Age Group. One hundred and thirty-eight pupils comprised the More-than-Six/Less-than-Seven Age Group of which 99 come from District I and 39 from District II.

Table 4.7 Mean Achievement Level of Pupils in the More-than-Six/Less-than-Seven Age Group

GRADE LEVEL LEARNING AREA	I	II	III	IV	V	VI	М	SD
ENGLISH	80.46	80.10	80.40	80.41	80.74	80.11	80.37	0.23
MATHEMATICS	80.81	80.59	80.46	80.46	30.47	80.42	80.54	0.14
SCL & HEALTH	80.48	80.69	80.63	80.44	81.20	BÙ.bb	80.68	0.28
GMRC	82.44	82.44	82.26	83.02	83.09	83.41	82.44	0.37
FILIPINO	81.63	81.67	81.65	81.58	81.26	81.15	81.49	0.23
HEKASI	81.29	81.98	81.67	80.88	81.06	81.31	81.37	0.42
MSEP	82.01	82.01	81.41	81.38	82.11	81.27	81.70	0.37
EPP				81.67	81.78	81.46	81.64	0.15
Mean	81.3	81.4	81.2	81.2	81.5	81.2		
SD	0.78	88.0	0.79	0.89	0.81	0.93		

Table 4.7 shows the average means of the learning area grades of more-than-six/less-than-seven year old pupils as they progressed from Grade I to VI. The average grades of the group in the seven learning areas range from as low as 80.1% (in Grade II English) to as high as 83.0% (in Grades IV and V GMRC). The group tends to excel in GMRC as evidenced by their mean grade of 82.4% compared to their performance in English where they have a mean grade of 80.4%.

Comparing their average grades across grade levels, the pupils under this age group performed relatively well in Grade IV where they showed an average grade of 81.5%. Parallel performances are

observed in Grades III, IV and VI where they registered an average common grade of 81.2%. As to consistency, the standard deviation values of their grades across learning areas and grade levels appear close to each other indicating that their performance is consistent in the all grade levels and learning areas.

Equal-to/More-than-Seven Age Group. The scholastic performance of the 289 pupils under this age group is summarized in Table 4.8.

The group exhibits a grade range of as low as 79.5% in Grade I Mathematics to as high as 83.2% in Grade V GMRC. The highest mean grade for the learning area is GMRC at 82.3% while the lowest is English at 80.1%. Across grade levels, the group's highest average grades are in Grades II and V at 81.4% while the lowest average grade is in Grade VI at 80.7%.

Table 4.8 Mean Achievement Level of Pupils in the Equal-to/Morethan-Seven Age Group

GRADE LEVEL	I	II	III	IV	V	VI	M	SD
LEARNING AREA								
ENGLISH	80.03	80.46	80.21	79.73	80.44	80.15	80.17	0.26
MATHEMATICS	79.50	81.97	80.43	79.72	81.04	80.55	80.36	0.64
SCI & HEALTH	80.03	80.69	80.30	79.98	80.91	79.93	80.31	0.41
GMRC	81.69	82.05	82.83	82.60	83.15	81.33	82.28	0.72
FILIPINO	81.75	81.68	81.15	80.17	81.10	81.04	81.15	0.36
HEKASI	81.18	81.65	81.32	81.10	80.83	80.94	81.17	0.29
MSEP	81.44	82.16	81.37	80.77	81.83	80.61	81.36	0.60
EPP				81.28	81.72	81.28	81.43	0.23
MEAN	80.8	81.4	81.1	80.8	81.4	80.7		
SD	0.94	0.66	0.91	0.97	0.87	0.52		

As the level of their performance, the pupils exhibited minimum variation from the mean performance across grade levels and across learning areas since the values of standard deviations are less than unity.

Comparative Achievement of Pupils In the Learning Areas Across Grade Levels

To test the first hypothesis posed in the study, "Is there a significant difference in the levels of achievement of the three groups of pupils in the seven learning competencies as they progress through the six grade levels?," the One-Way Analysis of Variance (ANOVA) was employed. The weighted means of the average grades for each grade level were used and the F value was computed at 0.05 level of significance.

Table 4.9 details the weighted means of the three groups of pupils by learning competencies.

Grade One. For the first grade level, the three groups of weighted means in the seven learning competencies for Grade One were subjected to the one-way analysis of variance (ANOVA) at 0.05 level of significance.

Table 4.9 Summary of ANOVA results for Achievement in Grade One

Source of var	SS	dF	MS	F	P-value	F crit
Between Groups	18.36095	2	9.180476	10.00987	0.001195	3.554561
Within Groups	16.50857	18	0.917143			
Total	34.86952	20				

ANOVA results indicate that with a total of 20 degrees of freedom, the computed F value of 10.000987 is greater than the critical F value of 3.554561 at 0.05 level of significance leading to the rejection of the null hypothesis. Thus, the achievement levels of the three groups of pupils in the seven learning areas in Grade One significantly differ from each other.

To determine which groups significantly differ in achievement levels, Scheffe's test was employed in Groups exhibiting significant differences in Achievement (See Appendix I). Table 4.10 shows the results of the test.

Table 4.10 Comparison of Means of the Achievement in Grade One by Age Group

Group Pair	Mean Difference	Computed F	Tabular F	Interpretation
AG < 6 / 6 < AG < 7	2.19	18.31	7.108	Significant
$ag \leq 6 / ag \geq 7$	1.69	10.90	7.108	Significant
6 < AG < 7 / AG > 7	0.50	0.954	7.108	Not Significant

The results indicate that the significant difference lies between the Less-than/Equal-to-Six Age Group and the More-than-Six/Less-than-Seven Age Group, and the same Less-than/Equal-to-Six Age Group and the Equal to/More-than-Seven Age Group whose computed F values were 18.31 and 10.91, respectively, as against critical 7.108 the value of0.05 level at significance. This implies that the achievement level Less-than/Equal-to-Six year old significantly differ with the other pupils in the Grade One class.

Table 4.9 summarizes the ANOVA results for the achievement levels of the three groups in Grade One.

Grade Two. The means of the grades of the three groups of pupils were likewise subjected to ANOVA at 0.05 level of significance to determine any significant differences. Results of the test, as reflected in table 4.11, indicate a computed F-value of 9.358084 as against the tabular 3.554561 value. This led to the rejection of the null hypothesis. Thus, the achievement levels in Grade Two of the three groups of pupils significantly vary.

