

**READING CAPACITY LEVELS OF SAMAR STATE COLLEGE OF  
AGRICULTURE AND FORESTRY SOCIAL SCIENCE  
STUDENTS AND READING DIFFICULTY  
LEVEL OF TEXTBOOKS**

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## APPROVAL SHEET

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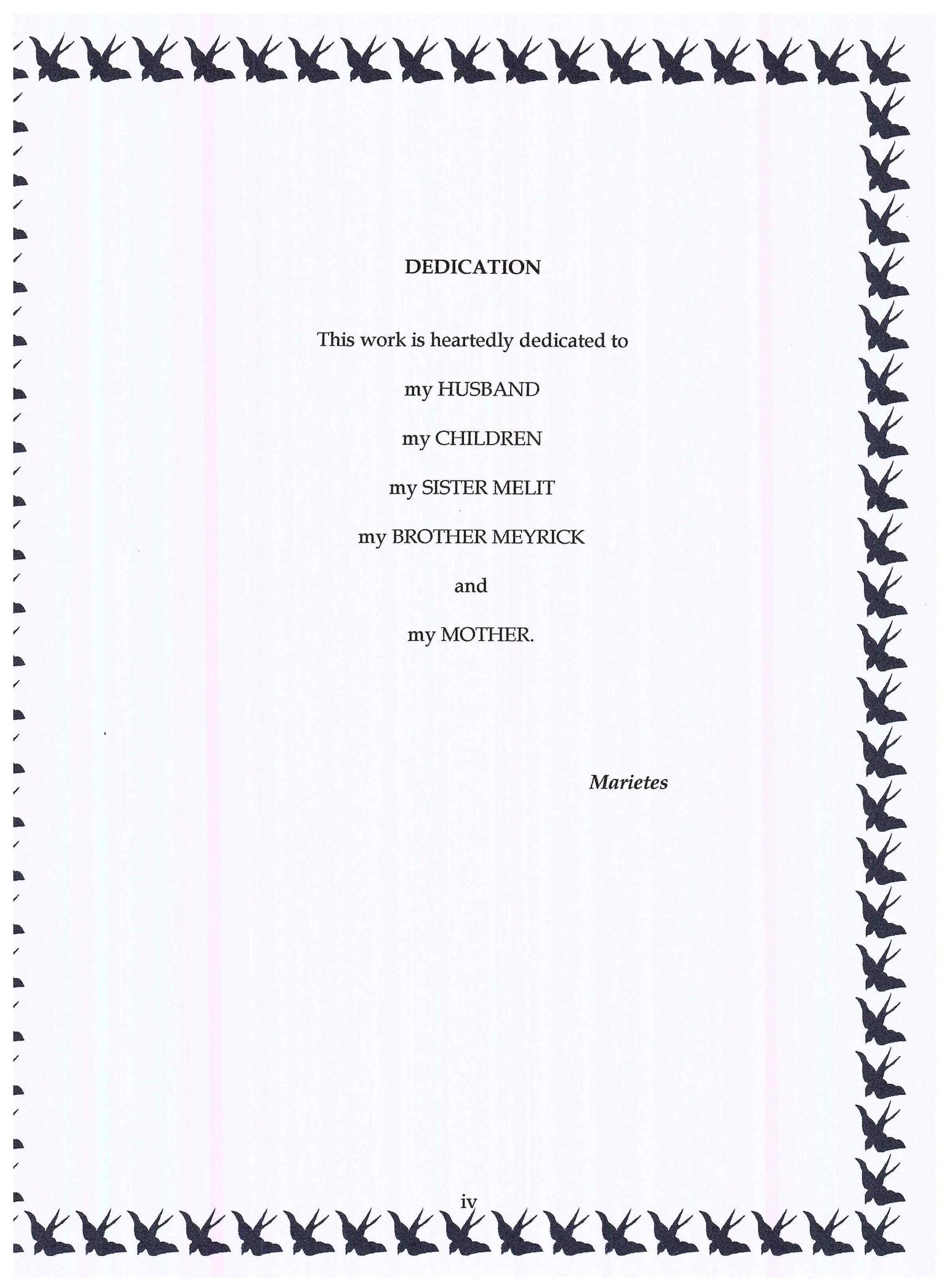
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**Marietes N. Beduya**  
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## DEDICATION

This work is heartedly dedicated to  
my HUSBAND  
my CHILDREN  
my SISTER MELIT  
my BROTHER MEYRICK  
and  
my MOTHER.

*Marietes*

## ABSTRACT

This study determined the reading grade capacity level of SSCAF Social Science college students for the school year 2007-2008 in relation to the readability index (difficulty level) of printed materials and textbooks used in Social Science. The study used the descriptive-correlational design. Descriptive study was to determine which of the different variables were related to each other and done within the context of a natural situation, which was investigated. The average reading grade capacity level of the variates of sex was shown to have significant relationship in an inverse/low position since the computed p-value of 0.010 is lesser than the significant level 0.05, two tailed at  $df=196$ .  $H_0$  which states that there is no significant relationship between the variates of sex and their reading grade capacity level is accepted. The reading capacity level of SSCAF students is assessed and the reading difficulty level of reading materials is according to students' reading capacity level for the good and effective teaching-learning situation. There is a need for a training seminar on paraphrasing texts and other reading materials to cater to the reading capacities of students for better teaching-learning results. Students' entry selection for a degree course be more strict- to at least accept an average reading performer according to what is expected from a college student.

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## Chapter 1

### THE PROBLEM AND ITS SETTING

#### Introduction

It has been suggested by Braid, et al. (1998: 150-167) that there is a need for an early planning and study for child survival, protection, participation, and development for children's adulthood by year 2020. Eight areas were identified to need this proper planning and study, and among these are 'education and Literacy'. Braid and Tuazon (1998: 229) offered various programs/policy options and one of their specific offered suggestions is the need of appropriate education and training of our youth.

All these forces for changes imply, by inference, that they shall influence education and literacy, since the culture of competition, entrepreneurship, business management and globalization of economic forces will be reflected in the curricular programs of the educational systems; high tech learning will replace the traditional method in the classroom. Distance education for basic, as well as, continuing learning will become more and more available to people from all walks of life; business and management schools will develop the analytical mind, providing skills that enable managers and policy-makers to look at the larger picture and to understand the socio-political matrix.

There is reason to believe that the plan of action for implementing the World Declaration of Survival, Protection and Development of Children will

reach out to ASEAN, the world community and the global villages as indicators for access and equity; two important dimensions of education for all.

Since education is the major factor in personal and socio-economic development, it is necessary that education and literacy targets shall have been met by 2020, via acquisition of quality education due to the production of a work force that are skilled both in technology and the academe. This target however, can be attained, only if there is quality comprehension of concepts expressed in the learning materials made available based on the needs of the reading capacities of learners, and the methods and approaches used during the teaching/training-learning process.

Everybody is learning to read all the time and this skill is a necessity to attain literacy, and this demands the process of "learning to read".

Reading in real life explained by Richardson (1992: vii) as cited by Hermosa (2002: vii) is an understanding of relevant language and bringing meaning to the printed word. It is a long distance communication between writer and reader through the text. If one could not bring meaning to the printed symbol, even if he can sound them, he is but barking at prints or just word calling.

In some cases, readers may not have the appropriate schemata. They simply cannot understand the concept being communicated because of lack of reading skills to handle the readability level of a reading material.

Due to the conditions mentioned above, this study was conceived with the intention of being able to participate in a small way, in the quest to attain the goal for our youth by year 2020.

At Samar State College of Agriculture and Forestry, college students in social Science has been commonly observed by the researcher and fellow instructors, to usually miss the concepts of lessons found in textbooks and references assigned to them, for reports or discussions (see attached sample copy of teacher's class record of quizzes, graded recitation, etc. The researcher chose to investigate the factor(s) that may cause this show of poor comprehension focused on the level of students' reading grade (with reading age equivalent capacities) in relation with the readability index (difficulty level) of the available textbooks and references for Social Science subjects in all curricular courses of SSCAF.

The Social Science students of Samar State College of Agriculture and Forestry shows poor reading comprehension as shown by their class performance, their quiz results and in their participations during class discussions, not to mention the common teacher observation of their responses to assignments and given questions for discussions.

It is then necessary, to assess the level of reading grades (with reading age equivalent capacities) of these students and the reading difficulty levels (readability index) of available school social science reading materials, to be able to point out as to whether there is a mismatch of learners' reading capacities and difficulty levels of reading materials at hand. If successful, teachers shall be able

to improve school situation in terms of library materials and textbooks, and then be able to come up with better matching of readers' reading capacities with the printed difficulty level of available reading materials and those to be acquired; we may come up with social scientists, who may help solve our social problems this present days.

### **Statement of the Problem**

This study determined the reading grade capacity level of SSCAF Social Science, college students for school year 2007-2008 in relation to the readability index (difficulty level) of printed materials and textbooks used in Social Science.

Specifically, it sought to answer the following questions:

1. What is the profile of the student-respondents in terms of:
  - 1.1 age group;
  - 1.2 sex, and
  - 1.3 academic year level?
2. What is the average reading grade capacity level of the student-respondents according to:
  - 2.1 age group;
  - 2.2 sex, and
  - 2.3 academic year level?
3. What is the reading speed and accuracy of the respondents according to:

- 3.1 age group;
- 3.2 sex, and
- 3.3 academic year level?

4. Are there significant differences in the average reading grade capacity levels of the student-respondents based on the following:

- 4.1 age group;
- 4.2 sex, and
- 4.3 academic year level?

5. What are the reading grade retardation of the student-respondents based on the following:

- 5.1 age group;
- 5.2 sex, and
- 5.3 academic year level?

6. What are the reading difficulty index (reading difficulty level) of the materials available for social science reading in the SSCAF library and those textbooks used by teachers?

7. Is there a significant relationship between the reading grade levels of the student-respondents and the reading difficulty index of the available social science printed reading materials/textbooks as per the following:

- 7.1 age;
- 7.2 sex, and
- 7.3 academic year level?

8. Which reading material available at the SSCAF library is difficult to read by the student-respondents?

9. What implications for instructional redirection can be derived from the findings of the study?

### Hypotheses

Based on the problem and questions raised, this study advanced and tested the following hypotheses.

1. There are no significant differences in the average reading grade capacity levels of the student-respondents based on the following:

1.1 age;

1.2 sex, and

1.3 academic year level.

2. There is no significant relationships between the reading grade capacity levels of student-respondents and the difficulty index of available social science printed reading materials/textbooks as per

2.1 age;

2.2 sex, and

2.3 academic year level.

### Theoretical Framework

This study is based on the theory of Thorndike on the Law of Readiness, stating that learning is dependent upon the learner's readiness to act, which

facilitates the strengthening of the bond between stimulus and response. Thus, an athlete or any learner who is highly motivated and eager to learn is more receptive to learning than one who is poorly motivated ([www.ans.com/topic/law-of-readiness](http://www.ans.com/topic/law-of-readiness): Oxford Dictionary Kent 2007). Lefrancois, (2000) explains these theories of Thorndike, stating that the law of effect is responses prior to a satisfying state of affairs are more likely to be repeated. Responses just prior to an annoying state of affairs are more likely not to be repeated. The law of exercise he explains as bonds between stimuli and responses which are strengthened through being exercised frequently, recently and vigorously. He also explains the law of readiness as certain behaviors that are likely to be learned than others are. When a conduction unit is ready to conduct... to do so is satisfying and not to do so is annoying... When a conduction unit is not ready to conduct being forced to do so is annoying. He mentioned Thorndike to say that when someone or something is in a situation and are forced to respond which lead to a solution, a connection is formed between the two. The learning of this connection was phrased "stamping in" by Thorndike.

Schultz (1981) said that Thorndike focused on behavior rather than consciousness to explain how 'stamping in' occurred. To study behavior, he said, it had to be broken down to a simple element called stimulus-response units. These elements of behavior became the composites of more complex behaviors and thus the above mentioned laws relate to different aspects of stamping in behaviors.

This theory is reinforced by the statement of Gilliland (1972:3), stating that the readability of a material is a primary concern in a basic problem of people who choose books for their own use, or for others to use. This he said, is a problem of matching individuals' interest and reading skills, with the range of difficulty index of books and other reading materials which differ widely in content, style and complexity. What must be look into, is the extent to which a book can be read with profit since this will determine largely by the way in which the two sides are matched.

Gilliland explains that a person who is a competent reader may soon be deterred from reading if his choice is restricted to simple repetitive texts. Similarly, a person with limited reading ability will soon become discouraged if he is given texts which are beyond his comprehension.

Gilliland explained further, that in choosing books for oneself, the reader will be influenced not only by his range of interests but also by the way in which the book have been written. This is so, he said, because books which look "wordy" or complicated maybe avoided even if the content and style might be acceptable on closer examination. In this matching type many other people aside from the reader are involved.

This matching of reader and text is called "readability". This term has to do with interest or the ease with which a book can be read.

It is with the above theories and expressed ideas and citations that this study was conceived as presented in the conceptual frame of the study.

## Conceptual Framework

The conceptual framework outlined by illustration, shows the start of the study and identification of the subjects of the investigation:- the social science college students in Samar State College of Agriculture and Forestry.

To get the answer to the questions on the subjects' present reading grade capacities, Gates Reading Survey Test was conducted. Lorge Readability Formula on Difficulty Estimate of reading materials was applied on the social science reading materials.

Gates Test that was conducted showed the reading grade capacity levels of student – respondents, who were grouped by academic grade level, by sex, and by age.

The result determined, evaluated and was computed for their mean differences between academic year levels, sex, and age groups; then correlated with the readability index (difficulty level) of the social science materials, textbooks and references available at SSCAF.

Based from the result of the study the researcher made an analysis and interpretation of the findings and came up with some recommendations and suggestions as implied by the findings of the study both for securing and producing of appropriate materials for the reading grade capacity levels of Social Science college students of SSCAF, and for producing right reading remedial to improve the reading skills of concerned students via content area subjects, (ex.

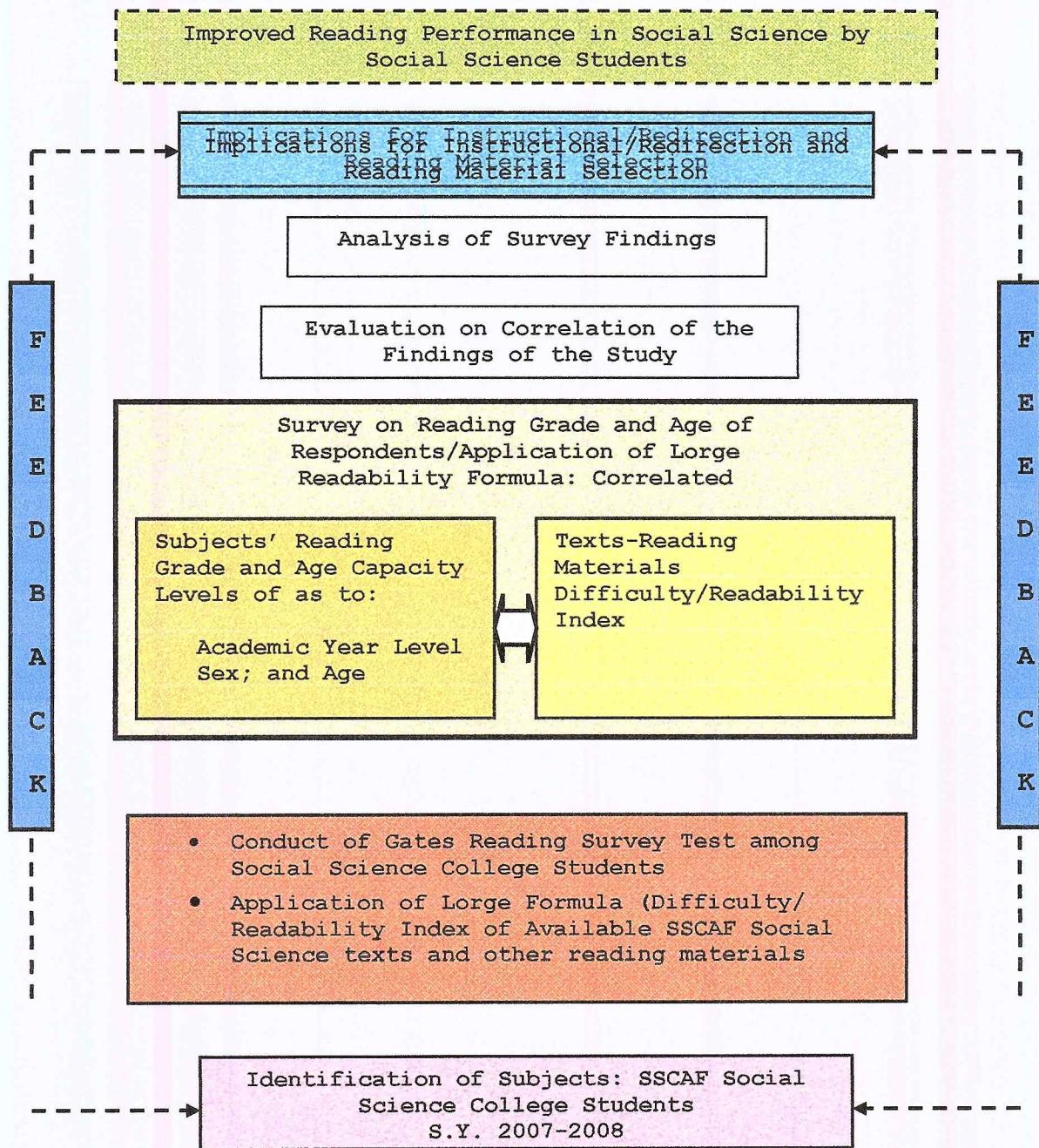


Figure 1: The Conceptual Framework of the Study

social science). As suggested by the broken line from the implications for instructional redirection back to the student respondents, the result suggests the need to make available teaching printed materials that are within the reading grade and reading age capacity of the students (specific in this study, Social Science content subject materials), by academic year level, sex, age, With consideration of the readability index of the Social Science reading materials available.

The same result shows that from the result of the Gates Test and material evaluation, some recommendations and suggestions were formed intended for the improvement and procurement of appropriate reading materials for the reading grade capacity levels of the social science students.

These recommendations and suggestions must be based and geared to answer the reading needs of the concerned students, as implied by the result of this study.

In broken line, the study points to the expectations from the Social Science students after all the recommendations and suggestions have been tried and complied with.

### **Significance of the Study**

The result of this study would provide basic information that would guide those concerned to balance and fit the difficulty of the reading materials with the reading grade and age capacities of their readers.

To students. The result of this study shall give them the opportunity to learn easily with materials within their capacity levels, and they will save time searching for references they could understand due to their knowledge of their own reading capacities supported by the existence of leveled materials in their library.

To the faculty. (Reading and other content area teachers). The result of the study will serve as guide in their planning, preparation and writing of materials for an easy and successful learning of the same students.

To the administrators of schools. The result of this study shall serve as their guide in the procurement of reading materials for every specific year level of users of particular reading materials for pleasurable and successful classroom reading experiences. This will also guide them on what to consider during purchase of books for students.

To the school librarians. The school librarians can join hands in the necessary leveling of the library resources, to make it easy for the students to find the references that are within their reading grade capacities. The librarians and instructors can guide them where to go and which book to read if resources are leveled according to reading difficulties.

To the writers of Social Science (or even of other content subjects) printed materials. The result of this study shall remind them OF the importance of matching the reading grade and reading age capacity levels of the target readers with the difficulty index of the material to be printed.

To the publication companies. The result of this study shall serve as an input for the improvement of books for publications by taking in consideration the average reading grade capacity level of the target users of the book by adjusting the readability index (difficulty level), of the material insuring therefore the relevance by difficulty to the capacity levels of target users. This shall insure successful reading of the material.

To the future researchers. The result of this study can serve as reference in the assessment of reading material difficulties and evaluation of reading capacities of individuals or group learners.

### Scope and Delimitation

This study investigated the reading capacity level of SSCAF college students (in Social Science) and further evaluated the reading readability index (difficulty index) of social science printed reading materials textbooks and other references in the library for college students. This investigation covered only social science college students of Samar State College of Agriculture and Forestry at San Jorge, Samar, who were enrolled during the school year 2007-2008.

This was conducted during the school year 2007-2008 in SSCAF, San Jorge, Samar.

### Definition of Terms

For a clearer understanding on the terms used in this study, the following words and phrases are defined.

Accuracy test. This refers to the percentage of the correct answer in a test, in speed test, and the grade score for speed of reading and rating taken from Gates standardized table (Gates, 1958: 2). Operationally this refers to number of correct answers in the speed and accuracy test by Gates Standardized test used in this study.

Actual age. This refers to the child's chronological age (Gates, 1958: 1). Operationally this refers to the present age of the learner since his birth.

Actual grade level. This refers to the real grade where a learner is presently enrolled regardless of age (Gates, 1958:1). Operationally this refers to the school grade level where the child belongs at present.

Comprehension test. Refers to the measurement to indicate how complex and difficult a passage the pupil can comprehend with reasonable thoroughness (Gates, 1958: 2). Operationally this refers to Gates test administered among the respondents, to get the level of reading grade and reading age capacity of respondents in reading comprehension.

Curriculum. This refers to a course of study, especially at a school or college (The New Webster's Dictionary of English Language, 2004:236).

Diagnosis. This relates to the techniques by which one discovers and evaluates both strengths and weaknesses of the individual as a basis for more effective guidance (Smith and Dechant, 1961:408-420). Operationally this refers to the Gates test used to find the level of the reading grade and reading age of the respondents in this study.

Difficulty index/readability index. This indicates the reading material to be difficult for a particular grade level. It maybe thought of in terms of placement of the material as within the reading comprehension of a particular average child at a particular grade level, but difficult to an average child in a lower grade, but easy to an average child at a particular higher grade level (Lorge, Erving, 1971).

Operationally adapted from the Lorge Definition in this study.

Educational diagnosis. This is a basis of intelligent teaching. Its function is to facilitate the optimum development of every pupil (Smith and Dechant, 1961:409).

Gates Reading Survey test. This refers to a standardized Unified Program for testing reading in the grades. This is designed for grades 3 to grade ten. It covers speed and accuracy, vocabulary and comprehension (Gates, 1958:1-15).

Lorge formula. This refers to the standardized Lorge Formula for Estimating Difficulty of Reading Materials (Lorge, 1971).

Raw score. Refers to the First Score obtained after the test has been scored (Gates, 1958).

Readability. This refers to interaction of many aspects of a reader and the book he reads (Gelliland, 1972:83). Operationally this refers to the relations of the difficulty of the book with the reading grade and reading age capacity of the reader.

Reading age capacity level. This refers to the average reading performance of a normal child for a certain, particular age (Gelliland, 1972:99).

Reading grade capacity level. This refers to the reading skill capacity level of the child in terms of reading-grade scores on test of reading comprehension (Gelliland, 1972:99). Operationally this refers to the reading ability of a child regardless of his/her actual grade level and age.

Reading index. This refers to an estimate of the reading grade at which the average school child will be able to answer about 55.00 percent of the questions about details etc. of what was read.

Reading material difficulty level. This refers to level of comprehension of reading passages. Comprehension is judged by the correctness and completeness of responses to questions about the passage that is appropriate to an average child at a particular grade or age level (Lorge, 1971:1). Operationally this refers to the difficulty index of a material that a reader could successfully comprehend and appreciate in the reading material.

Reading retardation. This is generally defined in relation to the development with perhaps the greater emphasis on mental development. A retarded reader is one who is reading below the expected level of development from an average child at a particular grade and age. This includes limits set by the pupil's physical, emotional, and social, as well as his mental development. (Smith and Dechant, 1961:1-2). Operationally, this points to an average normal child who is reading below what is expected of him.

understand what the learners are trying to communicate, will not know whether the teaching has been effective or not. It is evident in communication that literacy and reading is the most prominent idea of concern. Thus, leaders, guides, and teachers must be aware that one's language ability affects progress in all aspects of man's life hence, these questions must be asked and answered: What basic communication shall be used? What is needed in communication? Then how shall it be presented in a lively and accessible means? The answers to the questions will depend on a reliable survey of the needs and understanding of the reading skill capacities of users out of printed materials given them (Hodge 1995:21).

Explained further, that communication always requires at least three elements; the source, the message and the destination. Once the message is coded, it is free of its sender and the sender workers. If the message shall be understood it is as if the receiver shall respond as expected. This is because, in order to complete the act of communication, the message must be decoded. The success of this will depend upon the reading grade capacity of the decoder in relation to the difficulty of the coded message. Explains further, that the source can encode, and the destination can decode, only in terms of the experiences each has. If the circles have a large area in common, then to communicate is easy. If the circles do not meet, if there has been no common experience, then communication is impossible. If the circles have only a small area in common, that is, if the experiences of the source of the destination have been strikingly

unlike, then it is going to be very difficult to get an intended meaning across from one to the other (Hodge 1995:52).

Added further, that with our target users in a semantic approach, one envisage the possibility of immediate language use. This means, that the learner-teacher will have to try to understand more varied forms of language that he is capable of producing himself. In this case, much attention must be focused on the acquisition of a receptive competence and that an important feature of materials must be designed to produce such (Wilkins, 1997:79-88).

Also explained that in the preparation of materials, after the process of teaching the content of it, it is the time to think in terms of the presentation of the material, and in here, levels of proficiency will be determined in terms of the degree of capacity of the learner-reader to perform certain tasks, in relation to the readability of the material (Wilkins 1997:91).

Tapping into human potential means learning how to establish a foundation on which to build new skills and change behavior. One is continuously expected to learn complex and challenging information and to develop new skills. This means that one is faced with the need to accelerate the learning process. To accomplish this, a clear understanding of how one learns best - is one's learning style (Dunn 2001:1).

Also mentioned, that teachers need to approach teaching by considering what the best approach and materials maybe for the learner(s). Both gifted and non-gifted children benefit at least equally well when permitted to learn with

procedures and teaching materials that are congruent, rather than dissonant from their learning strength.

The under achievers are significantly different from those of other students. They need many things but specifically they need a variety of instructional resources from which to learn to respond to their low auditory and low-visual modalities and their strong preferences for variety rather than routines and patterns of materials that fit their capacities. They need resources, which introduce new and difficult information that are within their perceptual capacities and preferences to make learning easier and more appealing (Dunn 2001:32).

Prof. Jerome Bruner was cited to say that to understand anything well is to know where in it is simple. She was mentioned to explain that simplicity implies essence; that is, to get at the essence of things is to strip them down their bare bones that their hidden framework is revealed. Hence, in reading, full comprehension of any material read includes the reader's ability to break it down into its organizational framework, to lay bare its outline (Zintz 2004:303).

A reprint of Jo Carr's Horn Book Magazine article (1987) stated that it is not clear who said: 'A child is not a vase to be filled but a fire to be lit.' - This statement, applies especially to children reading nonfictions such as social science books. One can almost divide the nonfiction they read into two categories: nonfiction that stuffs in facts, as if children were vases to be filled, and nonfiction that ignites the imagination, as if children were indeed fires to be lit. . .

Learners all prefer books that are readable and exciting, and to come up with readable and exciting reading materials is the best answer to this preference (Sutherland and Arbuthnot: 1991:vi).

Some findings in support to those of Huck, et al, is as follows: aside from humor, children love action; they prefer varied subject matter; they do not like reading materials with long descriptive passage; they do not like reading materials that have unfamiliar figures of speech or archaic language; they do not like pedantic-sounding statements. These findings strongly support the idea of choosing reading materials that fit the needs and reading capacity of readers. They therefore must be supplied with materials they could read so that they could comprehend and function accordingly (Sutherland and Arbuthnot 1991:132).

Stated further that texts do not have unitary meanings potentially accessible to all, they rather allow for variety in interpretation by different readers, governed by factors such as purpose, background knowledge, and the relationship established in the act of reading between reader and the writer (Nunan, 2002:88).

In designing or acquiring reading materials, or a reading course, one of the first things to consider is the reader or learner's current level of reading proficiency. What skills does he possess? What sort of text, messages, signs, etc. can be read? (Nunan, 1986:451).

It must be understood, that rational decision-making on communication technology is based on adequate information about users' needs, available resources, costs and technology effectiveness, and environmental limitations. It is therefore essential that a careful study, survey and scanning be made before the production of materials or introduction of new technology and information. One of the means to establish needs, is to check on the capacities of targets, where conducting a survey test is one (Tuazon, et al., 1998:106).

It was also mentioned that the fundamental issue in innovations such as technology is whether it can be able to guide the development of the society along lines that reflect values and preferences of the people, by allowing new information to be introduced first, then adapting measures to make a proposition. This goes true on sending information before checking if the printed material is suitable to the users. It would be expensive and even liable to misinterpretation (London, 2003:106).

Some concerns for selecting reading materials were mentioned to be emotional experience, empathy, craftsmanship, values, purpose for reading, the readers, and readability of materials.

Readability refers to the ease with which a material is read, and reading specialists cited the following factors for readability: illustrations, design, number of pages, size of print, what it is about, writer's style, the way the title has been written. She mentioned Ruth Strang (n.d.) and Edgar Dale (1948) in a

journal article to have given three general factors that interplay in measuring readability, that is, material to be read, the reader and the purpose for reading.

The “readableness” (the quality of being easily read) of the reading material have four general factors: content, format, organization and style. Rivera quoted the sub-factors outlined by Strang as, content covers the theme, nature of the subject matter and unity of content; format includes kind/type of printing, illustrations, general appearance, size, binding, number of pages, margins, and length of line; organizations covers the title of book, chapter division, paragraph, introductory notes, study helps, reference guide, and glossary; and style, as the fourth factor, includes the number of polysyllabic words used in the material (the longer the words, the less readable it is), the number of unfamiliar words (based on word lists), sentence length, and paragraph length.

Readability though not very reliable is really useful, especially at times when a teacher needs to start somewhere. It is suggested however that the result be submitted to a panel of experts among colleagues or prospective readers to find if they agree with what the formula yields (Rivera, 1997:118-130).

The reader and his nature is one major factor for readability. Rivera further points to several sub-factors to reckon with relative to the reader(s). This includes the: background, chronological age/sex, mental age/intelligence, curriculum level, reading ability/grade, reader's interests. The teacher needs to observe the interplay among these sub-factors, and the factors and sub-factors that are considered in relation to the material.

The purpose for reading points to reasons for reading, which maybe for getting information or for entertainment. Most of the reading tasks of students fall under the former; this would include scanning and skimming for specific information necessary at short notice. Most of the materials read for this purpose are basic references like dictionary, encyclopedia, thesaurus, atlas, almanac, rosters of facts (directories, index, etc.) (Rivera, 1997).

Rivera (1997:61), mentioned Guzman, et al. (1991:ii) to explain that reading is said to be a complex act, which requires a synthesis of skills, and in a natural reading situation these individual skills are called for not in isolation but as part of the total reading process.

Durkheim long time statement which prevails until today was mentioned to states that categories of understanding are priceless instruments of thought which the human groups have laboriously forged through centuries and where they have accumulated the best of their intellectual capital. The relative continuity of these categories of understanding from one generation to another is primarily ensured by language, which is the most direct and comprehensive expression of the social experiences of the group (Rivera, 1997:61).

It is said, that to the meaningfulness of learning are stable anchoring ideas to which new materials can be linked, and an intention by the learner to make that link. The trainer, writer, teacher, therefore, should be adapted to the learner or reader's 'readiness', i.e., presented in terms he can learn or is already familiar, etc. (Ausabel, 1999:61).

It was said that man always read for some purpose. There is no such thing as merely reading words; always through the words man is trafficking or trying to traffic with things – things gone by, present, to come or eternal. One who is teaching reading is concerned on “which word is it?” turns to “which use?” and the question “which construction?”, in to “what implications?”

In teaching, it was emphasized that in giving information, it is essential to take the learner or reader at his own level and later, by motivation, leads him to increased standards of competence. This is based upon a careful diagnosis of defects and is geared to the needs and interests of pupils.

This is further explained that the type of teaching and style of giving information or reading material shall depend upon the character of the diagnosis, which was made (Blair, 1997:15-81).

Mentioned too, that there is a need for a fact-finding stage where the first stage is to know about the participants before curriculum design is developed. This goes true with the writing or procurement of reading materials for information, where there is a need to know the target users' reading capacities (McNeil, 1999:18).

Further mentioned, that while it is true that the intuitions of the native speaker is may be a useful tool, it is only through careful research that it is possible to discover the underlying patterns which make up the rules of speaking any language, including one's own. This implies that reading materials

concerned with socio-cultural matters need to depend on the output of socio-linguistic research as their primary source (Wolfson, 1998:63).

An approach in which the material preparer is concerned with strategies for effective reading and the nature of the reading passage, and learner's characteristics produce results, which are dependent on the matching of the two. The material preparer as synthesizer pays attention to the following: workouts that bring about interaction with the text; prorating a variety of materials to read; selecting text appropriate for learners/ teachers.

The role of material preparer or material procurer mentioned here, strengthens the resolve of the researcher to survey the reading capacities of the mentioned subjects in this study, so as to serve as guide in the preparation of any material for learners' improvement, implementation, guidance, and information (Dubin, 1999:8).

Readability is defined to be the ease with which a material is read. That when one wants to buy a book, but does not have any specific title in mind, he automatically looks for illustrations, designs, look for the number of pages, the size of print, what it is about, looks into the writer's style, including the way the title is written. This is so because without knowing, he is looking for a material that is easy to read (Hermosa, 1997:125).

The idea of Hermosa, supports the researcher's own belief, that books as teaching materials must be well selected, to fit with the reading capacity of the would be reader hence, make learning easy and pleasurable.

Strang et al. (1995:82) in their Journal article, "Concept of Readability", mentioned three general factors that interplay when readability is being measured. One is the material to be read, and the other two are the reader and the purpose.

In the material factor, there are four general sub-factors to consider: content, format, organization, and style. The content covers the theme, the nature of subject matter, and unity of content; on format, it covers the kind/ type of printing, illustrations, general appearance, size, binding, number of pages, margins and length of line; on organization, it covers title of book, chapter division, paragraph division, introductory notes, study helps, reference guide, and glossary.

The fourth factor is the writer's style, which includes the number of polysyllabic words used (the longer the words, the less readable it is), the number of unfamiliar words (based on word lists), sentence length, and paragraph length.

Readability formulas are useful since they provide the teacher a point to start from. After the use of the formula it can be followed by an assessment of a panel of experts or prospective readers, by asking them if they agree with the result.

It is explained however, that there is one other factor to consider for readability, when a teacher has to select printed materials for a reading class, which is the reader herself/ himself. The following are the sub-factors relative to

the reader: background, chronological age, sex, mental age/ intelligence, curriculum level, reading ability/ grade, reader's interests. The teacher, should observe the interplay of the above sub-factors to consider the relation to the material (Strang, et al., 1995:82).

Several research findings of Ann Terry, who focused on the relationship between children and reading materials was reported. Huck, et al was reported to say that the most popular content of the material are humor and familiar experience; a material enjoyed in grade one level may also be enjoyed across other levels; children do not like materials they cannot understand; awards of merit is not always a guarantee that the material will be liked; children do not like meditative and thoughtful materials; children prefer updated materials to more traditional ones; girls tend to like literary pieces than boys (Durkheim 1997:121).

The findings of Huck, et al further convinced Durkheim (1997:12) to emphasize a need to look into the relationship of students' reading capacity, with the difficulty levels of reading materials available for them hence

The following are questions suggested for considerations when choosing a reading material: does the printed material express how the writer feels in a way that will be clear to the children? Does the material present a unique view of something ordinary? Does the material reinforce the idea that it has multiple topics, form or style? (Durkheim, 1997:122).

Some reminders were also presented on the assessment of informative books as follows: Qualifications of the Author - He is knowledgeable about the topic and can communicate with children; The use of the Language - What is demanded is clarity, imaginativeness, as a major factor; Accuracy - One must find ways to update facts that may already have been overtaken by events; The quality of the Illustrations - This is a must for children's books. A special kind of accuracy and imaginativeness should go into the pictures; Organizational and Reference Aids - There should be detailed contents with main headings and sub-heads in the body of the texts, a glossary, an index, and plentiful diagrams to illustrate points made in the text. Self-sufficiency - Readers should be able to understand the material being presented in an informational book without having to look elsewhere for definitions, facts, and concepts (Stewig, 1998:135).

The following ideas of what would characterize a good piece of informative writing were also given: A subject of interest to young readers, written with zest; new information or information presented in a different way; a reading level and tone intended for the target clientele; an index and other aids; information to help locate further readings on the subjects; a Competent author with expertise on the subject matter (Stewig, 1998: 135).

The SRA Reading Laboratory Program set out to improve the reading situation of learner-teacher and it suggests that there is a need to develop a "multi-level, self-operating" method of learning, because it noticed that readers progress if they are presented with materials they could read and they could

move ahead as fast and as far as the individual learning takes and capacities allow, considering their uniqueness, or account of individual differences (Parker, 2002:16).

Discussed here, that words of more general meaning when viewed in relation to other words of more specific meaning can also be referred to by the more general term. In this case the difficulty lies in the mismatch between the words and the intention of the writer as it appears from the text as a whole.

Also is defined that comprehension is an active process, before, during, and after reading. It is an interaction of the reader, the text, and the context.

Cook was mentioned to define comprehension as a dynamic interactive process of constructing meaning by combining the reader's existing knowledge with the text information within the context of the reading situation.

Goodman was also mentioned to define that... even highly effective readers are severely limited in comprehension of texts by what they already know before they read. The author may influence the comprehensibility of a text particularly to specific targeted audiences, but no author can completely compensate in writing for the range of differences among all potential readers of a given text.

Further considered here, the statement of Carrell and Eisterhold (1983:18) saying; that no author can compensate for the individual variation among readers, especially readers from different cultural backgrounds. This is one of the concerns of the teacher in the ESL/ EFL reading classroom. As teachers then,

they can approach this problem by manipulating either one of the two variables: the text and/ or the reader.