Table 4.11 Summary of ANOVA results for Achievement in Grade Two

Source of var	ss	dF	MS	F	P-value	F crit
Between Groups	14.88381	2	7.441905	9.358084	0.001636	3.554561
Within Groups	14.31429	18	0.795238			
Total	29.1981	20			•	

Scheffe's test was employed to determine which groups significantly differ. Like in Grade One, the achievement level of the Less-than/Equal-to-Six year-old pupils significantly differ with the rest of the pupils as revealed by their F value of 13.808 with the More-than-Six/less-than-Seven Age Group, and of 14.264 with the Equal-to/More-than-Seyen Age Group (See Appendix G).

Table 4.12 shows the comparison of means of the achievement of Grade Two respondents by Age Group.

Table 4.12 Comparison of Means of the Achievement in Grade Two by Age Group

Group Pair	Mean Difference		Tabular F	Interpretation
AG < 6 / 6 < AG < 7	0.49	13.808	7.108	Significant
$AG \leq 6 / AG \geq 7$.	1.81	14.264	7.108	Significant
6 < AG < 7 / AG > 7	0.04	0.0037	7.108	Not Significant

Table 4.13 Summary of ANOVA results for Achievement in Grade Three

Source of var	SS	dF	MB	Ţ	P-value	F crit
Between Groups	7.18381	2	3.591905	5.821713	0.0011223	3.554561
Within Groups	11.10571	18	0.61984			
Total	18.28952	20				

Grade Three. The test was used for same achievement levels in Grade Three. ANOVA results, reflected in Table 4.13, showed a slightly higher computed F-value of 5.821713 than the critical value of 3.554561. The null hypothesis is again rejected. Schefe's test was employed to ascertain where differences lie.

As shown by Table 4.14, the test revealed the same findings as in the first and second grades although the values appear closer to the critical F value of 7.112. The F-value of the first paired groups was 9.586 while the second paired groups revealed an F value of 7.791 (See Appendix H).

Table 4.14 Comparison of Means of the Achievement in Grade Three by Age Group

Group Pair	Mean Difference	Computed F	Tabular F	Interpretation
AG < 6 / 6 < AG < 7	1.30	9.586	7.11	Significant
$AG \leq 6 / AG \geq 7$	1.18	7.791	7.11	Significant
$6 < AG < 7 / AG \ge 7$	0.12	0.093	7.11	Not Significant

Grade Four. Data for Grade Four were likewise subjected to ANOVA. Results, as summarized in Table 4.15 showed a computed value of 0.906366 which is lower than the critical value of 3.466795 at 0.05 level of significance and dF of 23.

Thus, the null hypothesis is accepted. This is no significant difference in the achievement levels of the three groups of pupils. This further implies that their achievement in the different learning areas do not significantly differ from each other.

Table 4.15 Summary of ANOVA results for Achievement in Grade Four

Source of ver	SS	dF	MS	F	P-value	F crit	
Between Groups	1.450833	2	0.725417	0.906366	0.419219	3.466795	
Within Groups	16.8075	16	0.800357	•			
Total	18.25833	20					•

Grade Five. ANOVA results for the data in Grade Five showed a computed value of 3.584351 which is slightly higher than the critical value of 3.466795 at 0.05 level of significance and dF of 23. Table 4.16 summarizes the results.

Table 4.16 Summary of ANOVA results for Achievement in Grade Five

Source of var	ss	dF	MS	F	P-value	F crit
Between Groups	5.240833	2	2.620417	3.584351	0.045768	3.466795
Within Groups	15.3525	. 21		•		
Total	20.59333	20				

In this light, the null hypothesis is rejected and Schefe's test was used to determine where the difference is located.

while the F for two of the three paired groups appear close in values, 7.1225 and 4.9858, it is in the first pair that the value is more than the critical F value of 6.9336. Thus, the Less-than/Equal-to-Six Group differ with the More-than-Six/Less-than-Seven Age Group but not with the Equal-to/More-than-Seven Age Group.

Table 4.17 shows the results of Scheffe's test.

Table 4.17 Comparison of Means of the Achievement in Grade Five by Age Group

Group Pair	Mean Difference	Computed F	Tabular F	Interpretation
AG < 6 / 6 < AG < 7	1.30	9.586	6.936	Significant
AG < 6 / AG ≥ 7	1.10	7.1225	6.9336	Significant
5 , AG < 7 / AG ≥ 7	0.12	4.9858	6.9336	Not Significant

Grade VI. ANOVA results, shown in Table 4.18, for Grade VI showed a computed F-value of 1.706744 which is lower than the critical F-value of 3.466795 at 0.05 level of significance. This allows the acceptance of the null hypothesis, that there is no significant difference in the achievement of the three groups of pupils as far as the learning areas in Grade VI are concerned.

Table 4.18 Summary of ANOVA results for Achievement in Grade Six

ss	dF	MS	F	P-value	F crit
2.01	2	1.005	1.796744	0.190411	3.466795
11.74625	21	0.559345			
13.75625	23				
	2.01 11.74625	2.01 2 11.74625 21	2.01 2 1.005 11.74625 21 0.559345	2.01 2 1.005 1.796744 11.74625 21 0.559345	2.01 2 1.005 1.796744 0.190411 11.74625 21 0.559345

Across grade levels, therefore, the three groups of pupils significantly differ in achievement in Grades One, Two, Three, and Five. Scheffe's tests in these grade levels indicate that the group which differ the most in achievement level is that of the Lessthan/Equal-to-Six Age Group.

<u>Drop-out rate</u>. In determining the drop-out rates of pupils in the three age group categories, the total number of pupils in every grade level, shown in table

4.19, was considered. Thus in Grade One, the total number of pupils was 472. In Grade Two, total enrolment was 465. An increase in enrolment increased the number to 477 and in Grade Four, the total number of pupils was 480. Grade Five enrolment tallied at 487, and for school year 2000-2001, the total number of Grade Six enrollees was 487.

The drop-out rates for each grade level, except for Grade One, were computed using the formula being used by the Division (See Appendix J). Table 4.19 also shows the drop-out rates (dr) of each grade level.