Tatlonghari is said to explain that when one reads, his comprehension is found at a number of different levels: an understanding of what the writer has actually said in so many words; an understanding of what he merely implied or suggested; an appreciation for and an evaluation of what he has said.

These levels of comprehension he said are literal, interpretative and applied. The levels of cognition for each word are knowledge for the literal level; comprehension for the interpretative level, and for the applied level there are application, analysis, synthesis, and evaluation.

In these cognitive processes, the following student's behaviors are expected: For Knowledge students are expected to recall or recognize information; for Comprehension students are expected to change information into a different symbolic form of language and discourse relationships among facts, generalizations, values, and skills; for Application, students solve a life-like problem that requires the identification of the issue and the selection and use of appropriate; generalizations and skills and then, for Analysis, students solve a problem through conscious knowledge of the parts and forms of thinking; for Synthesis, students solve a problem that requires original and creative thinking, and for Evaluation, students make judgment of good or bad, or right or wrong, according to designated standard (Taba, 1992:6).

Readability is supposed to be the ease with which a person can read printed materials, and is related to many factors. These factors are not measured by conventional readability formulas that are based on length of sentences and the number of long or multi-syllable words.

Readability includes: reader's prior knowledge; reader's purpose; reader's understanding of vocabulary; reader's interests and attitudes.

The difficulty of materials is related to: author's style of writing; author's purpose; organization of content and physical layout of textual material (Michigan Review Committee, 1999:6).

Meaning is said, does not reside in text, but rather text has potential for meaning... Thus the following are suggested to anyone who plans to organize a reading program: Conduct a needs assessment; establish goals and objectives; determine appropriate activities; formulate a systematic schedule; execute a plan of evaluation.

Suggested further that one must be convinced by the lines of L. Peter; stating that "If you don't know where you are going you will end up somewhere else". This, he suggest and emphasize that the first step is to conduct needs assessment before anything else (Wilkins, 1997:16).

It is argued that readability is best defined as the degree to which a given class of people find certain reading matter compelling and, necessarily, comprehensible: It emphasizes here, the characteristics of the reader as well as the degree of 'compellingness' of the text. It is regarded that this above

arguments are necessary factors since compellingness and comprehension are so closely related. It is further explained that this is so, since people will tend to continue to read only that which they understand. Argued further that a classification of texts which have been chosen by readers will provide a more satisfactory basis for construction of measures of readability than texts selected at random from the range available, since a selection on the former basis will reflect the degree of interest shown by particular groups of readers.

Teacher and all were said to have various reasons why they should be concerned with reading capacities of learners and readability of materials. This statement points specifically, the reading capacity level of Samar State College of Agriculture and Forestry (SSCAF) Social Science college students, because in most cases, they need to read content books, make researches, reports, project proposals, community information drives, etc., not to mention their personal needs to keep abreast with life, hence this study.

### Related Studies

Abinguna (2006) in his study "Attitude of Pupils Towards Reading English Textbooks and English Teachers, Attitude Towards Their Pupils" found that the highest level of pupil attitude towards reading English textbooks, only as "agree", which means that pupil respondents were really very enthusiastic to reading English textbooks. Among their Grade VI pupils their response (the respondents) to their English was also but "agree" which means that they were

not too close to their pupils as shown in their rating of "less agree" on their specific positive statements towards their pupils. Found too that there "less agree" attitude to their pupils has no significant probability relationship with their variates of age, sex, civil status, income, educational qualifications, number of seminars attended and teaching experiences.

Abinguna's study is similar to the present study since it involves student respondents reading ability. It differs however since it focus on attitude towards reading English texts only and it also consider the teachers' attitude towards the pupil respondent, while the present study is focused on the evaluation of the reading grade and age of the pupil respondents in relation to the difficulty (reading) index of the social science reading materials in Samar State College of Agriculture and Forestry for college students.

Achazo (2000) in her study, "Correlates of Reading Inadequacies of Grade VI Pupils in the District of Pinabacdao, San Sebastian", found that the pupil-respondents were poor in comprehension particularly in those that belong to the highest order thinking skills and in word recognition which represents critical sounds in English that are not found in the waray phonological structure.

She likewise concluded that the pupils exhibit poor oral reading performance owing to the numerous reading inadequacies committed during oral reading.

Achazo's study is similar to the present study since both are concerned with reading skills in relation to reading success. They differ since Achazo's

focus was an assessment of the oral reading capacity of grade VI pupils of San Sebastian Elementary School, while the present study is on matching difficulty index of reading materials in Social Science, with the reading grade capacity level of SSCAF, San Jorge Samar College Students.

Arteche (2002) in his study on the effect of his constructed "Prototype Reading Instructional Material for Enhancement of Reading skills (Primer for High School Freshmen"), found his work to be viewed by subjects as interesting, and beneficial, relative to acquisition of reading skills.

Arteche's study is similar to the present study, both being concerned with reading materials for the development of reading for understanding of content. They differ since Arteche constructed reading materials that match the reading capacity levels of freshmen secondary students of Samar National School, while the present study leveled existing social science printed materials, books and other references and match their difficulty index with the reading grade capacity levels of Social Science college students of Samar State College of Agriculture and Forestry, San Jorge, Samar.

Betanzor (2007) in her quasi-experiment on the effect of a "Teacher-Organized English Reading Comprehension Instructional Materials for Grade V Pupils of Jia-an, Jiabong, Samar" concluded that the leveled organized materials fit the reading capacity level of the grade V children of Jia-an Elementary School. She thus concluded that material leveled by difficulty index are easy to use, and

more effective than the traditional material randomly selected in developing reading comprehension skills.

Betanzor's study is similar to the present study since both are concerned with matching reading skills of learners to the difficulty index of leveled reading materials. They differ since Betanzor's subjects are grade V pupils of Jia-an, Jiabong, Samar, while the present study has social science college students as respondents. They differ further since Betanzor matched a self-constructed and leveled material, while the present study, computes the difficulty index of existing library social science materials, in SSCAF, and matched them with respondents' reading capacity level.

Cekolin (2000), in her study, "The Effect of Self-regulated Reading Strategy Instruction on Strategy Use and Academic Achievement" found that academic achievement is a critical component of self-regulated learning strategy instruction with all groups. Selected groups however showed greater increases in both academic achievement and self-regulated learning strategy use when prompting were a component of self-regulated learning strategy instruction thus, this emphasize the importance of self-regulated learning strategy instruction, especially for middle school students.

The study has similarity to the present study in the sense of focus on reading materials to enhance capabilities of students to increase their achievements. They differ however since the present study; though it focuses on reading materials it was more on measuring the reading grade and age capacity

level of college social science students in relation to the difficulty index of the social science materials used in Samar State College of Agriculture and Forestry.

Dacalos (2000) in her study "Self-Instructional Materials for Developing Vocabulary Skills Among Grade VI Pupils" found that the Reading Ease Score of the Self-instructional materials turned out to be equivalent to fifth grade and the Human Interest Score of constructed materials was interpreted as "interesting". She concluded that with the prevalence of least-learned skills, problems were encountered by teachers along techniques of vocabulary building; there was a dearth of instructional materials, drill and practice exercises to master these skills; and lack of emphasis on these skills in textbook for English.

The present inquiry is similar to the present study since both deal on teaching materials. They differ however, in the sense that the former focused on preparations of teaching materials, specific on vocabulary building among elementary children, while the present study is focused on the leveling of social science college students' actual reading grade and age, and relates it to the difficulty index of social science reading materials used in Samar State College of Agriculture and Forestry.

East (2002) conducted a study on "Reading Strategies of Language Minority Middle School Students Using Reading Miscues Inventory and Verbal Protocol Analysis as Assessment". It examined reading behavior of rural Central California middle school English language learners using miscue analysis and verbal protocol or think-aloud tasks as assessment instruments. Results showed

that students had higher word frequency retellings and higher text of comprehension with narrative text than with expository text. Students showed higher levels of word substitution with narrative text than with expository text. However, think-aloud assessments did not significantly influence comprehension across the text types.

East study is similar to the present study since it deals with developing reading skills. Their differences lie on the target clientele and the setting of the study, further differ since East was more interested on developing strategies for improvement of reading skills, while the present study is more on assessing the present reading grade and age capacity of college respondents in relation to the difficulty index of their social science learning materials.

Lacandazo (2008) in her study on the "Effect of Teacher Organized Reading material on the Reading ability of Grade II Pupils" found that the traditional way of teaching was effective. However, the teacher-organized material used for treatment of the experimental group was more effective than the traditional teaching applied.

Lacandazo's study is similar to the present study since both are concerned on the matching of reading material to the reading grade capacity level of learners. They differ however in the since that Lacandazo constructed reading material that match the reading grade capacity level of Grade II pupils of Bagacay Elementary School while the present study leveled the printed materials, books, and other reference as to difficulty index, and match the same

with the reading grade capacity level of SSCAF in San Jorge, Samar college Social Science students.

Lim (2004) in her study in the "Level of Communicative Competence of SSPC BSIT First Year Students of 2003-2004", concluded that respondents were "fair" on reading, speaking and writing, but high in "listening".

Lim's study is similar to the present study in the sense that both are concerned with reading competence and further similar in their inclusion of sex, age, as factors to reading performance and both used college student as respondents. They differ since Lim's study was concerned specifically on language modes in reading, speaking, writing and listening, of first year college BSIT students of SSPC, while the present study is more on reading grade capacity level of SSCAF Social Science materials of respondents, matched with the reading difficulty index of the existing printed materials, books, textbooks, and other references in SSCAF library, San Jorge, Samar.

Lopez (2006) in her study on the "Development of Supplementary Silent Reading Exercises (SRE) To Enhance Comprehension Skills Among Freshmen College Students of Samar State University" found that learning took place in the control and experimental group. However the students who used the supplementary materials learned just as well as the students who were taught with close guidance and supervision by the teacher. Thus it was concluded that the supplementary instruction material is effective.

They differ in the sense that the study of Lopez produced supplementary reading skill development materials for Samar State Polytechnic students, while the present study just assessed the actual reading grade and age capacity level of respondents and relate it with the difficulty index of the teaching materials available at Samar State College of Agriculture and Forestry.

Uy (2006) proposed a Remedial Reading Program for Jiabong District Elementary schools and it used as base point, the result of Gates Reading Survey Test in the selection of materials for the Reading Remediation Program she proposed.

Uy's study is similar to the present study since both are concerned with reading skills and both used Gates Reading Survey Test. They differ since Uy's study was preparation of a proposed reading program while the present study was an assessment with the use of Gates Reading Survey Test, of the actual reading grade and age capacity level of respondents and related result with the difficulty index of social science teaching materials used by social science students and teachers.

## Chapter 3

### METHODOLOGY

This chapter presents the research design, the instrumentation, the validation of the instruments, sampling procedures used, the data gathering procedure and the statistical treatment of the data.

#### Research Design

The study used the descriptive-correlational design. Descriptive study was to determine which of the different variables were related to each other and done within the context of a natural situation, which was investigated. This further used the following statistical tools: Percentage, Weighted Mean, Arithmetic Mean, t-test, one way Analysis of Variance (ANOVA), Pearson product Moment Correlation, Fisher's test and Scheffe's test.

This study determined the readability index or difficulty level of printed materials, with the use of Lorge Formula for estimating difficulty index of textbooks and other references used by subject teachers and it also determined the reading capacity level of SSCAF Social Science college student-respondents with Gates Reading Survey Test. The correlational analysis was used to establish the relationship between the difficulty of printed reading materials, textbooks and other references that were available in the library of the school of the

respondents as they affect their reading performance in Social Science (reading capacity level).

### **Instrumentation**

The researcher made use of Gates Survey Test, Lorge Formula, and Questionnaire. It also included some documentation.

**Gates Survey Test Form 1.** This is a standardized test with three parts: speed and Accuracy; vocabulary; and comprehension. Speed and accuracy test measures how fast one can read with understanding and accuracy; vocabulary test measures one's knowledge of isolated words; comprehension test measures one's ability to understand the prose passage.

This test was used to determine the respondents' reading grade and reading age capacity to comprehend written English texts (shown in Gates Reading Survey Test Manual). This was immediately administered, with attached questionnaire for respondents' profile.

**Lorge Formula for estimating readability index (Difficulty) of reading materials.** This instrument was designed to appraise the relative difficulty of printed texts. Reading difficulty is based upon the comprehension of reading passages. Comprehension is judged by the correctness and completeness of responses to questions about the passage. The formula is based on a criterion derived from responses to questions of the five types. This provides an over-all estimate which is useful in grading materials. As an estimate it should not be

considered definitive, nor should it be used blindly. The readability index of this formula is an estimate, and not a rigorous determination

As shown on the work sheet (see Appendix A1), the readability index is a standardized estimate of the reading grade at which the average school child will be able to answer about 55.00 percent of the questions concerning detail, appreciation, import, vocabulary, and concept with adequate completeness and correctness. The reading grade so obtained may be thought of in terms of reading-grade scores on a test of reading comprehension. A readability index for example of 5.2 for a passage may be considered indicative of the material at the fifth grade; it may be thought of in terms of placement of the material as within the reading comprehension of average fifth-grade children. Such placement, however, should consider the interests of pupils, the suitability of subject matter, and other factors (Gelliland, 1972).

Questionnaire. A questionnaire was attached to the standardized test administered to gather information on age, sex, and academic year level enrolled by all respondents.

Some relevant information on student respondents was secured from the registrar's office by permission from the college president. This was used to verify responses of student respondents to the questionnaire.

### **Validation of Instrument**

Validation of instrument was found unnecessary since Gates Reading Survey Test and Lorge Formula for Estimating Difficulty Index (Readability Index) of Reading Materials are both standardized.

The questionnaire which calls only for the respondents' names, academic year level enrolled in, sex, and age, were too simple information and can even be verified from school records hence, no need of validation.

### **Sampling Procedure**

Sampling of subjects was total enumeration of all social science students were in school when the survey test was conducted.

The population of social science college students of SSCAF is but 228, divided between year levels: first and second year only hence, it necessitate a plan to purposely include all enrolled students present on the day the survey was conducted which reached a number of 198 students which is about 87% of the total population due to absences.

### **Data Gathering Procedure**

Gates Survey Reading Test was administered by the researcher after her oral request to conduct the test was approved by her immediate supervisor. This was done during researcher's class sessions with the respondents, for two days, from June 21, 2007 to June 22, 2007.

The result was corrected, computed for raw scores, and checked with provided standardized tables for the specific purpose of finding the following: Vocabulary Reading Grade and Reading Age; Comprehension Reading Grade and Reading Age; Speed Reading Grade and Reading Age Percentage of Accuracy and Speed and Accuracy Rating; Average reading grade and reading age of student-respondents.

Lorge Formula for Estimating Difficulty (Readability Index) of Reading Material was applied from July 1, 2007 to August 31, 2007, by the researcher herself with the help of a reading specialist.

Standardized and statistical computations followed, to answer the problem of the study.

#### Statistical Treatment of Data

To show on what reading grade capacity level are the SSCAF-SS social science college students; by academic year level, by sex and by age, the researcher applied a descriptive discussion as to the result of the computation with the use of the following statistical formula:

For Reading Grade and Reading Age formula as to:

A. Vocabulary Test

No. of correct answer

minus

$\frac{1}{4}$  of wrong answer (Get nearest whole no.)

equals

Raw Score

Use Raw Score to get reading grade and reading age from table III for this purpose in Gates Reading Survey Test Manual.

B. Comprehension Test

No. of correct answer

minus

$\frac{1}{4}$  of wrong answer (Get nearest whole no.)

equals

Raw Score

Use Raw Score to get reading grade and reading age from table IV for this purpose in Gates Reading Survey Test Manual.

C. Speed and Accuracy

Get Raw Score of Speed Aspect

(Total no. of exercise correct)

Get Reading Grade and Reading Age from Table 1

Get Score of Accuracy Aspect of the Speed Test by following the steps below:

1. To find percent correct, use the total number attempted (sum of correct and wrong answer) and get the number correct.

Using both data, get from table IX the percentage of the no. right which is of the no. attempted.

With the grade score for speed of reading and the percentage of accuracy get the accuracy rating from table V.

D. For Average Reading Grade and Reading Age, follow the ordinary procedure for finding an average:

Specific for this purpose – do the following:

Speed grade score

Plus

Vocabulary grade score

Plus

Comprehension grade score

Equals

Total divide 3 equals average grade score.

Weighted mean. This was computed to find the mean level of reading grade of social science students.

Arithmetic mean. This was used to determine the mean level of the reading grade of SSCAF social science students.

The t-test for independent samples was used to compare mean of two groups with the formula shown below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(N_1 - 1)S_1^2 + (N_2 - 1)S_2^2}{N_1 + N_2 - 2} \cdot \frac{1}{N_1 + N_2 - 2}}}$$

Where:

$t$  = test of significance

$\bar{X}_1$  = mean of the raw scores of the male samples

$\bar{X}_2$  = mean of the raw scores of the female samples

$N_1$  = no. of male samples

$N_2$  = no. of female samples

$S_2^2$  = variance of the raw scores of the male

$$\text{samples; } S_2^2 = \frac{N_2 \sum X_2^2 - (\sum X_2)^2}{N_2(N_2 - 1)}$$

$S_1^2$  = variance of the raw scores of the female

$$\text{samples; } S_1^2 = \frac{N_1 \sum X_1^2 - (\sum X_1)^2}{N_1(N_1 - 1)}$$

**One-way analysis of Variance (ANOVA)**. This was used to statistically test whether there is a significant difference in the reading grade by age of the respondents.

The following formula for One-way ANOVA was used:

**Analysis of variance (ANOVA).** This was used to compare the reading comprehension grades of respondents, using the following formula (Walpole, 1982).

Sources of Variation (SV)	Sum of Squares (SS)	Degree of Freedom (df)	Mean Squares (MS)	Computed F Value
Between Groups	$T_1^2 - \frac{\sum X^2}{N}$	K-1	$\frac{SS \text{ Between}}{K-1}$	MS Between F = $\frac{\text{MS Between}}{\text{MS Within}}$
Within Groups	SS total - SS Between	N-K	$\frac{SS \text{ Within}}{N-K}$	
Total	$\sum X^2 - \frac{(\sum X)^2}{N}$	N - 1		

Where:

- K - refers to the number of groups compared
- $\sum T_i^2$  - refers to the total of the values in the  $i$ th group
- $N_i$  - refers to the number of cases in the  $i$ th group
- $\sum X^2$  - refers to the total of the squared values
- C - refers to the correlation factor equal to  $\frac{(\sum X)^2}{N}$
- $(\sum X)^2$  - refers to the square of the total of the scores
- N - refers to the total number of cases

**The Pearson Product Moment Correlation.** Was applied to show the relationship of the average reading grade capacity level of the subjects by age, sex, and academic year level.

It made use of the Pearson Product Moment Correlation. The formula is:

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

Where:

$N$  - total no. of student under study relative to age, sex and year level)

$\Sigma X$  - sum of the reading grade capacity level of the subject

$\Sigma Y$  - sum of the readability index/ difficulty level of the available printed materials.

To test the significance of the coefficient of correlation, the Fisher's t-test (Walpole, 1982:388) formula used used:

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

Where:

$r$  - coefficient of correlation

$N$  - total no. of paired variable.

To get the readability index or the difficulty levels of the available books (textbooks and references) for SSCAF social science college students Large Formula was applied as follows:

Locate samples (In this study get from every 18<sup>th</sup> page-100 word sample)

Find:

1. No. of words in samples

2. No. of sentences in samples
3. No. of prepositional phrases
4. No. of hard words in sample

Compute for:

## Average Sentence Length      Value

(Item 1 divide item 2) = \_\_\_\_\_ X 0.06 = \_\_\_\_\_

### Ratio of Prepositional Phrases

(Item 3 divide item 1) = \_\_\_\_\_ X 9.55 = \_\_\_\_\_

### Ratio of Hard Words

(Item 4 divide item 1) = \_\_\_\_\_ X 10.43 = \_\_\_\_\_

Constant +        1.9892

(Note: See Appendix)      Readability Index

Comparison as to relationship of readability index of available text and the average reading grade capacity of respondents was based by simple computation for the difference between the two variables. Interpretation was based from Gates Manual.

## Chapter 4

### PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter presents the findings, analysis and interpretations of data on the aims of the study. For purposes of clarity in the interpretation of data, appropriate tables were used.

#### Profile of Student-Respondents

This section presents the profile of the student-respondents in terms of their academic year level and sex groups and their age.

Academic year level and sex groups. Table 1 presents the year level groups and sex groups of respondent. From this table it can be read that there was a total of 198 respondents where 108 (54.50 percent) were male students and

Table 1

Academic Year Level and Sex Groups of the Respondents

Year Level	Male		Female		Total	
	n	%	n	%	n	%
1 <sup>st</sup> Year	84	42.4	56	28.3	130	70.7
2 <sup>nd</sup> Year	24	12.1	34	17.2	68	29.3
Total	108	54.5	90	45.5	198	100

Note: See Appendix E to refer to the individualized list of respondent's with code number identification as grouped by sex, age and academic year level.

90 (45.50 percent) were female students. Out of the 108 (54.50 percent) male student respondents, 84 (42.40 percent) were first year students, and 24 (12.10 percent) were second year students. Among the 90 (45.50 percent) female respondents, 56 (28.20 percent) were first year students, and 34 (17.20 percent) were second year students. There then were a total of 130 (70.70 percent) first year student respondents and 68 (29.30 percent) second year student respondent respondents. This gave a grand total of 198 (100.00 percent) student respondents.

It should be noted that a reference is suggested to Appendix E (Respondents' Profile According to academic year level, age and sex groups with each respondent code number identification used all through-out chapter 4 in this study). In this Appendix E can be verified the total number of 198 respondents, where there were 130 first year student respondents and 68 second year student respondents which total to 198 respondents. Out of these 198 respondents, 108 were males and 90 were female. Out of the 108 male respondents 84 were first year students and 24 were second year students. Out of the 90 female students, 56 were first year students and 34 were second year students.

Chronological age. Table 2 presents the number of respondents arranged by of chronological age with their frequency and percentage based on the total respondents of 198.

**Table 2**  
**Respondent' Profile as to their Chronological Age**  
**(A Summary)**

Age	Frequency	Percent
36	1	0.51
35	2	1.01
31	1	0.51
29	1	0.51
28	1	0.51
27	3	1.52
26	4	2.02
25	5	2.53
24	4	2.02
23	1	0.51
22	6	3.03
21	12	6.06
20	31	16.1
19	80	40.4
18	23	11.6
17	8	4.04
16	10	5.05
15	1	0.01
14	4	2.02
<b>Total</b>	<b>198</b>	<b>100</b>

Note: Individualized age list in appendix E2

This same Table 2 shows that of the 198 college student respondents, one (0.51 percent) was aged 36; two (1.01 percent) were aged 35 and one (0.51 percent) each for ages 31, 29, and 28. There were three (1.52 percent) aged 27,

four (2.02 percent) aged 26, five (2.53 percent) aged 25, four (2.02 percent) were aged 24, one (0.51 percent) aged 23, six (3.03 percent) were aged 22, 12 (6.06 percent) were aged 21, 31 (16.1 percent) were aged 20, 80 (40.4 percent) were aged 19, 23 (11.60 percent) were aged 18, eight (4.04 percent) were aged 17, 10 (5.05 percent) were aged 16, one (0.01 percent) was aged 15, four (2.02 percent) were aged 14, with a total of 198 (100.00 percent) respondents

### Average Reading Capacity Level

Table 3 presents the average reading raw scores of respondents, (based from Gates Test on Vocabulary, Comprehension and Reading Speed – see appendix) where those 140 (92.40 percent) respondents aged 14 to 19 had average raw score of 19.96, with their corresponding reading grade capacity level ranging from 3.2 to 7.4 at an average reading grade capacity of 4.84. There was an average of 13.32 raw score for those aged 20 and above, representing 58 or 7.6 percent of the total respondents, which was further shown to have an average reading grade capacity level ranging from 1.6 to 6.4, at an average reading capacity level of 4.75 for the whole group.

This showed that the lowest average reading grade capacity of the 14 to 19 year olds was equal to the reading grade capacity level of an average grade three, who has been in it for two months. The highest reading grade capacity level shown by the group was equal to the reading grade capacity of an average grade seven, who has been in the class for four months. The whole group however was

shown to have but an average reading grade capacity level equal to the reading grade capacity of an average grade four who has been in the grade for eight months and four days.

**Table 3**  
**Distribution of Respondents' Average Reading**  
**Grade Capacity Level by Age Group**

Age Group	Ave. Gates RS	N	%	Range	Average Reading
14 - 19	19.96	140	92.4	3.2 - 7.4	4.84
20 - above	13.32	58	7.6	1.6 - 6.4	4.75
<b>Total</b>	<b>33.28</b>	<b>198</b>	<b>100</b>	<b>-</b>	<b>9.59</b>
<b>Average</b>	<b>16.64</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.80</b>

The lowest reading grade capacity at 1.6 by those aged 20 and above was but equal to the reading grade capacity of an average grade one, who has been in a grade 1 class for six months. The highest reading grade capacity of the same group was equal to an average grade four who has been in the grade for seven months and five days.

Those aged 14 to 19, with their average reading grade capacity level of 4.84 was shown to have a reading grade retardation of 6.16, which means that on the average, the group was behind in their reading skill for six years, one month

and six days reading grade capacity based from the reading grade capacity level of 11.0 which is expected from an average first year college student, and behind of seven years one month and six days if based from what is expected from an average second year student. The 20 and above respondents' group has a reading grade capacity retardation of 6.25, which means that the group was six years, two months and five days behind from the reading grade capacity expected from an average first year college student, or seven years two months and five days retarded reader if based from what is expected from an average second year college student.

As a whole, the 198 respondents were shown to have an average reading capacity of 4.80 which means that the total group respondents have an average reading grade capacity of an average child who has been in grade four for eight months.

Sex group. Table 4 reflects the average reading grade capacity level of respondents according to sex.

In Table 4, the male of 108 (54.50 percent) respondents were shown to have an average Gates reading survey test raw score of 16.20 and the females of 90 (48.80 percent) respondents at 19.3 average Gates reading raw score.

From the same Table 4, it can be read that the reading capacity level interpretation of the 108 male respondents ranged from 3.3 – 7.4, at an average of 4.65, while those of the female respondents their reading grade capacity ranged from 3.2 – 6.8, at an average of 5.06. The interpretation of the reading grade

capacity level of the males and those of the females were of the same explanation with the capacity ranges of the first year and second year level groups above.

Table 4

## Distribution of Respondents' Average Reading Grade Capacity Level by Sex

Sex Group	Ave. Gates RS	N	%	Range	Average Reading
Male	16.20	108	54.5	3.3 - 7.4	4.65
Female	19.3	90	48.8	3.2 - 6.8	5.06
<b>Total</b>	<b>35.5</b>	<b>198</b>	<b>100%</b>	<b>-</b>	<b>9.71</b>
<b>Average</b>	<b>17.75</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.86</b>

The average reading capacity level of the males at 4.65 was however interpreted to be equal to the reading capacity level of an average grade four, who has been in the grade four classes for six months and five days. The female group on the other hand has an average reading grade capacity level of 5.06, which was equal to the reading grade capacity level of an average grade five, who has been in the grade five classes for six days. If based on the expected reading grade capacity of an average first year college student, it showed a reading retardation of 6.35 for the males and 5.94 for the females. The male group therefore was behind for six years, three months and five days reading capacity of an average grade 11 or average first year college student; this is

interpreted further that respondents are retarded readers for seven years, three months, and five days if a second year college student. The female group was shown to be behind in reading grade capacity level for five years, nine months and four days, from the expected reading grade capacity of an average first year college student, and six years, nine months and four days if a second year college student.

As a whole, the total 198 respondents was shown to have an average reading grade capacity level of an average child who has been in grade four for eight months and six days.

Academic year level. Table 5 shows the average reading grade capacity level of respondents according to academic year level.

Table 5

**Distribution of Respondents' Gates Average Reading Test Raw Score, Actual Reading Grade Capacity Level Interpretation, in Percentage by Year Level Group**

Year Level	Ave. Gates RS	N	%	Range	Average Reading Grade Level
First Year	16.11	130	72.2	3.3 - 7.4	4.9
Second Year	17.7	68	22.8	3.2 - 6.8	4.7
Total	33.81	198	100	-	9.60
Average	16.91	-	-	-	4.80

From Table 5 can be read the average Gates raw score of respondents by year level; the first year respondents of 130 (72.20 percent), were shown to get 16.11 average Gates raw score and the second year college students of 68 (22.80 percent) respondents were with 17.7 average Gates reading raw score.

Table 5 presents Gates reading capacity interpretation of the raw score to mean, that the reading grade capacity level at 3.3 to 7.4 of the first year college student respondents' group was interpreted to mean that the lowest reading capacity of these first year college student respondents' group was equivalent to the reading grade capacity of an average grade three pupil who has been in a grade three class for three months. Their highest performer of 7.4 means that this respondent who was a first year college student was but reading equal to the capacity of an average grade seven (first year high school), who has been in this grade for four months. The average reading grade capacity level of the first year student respondents' group, however, was at 4.90, which was equal to the reading grade capacity of an average child at grade four, but has been in the grade for nine months.

The second year student respondents' group was shown to have a reading grade capacity level ranging from 3.2 to 6.8 at an average reading grade capacity level of 4.7. This means that the slowest reader among them was reading in equal capacity to an average grade three, who has been in the grade for two months. Their highest reading grade capacity of 6.8 was equal to the reading grade capacity of an average grade six, who has been in the grade for eight months.

Their average reading grade capacity of this group at 4.47 was equal to the reading grade capacity of an average grade four, who has been in the grade for seven months.

On the average, it can be interpreted that the first year college students' group had a reading retardation of 6.01. This means that the reading grade capacity of this group was six years and one day behind from the expected reading grade capacity level of an average first year college student.

The second year group on the other hand, at their average reading grade capacity level at 4.7 had a reading retardation of 7.1. This means that on the average, the second year group was behind of seven years, one month and one day reading grade capacity level from what is expected from an average second year college student.

As a whole, the 198 respondents has an average reading grade capacity level equal to an average grade four who has been the grade 4 class for eight months.

**Respondents' Reading Speed and Accuracy**  
**by Percentage Rating Interpretation**  
**by Gates Test**

Speed and accuracy rating of the student-respondents in terms of age group, sex, and academic year level are presented in several tables below.

**Age group.** Table 6 presents the respondents' reading speed and accuracy rating by age group.

**Table 6**  
**Reading Speed and Accuracy Rating by Age Group**

Age Range	Frequency	Reading Speed & Accuracy Rating			
		L	VL	H	VH
14-19	140	7	133	0	0
20 and above	58	1	57	0	0
<b>Total</b>	<b>198</b>	<b>8</b>	<b>190</b>	<b>0</b>	<b>0</b>

According to age group as seen in Table 6, a majority of 133 respondents, out of those 140 respondents aged 14 to 19, were rated very low and only seven were rated low in reading speed and accuracy. No one was rated high nor very high. For the 58 respondents aged 20 and above only one of them was rated low in reading speed and accuracy, while the remaining 57 respondents were rated very low. No one was rated high nor very high.

**Sex group.** Presented in Table 7 is the speed and accuracy of the respondents according to sex. Out of the 108 male respondents, two were rated low in reading speed and accuracy, while 106, a big majority, were rated very low in reading speed and accuracy. No one was rated high nor very high. Among the 90 female respondents, six were rated low, while 84 were rated very low. No one also rated high nor very high.

**Table 7**  
**Reading Speed and Accuracy Rating by Sex**

Sex	Frequency	Reading Speed & Accuracy Rating			
		L	VL	H	VH
Male	108	2	106	0	0
Female	90	6	84	0	0
<b>Total</b>	<b>198</b>	<b>8</b>	<b>190</b>	<b>0</b>	<b>0</b>

Academic year level. Shown in Table 8 is the reading speed and accuracy of the respondents by academic year level.

Table 8 presents the respondents' speed and accuracy percentage rating interpretation, based from Table of Gates Survey Manual.

According to course level, there were 130 first year respondents. Five of them were interpreted to be low in reading speed and accuracy, while 125, which was the majority were very low. Out of the 68 second year college respondents three were rated low and 65 were rated as very low in reading speed and accuracy. No one in both the first year and second year level group were rated high nor very high.

Table 8

## Reading Speed and Accuracy Rating by Academic Year Level

Course Year Level	Frequency	Speed & Accuracy Rating			
		L	VL	H	VH
First Year	130	5	125	0	0
Second Year	68	3	65	0	0
Total	198	8	190	0	0

Difference in Respondents' Average Reading Capacity Level

Result of respondents' t-test on average reading capacity level as per their variates by age group, sex and academic year level are discussed in this section.

Age group. Table 9 shows the result of the t-test for independent samples conducted for age group.

From Table 9 can be read that those respondents aged 14 to 19 had a mean of 4.84 at  $SD=0.959$  while those aged 20 and above had a mean of 4.75 at  $SD=0.775$ . When compared for significant of mean difference, t-test revealed a computed t-value of 0.384 at  $df=196$ , which is lesser than the tabular t-value of 1.96. Ho therefore, which states that there is no significant mean difference between age groups' average reading grade capacity level was accepted.

Table 9

## t-test of Independent Means According to Age Group

Age Group	N	Mean	SD	t-computed	df	t-tabular
14-19	130	4.84	0.959		196	196
20 & above	68	4.75	0.775	0.384		

Sex. Table 10 reflects the result of the t-test for independent samples conducted on respondents' sex.

Table 10 showed a mean of 4.65 at SD=1.00 for the males, and 5.06 at SD=0.822 for the females. When tested for significance of difference at 0.05 point of significance, it showed a computed t-value of 3.12 at df=196, which is greater than the tabular t-value of 1.96. Therefore, there is a significant mean difference between the male and the female respondents on their average reading grade capacity levels, hence Ho which states that there is no significant mean difference between the male and the female respondents' average reading grade capacity level was rejected.

**Table 10**  
**t-test of Independent Means According to Sex**

Sex	N	Mean	SD	t-computed	df	t-tabular
Male	108	4.65	1.00			
Female	90	5.06	0.822	3.12	196	1.96

**Academic Level Group.** Presented in Table 11 is the result of the t-test for independent samples conducted on respondents' academic year level.

Table 11 also showed that the first year level respondents had a mean of 4.98 at SD=0.96. The second year level respondents had 4.47 mean at SD=0.81. When compared statistically it brought out a computed t-value of 3.51 with df=196, and it was greater than the tabular t-value of 1.96 at 0.05 point of significance. This means that there is a significant difference, between the two groups in their average reading grade capacity levels. Therefore, the null hypotheses which states that there is no significant mean difference between the average reading grade capacity levels of the first year and second year college level respondents was rejected.

Table 11

**t-test of Independent Means According  
to Academic Year Level**

Year Level	N	Mean	SD	t-computed	df	t-tabular
First	130	4.98	0.960			
Second	68	4.47	0.810	3.51	196	1.96

Tables 9, 10 and 11 showed that the respondents' average reading grade capacities among groups by sex, if compared with average reading grade capacity with the academic year level group, it can be said that the two groups are of almost the same level, except with by age groups, where no significant mean difference was found between the group of the 15 to 19 year olds and the 20 and above year olds.

**Respondents' Reading Grade Retardation  
by Variates of Age Group, Sex and  
Academic Year Level**

Retardation by variates of age group, sex and academic year level, was based on the standardized expected average reading grade capacity of 11.0 for an average first year high school student, and 12.0 for an average second year high school student.

Age group. Table 12 shows the respondents' reading retardation according to age groups.

**Table 12**  
**Respondents' Reading Retardation as per**  
**Variate of Age**

Age Group	N	ARGC L	EARC for AC		Retardation for	
			FYL	SYL	AE-1 <sup>st</sup> Yr	AE-2 <sup>nd</sup> Yr
14 - 19 20 up	130	4.84	11.00	12.00	6.16	7.6
	68	4.75	(constant)		6.25	7.225

Legend:	RGC -	Reading Grade Capacity
	RGCL -	Reading Grade Capacity Level
	ARGCL -	Average Reading Grade Capacity Level
	EARC -	Expected Average Reading Grade
	AC -	Average Child
	AE -	Actual Enrollment
	FYL -	First Year Level
	SYL -	Second Year Level

From the table, it can be read that respondents aged 14 to 19 (130 respondents) have an actual reading grade capacity of 4.84 and if actually enrolled as first year college they were with a reading retardation of 6.16 (against 11.0 expected reading capacity of an average first year college) and 7.16 retardation for a second year college student respondent (against 12.0 expected average reading grade capacity of an average second year student).

Sex. Table 13 shows the respondents' reading retardation according to sex.

Table 13

Respondents' Reading Retardation as per Variates of Sex

SEX	N	AARGCL	Expected (ERGC)	Retardation in RGCL	
				1 <sup>st</sup> Year	2 <sup>nd</sup> Year
Male	108	4.65	11.0	6.35	7.35
Female	90	5.06	12.0	5.94	6.06

Legend:  
 ERGC - Expected Reading Grade Capacity from an Average child  
 RRGCL - Retardation Reading Grade Capacity Level  
 AARGCL - Actual Average Reading Grade Capacity Level

The male respondents are shown to have an actual average reading grade capacity of 4.65 equal to a capacity of an average grade four, who has been in the grade for four years, six months, five days, against the 11.0 expected reading grade capacity of an average first year college, hence the male respondents have a reading retardation of 6.35 if enrolled as first college student and if enrolled in the second year they have a retardation of 7.35 against 12.0 which is the expected reading grade capacity of an average second year college student.

The female (90 respondents) were with an average reading grade capacity of 5.06 which has a reading retardation (if enrolled as first year college) of 5.94 and 6.06 (if enrolled as second year college).

Academic Year Level. Table 14 shows the respondents' reading retardation according to academic year level.