Table 4.19 Enrollment and Drop Out rates by Grade Level

	AG <u>≺</u> 6	6 < AG <	7 AG	<u>></u> 7	TOTAL
	e dr	e d	r e	_ dr	Enrolment
Grade I	34	147	291		472
Grade II	34 O	142 3	.4 289	0.7	465
Grade III	32 5.9	153 2	.8 292	0.3	477
Grade IV	34 0	151 9	.8 295	1.0	480
Grade V	34 5.9	154 8	.6 299	2.0	487
Grade VI	34 5.9	154 1	0.4 299	3.3	487

To test the second hypothesis posed in the study, "Is there a significant relationship between the age of entry and the drop-out rates of the elementary pupils in the three age group categories?," the Pearson coefficient of correlation r was computed. Computations reveal r values of -0.12435, -0.91494, -0.21562, -

0.69602, and -0.55373 for Grades II, III, IV, V, and VI as against the ages of respondents. Table 4.20 shows the correlation between ages of entry and drop-out rates.

Using Calmorin's (1994:256) interpretation, the r values indicate that ages of entry and drop-out rates are moderately correlated in Grades V and VI, slightly correlated in Grade IV, very highly correlated in Grade III, and not correlated in Grade II.

Table 4.20 Correlation Analysis Between of Ages of Entry and Drop Out Rates

1 " 	GRADE	GRADE III	GRADE IV	GRADE V	GRADE VI
r _{sy}	-0.12435	-0.91494	-0.21562	-0.69602	-0.55373
Comp t	-0.63901	-11.5595	-1.12591	-4.94276	-3.39077
Interp	Not Signif	Significant	Not Signif	Significant	Significant

Tab t = 2.056, two-tailed df = 26 level of significance = 0.05

To determine if the obtained correlation is significant at 0.05 level of significance, Fisher's t-test was employed. Table 4.16 shows that correlation is significant in Grades III, V, and VI while computed t for grades II and IV indicated no significance.

The results indicate that in grades III, V, and VI, ages of entry determine drop-out rates. As the child grows older, his chances of dropping lessens.

This may be attributed to maturity and level of adjustment that the child makes as he grows older.

Repetition rate. To test the hypothesis "Is there a significant relationship between the age of entry and the repetition rates of the elementary pupils in the three age groups categories?,", the Pearson r was used.

Repetition rates for each grade level were computed using the formula used in the Division and correlated by Pearson r.

Table 4. 21 shows the repetition rates of the three groups of pupils for the different grade levels except Grade One. It also reflects the computed Fisher's t-test values for each grade level.

Table 4.21 Correlation Analysis Between of Ages of Entry and Repetition Rates

GRAD II	E GRADE	GRADE IV	GRADE V	GRADE . VI
_{*r} -0.923	77 -0.22186	-0.72315	-0.54005B	-0.54747
omp t -12.3	006 -1.16016	-5,33864	-3.27644	-3.33591
nterp Not Si	gnif Significa	nt Significa	nt Significa	nt Significant

Tab t = 2.056, two-tailed df = 26 level of significance = 0.05

Results of the Pearson r correlation reveal that ages of entry of the respondents and the repetition rates are moderately correlated in Grades IV, V and VI,

slightly correlated in Grade III, and highly correlated in Grade II.

The table also reveals t values of -12.3006, -1.16016, 5.33864, -3.27644, and -3.33591 for Grades II, III, IV, V, and VI, respectively. The values as compared to the critical t value of 2.056 indicate that the correlation is significant for Grades II, IV, V, and VI.

The results imply that older children tend not to repeat grade levels. They also imply that younger children are most likely to repeat grade levels. This may be attributed to maturity which hinders older children to go over the same grade level more than once.

Chapter 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter summarizes the significant findings of the study, the subsequent conclusions drawn in the light of the problems posed, and the relevant recommendations for future actions.

Summary of Findings

The following were the significant findings of the study:

- 1. As to age, 62.9% pupils composed the More-than/Equal-to-Seven Group, 30.1% belong to the More-than-Six/Less-than-Seven Group while the remaining 7.0% comprised the Equal-to/Less-than-Six Group.
- 2. Of the 459 pupils, 37.2% belong to families whose main source of income is fishing, 29.2% rely on farming, while 14.8% are into retail selling, 7.2% in laundry wash and 5.4% engaged in animal raising. The remaining families are into other means of livelihood that include carpentry, ambulant vending, dried fish selling, and government employment.

- 3. On the whole, the largest number of pupils (71.0%) come from families whose monthly income ranges from PhP 3,000 to PhP 5,000. This is followed by pupils whose families earn monthly incomes of between PhP 10,000 and PhP 15,000. Families of the third group earn incomes of between PhP 10,001 and PhP 15,000. The remaining pupils are evenly distributed in families whose monthly incomes are almost evenly distributed between those earning below PhP 3,000 and those earning above PhP 15,000 monthly.
- 4. Data under household size reveal that most of the pupils belong to the 6-to-8 member households comprising 45.8% of the pupils. This group is followed by 26.8% of the pupils who live in families of 9-to-11 members, another 21.1% belonging to the 3 to 5 members, while the rest (6.4%) have 12 or more members. The mean size is 7.3.
- 5. Nearly 54% of the pupils did not undergo day-care training. Most of them, around 86%, neither have attended kindergarten classes.
- 6. The average grades obtained by the Less-than/Equalto-Six Age Group in the seven learning areas vary from as low as 78.2% (in Grade I English) to as high

- as 81.7% (in Grade V GMRC). Across learning areas, the pupils exhibit a relatively high proficiency in GMRC with a mean grade of 80.4% and a relatively low proficiency in English with a mean grade of 77.8%. Except in English where the standard deviation is 3.53, the pupils under this age group displayed consistent performance in the remaining six learning areas where the standard deviations were found to be less than unity. On the other hand, across grade levels, the pupils performed relatively well in Grade IV with an average grade of 80.7% and relatively poor in Grade III with an average grade of 78.6%.
- 7. The average grades of the More-than-Six/Less-than-Seven Age Group in the seven learning areas range from as high as 83.0% (in Grades IV and V GMRC) to as low as 80.1% (in Grade II English). The group tends to excel in GMRC as evidenced by their mean which is grade of 82.48 contrary to their performance in English where they have a mean grade of 80.4%. Comparing their average grades grade levels, the pupils under this age group perform relatively well in Grade IV where they show

an average grade of 81.5%. Similar performances are observed in Grades III, IV and VI where they register an average common grade of 81.2%. As to deviation from the mean, the standard deviation values of their grades across learning areas and grade levels cluster near the mean indicating that their performance exhibits minimal variation in the all grade levels and learning areas.