**Table 14**  
**Respondents' Reading Retardation as per**  
**Variates of Academic Year Level**

Year Level	N	AARGCL	Expected ERGC	Retardation in RGCLR
First Year	130	4.98	11.0	6.02
Second Year	68	4.47	12.0	7.53
Legend:	ERGC - Reading Grade Capacity from an average child RGCLR - Reading Grade Capacity Level Retardation AARGCL - Actual Average Reading Grade Capacity Level			

As presented in Table 14, those first year college students' respondents have 4.98 reading grade capacities hence, with a reading grade retardation of 6.02. Those respondents actually enrolled as second year college students have an actual reading grade capacity of 4.47, hence with a reading grade retardation of 7.53.

#### Readability of Social Science Textbooks

Social Science readability/Difficulty Index of available materials in SSCAF based from Lorge Formula Readability Index.

Table 15

**Readability Index of SSCAF Social Science Textbooks Relative to  
Respondents Average Reading Grade Capacity Level**

SST Title	Readability Index (Text)	RARGCL	RGCL- Relative To SSTM - RI
1. Introduction to Humanities (Arts for Fine Living), 1 <sup>st</sup> Ed., 1971 by Josefina V. Estolas, et al	6.73		2.005
2. Agrarian Reform, Taxation and Cooperatives (A Social Sciences Perspective), 1991 by Josefina Estolas, et al	6.82	4.725	1.095
3. Foundation and Dynamics of Political Science – 1996 by Francisco Zulueta	6.91		2.185

**Legend:**

SST-Title	-	Social Science Textbook
RARGCL	-	Respondents' Average Reading Grade Capacity Level
RGCL	-	Respondents' Average Reading Grade capacity
		Relative to Level Relative to Social Science
SSTM - RI	-	Textbook Material Readability Index
SSTM	-	Social Science text material
RI	-	Readability Index

Table 15 presents the readability index of the texts/teaching materials of SSCAF in Social Science Courses. It indicated that the text 'Introduction to Humanities' has its readability index of 6.73. This means that the text can be read successfully by a child whose reading grade capacity is equal to an average grade

six, who has been in the class for seven months and three days. Those with lower reading grade capacities than 6.73 will find the book difficult to read. The lower the reading grade capacity of a child the more difficult is the book to the child. The higher than 6.73 reading grade capacity of a child, the easier is the book to the child. This respondents reading capacity is shown to be behind of 2.005 reading capacity to be able to read the book in comfort.

The table shows that the average reading capacity of the total respondents is but 4.725, which is lower than he readability index of 6.73 for the book Introduction to Humanity at .05 difference, hence this is but very slightly difficult to the respondents.

The book, "Agrarian Reform Taxation and Cooperatives' is shown to have a readability index of 6.82. This means that the book can be successfully read by an average child whose reading grade capacity level is 6.82. That is, a reader must have a reading grade capacity of an average child who is in grade six and has been there for eight months and two days. Thus, those reading with reading grade capacity lower than 6.82 will find it hard to comprehend the book, while those with reading grade capacity level higher than 6.82 will find the book easy to read. The table further shows that the average reading capacity level of the respondents at 4.725 is lower in capacity at 2.095 for respondents to read the book in comfort.

The book, 'Foundation and Dynamics of Political Science has a readability index of 6.91, which means that a child with a reading grade capacity level equal

to an average grade six child who has been in the class for nine months and one day shall successfully read this book. Those with reading grade capacity level higher than 6.91, will even find the book easier to read than those whose reading grade capacity level are lower than 6.91. That is, the higher than 6.91 reading grade capacity level of a child the easier is the reading of this book. Thus, the lower is the reading grade capacity level than 6.91, the harder is the reading of this book.

Since the average reading grade of the majority of respondents are lower than 6.91 even lower than 6.82 and 6.73, it can be said that the three books are hard readings

to all respondents, except for an insignificant one male respondent (refer to appendix F4) who is reading at 7.4 reading grade capacity level, that is, this respondent can even read successfully a text that is at a readability index that fits a reading grade capacity of an average grade seven child (first year high school).

The reading capacity of majority of respondents in either of the four sub-groups are lower than 6.9, it can be said then that the three books are hard readings to all respondents, except for an insignificant one respondents who was reading at 7.4 reading grade capacity level; that is, this respondent can even read a book successfully at a readability index that fits a reading grade capacity of an average grade seven (first year high school) who has been in the grade for four months.

### Differences in Average Reading Capacity Level

This section discusses the difference in average reading grade capacity level of respondents according to age, sex and year level.

Age group. Table 16 presents the difference in average reading grade capacity level of respondents according to year level.

**Table 16**  
**Difference in Average Reading Grade Capacity Levels by Age Group**

Age Group	n	Mean	SD	t-value	p-value	Decision
14 to 19	130	6.7942	0.92837			
20 and above	68	6.9452	0.98781	-0.227	0.821	Accept H <sub>0</sub>

\*significance level = 0.05; p < 0.05; two-tailed; df = 196

Table 16 on age groups' reading grades capacity level is shown not to have a significant difference between age groups since p-value of 0.821 is greater than the 0.05 significance level. Therefore H<sub>0</sub> which states that there is no significant difference between age groups' reading grade capacity level is accepted.

Sex. Table 17 shows the difference in average reading grade capacity level according to sex.

**Table 17**  
**Difference in Average Reading Grade Capacity Levels by Sex**

<b>Sex</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>p-value</b>	<b>Decision</b>
Male	108	7.0656	0.92837			
Female	90	6.6738	0.98781	-4.014	0.010	Reject H <sub>0</sub>

\*significance level = 0.05; p < 0.05; two-tailed; df = 196

As reflected in the table there is a significant difference in reading grade capacity level between male and female reading grade capacity levels, at a significant level equal to 0.05 with p-value of 0.010, two-tailed, at df=196. A significant difference between male and female average reading grade is shown since p-value of 0.010 is lower than the 0.05 significance level, thus the male group is shown to have better reading grade capacity than the female group. Therefore, H<sub>0</sub> which states that there is no significant difference between reading grade capacity level by sex groups is rejected.

Year level. In Table 18 is presented the difference in average reading grade capacity level by year level group.

**Table 18**  
**Difference in Average Reading Grade Capacity Levels by Year Level**

Year Level	n	Mean	SD	t-value	p-value	Decision
First Year	130	6.9921	0.99958			
Second Year	68	6.7473	0.98602	1.592	0.113	Accept H <sub>0</sub>

\*significance level = 0.05;  $p < 0.05$ ; two-tailed;  $df = 196$

Entries in Table 18 shows that there is no significant difference between the reading grade capacity level by academic year level group (first year college and second year college respondents groups) at a significant level equal to 0.05 with p-value of 0.113, two tailed, with  $df=196$ . The slight difference as shown by a computed p-value of 0.113 is greater than 0.05 level of significance hence not significant. Therefore  $H_0$  which states that there is no significant difference in reading grade capacity between academic year level group is accepted.

**Relationships Between Respondents' Average Reading Grade Capacity Level and Profile**

Table 19 presents the correlations performed between respondents' average reading grade capacity level and profile variates.

**Table 19****Correlations Relationship Between Average Reading Grade Capacity Level and Profile**

<b>Ave. Reading Grade vs</b>	<b>r<sub>xy</sub></b>	<b>p-value</b>	<b>Interpretation</b>	<b>Evaluation/Decision</b>
Age	0.046	0.521	NS	Accept H <sub>0</sub>
Sex	0.276	0.010	Significant	Accept H <sub>0</sub>
Year Level	-0.045	0.531	NS	Accept H <sub>0</sub>

\*significance level = 0.05;  $p < 0.05$ ; two-tailed;  $df = 196$

Table 19 shows that the average reading grade capacity by year level group of respondents at a computed p-value of 0.531 and that of the age group of respondents at computed p-value of 0.521 are both not significant since both computed p-values are greater than the significant level of significance which is equal to p-value of 0.05, two-tailed with  $df=196$ . Hence  $H_0$  was accepted, stating thus, that there is no significant relationship between reading grade capacity level of respondents' group by year level and age level. However the reading grade capacity level of the variates of sex was shown to have significant relationship in an inverse/low position since the computed p-value of 0.010 is

lesser than the significant level of 0.05, two-tailed at  $df=196$ . Therefore  $H_0$  which states that there is no significant relationship between the variate of sex and their reading grade capacity level is accepted.

#### Comparison Between Readability

##### Index and Average Reading

##### Grade Capacity Level

Table 20 shows the comparison between readability index of social science books available at Samar State College of Agriculture and Forestry library and respondents' reading grade capacity level according to age, sex and year level.

Agrarian Reform and Taxation and Cooperatives: A Social Science Perspective, at 6.82 difficulty index is difficult for the second year college group, the female group and the 14-19 age group.

The same is true with the book Foundation and Dynamics of Political Science, First Edition, at difficulty index of 6.91. The second year group, the female group and the 14-19 age group finds this book difficult.

Book titled Introduction to Humanities; Arts for Fine Living - 1<sup>st</sup> Edition was shown to be at a difficulty index of 6.7265, which means that the book shall be easy reading for an average child with a reading age capacity of an average child aged six years, seven months, and more than two days. The book

Table 20

**Difficulty Index of SSCAF Available Social Science Materials and Reading Capacity Level of Respondents by the Variates of Academic Year Level, Sex, and Age**

Book (Difficulty Index)	Year Level		Sex		Age	
	1 <sup>st</sup> (4.98)	2 <sup>nd</sup> (4.47)	Male (4.65)	Female (5.06)	14-19 (4.84)	20 & above (4.75)
Introduction to Humanities: Arts for Fine Living 1 <sup>st</sup> Edition (6.73)	D	D	D	D	D	D
Agrarian Reform and Taxation and Cooperatives: A Social Science Perspective (6.82)	D	D	D	D	D	D
Foundation and Dynamics of Political Science 1 <sup>st</sup> Edition (6.91)	D	D	D	D	D	D

Legend: D – Difficult

on Agrarian Reform and Taxation and Cooperatives: A Social Science perspective has a readability index of 6.8232. This means that the book is easy to

read by an average child with a reading age capacity level of six years, eight months, and more than two days. The book, Foundation and Dynamics of Political Science, 1<sup>st</sup> Edition, has a readability index of 6.9094. This is easy reading by an average child who has a reading age capacity level of six years, nine months, and one day. The table further shows that the book, Introduction to Humanities Arts for Fine Living, first Edition is slightly easier reading material than the book Agrarian Reform and Taxation and Cooperatives: A Social Science Perspective and also easier reading than the book Foundation of Dynamics of Political Science, first Edition. The book Agrarian Reform and Taxation and Cooperatives: A Social Science Perspective is easier reading than the book, Foundation and Dynamics of Political Science, First Edition, but is a harder reading material than the book, Introduction to Humanities: Arts for Five Living, First Edition.

### Implications

The result of the study implies a need of the following:

1. A need to acquire teaching materials leveled from the lowest level of 2.0 and up, to cater to the varied levels of reading capacities of the student populace.
2. A response to the need of paraphrasing or re-writing available teaching materials to a difficulty index within the reading capacity levels of respondents be attended to.

3. A need for more visual aids to help simplify the available social science reading materials be looked into.
4. A need to organize a remedial reading program based on the average reading grades revealed in this study be attended to.
5. There is a need for the whole school, to organize a developmental reading program to solve reading problems among the school populace.
6. There is a need to involve all content area teachers to the planning, construction organization and implementation of a developmental reading program that would serve the whole school populace; the average reader, the slow reader, the fast reader, the retarded reader, etc.
7. There is a need to level reading materials in the library and textbooks available for all courses, to ensure a good match of the reading capacity levels of students with the difficulty index of materials.

## Chapter 5

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary of the data gathered on the measurement of the actual reading grade capacity level of Samar State College of Agriculture and Forestry social science students in relation with the readability index and or difficulty index of available social science textbooks and other reading materials in Samar State College of Agriculture and Forestry.

#### Summary of Findings

The following are the salient findings of the study.

1. The total number of respondents by total enumeration was 198 (100%) which was the total of all enrolled students in the first year and second year college students of Samar State College of Agriculture and Forestry.

Of this 198, 84 (42.40 percent) were first year college male student respondents, and 24 (12.10 percent) were second year college male student respondents, which made a total of 108 male respondents. There were 56 (28.30 percent) female first year college respondents and 34 (17.20 percent) second year college female respondents, giving a total of 90 female respondents. There was a total of 130 (70.70 percent) first year college respondents and 68 (29.30 percent) second year college respondents.

2. The age profile of respondents was shown to be widely varied. Eighty (40.40 percent) were age 19, which covers the majority of the total respondents. This was followed by 31 (16.10 percent) aged 20; then by 23 (11.60 percent) aged 18; 12 (6.00 percent) aged 21; 10 (5.05 percent) aged 16; 8 (4.04 percent) aged 17; six (3.03 percent) aged 22; five (2.53 percent) aged 25; four (2.02 percent) for each ages 26, 24 and 14; three (1.52 percent) aged 27; two (1.01 percent) aged 35, and one each (0.51 percent) for ages 36, 31, 28 and 15.

3. The average reading grade capacity of these ages 14 - 19 was 4.84, while those of aged 20 and above was 4.75. This showed reading capacity retardation 6.16 for those enrolled first year college student, and 7.25 retardation for those enrolled as second year college students.

4. Grouped by sex, the male group was shown to have an average reading grade capacity of 4.65, while the female group was with an average reading grade capacity of 5.06. As a whole the average reading grade capacity of the whole respondents was 4.86. This showed that the whole male first year college respondents have a reading retardation of 6.14. For those male respondents enrolled as second year college students their reading retardation was 7.14. The whole female respondents enrolled as first year college students had 5.94 reading retardation and if enrolled as second year college student, their reading retardation was 6.94.

5. Gates Reading Survey Test result showed that the first year college student respondents has an average reading grade capacity of 4.9, while those respondents enrolled as second year college students have an average reading grade capacity of 4.7. This showed a reading grade capacity retardation of 7.10 among the first year college respondents, while those second year college respondents have an average reading retardation of 7.3. There was a general average reading grade capacity of 4.8 for the whole respondents of 198.

6. The best reader of the whole 198 respondents was reading at a grade level of 7.4, which is equal to a reading grade capacity level of an average child who has been 4 months in grade seven. The slowest reader was reading at a reading grade capacity level of 3.2 which is equal to the reading grade capacity of an average child who has been three months in grade three.

7. Among respondents aged 15 to 19, 133 were rated very low (VL) in their reading speed and accuracy ability. Seven were rated low and no one was rated high nor very high.

Those aged 20 and above respondents, only one was rated low in reading speed and accuracy, the remaining 57 were rated very low.

On the academic year level group, of the 130 first year college respondents, five were rated low in reading speed and accuracy, and 125 were rated very low. Among the 68 second year college respondents, three were rated very low. Three were rated low and 65 were rated very low.

8. t-test result showed a mean of 4.84 at  $SD=0.959$  for those aged 14-19, and mean of 4.75 at  $SD=0.775$  for those aged 20 and above. Compared for significance of difference, t-test showed a computed  $t$ -value of 0.384 at  $df=196$ , which is lesser than the tabular value of 1.96.  $H_0$  therefore, stating that there is no significant mean difference between age groups' average reading grade capacity level was accepted.

9. The male group respondents showed a mean of 4.65 at  $SD=1.00$  and 5.06 for the female group at  $SD=0.822$ . When computed for t-test for significance was computed, a difference was shown at a computed  $t$ -value of 3.12, with  $df=196$ , which is greater than the tabular  $t$ -value of 1.96. There was shown a significant mean difference between the male and female respondents' reading grade capacity levels.  $H_0$ , therefore, which states that there is no significant mean difference between the male and female respondents' average reading capacity level was rejected.

10. Between year level groups of respondents, the first year college group showed a mean of 4.98 at  $SD=0.960$ , while the second year college level group had a mean of 4.47 at  $SD=0.810$ . When the mean of the groups were compared, the result showed a computed  $t$ -value of 3.51, with  $df=196$  which was greater than the tabular  $t$ -value of 1.96 at 6.05 point of significance. There is then a significant mean difference between the reading grade capacity levels of the groups.  $H_0$  which states that there is no significant mean difference between the reading grade capacity level of the groups was rejected.

11. Among the groups, there is an average reading retardation for group aged 14-19 of 6.16 if enrolled as first year college student, and a retardation of 7.6 among those actually enrolled as second year college students.

For those enrolled as second year college, there is a reading capacity retardation of 6.25 and 7.225 retardation for those enrolled as second year college students.

12. The sex group respondents showed an average reading grade capacity level at 4.65 among the males, and 5.06 reading grade capacity level among the female group. They were shown to have a reading grade capacity retardation of 6.35 for those enrolled as first year college and a retardation of 7.35 if enrolled as second year college student.

The female respondents enrolled as first year college student were shown to have a reading retardation of 6.94 and a retardation of 6.06 for those enrolled as second year college.

13. Between academic year level groups, those enrolled as first year college students have an average reading capacity level of 4.98 and shown to have a reading capacity retardation of 6.02, while those enrolled as second year college who have an average of reading grade capacity of 4.47 have a reading grade capacity retardation of 7.53.

14. The textbooks used by teachers for the social science subjects were shown to have readability index as follows: Introduction to Humanities: Arts for Fine Living, Estoless, et al., 1971 – Readability Index (RI) was 6.73. This text

can be read successfully by an average child who at least has attended a grade six class for seven months and three days. The book is difficult to the respondents whose average reading grade capacities are but 4.725 (Average Reading Grade Capacity of Respondents) a reading skill of an average grade 4 children who has been in a grade 4 class for seven months, and about two days. Present average reading grade capacity level of respondents at 4.725 runs short of 2.205 reading capacity to be able to read this book comfortably.

The book Agrarian Reform, Taxation and cooperative has a readability Index of 6.82 which will be easy to read by an average child who has been in a grade 6 class for at least eight months and two days but any child with reading grade capacity lower than 6.82 will find the book difficult hence it is difficult to a child with an average reading grade of 4.725 (average reading grade capacity of the total respondents.) The respondents run short of 1.095 reading capacity to be able to read the book.

The textbook Foundation and Dynamics of Political Science - 1996 by Francisco Zulueta has 6.91 readability index. This shall be easy reading for an average child who at least has been in a grade six class for 9 months and one day. This is hard reading for the respondent whose average reading grade capacity was but 4.725. The respondents run short of 2.185 reading grade capacity to be able to read this book with good comprehension.

In general, all three textbooks are hard reading to the respondents except for a few whose individual reading grade capacities were equal or higher than 6.73, 6.82 and 6.91 (readability index of the above mentioned available textbook)

15. There is no significant difference in the average reading grade capacity levels by age groups at p-value of 0.821 which is greater than the 0.05 significance level. Ho therefore which states that there is no significant difference between age group's reading grade capacity level is accepted. The same is true between academic level groups with p-value at 0.113, two-tailed, at df=196. Between sex groups however, there is a significant difference in reading grade capacity level, at a significant level equal to 0.05 with p-value of 0.010, two-tailed. Since p-value of 0.010 is lower than the 0/05 significant level. Thus the male group was shown to have better reading grade capacity than the female group. Ho therefore which states that there is no significant difference between reading grade capacity level by sex groups was rejected.