- 8. The group exhibits a grade range of as low as 79.5% in Grade I Mathematics to as high as 83.2% in Grade V GMRC. The highest mean grade for the learning area is GMRC at 82.3% while the lowest is English at 80.1%. Across grade levels, the group's highest average grades are in Grades II and V at 81.4% while the lowest average grade is in Grade VI at 80.7%. As to deviation from the mean in the level of their performance, the pupils exhibited minimally varied performance across grade levels and across learning areas since the values of standard deviations are less than unity.
- 9. To test the first hypothesis posed in the study the One-Way Analysis of Variance (ANOVA) was employed. For the first grade level, ANOVA results indicate

that with a total of 20 degrees of freedom, the computed F value of 10.000987 is greater than the critical F value of 3.554561 at 0.05 level of significance leading to the rejection of the null hypothesis. Thus, the achievement levels of groups of pupils in the seven learning competencies in Grade One significantly differ from Results of the test for Grade Two each other. indicate a computed F-value of 9.358084 as against tabular 3.554561 value. This the led the rejection of the null hypothesis. Thus, the achievement levels in Grade Two of the three groups of pupils significantly vary. For Grade Three, the test revealed the same findings as in the first and second grades although the values appear closer to the critical F value of 7.112. The F-value of the first paired groups was 9.586 while the second paired groups revealed an F value of 7.791. Data for Grade Four were likewise subjected to ANOVA and results showed a computed value of 0.906366 is lower than the critical value of 3.466795 at 0.05 level of significance and dF of 23. Thus, the null hypothesis is accepted which implies that

achievement of the pupils from the three age groups in the different learning areas do not significantly differ from each other. Data for Grade Five were likewise subjected to ANOVA. Results were determined at 0.05 level of significance and dF of 23. The null hypothesis was accepted. This is no significant difference in the achievement levels of the three groups of pupils. This further implies that their achievement in the different learning areas do not significantly differ from each other. For Grade Six, data showed a computed F-value of 1.706744 which is lower than the critical F-value of 3.466795 at 0.05 level of significance. This allows the acceptance of the null hypothesis, that there is no significant difference in the achievement of the three groups of pupils as far as the learning areas in Grade VI are concerned. The drop-out rates for grade level, except for Grade One, were computed using the formula being used by the Division. Computations reveal r values that tend to indicate moderate correlation between drop-out rates age of entry in grades V and VI, slight

correlation in Grade IV and high correlation in Grade III. No correlation exists in Grade II.

10. In correlating age of entry and the repetition rates, the correlation r values revealed that ages of entry of the respondents and the repetition rates are moderately correlated in Grades IV, V and VI, slightly correlated in Grade III, and highly correlated in Grade III.

Conclusions

In the light of the foregoing findings, the following conclusions were drawn:

1. The less-than/equal-to-six year old enrollee is a female belonging to a family of 13 whose main source of income is fishing and earns an average of PhP 4,000 per month, and has not attended day-care training nor kindergarten classes; the more-than-six/less-than-seven year old enrollee is also a female belonging to a family of four whose main source of income is fishing and earns an average of PhP 4,000 per month, and has no day-care or kindergarten class experience; while the equal-to/more-than-seven year old enrollee is likewise a

female belonging to a family of seven whose main source of income is likewise fishing and earns an average of PhP 4,000 per month, and although she has attended day-care training, she does not have preschool experience.

- 2. As far as their achievement in the learning areas is concerned, the pupils in each age group exhibited uniform performance across grade levels and across learning areas as evidenced by minimum dispersions of the grades from the mean.
- differences 3. Significant noted among the are achievement of pupils in the Less-than/Equal-to-Six Age Group with pupils in the More-than-Six/Lessthan-Seven Age Group and with pupils in the Equal-These differences to/More-than-Seven Age Group. occur in Grades I, II, III, and to a lesser extent in Grade V. Remarkably, the levels of differences in achievement of pupils under the Less-than/Equal-to-Six Age Group with the rest of the pupils in the other two groups indicate periods of adjustment. By the fourth grade, they are able to keep at pace with the achievement of the rest of the pupils in class

- when no significant differences are detected in the achievement of all pupils.
- 4. As indicated by the results of this study, age of entry is a determinant of achievement differences in Grades I, II, III and V of pupils who enrolled as first graders during the school year 1995-1996.
- 5. Drop-out rates of pupils in Grades III, IV, V and VI are related to age of entry, while repetition rates of the pupils in Grades II, III, IV, V, and VI are related to age of entry. The results imply that as children grow older, their chances of dropping lessen, and that older children tend not to repeat grade levels while younger ones are most likely to repeat.

Recommendations

In view of the conclusions crystallized from the results and findings of the study, the following are earnestly recommended:

1. Pre-schooling among young rural pupils should be encouraged to prepare their attendance in formal schools. This will minimize the gap in the

- achievement of pupils with different age of entry as they progress through grade school.
- 2. Remedial classes should be introduced, especially in Grades I, II, and III to address the needs of younger pupils and facilitate the development of their innate coping/adjustment mechanisms.
- 3. A similar study should be conducted among urban pupils as regards their achievement levels and varying age of entry.
- 4. A study on the correlates of drop-out rates among grade schools pupils should be conducted to ascertain the factors that affect the incidence.

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APPENDICES

APPENDIX A

Republic of the Philippines SAMAR STATE POLYTECHNIC COLLEGE Cathelogen, Samer

April 18, 2000

The Dean Graduate Studies Samer State Polytechnic College Cathalogan, Samar

Sir:

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

- 1. AGE OF ENTRY AS DETERMENANT OF ACHIEVEMENT AMONG ELEMETARY GRADES: A COMPARATIVE STUDY.
- 2. THE RELATIONSHIP BETWEEN ECONOMIC STATUS AND JOB PERFOMANCE OF ELEM SCHOOL TEACHERS IN DARAM I DISTRICT.
- 3. INTENSIFIED VEGETABLES GARDENING IN DARAM I DISTICT: A MODEL FOR FAMILY INCOME AUGMENTATION.

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

Very truly yours,

JOSE NELSON M. LOZANO

Researcher

APPROVED:

RUSEBIO TERAÇOLOR, Ph. D.

Dean Graduate Studies

APPENDIX B

CGS Form 13

Republic of the Philippines
SAMAR STATE POLYTECHNIC COLEGE
Cathelogen, Samer

COLLEGE OF GRADUATE STUDIES

Assignment of Adviser

April 27,2000 Date

Thank you for your cooperation.