16. The reading grade capacity level of the year level group at p-value of 0.531 and the computed p-value of 0.521 for the age group were both shown to be not significant since both computed p-value were greater than the significant level of significance which was equal to p-value of 0.05, two-tailed with df=196. Ho therefore, which stated that there is no significant relationship between reading grade capacity level of respondents group (year level group vs age level group).

The average reading grade capacity level of the variates of sex was shown to have significant relationship in an inverse/low position since the computed p-value of 0.010 is lesser than the significant level 0.05, two-tailed at df=196. Ho which states that there is no significant relationship between the variates of sex and their reading grade capacity level is accepted.

### Conclusions

In view of the foregoing findings, the following conclusions were raised:

1. The average reading grade of those respondents aged 14-19 was 4.84 while those aged 20 and above was 4.75 hence the total average of respondents was 4.80. Grouped by sex, the average reading grade capacity level of the male group was 4.65, while the female group was 5.06. The average of the whole group was 4.86. By year group, the average reading grade capacity of the first year college group was 4.9, while the second year college group was 4.7. The average reading capacity of the whole first and second year group was 4.80.

There was a general average reading grade capacity of the total 198 respondents at 4.8. The actual reading grade capacities of respondents ranges from 3.2 to 7.4, shown to be all retarded readers if based on what is expected from an average first year college student which is of a reading capacity of an average grade 11 student and grade 12 for an average first year and second year college student-respondents respectively.

2. Of the total 198 respondents, 8 were rated low in reading speed and accuracy, and only 223 were rated very low. In general, the respondents could be said to be poor readers.

3. There were significant differences in reading grade capacity levels between sex groups, and year level groups. There were no significant differences between age groups, as to t-test results.

4. All respondents have been in their reading retardations ranging from 4.86 to 7.52. Thus, the null hypotheses stating that there is no significant difference in actual reading capacity between year level group, sex groups, and academic year level group was rejected.

5. Data further revealed that majority of the respondents have an average reading grade retardation of 5.93. This means that they are behind of 5.93 reading grade capacity level based on the expected reading grade capacity of an average first and second year college students.

6. The available social science text books have a readability index that were easy readings to learners with reading grade capacity of an average grade six who has been in a grade six class from seven to nine months.

7. The reading grade capacity of the first year and second year college student-respondents were behind from the difficulty index of social science materials in the school at 6.6 to 6.9 since respondents' actual reading grade capacity of 3.2 to 7.4 were not in parallel with the difficulty index of the social science materials available in the school, except for those few respondents whose

actual reading grade capacity levels were equal to the average grade six who has been in the grade for six to nine months, who can read with assistance from the teacher or any adult assistance and for those very few respondents who were with an actual reading grade capacity of 7.0 to 7.4, who can read the available materials independently.

8. The Social Science students in the college are retarded readers and need reading remediation.

9. There is a need of providing easier reading material which is according to the reading grade capacity level of the respondents.

10. The reading materials need to be re-written to answer the needs of the students.

11. The reading capacity level of SSCAF students be assessed and reading difficulty level of reading materials be according to students' reading capacity level for the good and effective teaching-learning situation.

12. There is a need of a training seminar on paraphrasing texts and other reading materials to cater to the reading capacities of students for better teaching-learning results.

### Recommendations

Based on the findings, conclusions and implications in this study, it is recommended to the school authorities of SSCAF that improving reading capacities be made a school special concern; thus,

1. Students entry selection for a degree course be more strict-, to at least accept average reading performer according to what is expected from a college student.
2. Recommended too that teaching reading materials be leveled by readability index and labeled as to its difficulty index to guide users to the right material they can read hence, be able to progress.
3. Content subject teachers be consulted on the selection, acquisition of reading materials for students.
4. A specialist on readability leveling of reading materials be employed to start a good reading center.
5. It is suggested that a remedial reading program be organized in the school to improve learners' reading capacity levels, and a reading expert be hired or invited to guide the organizers.
6. Suggested too that the available books be leveled and those found difficult reading be re-written to cater to the reading capacity level of learners for better teaching-learning results.
7. An expert on re-writing and leveling of teaching materials be invited to lead the faculty on this project.
8. A seminar on writing and re-writing materials to cater to reading capacity levels of students be organized.
9. Update library materials, textbooks, and other teaching materials according to the need of the teachers and learners.

10. Recommended too, that a seminar-workshop preparation of a reading program for all content subject areas be organized;

11. Recommended further that support materials to the program be made available either by purchase acquisition or by in-school teacher construction--- these materials must be labeled by readability index to guide users to the right level they can read and progress as they go along.

The reading grade capacity of all SSCAF learners be determined to help and guide teachers in their selection of reading materials for their clients.

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## **APPENDICES**

**Appendix A**  
**Samar State University**  
**Graduate School**  
**Catbalogan, Samar**

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The Dean  
 Graduate School  
 Catbalogan, Samar

Sir/Madam:

The undersigned will enroll in thesis writing this 1<sup>st</sup> semester, 2008. In this regard, she would like to present the following proposed thesis titles; preferably number 1, for your evaluation, suggestions and recommendation.

1. Reading Capacity Levels of Samar State College of Agriculture and Forestry (SSCAF) Social Science College Students and Reading Difficulty Level of Textbooks.
2. College Student Reading Grade Capacity Level and Reading Material Difffficulty Index of Social Science College Students
3. Reading Material Difficulty Index and Reading Grade Capacity Levels

(Sgd.) **MARIETES N. BEDUYA**  
 Graduate Student

Recommends Title No.

#1 as Rephrased

(Sgd.) **SIMON BABALCON, Ph.D.**  
 Evaluator

Title #1

(Sgd.) **MARILYN CARDOSO, Ph.D.**  
 Evaluator

Title #1

(Sgd.) **ALFREDO DACURO, Ph.D.**  
 Evaluator

Approved: Title No. 1

(Sgd.) **EUSEBIO PACOLOR, Ph.D.**  
 Dean, Graduate School

**Appendix B**  
Republic of the Philippines  
COMMISSION ON HIGHER EDUCATION  
Region VIII  
SAMAR STATE UNIVERSITY  
Catbalogan, Samar

ASSIGNMENT OF ADVISER

NAME : MARIETES N. BEDUYA  
COURSE : Master of Arts in Teaching  
SPECIALIZATION : Reading  
TITLE OF THESES PROPOSAL: Reading Capacity Levels of Samar State College of Agriculture and Forestry Social Science Students and Reading Difficulty Level of Textbooks  
NAME OF ADVISER : Emerita A. Pacayra, M.A.T.

---

(Sgd) **MARIETES N. BEDUYA**  
Graduate Student

(Sgd) **EMERITA A. PACAYRA, M.A.T.**  
Adviser

APPROVED:

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

**Appendix C**  
Samar State University  
Graduate School  
Catbalogan, Samar

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The School President  
SSCAF  
San Jorge, Samar

Sir/Madam:

The undersigned is writing her thesis on "READING CAPACITY LEVELS OF SAMAR STATE COLLEGE OF AGRICULTURE AND FORESTRY SOCIAL SCIENCE STUDENTS AND READING DIFFICULTY LEVELS OF TEXTBOOKS". She hopes your kind office will allow her to gather her data from the students of Samar State College of Agriculture and Forestry, San Jorge, Samar for her come up with a more reliable study.

Thank you and with sincere appreciation for your favorable action.

Respectfully yours,

(Sgd.) MARIETES N. BEDUYA  
Researcher

**APPROVED:**

(Sgd.) AIDA L. TOBES, Ed. D.  
College President

**Appendix D**  
**Samar State University**  
**Graduate School**  
**Catbalogan Samar**

---

Date

Dear Respondents,

The undersigned is making a survey on your actual reading grade capacity level. This is for the intention of matching the teaching materials of the school with your actual reading grade capacity level and be able to help you in your research work and other reading activities in school.

She hopes for your cooperation.

(Sgd.) **MARIETES N. BEDUYA**  
Researcher

**Appendix D1**  
**Questionnaire**

**On**  
**Profile**

Please provide the following personal information and be assured that any information you provide shall be treated with utmost confidentiality.

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

Age : \_\_\_\_\_

Sex : \_\_\_\_\_

Academic Year Level : \_\_\_\_\_

**Note:** Gates Reading Survey Test (standardized) shall  
be administered.

**Appendix E**  
**Respondents' Profile According to Academic Group and Sex Group with their  
Corresponding Chronological Age**

RC	Year Level		Sex			CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	
1	X		X			19
2		X			X	19
3	X		X			18
4	X		X			19
5	X				X	20
6	X		X			19
7		X			X	16
8	X		X			19
9	X				X	20
10	X		X			35
11	X		X			19
12		X	X			25
13	X				X	26
14	X		X			27
15		X			X	21
16	X				X	18
17	X				X	24
18	X				X	19
19	X				X	19
20		X	X			18
21	X				X	16
22	X				X	19
23		X	X			21
24	X				X	24
25		X			X	25
26		X			X	21
27		X			X	20
28		X			X	20
29		X			X	18
30		X	X			20

RC	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
31		X			X		19
32		X			X		17
33		X	X				18
34		X			X		19
35		X			X		19
36		X			X		18
37		X			X		18
38		X	X				29
39		X	X				26
40		X			X		19
41		X			X		19
42		X			X		18
43		X			X		18
44		X			X		20
45		X			X		19
46		X			X		16
47		X			X		19
48	X				X		20
49	X		X				21
50	X		X				19
51	X		X				21
52	X		X				16
53	X		X				19
54	X		X				17
55	X		X				19
56	X		X				17
57	X				X		19
58		X			X		20
59		X			X		18
60		X			X		20
61		X	X				20

RC	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
62		X	X				22
63		X	X				25
64		X	X				24
65	X				X		21
66	X				X		19
67	X		X				17
68	X				X		18
69	X				X		19
70	X				X		19
71		X			X		19
72		X			X		24
73		X			X		18
74		X	X				24
75		X	X				27
76		X	X				26
77		X	X				25
78		X			X		22
79		X			X		19
80		X			X		35
81		X			X		20
82		X			X		20
83		X			X		20
84	X				X		19
85	X				X		16
86	X				X		19
87	X				X		20
88	X				X		19
89	X				X		18
90	X				X		19

RC	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
91	X				X		19
92	X				X		20
93	X				X		19
94	X				X		16
95	X		X				19
96	X		X				19
97	X		X				18
98	X		X				17
99	X		X				19
100	X		X				19
101	X		X				19
102	X		X				19
103	X		X				20
104	X		X				21
105	X		X				18
106	X		X				17
107	X		X				19
108	X				X		19
109	X				X		19
110	X				X		20
111	X				X		18
112	X		X				19
113	X		X				19
114	X		X				19
115	X		X				20
116	X		X				21
117	X		X				25
118	X		X				26
119	X		X				27
120	X						19

RC	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
121	X		X				20
122	X		X				19
123	X		X				19
124	X				X		14
125	X				X		14
126	X				X		15
127	X				X		16
128	X				X		16
129	X				X		17
130	X				X		23
131	X				X		36
132	X				X		20
133	X				X		18
134	X		X				19
135	X		X				20
136	X		X				20
137	X		X				21
138	X		X				22
139	X		X				19
140	X		X				20
141	X		X				19
142	X		X				19
143	X		X				18
144	X		X				16
145	X		X				17
146	X		X				18
147	X		X				21
148	X		X				19
149	X		X				19
150	X		X				19
151	X		X				19
152	X		X				19
153	X		X				19
154	X		X				18
155	X		X				19
156	X		X				19

RC	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
157	X		X				19
158	X		X				19
159	X		X				20
160	X		X				18
161	X		X				19
162	X		X				19
163	X		X				16
164	X		X				14
165	X		X				14
166	X		X				16
167	X		X				18
168	X		X				19
169	X		X				19
170	X		X				19
171	X		X				20
172	X			X			20
173	X			X			19
174	X			X			19
175	X			X			19
176	X			X			19
177	X			X			18
178	X			X			19
179	X			X			19
180		X					19
181		X					20
182		X					20
183		X					21
184		X					19
185		X					19
186		X					21
187		X					19
188		X					19
189		X					19
190		X					19

RCN	Year Level		Sex				CA
	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Male	Percent	Female	Percent	
191		X	X				20
192		X	X				19
193		X	X				21
194		X			X		20
195		X			X		22
196		X			X		31
197		X			X		20
198		X			X		22
Total	138	68	108		90		
1 <sup>st</sup> year			84		56		
2 <sup>nd</sup> year			24		34		
Mean							
SD							

**E1. Reading Grade and Reading Age for Vocabulary Skill by Age.**

**Appendix E**

Age Group 14 to 19										Age Group 20 & above									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
1	22	4.7	9-10	48	31	6.2	11-5	100	37	7.4	12-8	154	14	3.4	8-7	49	22	4.7	9-10
2	17	4.0	9-2	50	24	5.0	10-2	101	20	4.4	9-7	155	14	3.4	8-7	51	22	4.7	9-10
3	15	3.6	8-9	52	25	5.2	10-4	102	23	4.8	10-0	156	9	2.7	7-11	78	28	5.6	10-8
4	9	2.7	7-11	53	9	2.7	7-11	103	30	6.0	11-2	157	6	2.5	7-8	81	25	5.2	10-4
5	15	3.6	8-9	54	20	4.4	9-7	104	27	5.5	10-7	158	0	2.0	7-2	82	33	6.6	11-10
6	20	4.4	9-7	55	25	5.2	10-4	105	31	6.2	11-15	159	0	2.0	7-2	130	22	4.7	9-10
7	20	4.4	9-7	56	14	3.4	8-7	106	31	6.2	11-15	160	12	3.1	8-3	131	18	4.2	9-4
8	6	2.5	7-8	57	18	4.2	9-4	107	28	5.6	10-8	161	10	2.8	8-0	133	35	7.0	12-3
9	14	3.4	8-7	58	9	2.7	7-11	108	29	5.8	10-10	162	0	2.0	7-2	135	9	2.7	7-11
10	37	7.4	12-8	59	6	2.5	7-8	109	33	6.6	11-10	163	10	2.8	8-0	137	6	2.5	7-8
11	11	2.9	8-1	60	0	2.0	7-2	110	37	7.4	12-8	164	6	2.5	7-8	138	6	2.5	7-8
12	21	4.5	9-8	61	12	3.1	8-3	111	30	6.0	11-12	165	18	4.2	9-4	140	11	2.9	8-1
13	26	5.4	10-6	62	10	2.8	8-0	112	31	6.2	11-15	166	14	3.4	8-7	147	12	3.1	8-3
14	30	6.0	11-2	63	0	2.0	7-2	113	35	7.0	12-3	167	18	4.2	9-4	171	18	4.2	9-4
15	6	2.5	7-8	64	6	2.5	7-8	114	25	5.2	10-4	168	18	4.2	9-4	181	11	2.9	8-1
16	20	4.4	9-7	65	20	4.4	9-7	115	25	5.2	10-4	169	10	2.8	8-0	186	15	3.6	8-9
17	0	2.0	7-2	66	18	4.2	9-4	116	36	7.2	12-6	170	6	2.5	7-8				
18	10	2.8	8-0	67	25	5.2	10-4	117	29	5.8	10-10	172	18	4.2	9-4				
19	17	4.0	9-2	68	31	6.2	11-5	118	27	5.5	10-7	173	12	3.1	8-3				
20	12	3.1	8-3	69	18	4.2	9-4	119	30	6.0	11-2	174	10	2.8	8-0				
21	14	3.4	8-7	70	22	4.7	9-10	120	30	6.0	11-2	175	15	3.6	8-9				
22	31	6.2	11-5	71	22	4.7	9-10	121	37	7.4	12-8	176	15	3.6	8-9				
23	22	4.7	9-10	72	27	5.5	10-7	122	30	6.0	11-2	177	9	2.7	7-11				
24	24	5.0	10-2	73	14	3.4	8-7	123	24	5.0	10-2	178	11	2.9	8-1				
25	22	4.7	9-10	74	22	4.7	9-10	124	20	4.4	9-7	179	0	2.0	7-2				
26	25	5.2	10-4	75	31	6.2	11-15	125	37	7.4	12-8	180	12	3.1	8-3				
27	18	4.2	9-4	76	20	4.4	9-7	126	28	5.6	10-8	182	14	3.4	8-7				
28	26	5.4	10-6	77	28	5.6	10-8	127	31	6.2	11-15	183	6	2.5	7-8				
29	23	4.8	10-0	79	35	7.0	12-3	128	25	5.2	10-4	184	18	4.2	9-4				
30	22	4.7	9-10	80	35	7.0	12-3	129	22	4.7	9-10	185	18	4.2	9-4				
31	20	4.4	9-7	83	36	7.2	12-6	132	23	4.8	10-0	187	11	2.9	8-1				
32	28	5.6	10-8	84	29	5.8	10-10	134	17	4.0	9-2	188	14	3.4	8-7				
33	35	7.0	12-3	85	33	6.6	11-10	136	15	3.6	8-9	189	18	4.2	9-4				
34	25	5.2	10-4	86	27	5.5	10-7	139	14	3.4	8-7	190	15	3.6	8-9				

Continuation: E1

**Age Group 14 to 19**

Age Group 14 to 19										Age Group 20 & above									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
35	12	3.1	8-3	87	23	4.8	10-0	141	0	2.0	7-2	191	10	2.8	8-0				
36	33	6.6	11-10	88	27	5.5	10-7	142	0	2.0	7-2	192	9	2.7	7-11				
37	36	7.2	12-6	89	24	5.0	10-2	143	10	2.8	8-0	193	12	3.1	8-3				
38	29	5.8	10-10	90	18	4.2	9-4	144	12	3.1	8-3	194	14	3.4	8-7				
39	27	5.5	10-7	91	20	4.4	9-7	145	18	4.2	9-4	195	14	3.4	8-7				
40	14	3.4	8-7	92	30	6.0	11-2	146	12	3.1	8-3	196	15	3.6	8-9				
41	11	2.9	8-1	93	37	7.4	12-8	148	12	3.1	8-3	197	18	4.2	9-4				
42	12	3.1	8-13	94	30	6.0	11-2	149	11	2.9	8-1	198	18	4.2	9-4				
43	33	6.6	11-10	95	35	7.0	12-3	150	11	2.9	8-1								
44	18	4.2	9-4	96	28	5.6	10-8	151	12	3.1	8-3								
45	23	4.8	10-0	97	25	5.2	10-4	152	18	4.2	9-4								
46	22	4.7	9-10	98	29	5.8	10-10	153	9	2.7	7-11								
47	27	5.5	10-7	99	33	6.6	11-10									T =			

Legend:

RCN - Respondents' Code Number

RS - Raw Score

RG - Reading Grade

RA - Reading Age

T - Total

Ave. - Average

Ave. =  $\frac{T}{20}$

RCN =  $\frac{RS + RG + RA}{3}$

**E2.** Reading Grade and Reading Age for Vocabulary Skill by Sex.

**Appendix E2**

Males										Females									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
1	22	4.7	9-10	114	25	5.2	10-4	180	12	3.1	8-3	2	17	4.0	9-2	80	35	7.0	12-3
3	15	3.6	8-9	115	25	5.2	10-4	181	11	2.9	8-1	5	15	3.6	8-9	81	25	5.2	10-4
4	9	2.7	7-11	116	36	7.2	12-6	182	14	3.4	8-7	7	26	4.4	9-7	82	33	6.6	11-10
6	20	4.4	9-7	117	29	5.8	10-10	183	6	2.5	7-8	9	14	3.4	8-7	83	36	7.2	12-6
8	6	2.5	7-8	118	27	5.5	10-7	184	18	4.2	9-4	13	26	5.4	10-6	84	29	5.8	10-10
10	37	7.4	12-8	119	30	6.0	11-2	185	18	4.2	9-4	15	6	2.5	7-8	85	33	6.6	11-10
11	11	2.9	8-1	120	30	6.0	11-2	186	15	3.6	8-9	16	20	4.4	9-7	86	27	5.5	10-7
12	21	4.5	9-8	121	37	7.4	12-8	187	11	2.9	8-1	17	0	2.0	7-2	87	23	4.8	10-0
14	30	6.0	11-2	122	30	6.0	11-2	188	14	3.4	8-7	18	10	2.8	8-0	88	27	5.5	10-7
20	12	3.1	8-3	123	24	5.0	10-2	189	18	4.2	9-4	19	17	4.0	9-2	89	24	5.0	10-2
23	22	4.7	9-10	125	9	2.7	7-11	190	15	3.6	8-9	21	14	3.4	8-7	90	18	4.2	9-4
30	22	4.7	9-10	136	15	3.6	8-9	191	10	2.8	8-0	22	31	6.2	11-5	91	20	4.4	9-7
33	35	7.0	12-3	137	6	2.5	7-8	192	9	2.7	7-11	24	24	5.0	10-2	92	30	6.0	11-2
38	29	5.8	10-10	138	6	2.5	7-8	193	12	3.1	8-3	25	22	4.7	9-10	93	37	7.4	12-8
39	27	5.5	10-7	139	14	3.4	8-7					26	25	5.2	10-4	94	30	6.0	11-2
49	22	4.7	9-10	140	11	2.9	8-1					27	18	4.2	9-4	108	29	5.8	10-10
50	24	5.0	10-2	141	0	2.0	7-2					28	26	5.4	10-6	109	33	6.6	11-10
51	22	4.7	9-10	142	0	2.0	7-2					29	23	4.8	10-0	110	37	7.4	12-8
52	25	5.2	10-4	143	10	2.8	8-0					31	26	4.4	9-7	111	30	6.0	11-2
53	9	2.7	7-11	144	12	3.1	8-3					32	28	5.6	10-8	124	20	4.4	9-7
54	20	4.4	9-7	145	18	4.2	9-4					34	25	5.2	10-4	125	37	7.4	12-8
55	25	5.2	10-4	146	12	3.1	8-3					35	12	3.1	8-3	126	28	5.6	10-8
56	14	3.4	8-7	147	12	3.1	8-3					36	33	6.6	11-10	127	31	6.2	11-15
61	12	3.1	8-3	148	12	3.1	8-3					43	33	6.6	11-10	132	23	4.8	10-4
62	10	2.8	8-0	149	11	2.9	8-1					44	18	4.2	9-4	133	35	7.0	12-3
63	0	2.0	7-2	150	11	2.9	8-1					45	23	4.8	10-0	134	17	4.0	9-2
64	6	2.5	7-8	151	12	3.1	8-3					42	12	3.1	8-13	131	18	4.2	9-4
67	25	5.2	10-4	152	18	4.2	9-4					37	36	7.2	12-6	128	25	5.2	10-4
74	22	4.7	9-10	153	9	2.7	7-11					40	14	3.4	8-7	129	22	4.7	9-10
75	31	6.2	11-15	154	14	3.4	8-7					41	11	2.9	8-1	130	22	4.7	9-10
76	20	4.4	9-7	155	14	3.4	8-7					46	22	4.7	9-10	172	18	4.2	9-4
77	28	5.6	10-8	156	9	2.7	7-11					47	27	5.5	10-7	173	12	3.1	8-3
95	35	7.0	12-3	157	6	2.5	7-8					48	31	6.2	11-5	174	10	2.8	8-0
96	28	5.6	10-8	158	0	2.0	7-2					57	18	4.2	9-4	175	15	3.6	8-9

Continuation: E.2

Males				Females												
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	
97	25	5.2	10-4	159	0	2.0	7-2		58	9	2.7	7-11	176	15	3.6	8-9
98	29	5.8	10-10	160	1.2	3.1	7-3		59	6	2.5	7-8	177	9	2.7	7-11
99	33	6.6	11-10	161	1.0	2.8	8-0		60	0	2.0	7-2	178	11	2.9	8-1
100	37	7.4	12-8	162	0	2.0	7-2		65	20	4.4	9-7	179	0	2.0	7-2
101	20	4.4	9-7	163	1.0	2.8	8-0		66	1.8	4.2	9-4	194	14	3.4	8-7
102	23	4.8	10-0	164	6	2.5	7-8		68	31	6.2	11-5	195	14	3.4	8-7
103	30	6.0	11-2	165	1.8	4.2	9-4		69	1.8	4.2	9-4	196	15	3.6	8-9
104	27	5.5	10-7	166	14	3.4	8-7		70	22	4.7	9-10	197	18	4.2	9-4
105	31	6.2	11-5	167	18	4.2	9-4		71	22	4.7	9-10	198	18	4.2	9-4
106	31	6.2	11-5	168	18	4.2	9-4		72	27	5.5	10-7				
107	28	5.6	10-8	169	10	2.8	8-0		73	14	3.4	8-7				
112	31	6.2	11-15	170	6	2.5	7-8		78	28	5.6	10-8				
113	35	7.0	12-3	171	18	4.2	9-4		79	35	7.0	12-3				

Legend:

RCN - Respondents' Code Number  
 RS - Raw Score  
 RG - Reading Grade  
 RA - Reading Age  
 T - Total  
 Ave. - Average

T =

Ave. =

Ave. =

Ave. =

**E3.** Reading Grade and Reading Age for Vocabulary Skill by Year Level.

**Appendix E3**

RCN	First Year						Second Year					
	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN
1	22	4.7	9-10	84	29	5.8	10-10	131	18	4.2	9-4	2
3	15	3.6	8-9	85	33	6.6	11-10	132	23	4.8	10-0	7
4	9	2.7	7-11	86	27	5.5	10-7	133	35	7.0	12-3	12
5	15	3.6	8-9	87	23	4.8	10-0	134	17	4.0	9-2	15
6	20	4.4	9-7	88	27	5.5	10-7	135	9	2.7	7-11	20
8	6	2.5	7-8	89	24	5.0	10-2	136	15	3.6	8-9	23
9	14	3.4	8-7	90	18	4.2	9-4	137	6	2.5	7-8	25
10	37	7.4	12-8	91	20	4.4	9-7	138	6	2.5	7-8	26
11	11	2.9	8-1	92	30	6.0	11-2	139	14	3.4	8-7	27
13	26	5.4	10-6	93	37	7.4	12-8	140	11	2.9	8-1	28
14	30	6.0	11-2	94	30	6.0	11-2	141	0	2.0	7-2	29
16	20	4.4	9-7	95	35	7.0	12-3	142	0	2.0	7-2	30
17	0	2.0	7-2	96	28	5.6	10-8	143	10	2.8	8-0	31
18	10	2.8	8-0	97	25	5.2	10-4	144	12	3.1	8-3	32
19	17	4.0	9-2	98	29	5.8	10-10	145	18	4.2	9-4	33
21	14	3.4	8-7	99	33	6.6	11-10	146	12	3.1	8-3	34
22	31	6.2	11-5	100	37	7.4	12-8	147	12	3.1	8-3	35
24	24	5.0	10-2	101	20	4.4	9-7	148	12	3.1	8-3	36
48	31	6.2	11-5	102	23	4.8	10-0	149	11	2.9	8-1	37
49	22	4.7	9-10	103	30	6.0	11-2	150	11	2.9	8-1	38
50	24	5.0	10-2	104	27	5.5	10-7	151	12	3.1	8-3	39
51	22	4.7	9-10	105	31	6.2	11-15	152	18	4.2	9-4	40
52	25	5.2	10-4	106	31	6.2	11-15	153	9	2.7	7-11	41
53	9	2.7	7-11	107	28	5.6	10-8	154	14	3.4	8-7	42
54	20	4.4	9-7	108	29	5.8	10-10	155	14	3.4	8-7	43
55	25	5.2	10-4	109	33	6.6	11-10	156	9	2.7	7-11	44
56	14	3.4	8-7	110	37	7.4	12-8	157	6	2.5	7-8	45
57	18	4.2	9-4	111	30	6.0	11-2	158	0	2.0	7-2	46
65	20	4.4	9-7	112	31	6.2	11-15	159	0	2.0	7-2	47
66	18	4.2	9-4	113	35	7.0	12-3	160	12	3.1	8-3	58
67	25	5.2	10-4	114	25	5.2	10-4	161	10	2.8	8-0	59
68	14	3.4	8-7	115	25	5.2	10-4	162	0	2.0	7-2	60
69	18	4.2	9-4	116	36	7.2	12-6	163	10	2.8	8-0	61
70	22	4.7	9-10	117	29	5.8	10-10	164	6	2.5	7-8	62

Continuation: E3

RCN	First Year						Second Year					
	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN
71	2.2	4.7	9-10	118	27	5.5	10-7	165	18	4.2	9-4	63
72	2.7	5.5	10-7	119	30	6.0	11-2	166	14	3.4	8-7	64
73	1.4	3.4	8-7	120	30	6.0	11-2	167	18	4.2	9-14	180
74	2.2	4.7	9-10	121	37	7.4	12-8	168	18	4.2	9-14	181
75	3.1	6.2	11-15	122	30	6.0	11-2	169	10	2.8	8-0	182
76	2.0	4.4	9-7	123	24	5.0	10-2	170	6	2.5	7-8	183
77	2.8	5.6	10-8	124	20	4.4	9-7	171	18	4.2	9-4	184
78	2.8	5.6	10-8	125	37	7.4	12-8	172	18	4.2	9-4	185
79	3.5	7.0	12-3	126	28	5.6	10-8	173	12	3.1	8-3	186
80	3.5	7.0	12-3	127	31	6.2	11-15	174	10	2.8	8-0	187
81	2.5	5.2	10-4	128	25	5.2	10-4	175	15	3.6	8-9	188
82	3.3	6.6	11-10	129	22	4.7	9-10	176	15	3.6	8-9	189
83	3.6	7.2	12-6	130	22	4.7	9-10	177	9	2.7	7-11	190
								178	11	2.9	8-1	
								179	0	2.0	7-2	
												T =
												Ave. =

Legend:

RCN - Respondents' Code Number

RS - Raw Score

RG - Reading Grade

RA - Reading Age

T - Total

Ave. - Average

RS = Ave. =

RG = Ave. =

RA = Ave. =

T = Ave. =

#### Appendix E4

E4. Reading Grade and Reading Age for Comprehension Skill by Age.

Age Group 14 to 19										Age Group 20 & above									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
1	8	2.9	8-1	48	0	2.0	7-2	100	17	4.4	9-7	154	2	2.2	7-4	49	1	2.1	7-3
2	8	2.9	8-1	50	1	2.1	7-3	101	18	4.8	10-0	155	2	2.2	7-4	51	4	2.5	7-8
3	0	2.0	7-2	52	2	2.2	7-4	102	19	5.0	10-2	156	2	2.2	7-4	78	5	2.6	7-10
4	10	3.3	8-6	53	3	2.4	7-7	103	15	4.2	9-4	157	1	2.1	7-3	81	6	2.7	7-11
5	14	4.0	9-2	54	3	2.4	7-7	104	19	5.0	10-2	158	10	3.3	8-6	82	9	3.1	8-3
6	20	5.2	10-4	55	0	2.0	7-2	105	14	4.0	9-2	159	12	3.6	8-9	130	10	3.3	8-6
7	9	3.4	8-3	56	0	2.0	7-2	106	13	3.8	9-0	160	9	3.1	8-3	131	9	3.1	8-3
8	16	4.3	9-6	57	1	2.1	7-3	107	12	3.6	8-9	161	0	2.0	7-2	133	16	4.3	9-6
9	15	4.2	9-4	58	8	2.9	8-1	108	20	5.2	10-4	162	1	2.1	7-3	135	0	2.0	7-2
10	10	3.3	8-6	59	5	2.6	7-10	109	21	5.3	10-5	163	1	2.1	7-3	137	8	2.9	8-1
11	6	2.7	7-11	60	0	2.0	7-2	110	14	4.0	9-2	164	3	2.4	7-7	138	8	2.9	8-1
12	5	2.6	7-10	61	9	3.4	8-3	111	14	4.0	9-2	165	4	2.5	7-8	140	9	3.4	8-3
13	9	3.4	8-3	62	6	2.7	7-11	112	14	4.0	9-2	166	5	2.6	7-10	147	3	2.4	7-7
14	9	3.4	8-3	63	0	2.0	7-2	113	15	4.2	9-4	167	5	2.6	7-10	171	10	3.3	8-6
15	6	2.7	7-11	64	13	3.8	9-0	114	17	4.4	9-7	168	4	2.5	7-8	181	0	2.0	7-2
16	5	2.6	7-10	65	2	2.2	7-4	115	15	4.2	9-4	169	3	2.4	7-7	186	10	3.3	8-6
17	5	2.6	7-10	66	10	3.3	8-6	116	12	3.6	8-9	170	10	3.3	8-6				
18	10	3.3	8-6	67	10	3.3	8-6	117	12	3.6	8-9	172	11	3.4	8-7				
19	15	4.2	9-4	68	13	3.8	9-0	118	13	3.8	9-0	173	15	4.2	9-4				
20	0	2.0	7-2	69	15	4.2	9-4	119	10	3.3	8-6	174	9	3.1	8-3				
21	16	4.3	9-6	70	18	4.8	10-0	120	11	3.4	8-7	175	6	2.7	7-11				
22	12	3.6	8-9	71	17	4.4	9-7	121	29	7.4	12-8	176	5	2.6	7-10				
23	12	3.6	8-9	72	15	4.2	9-4	122	25	6.2	11-5	177	1	2.1	7-3				
24	5	2.6	7-10	73	10	3.3	8-6	123	25	6.2	11-5	178	2	2.2	7-4				
25	16	4.3	9-6	74	11	3.4	8-7	124	18	4.3	10-0	179	2	2.2	7-4				
26	0	2.0	7-2	75	9	3.1	8-3	125	18	4.3	10-0	180	0	2.0	7-2				
27	0	2.0	7-2	76	8	2.9	8-1	126	18	4.3	10-0	182	0	2.0	7-2				
28	7	2.8	8-0	77	6	2.7	7-11	127	14	4.0	9-2	183	0	2.0	7-2				
29	0	2.0	7-2	79	5	2.6	7-10	128	11	3.4	8-7	184	16	4.3	9-6				
30	8	2.9	8-1	80	8	2.9	8-1	129	10	3.3	8-6	185	0	2.0	7-2				
31	0	2.0	7-2	83	12	3.6	8-9	132	15	4.2	9-4	187	7	2.8	8-0				
32	8	2.9	8-1	84	12	3.6	8-9	134	0	2.0	7-2	188	0	2.0	7-2				
33	20	5.2	10-4	85	13	3.8	9-0	136	7	2.8	8-0	189	8	2.9	8-1				
34	14	4.0	9-2	86	14	4.0	9-2	139	4	2.5	7-8	190	0	2.0	7-2				

Continuation: E4

Age Group 14 to 19								Age Group 20 & above							
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
35	7	2.8	8-0	87	15	4.2	9-4	141	0	2.0	7-2	191	0	2.0	7-2
36	14	4.0	9-2	88	14	4.0	9-2	142	1	2.1	7-3	192	7	2.8	8-0
37	0	2.0	7-2	89	10	3.3	8-6	143	1	2.1	7-3	193	7	2.8	8-0
38	0	2.0	7-2	90	14	4.0	9-2	144	5	2.6	7-10	194	8	2.9	8-1
39	9	3.4	8-3	91	19	5.0	10-2	145	6	2.7	7-11	195	4	2.5	7-8
40	8	2.9	8-1	92	18	4.8	10-0	146	3	2.4	7-7	196	6	2.7	7-11
41	8	2.9	8-1	93	21	5.3	10-5	148	0	2.0	7-2	197	4	2.5	7-8
42	4	2.5	7-8	94	23	5.6	10-8	149	0	2.0	7-2	198	0	2.0	7-2
43	8	2.9	8-1	95	23	5.6	10-8	150	4	2.5	7-8				
44	8	2.9	8-1	96	23	5.6	10-8	151	5	2.6	7-10				
45	9	3.4	8-3	97	10	3.3	8-6	152	0	2.0	7-2				
46	8	2.9	8-1	98	30	7.6	12-11	153	3	2.4	7-7				
47	13	3.8	9-0	99	15	4.2	9-4								

Legend:

T =

Ave. =

RCN - Respondents' Code Number

RS - Raw Score

RG - Reading Grade

RA - Reading Age

T - Total

Ave. - Average

**E5.** Reading Grade and Reading Age for Comprehension Skill by Sex.

**Appendix E5**

RCN	Males						Females						
	RS	RG	RCN	RA	RS	RG	RCN	RA	RS	RG	RCN	RA	
1	8	2.9	8-1	114	17	4.4	9-7	180	0	2.0	7-2	2	8
3	0	2.0	7-2	115	15	4.2	9-4	181	0	2.0	7-2	5	14
4	10	3.3	8-6	116	12	3.6	8-9	182	0	2.0	7-2	7	9
6	20	5.2	10-4	117	12	3.6	8-9	183	0	2.0	7-2	9	15
8	16	4.3	9-6	118	13	3.8	9-0	184	16	4.3	9-6	13	9
10	10	3.3	8-6	119	10	3.3	8-6	185	0	2.0	7-2	15	6
11	6	2.7	7-11	120	11	3.4	8-7	186	10	3.3	8-6	16	5
12	5	2.6	7-10	121	29	7.4	12-8	187	7	2.8	8-2	17	5
14	9	3.4	8-3	122	25	6.2	11-5	188	0	2.0	7-2	18	10
20	0	2.0	7-2	123	25	6.2	11-5	189	8	2.9	8-1	19	15
23	12	3.6	8-9	125	0	2.0	7-2	190	0	2.0	7-2	21	16
30	8	2.9	8-1	136	7	2.8	8-0	191	0	2.0	7-2	22	12
33	20	5.2	10-4	137	8	2.9	8-1	192	7	2.8	8-0	24	5
38	0	2.0	7-2	138	8	2.9	8-1	193	7	2.8	8-0	25	16
39	9	3.4	8-3	139	4	2.5	7-8					26	0
49	1	2.1	7-3	140	9	3.4	8-3					27	0
50	1	2.1	7-3	141	0	2.0	7-2					28	7
51	4	2.5	7-8	142	1	2.1	7-3					29	0
52	2	2.2	7-4	143	1	2.1	7-3					31	0
53	3	2.4	7-7	144	5	2.6	7-10					32	8
54	3	2.4	7-7	145	6	2.7	7-11					34	14
55	0	2.0	7-2	146	3	2.4	7-7					35	7
56	0	2.0	7-2	147	3	2.4	7-7					36	14
61	9	3.4	8-3	148	0	2.0	7-2					37	0
62	6	2.7	7-11	149	0	2.0	7-2					40	8
63	0	2.0	7-2	150	4	2.5	7-8					41	8
64	13	3.9	9-0	151	5	2.6	7-10					42	4
67	10	3.3	8-6	152	0	2.0	7-2					43	8
74	11	3.4	8-7	153	3	2.4	7-7					44	8
75	9	3.1	8-3	154	2	2.2	7-4					45	9
76	8	2.9	8-1	155	2	2.2	7-4					46	8
77	6	2.7	7-11	156	2	2.2	7-4					47	13
95	23	5.6	10-8	157	1	2.1	7-3					48	0
96	23	5.6	10-8	158	10	3.3	8-6					57	1

Continuation: E5

Males										Females									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
97	10	3.3	8-6	159	12	3.6	8-9					58	8	2.9	8-1	176	5	2.6	7-10
98	30	7.6	12-11	160	9	3.1	8-3					59	5	2.6	7-10	177	1	2.1	7-3
99	15	4.2	9-4	161	0	2.0	7-2					60	0	2.0	7-2	178	2	2.2	7-4
100	17	4.4	9-7	162	1	2.1	7-3					65	2	2.2	7-4	179	2	2.2	7-4
101	18	4.8	10-0	163	1	2.1	7-3					66	10	3.3	8-6	194	8	2.9	8-1
102	19	5.0	10-2	164	3	2.4	7-7					68	13	3.8	9-0	195	4	2.5	7-8
103	15	4.2	9-4	165	4	2.5	7-8					69	15	4.2	9-4	196	6	2.7	7-11
104	19	5.0	10-2	166	5	2.6	7-10					70	18	4.8	10-0	197	4	2.5	7-8
105	14	4.0	9-2	167	5	2.6	7-10					71	17	4.4	9-7	198	0	2.0	7-2
106	13	3.8	9-0	168	4	2.5	7-8					72	15	4.2	9-4				
107	12	3.6	8-9	169	3	2.4	7-7					73	10	3.3	8-6				
112	14	4.0	9-2	170	10	3.3	8-6					78	5	2.6	7-10				
113	15	4.2	9-4	171	10	3.3	8-6					79	5	2.6	7-10				

Legend:

RCN - Respondents' Code Number  
 RS - Raw Score  
 RG - Reading Grade  
 RA - Reading Age  
 T - Total  
 Ave. - Average

T =   
Ave. =

### Appendix E6

E6. Reading Grade and Reading Age for Comprehension Skill by Year Level.