Very truly yours,

OO. O AL EUSEBIO TIPACOLOR, PL D. IDem

CONFORME:

JOSE LABRO, Ph. D.

APPENDIX C

Republic of the Philippines
SAMAR STATE POLYTECHNIC COLLEGE
Catbalogan, Samar

November 28, 2000

The SCHOOLS DIVISION SUPERINTENDENT DECS Division of Samar Cathalogan, Samar

Madam:

I am a graduate student of the Samar State Polytechnic College currently undertaking field research in connection with my thesis entitled "Age of Entry as Determinant of Achtevement in the Elementary Grades: A Comparative Study." In this regard, may I request permission to administer my survey questionnaire to and access the form 137-A records of selected elementary pupils in the ten complete elementary schools in the two school districts of Daram.

The study is envisioned to gather information which will serve as inputs for policy redirections, and any information coming from this endeavor will be treated with utmost confidentiality and used for scholastic and academic purposes.

Thanking you in anticipation of your whole-hearted support and favorable action on this matter, I

Truly yours,

JOSE NELSON M. LOZANO Graduate Researcher

NOTED:

EUSEBIO T/PACOLOR, Ph. D. Dean, Gradubje School

APPROVED:

THELMAC QUITALIG, Ph. D., 0050 by

DECS Division of Samer

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APPENDIX D

Republic of the Philippines SAMAR STATE POLYTECHNIC COLLEGE Catbalogan, Samar

GRADUATE STUDIES

Jan. 8, 2001

QUESTIONNAIRE (Mga Paki-ana)

Haiyo, Hinigugma ko nga Kag-anak,

Maupay nga adlaw ha iyol

An iyo ubos nga sangkay in usa yana nga estudyante han Graduate Studies (Masteral). Hine nga higayon, karuyag niya mahibarua-an in pipira nga importante nga impormasyon mahitungod hadton iyo anak nga nagtikang pag-eskwela hadton tuig 1995-1996, ine nga mga impormasyon in dako kaupay nga bulig ha iya gin-aadman. Salit, naglala-om an iyo ubos nga sangkay han iyo kooperasyon ug tambulig.

. Damo nga salamat!

JOSE NELSON M. LOZANO (Researcher)

,	•
1. Ngaran han Kag-anak:	•
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APPENDIX E

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Republic of the Philippines
DEPARTMENT OF EDUCATION, CULTURE AND SPORTS
UL Complex, Pasig, Metro Manila

September 16, 1994

DECS .O R D E R lo. 65, s. 1994

NATIONAL SCHOOL ENROLMENT DAY

'o: Undersecretaries
Assistant Secretaries
Bureau/Cultural Agency Directors
Directors of Services/Centers and Heads of Units
Regional Directors
Schools Superintendents
All Other Officials Concerned

To implement the Constitutional mandate on free and compulsory elementary education and to ensure the enrolment of children who shall have reached the age of six by the beginning of every schoolyear, a National School Enrolment Day for Grade I shall be held on the last Monday of January of every year, seginning on January 30, 1995.

- 2. School officials at all levels are instructed to take the necessary measures to implement this directive, including eliciting the support of local government units, community organizations and religious, social and civic groups in identifying prospective enroless.
 - The results of National School Enrolment Day shall be used as a basis for planning for the coming schoolyear with espect to the construction of additional classrooms and assignment of teachers. Data on expected number of Grade I woils shall be submitted to DECS Central Office within two weeks after the National School Enrolment Day.

Detailed guidelines for the implementation of National chool Enrolment Day will be issued shortly in a follow-up DECS rder.

Immediate dissemination of this Order is desired:

(SGD.) RICARDO T. GLORIA Secretary

ference: N o n e lotment: 1-2--(M.O. 1-87) be indicated in the <u>Perpetual Index</u> under the following subjects:

ADMISSION OR ENROLMENT AUREAUS & OFFICES OFFICIALS REPORTS STATISTICS (Data) GREATER THAN OR EQUAL TO SEVEN (A6' > 7)

	SCHOOLS	I	II	III.	IV	V	VI
1.	Central	81.41	1 81.2	80.69	79.11	78.42	
2.	Astorga	82.84	81.89	81.25	80.39	82.59	
3.	Baclayan ·	82.83	82.69	82.33	82.65	82.63	
4.	Bagacay	82.64	83.88	82.51	· 82:48	84.37	
5.	Parasan	81.25	81.87	81.06	80.80	80.67	
6.	Rizal	81.07	79.93	80.75	80.99	82.62	
7.	Bakhaw	.79.74	81.58	81.19	82.28	79.98	81.47
В.	Birawan .	82.4	81.49	B3'.23	80.73	80.69	80.39
9.	Calawan-an	79.61.	80.1	80.26	80.62	79.56	83.31
10.	Candugue	77.96	79.70	80.24	78.85	80.62	79.1
11.	Sua	79.96	79.99	79.55	78.71	79.04	. 79.35
	AVERAGE	81.12	81.31	81.21	80.69	81.29	80.72

MORE THAN SIX BUT LESS, THA SEVEN (6 < A6 < 7).

	SCHOOLS	· 1,	· II	III ·	IV ·	. V	. VI
1.	Central	81.86	· 81.86	81.88	81.68	83.59	
2.	λstorga	83.72	81.96	-80.93	81	81.67	
з.	Baclayan	82.03	B2.34	81:17	81.64	82.32	
4.	Bagacay	83.2	83.11	80.81	81.79	77.46	
5.	Parasan	81.61	81.16	81.40	80.83	81.14	
6.	Rizal .	82:34	82.05	82.21	82.73	84.53	
7.	Bakhaw .	81.4	82.16	82.6	83.54	81.41	81.33
8.	Birawan	80.50	· 81.07.	80.50	81.12	80.85	.80.45
9.	Calawan~an	78.13	78.59	79.28	80.25	81.23	83.15
10.	Candugue	79.07	79.64	81.64	78.75	82.18	79.75
11.	Sua ·	80.40	80.77	80.77	80.2	80.15	B0.3
	average	81.29	81.38	81.2	81.23	81.50	80.99

LESS THAN OR EQUAL TO SIX

*	SCHOOLS	I	II	III	IV	· v	· VI
1.	Central	80.23	81.02	79.43	80.71	81	•
2.	Astorga	0	· 0	0	0	0	
3.	Baclayan	78.46	.78.25	78.78	79.84	81.12	· · · · · ·
4.	Bagacay	80.07	'80.85·	81.10	80.68	B0.68	
5.	Parasan	76.85	76.28	76.42	76.87	78.75	
6.	Rizal '	79.07	80.21	81.07	81.19	82.01	
7.	Bakhaw '	79.52	82.61	82,66	83,62	81.25	81.54
8.	Birawan	77.85	79.85	81.85	83.75	81.12	81.25
9	Calawan-an .	78.42	77.99	79.9	80.37	81.49	84.12
10.	Candugue	7885	80.28	79.71	78.37	78.06	·. 77.68 :
11.	Sua, ·	77,23	78.38	78.90	·81.45	78.08	77.66
	AVERACE	78.65	-79.57	79.88	80.68	80.35	80.45

GRADE LEVEL	A6 > 6	6 > A6 > 7	; A6 < 7	AVERAGE
I	78.65	81.29	81.12	80.35
II	79.57	81.38	81.31	80.75
III	79.88	81.20	· 81.21	80.76
IV.	80.68	81.23	80.69	80.36
٧. V	80.35	81.50	81.29	81.04
· VI	80.45	80.99	80.72	80.72

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LEARNING AREA SUNCINC SUNCINC		•						•	-			90
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LEARNING AREA Fig. Substitution Substitutio				٠,								
EARNING AREA First			• .									
Column C			_			•		Anova: Sin	gie Factor	•		
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Source of Varia: SS		80.8	82	82.2	2	Column 3	. 7	569.7	81.38571	<u>0.431429</u>	_	
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Source of Varia: SS					•							
Source of Varia: SS						ANOVA	٠.		,			
Between G: 14.88381					Sor		22 1	· df	MS	F	P-value	F crit
Within Gro: 14.31429 18 0.795238 Total		•	•		300							
Total 29.1981 20 Total 29.1981 20 79.7 80.4 80.2 Anova: Single Factor 79 80.5 80.4 79.6 80.6 80.3 SUMMARY 81.3 82.3 82.8 Groups Count Sum Average Veriance 80.1 81.6 81.2 Column 1 7 559.4 79.91429 0.498095 80 81.7 81.3 Column 2 7 568.5 81.21429 0.524762 79.7 81.4 81.4 Column 3 7 567.6 81.08571 0.828095 ANOVA Source of Verit SS df MS F P-value F crit Between C 7.18381 2 3.591905 5.821713 0.011223 3.55456											0.001030	3.334301
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79.6 80.6 80.3 SUMMARY 81.3 82.3 82.8 Groups Count Sum Average Variance 80.1 81.6 81.2 Column 1 7 559.4 79.91429 0.498095 80 81.7 81.3 Column 2 7 568.5 81.21429 0.524762 79.7 81.4 81.4 Column 3 7 567.6 81.08571 0.828095 ANOVA Source of Varia SS df MS F P-value F crit Between © 7.18381 2 3.591905 5.821713 0.011223 3.55456								•	,			
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ANOVA Source of Veris SS df MS F P-value F-crit Between C 7.18381 2 3.591905 5.821713 0.011223 3.55456 Within Gro 11.10571 18 0.616984		80	81.7	81.3	3	Column 2	7	568.5	81.21429	0.524762		
ANOVA Source of Veris SS df MS F P-value F-crit Between C 7.18381 2 3.591905 5.821713 0.011223 3.55456 Within Gro 11.10571 18 0.616984		79.7	81.4			Column 3	7	567.6	81.08571	0.828095	<u>i</u>	•
Source of Verit SS df MS F P-velue F-crit Between C 7.18381 2 3.591905 5.821713 0.011223 3.55458 Within Gro 11.10571 18 0.616984				-							-	
Source of Verit SS df MS F P-velue F-crit Between C 7.18381 2 3.591905 5.821713 0.011223 3.55458 Within Gro 11.10571 18 0.616984						ANOVA		•				1 .
Between C 7.18381 2 3.591905 5.821713 0.011223 3.55456 Within Gro 11.10571 18 0.616984							66	, HE	MC	Ē	Puelus	E aris
Within Gro 11.10571 18 0.616984					2011							
·	~ . -	•								0.021713	0.011223	J.004001
Total 18.28952 20						within Gro	11.10571	. 18	U.616984			
Total 18.28952 20								-				
						Total	18.28952	20		_		
					•							

										•	
	80.1	80.4	79.7	SUMM	<u>ARY</u>	•					
	80	80.5	79.7	Grou	os	Count	Sum	Average	Variance		
	79.6	80.4	80	Colum	າ 1	8	645.5	80.6875	0.664107		
	82.2	83	82.6	Colum	12	8	649.9	81.2375	0.79125		
	80.7	81.6	80.8	Colum	1 3	8	646	80.75	0.945714		
	80.7	80.9	81.1			-		•	•		
	81.2	81.4	80.8								
	81	81.7	81.3	ANOV	Α			٠			
				Source of	/arit	SS	_df	MS		P-value	Fcrit
						1.450833			0.906366	0.419219	3.466795
				Within	Gro	16.8075	21	0.800357		•	
			, •	Total		18.25833_	23	•			
٧	₹										·
	79.8	80.7	80.4	. Апоча	: Sing	le Factor					
	79.2	80:5	81								
	79.9	81.2	80.9	SUMN	IARY	•	•.			i	
	81.8	83	83.2	Grou	ps	Count	Sum	Average	Variance		
	80.5	81.3	81.1	Colum	n 1	8	-643.4	80.425	.0.770714		
	79.9	81.1	80.8	Colum	n 2	8	651.7	81.4625	0.659821		
	81.2	82.1	81.8	Colum	n 3	8	650.9	81.3625	0.762679		
	81.1	81.8	81.7								
				ANOV		· · · <u></u>	•				,
				Source of	vant	SS	df	MS	F	P-velue	F crit
				Between	en G	5.240833	2	2.620417	3.584351	0.045788	3.466795
				Withir				0.731071			
		•		Total		20.59333	23	· . .		. <u>.</u>	
VI	•								•		
VI	79.4 80.5	80.1 80.4	80.1 80.6	Anova	: Sin	gle Factor					
						_					
	79.8	80.7	79.9	SUM	/AR	′					
	79.9 81.4	80.7 83.1			IAR\		Sum	Average	Variance	•	_
			79.9 81.3 81	Grou	ips_	Count 8	Sum 644.5	Average 80.5625	Variance 0.545536	•	•
	81.4	83.1	81.3	Gro	<i>ips</i> រា 1	Count	Sum 644.5 649.9	80.5625	Variance 0.545536 0.865536	•	•
	81.4 · 81.4	83.1 81.1	81.3 81	Grou	ips in 1 in 2	Count 8	644.5 649.9	80.5625 81.2375	0.545536 0.865536		•
	81.4 · 81.4 81.2	83.1 81.1 81.7	81.3 81 80.9	Grod Colum Colum	ips in 1 in 2	. Count 8	644.5	80.5625 81.2375	0.545536		
	81.4 · 81.4 81.2 80.6	83.1 81.1 81.7 81.3	81.3 81 80.9 80.6	Grod Colum Colum	ips in 1 in 2 in 3	. Count 8	644.5 649.9	80.5625 81.2375	0.545536 0.865536		
	81.4 · 81.4 81.2 80.6	83.1 81.1 81.7 81.3	81.3 81 80.9 80.6	Grou Colun Colun Colun	ips in 1 in 2 in 3	Count 8 8 8	644.5 649.9 845.7	80.5625 81.2375 80.7125	0.545536 0.865536		Ferit
	81.4 · 81.4 81.2 80.6	83.1 81.1 81.7 81.3	81.3 81 80.9 80.6	Ground Column Column Column ANO\ Source of Between	ips in 1 in 2 in 3 Vari	Count 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	644.5 649.9 845.7 df	80.5625 81.2375 80.7125 - MS 1.005	0.545536 0.865536 0.266964 F 1.796744	P-value	
	81.4 · 81.4 81.2 80.6	83.1 81.1 81.7 81.3	81.3 81 80.9 80.6	Ground Column Column Column ANO\ Source of Between	ips in 1 in 2 in 3 Vari	Count 8 8 8 8	644.5 649.9 845.7 df	80.5625 81.2375 80.7125	0.545536 0.865536 0.266964 F 1.796744	P-value	

-_

APPENDIX I

SCHEFFE'S TEST

GRADE I - GROUP AB

GROUP AC

1/2

$$F = \frac{(79.11 - 81.3)^2}{0.917 (14) / 49}$$

$$F = \frac{4.796}{0.262}$$

$$F = 18.31$$

$$F = 0.917 (14) / 49$$

$$= \frac{2.8561}{0.262}$$

$$F = 10.90$$

GROUP BC

at 0.05 level significance

$$F = \frac{(81.3 - 80.8)^2}{0.262}$$

F = 0.954

=7.108

GRADE II GROUP AB

GROUP AC

$$F = \frac{(79.856 - 81.35)^2}{0.795(14)/49}$$

$$F = (79.5801 - 81.386)$$
0.22714

$$P = 3.24$$
0.22714

$$F = 14.264$$

GROUP BC

2/3

$$F = \frac{(81.357 - 81.386)^2}{0.22714}$$

$$F = 0.0037$$

: :

GRADE III GROUP AB

1/2

$$F = \frac{(79.914 - 81.214)^2}{0.616984 (14)/49}$$

$$= 1.69$$
 0.1763

F = 9.586

GROUP AC

1/3

F=7.791

at 0.05 L.S.

(K-1)(Ferit)

(K-1)(**E**prit)

(3-1)(3.556)

. = 7.112

2/3

$$F = \frac{(81.214 - 81.086)^2}{0.1763}$$
$$= 0.093$$

- GRADE V GROUP AB

··.

$$F = \frac{(80.425 - 81.4625)}{(16)/64}$$

GROUP AC

=0.8789062 = 4.80887

APPENDIX J

DROP-OUT RATE

DR Gr. X = $\frac{\text{Gr. (X-1) enroll } \text{SYN} - 1}{\text{Gr. (X-1) enrol } \text{SYN} - 1} * 100}$ $\frac{\text{Gr. (X-1) enrol } \text{SYN} - 1}{\text{SYN} - 1}$

GRADE LEVEL		AGE CATEGORY	
	A6>6	6 <a6<7< td=""><td>A6 > 7</td></a6<7<>	A6 > 7
Grade II	0	147 – (142 – 0) 147	
:	. = 0	= 3.4	= 0.7
	34 - (34 - 2).	142 – (153-15)	289 – (291-3)
Grade III	$ \begin{array}{r} 34 \\ = 5.9 \end{array} $	$ \begin{array}{r} 142 \\ \hline 142 \\ = 2.8 \end{array} $	289 = 0.3
Grade IV	$ \begin{array}{r} 32 - (34-2) \\ \hline 32 \\ = 0 \end{array} $	1 53 - (151-13) 53 = 9.8	292 (295-6) 292 = 1.0
Grade V	34 - (34 - 2) 34 = 5.9	151 - (154 -16) 151 = 8.6	295 - (295 - 6) 295 = 2.0
Grade VI	$ \begin{array}{r} 34 - (34-2) \\ \hline 34 \\ = 5.9 \end{array} $	154 - (154 -16) 154 = 10.4	299 - (299 - 10) 299 = 3.3

APPENDIX K

REPETITION RATE

	·		
GRADE LEVEL		AGE CATEGORY	
	A6>6	6 <a6<7< td=""><td>A6>7</td></a6<7<>	A6>7
Grade II	RR ₂ = 2 * 100 34 = 5.9	RR ₂ = 4 * 100 147 = 2.7 .	RR ₂ = 0 * 100 291 = 0
Grade III	$RR_2 = \underbrace{0}_{34} * 100$ $= 0$	$RR_2 = 15 100$ $= 10.6$	$RR_2 = 3 $
Grade IV.	$RR_2 = \frac{2}{32} * 100$ $= 6.2$	$RR_2 = 13 * 100$ $= 8.5$	$RR_2 = 6 *100$ $= 2.05$
Grade V	RR ₂ = 2 * 100 34 = 5.9	RR ₂ = <u>16</u> *100 · 151 = 10.6	RR ₂ = 10 * 100 295 -=3.4
Grade VI	$RR_2 = \frac{2}{34} *100$ = 5.9	RR ₂ = 16 * 100 154 = 10.4	$RR_2 = \frac{10}{299} * 100$ = 3.3

Repetition Rate

			Year Level			
AGE	. 11 .	III (IV	V	VI	
5.5	5.4	. 0	6.2	5.9	5.9	
5.6	5.4	0	6.2	5.8	5.9	
5.7	5.4	0	6.2	5.9	5.9	
5.8	5.4	0	6.2	5.9	5.9	
5.9	5,4	0	6.2	5.9	5.9	
8	5.4	0	6.2	5.9	5.9 .	
6.1	2.7	10.6	8.5	10.6	10.4	
6.2	2.7	10.6	8.5	10.6	10.4	
6.3	2,7	10.6	8.5	10.6	10.4	
6.4	2.7	10.6	8.5	10.6	10.4	
6.5	2.7	10.6	8.5	10.6	10.4	
8.8	2:7	10.8	8.5	10.6	10.4	
6.7	2.7	10_6	8.5	10.6	10.4	
8.8	2.7	10.6	8.5	10.6	10.4	
6.9	2.7	. 10.6	8.5	10.8	10.4	
7	· 2.7	10.6	8.5	10.6	10.4	
7.1	0	1	2,1	3.4	3.4	
7.2	0	1	2.1	. 3.4	3.4	
7.3	0	1	2.1	3.4	3.4	
7.5	0	. 1	2.1	3.4	3.4	
7.6	0	1	2.1	3.4	3.4	
7.7 .	. 0	. 1	2.1	3.4	3.4	
7.8	. 0	1	2.1	3.4	3.4	
7.9	0	1	2.1	3.4	3.4	
٠ . 8	0	1	2.1	3.4	3.4	
8.1	0	. 1	. 2.1	3.4	3.4	
8.2	0	1	2.1	3.4	3.4	
8.3	0	1	2.1	3.4	3.4	
•	-0.92377	-0.22186	-0.72315	-0.54058	-0.54747	
/ N-2	5.09902	5.09902	5.09902	5.09902	5.09902	
V N -2	-4.71034	-1.13125	-3.68735	-2.75644	-2.79157	
-value	-12.3006	-1.16016		-3.27644	-3.33591	
xr	0.853359	0,04922		0.29223	0.299726	
1-nxr	0.146641		0.477055	0.70777	0.700274	
/ 1-rxr .	0.382938	0.975079		0.841291	0.836824	
:-tabular =	.2.056 (two	o-tailed)	a =.05			

APPENDIX M

					• •
5.5	. 0	5.9	0	5.9	5.9
5.6	0	5,8	0	5.9	5.9
5.7	0	5.9	0	5.9	5.9
5.8	0	5.9	0	5.9	5.9
5.9	Û	5.9	0	5.9	5.9
6	0.	5.9	0	5.9	5.9
6.1	3.4	2.8	9.8	8.6	10.4
6.2	3.4	2.8	9.8	8.8	10.4
6.3	3.4	2.8	9.8	8.8	10.4
8.4	3.4	2.8	9.8	8.6	10.4
6.5	3.4	2.8	9.8	8.6	10.4
6.8	3.4	2.8	8.8	8.6	10.4
6.7	3.4	2.8	9.8	8.6	10.4
6.8	3.4	2.8	9.8	8.6	10.4
6.9	3.4	2.8	9.8	8.6	10.4
7	3.4	2.8	8.8	8.6	10.4
7.1	0.7	0.3	· i	2	3.3 *
7.2	0.7	0.3	1	2	3.3
7.3	0.7	0.3	. 1	2	3.3
7.5	0.7	0.3	1	2 2 2	3.3
7.6	0.7	0.3	1	2	3.3
7.7	0.7	0.3	1	Ź	3.3
. 7.8	0.7	0.3	1	. 2	3.3
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CURRICULUM VITAE

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Daram, Samar, 1980-1986

Secondary : Samar National School

Catbalogan, Samar 1986-1989

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Catbalogan, Samar, 1993-1994

Degree Earned : Bachelor of Science in

Industrial Education (BSIE)

Major : Industrial Arts

Graduate : Samar State Polytechnic College

Catbalogan, Samar, 2000-date

Degree Pursued : Master of Arts in Education

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Professional Board Examination for Teachers, Catbalogan, Samar September 27, 1993, 71.85%

Police Officer I, Catbalogan, Samar, 81%

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BTC Training Boy Scout of the Phils., San Jose de Buan, Samar

Bio-Intensive Gardening (BIG), Pinabacdao National High School, Pinabacdao, Samar, February 17-18, 1995

Seminar on Technology and Home Economics, A Challenge to Year: 2000, Samar State Polytechnic College, Catbalogan, Samar. February 27, 1993

Seminar on Home Economics and Livelihood Education, Mercedes Elementary School, Catbalogan, Samar. March 13, 1996

Three in one Activity Orientation, Symposium and Induction of Class I Consumer Group Officers, Hotel Maqueda Bay, Catbalogan, Samar. November 19-21, 1998

Orientation Workshop on the Regular Annual Collection Processing of Basic Education Data, Redaja Hall, DECS, Division Office, Catbalogan, Samar. January 7-8, 1998

Reading Education Training Program, Daram I Central Elementary School, Daram, Samar. August 3-5, 2000

Re-echo Seminar Workshop on Elementary Mathematics, Daram I Central Elementary School, Daram, Samar September 21-22, 2000

Division Training Seminar in Teaching Geography, Redaja Hall, Catbalogan, Samar. January 24-26, 2001

RECOGNITION/ACHIEVEMENTS

Certificate of Recognition for his meritorious and commendable Achievements Garnered which immeasurably helped in the Development of the Education Upliftment of the School Children in the District of Daram I.

December 5, 1997

Certificate of Recognition of his outstanding services for having dedicated all his efforts in pursuance of the Vision and Mission of the DECS in the Division of Samar through his uncompressing attitude toward his duties and responsibilities bolstering the implementation of all DECS program and projects, Daram Central Elementary School, Daram, Samar December 21, 1999

Certificate of Recognition of his outstanding services and dedication of all efforts in pursuance of the vision and mission of the DECS in the Division of Samar through his uncompromising attitude toward his duties and responsibilities bolstering the implementation of all curricular programs, projects and activities, and contributing to the top performance of Samar Division in the National Elementary Achievement Test (NEAT) for the SY 1999-2000. Redaja Hall, DECS, Division Office, Catbalogan, Samar August 14, 2000

Certificate of Appreciation for his invaluable involvement in the successful conduct of the study: Teaching Effectiveness of Mathematics and Science Teachers in Public Elementary and Secondary Schools, Pasig, City
November 6, 2000

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