First Year										Second Year									
RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA	RCN	RS	RG	RA
1	8	2.9	8-1	84	12	3.6	8-9	131	9	3.1	8-3	2	8	2.9	8-1	191	0	2.0	7-2
3	0	2.0	7-2	85	13	3.8	9-0	132	15	4.2	9-4	7	9	3.4	8-3	192	7	2.8	8-0
4	10	3.3	8-6	86	14	4.0	9-2	133	16	4.3	9-6	12	5	2.6	7-10	193	7	2.8	8-0
5	14	4.0	9-2	87	15	4.2	9-4	134	0	2.0	7-2	15	6	2.7	7-11	194	8	2.9	8-1
6	20	5.2	10-4	88	14	4.0	9-2	135	0	2.0	7-2	20	0	2.0	7-2	195	4	2.5	7-8
8	16	4.3	9-6	89	10	3.3	8-6	136	7	2.8	8-0	23	12	3.6	8-9	196	6	2.7	7-11
9	15	4.2	9-4	90	14	4.0	9-2	137	8	2.9	8-1	25	16	4.3	9-6	197	4	2.5	7-8
10	10	3.3	8-6	91	19	5.0	10-2	138	8	2.9	8-1	26	0	2.0	7-2	198	0	2.0	7-2
11	6	2.7	7-11	92	18	4.8	10-0	139	4	2.5	7-8	27	0	2.0	7-2				
13	9	3.4	8-3	93	21	5.3	10-5	140	9	3.4	8-3	28	7	2.8	8-0				
14	9	3.4	8-3	94	23	5.6	10-8	141	0	2.0	7-2	29	0	2.0	7-2				
16	5	2.6	7-10	95	23	5.6	10-8	142	1	2.1	7-3	30	8	2.9	8-1				
17	5	2.6	7-10	96	23	5.6	10-8	143	1	2.1	7-3	31	0	2.0	7-2				
18	10	3.3	8-6	97	10	3.3	8-6	144	5	2.6	7-10	32	8	2.9	8-1				
19	15	4.2	9-4	98	30	7.6	12-11	145	6	2.7	7-11	33	20	5.2	10-4				
21	16	4.3	9-6	99	15	4.2	9-4	146	3	2.4	7-7	34	14	4.0	9-2				
22	12	3.6	8-9	100	17	4.4	9-7	147	3	2.4	7-7	35	7	2.8	8-0				
24	5	2.6	7-10	101	18	4.8	10-0	148	0	2.0	7-2	36	14	4.0	9-2				
48	0	2.0	7-2	102	19	5.0	10-2	149	0	2.0	7-2	37	0	2.0	7-2				
49	1	2.1	7-3	103	15	4.2	9-4	150	4	2.5	7-8	38	0	2.0	7-2				
50	1	2.1	7-3	104	19	5.0	10-2	151	5	2.6	7-10	39	9	3.4	8-3				
51	4	2.5	7-8	105	14	4.0	9-2	152	0	2.0	7-2	40	8	2.9	8-1				
52	2	2.2	7-4	106	13	3.8	9-0	153	3	2.4	7-7	41	8	2.9	8-1				
53	3	2.4	7-7	107	12	3.6	8-9	154	2	2.2	7-4	42	4	2.5	7-8				
54	3	2.4	7-7	108	20	5.2	10-4	155	2	2.2	7-4	43	8	2.9	8-1				
55	0	2.0	7-2	109	21	5.3	10-5	156	2	2.2	7-4	44	8	2.9	8-1				
56	0	2.0	7-2	110	14	4.0	9-2	157	1	2.1	7-3	45	9	3.4	8-3				
57	1	2.1	7-3	111	14	4.0	9-2	158	10	3.3	8-6	46	8	2.9	8-1				
65	2	2.2	7-4	112	14	4.0	9-2	159	12	3.6	8-9	47	13	3.8	9-0				
66	10	3.3	8-6	113	15	4.2	9-4	160	9	3.1	8-3	58	8	2.9	8-1				
67	10	3.3	8-6	114	17	4.4	9-7	161	0	2.0	7-2	59	5	2.6	7-10				
68	13	3.8	9-0	115	15	4.2	9-4	162	1	2.1	7-3	60	0	2.0	7-2				
69	15	4.2	9-4	116	12	3.6	8-9	163	1	2.1	7-3	61	9	3.4	8-3				
70	18	4.8	10-0	117	12	3.6	8-9	164	3	2.4	7-7	62	6	2.7	7-11				

Continuation: E6

First year

Legend:

BCN = Respondents' Code Number

RCN = Raw Score

RS = Raw Score  
RG = Reading Grade  
DA = Reading Age

RA = reading  
T = tail

### Appendix E7

#### E7. Reading Grade and Reading Age for Speed for Percentage of Accuracy and Rating by Age

AGE GROUP 14 TO 19					
RCN	RS	RG	RA	%A	R
1	28	7.7	13-0	85	L
2	20	6.2	11-5	55	VL
3	21	6.3	11-6	58	VL
4	18	5.8	10-10	50	VL
5	23	6.7	12-0	64	VL
6	31	8.4	13-8	89	L
7	33	8.8	14-8	91	L
8	26	7.2	12-6	72	VL
9	16	5.0	10-4	46	VL
10	28	7.7	13-0	77	VL
11	31	8.4	13-8	86	VL
12	26	7.2	12-6	74	VL
13	28	7.7	13-0	77	VL
14	26	7.2	12-6	72	VL
15	26	7.2	12-6	72	VL
16	31	8.4	13-8	86	VL
17	31	8.4	13-8	86	VL
18	28	7.7	13-0	77	VL
19	27	7.4	12-8	75	VL
20	21	6.3	11-6	58	VL
21	20	6.2	11-5	55	VL
22	26	7.2	12-6	72	VL
23	24	6.8	12-1	66	VL
24	33	8.8	14-6	91	L
25	33	8.8	14-6	91	L
26	32	8.6	13-10	88	VL
27	30	8.2	13-6	83	VL
28	27	7.4	12-8	88	VL
29	30	8.2	13-6	83	VL
30	25	7.0	12-3	69	VL
31	34	9.1	14-4	94	L
32	29	7.9	13-4	80	VL
33	30	8.2	13-6	86	VL
34	27	7.4	12-8	79	VL
35	18	5.8	10-10	50	VL
36	26	7.2	12-6	74	VL
37	28	7.7	13-0	77	VL
38	28	7.7	13-0	77	VL
39	21	6.3	11-6	58	VL
40	20	6.2	11-5	55	VL
41	19	6.0	11-2	52	VL
42	24	6.8	12-1	66	VL
43	24	6.8	12-1	66	VL
44	28	7.7	13-0	77	VL
45	19	6.0	11-2	52	VL

Continuation: E7

AGE GROUP 14 TO 19					
RCN	RS	RG	RA	%A	R
46	25	7.0	12-3	69	VL
47	29	7.9	13-4	80	VL
48	18	5.8	10-10	50	VL
50	16	5.0	10-4	46	VL
51	16	5.0	10-4	46	VL
52	18	5.8	10-10	53	VL
53	19	6.0	11-2	52	VL
54	17	5.5	10-7	47	VL
55	17	5.5	10-7	47	VL
56	16	5.0	10-4	46	VL
57	20	6.2	11-5	55	VL
58	21	6.3	11-6	58	VL
59	24	6.8	12-1	66	VL
60	18	5.8	10-10	53	VL
61	20	6.2	11-5	55	VL
62	20	6.2	11-5	55	VL
63	19	6.0	11-2	52	VL
64	17	5.5	10-7	47	VL
65	26	7.2	12-6	72	VL
66	30	8.2	13-6	86	VL
67	31	8.4	13-4	86	VL
68	28	7.7	13-0	85	VL
69	20	6.2	11-5	55	VL
70	21	6.3	11-6	58	VL
71	23	6.7	12-0	64	VL
72	26	7.2	12-6	72	VL
73	27	7.4	12-8	75	VL
74	28	7.7	13-0	85	VL
75	20	6.2	11-5	55	VL
76	21	6.3	11-6	58	VL
77	23	6.7	12-0	64	VL
79	28	7.7	13-0	77	VL
80	31	8.4	13-8	89	L
83	29	7.9	13-4	80	VL
84	30	8.2	13-6	86	VL
85	27	7.4	12-8	79	VL
86	31	8.4	13-8	86	VL
87	30	8.2	13-6	83	VL
88	21	6.3	11-6	58	VL
89	24	6.8	12-1	66	VL
90	28	7.7	13-0	77	VL
91	26	7.2	12-6	74	VL
92	29	7.9	13-3	80	VL
93	27	7.4	12-8	75	VL
94	23	6.7	12-0	68	VL
95	26	7.2	12-6	72	VL
96	23	6.7	12-0	68	VL

Continuation: E7

## AGE GROUP 14 TO 19

RCN	RS	RG	RA	%A	R
97	28	7.7	13-0	77	VL
98	33	8.8	14-0	91	L
99	27	7.4	12-8	79	VL
100	30	8.2	13-6	86	VL
101	29	7.9	13-4	80	VL
102	34	9.1	14-4	94	L
103	25	7.0	12-3	69	VL
104	30	8.2	13-6	83	VL
105	32	8.6	13-10	88	VL
106	21	6.3	11-6	58	VL
107	24	6.8	12-1	66	VL
108	28	7.7	13-0	77	VL
109	31	8.4	13-8	89	L
110	25	7.0	12-3	69	VL
111	32	8.6	13-10	88	VL
112	31	8.4	13-8	89	L
113	25	7.0	12-3	69	VL
114	34	9.1	14-4	94	L
115	30	8.2	13-6	83	VL
116	27	7.4	12-8	88	VL
117	21	6.3	11-6	58	VL
118	24	6.8	12-1	66	VL
119	28	7.7	13-0	77	VL
120	26	7.2	12-6	74	VL
121	27	7.4	12-8	75	VL
122	19	6.0	11-2	52	VL
123	20	6.2	11-5	55	VL
124	21	6.3	11-6	58	VL
125	27	7.4	12-8	75	VL
126	28	7.7	13-0	77	VL
127	26	7.2	12-6	74	VL
128	31	8.4	13-8	86	VL
129	28	7.7	13-0	77	VL
132	25	7.0	12-3	69	VL
134	27	7.4	12-8	79	VL
136	27	7.4	12-8	88	VL
139	24	6.8	12-1	66	VL
141	26	7.2	12-6	72	VL
142	24	6.8	12-1	66	VL
143	26	7.2	12-6	72	VL
144	27	7.4	12-8	75	VL
145	17	5.5	10-7	47	VL
146	19	6.0	11-2	52	VL
148	18	5.8	10-10	53	VL
149	18	5.8	10-10	53	VL
150	21	6.3	11-6	58	VL
151	27	7.4	12-8	75	VL

Continuation: E7

## AGE GROUP 14 TO 19

RCN	RS	RG	RA	%A	R
152	28	7.7	13-0	77	VL
153	26	7.2	12-6	74	VL
154	16	5.0	10-4	46	VL
155	16	5.0	10-4	46	VL
156	16	5.0	10-4	46	VL
157	23	6.7	12-0	68	VL
158	23	6.7	12-0	68	VL
159	26	7.2	12-6	72	VL
160	23	6.7	12-0	64	VL
161	21	6.3	11-6	58	VL
162	20	6.2	11-5	55	VL
163	20	6.2	11-5	55	VL
164	20	6.2	11-5	55	VL
165	21	6.3	11-6	58	VL
166	18	5.8	10-10	50	VL
167	18	5.8	10-10	50	VL
168	16	5.0	10-4	46	VL
169	18	5.8	10-10	50	VL
170	19	6.0	11-2	52	VL
172	17	5.5	10-7	47	VL
173	21	6.3	11-6	58	VL
174	24	6.8	12-1	66	VL
175	21	6.3	11-6	58	VL
176	21	6.3	11-6	58	VL
177	17	5.5	10-7	47	VL
178	26	7.2	12-6	72	VL
179	27	7.4	12-8	75	VL
180	17	5.5	10-7	47	VL
182	18	5.8	10-10	50	VL
183	20	6.2	11-5	55	VL
184	21	6.3	11-6	58	VL
185	16	5.0	10-4	46	VL
187	21	6.3	11-6	58	VL
188	18	5.8	10-10	53	VL
189	20	6.2	11-5	55	VL
190	19	6.0	11-2	52	VL
191	17	5.5	10-7	47	VL
192	17	5.5	10-7	47	VL
193	24	6.8	12-1	66	VL
194	21	6.3	11-6	58	VL
195	21	6.3	11-6	58	VL
196	18	5.8	10-10	53	VL
197	18	5.8	10-10	53	VL
198	20	6.2	11-5	55	VL

Continuation: E7

## AGE GROUP 20 ABOVE

RCN					
	RS	RG	RA	%A	R
49	21	6.3	11-6	58	VL
78	26	7.2	12-6	72	VL
81	25	7.0	12-3	69	VL
82	34	9.1	14-4	94	VL
130	23	6.7	12-0	68	VL
131	26	7.2	12-6	72	VL
133	29	7.9	13-4	80	VL
135	25	7.0	12-3	69	VL
137	27	7.4	12-8	88	VL
138	26	7.2	12-6	72	VL
140	26	7.2	12-6	72	VL
147	20	6.2	11-5	55	VL
171	20	6.2	11-5	55	VL
181	18	5.8	10-10	50	VL
186	27	7.4	12-8	75	VL

### Appendix E8

**E8.** Reading Grade and Reading Age for Speed for Percentage of Accuracy and Rating by Sex.

MALES											
RCN						RCN					
	RS	RG	RA	%A	R		RS	RG	RA	%A	R
1	28	7.7	13-0	85	L	122	19	6.0	11-2	52	VL
3	21	6.3	11-6	58	VL	123	20	6.2	11-5	55	VL
4	18	5.8	10-10	50	VL	135	25	7.0	12-3	69	VL
6	31	8.4	13-8	89	L	136	27	7.4	12-8	88	VL
8	26	7.2	12-6	72	VL	137	27	7.4	12-8	88	VL
10	28	7.7	13-6	77	VL	138	26	7.2	12-6	72	VL
11	31	8.4	13-8	86	VL	139	24	6.8	12-1	66	VL
12	26	7.2	12-6	74	VL	140	26	7.2	12-6	72	VL
14	26	7.2	12-6	72	VL	141	26	7.2	12-6	72	VL
20	21	6.3	11-6	58	VL	142	24	6.8	12-1	66	VL
23	24	6.8	12-1	66	VL	143	26	7.2	12-6	72	VL
30	25	7.0	12-3	69	VL	144	27	7.4	12-8	75	VL
33	30	8.2	13-6	86	VL	145	17	5.5	10-7	47	VL
38	28	7.7	13-0	77	VL	146	19	6.0	11-2	52	VL
39	21	6.3	11-6	58	VL	147	20	6.2	11-5	55	VL
49	21	6.3	11-6	58	VL	148	18	5.8	10-10	53	VL
50	16	5.0	10-4	46	VL	149	18	5.8	10-10	53	VL
51	16	5.0	10-4	46	VL	150	21	6.3	11-6	58	VL
52	18	5.8	10-10	53	VL	151	27	7.4	12-8	75	VL
53	19	6.0	11-2	52	VL	152	28	7.7	13-0	77	VL
54	17	5.5	10-7	47	VL	153	26	7.2	12-6	74	VL
55	17	5.5	10-7	47	VL	154	16	5.0	10-4	46	VL
56	16	5.0	10-4	46	VL	155	16	5.0	10-4	46	VL
61	20	6.2	11-5	55	VL	156	16	5.0	10-4	46	VL
62	20	6.2	11-5	55	VL	157	23	6.7	12-0	68	VL
63	19	6.0	11-2	52	VL	158	23	6.7	12-0	68	VL
64	17	5.5	10-7	47	VL	159	26	7.2	12-6	72	VL
67	31	8.4	13-4	86	VL	160	23	6.7	12-0	64	VL
74	28	7.7	13-0	85	VL	161	21	6.3	11-6	58	VL
75	20	6.2	11-5	55	VL	162	20	6.2	11-5	55	VL
76	21	6.3	11-6	58	VL	163	20	6.2	11-5	55	VL
77	23	6.7	12-0	64	VL	164	20	6.2	11-5	55	VL
95	26	7.2	12-6	72	VL	165	21	6.3	11-6	58	VL
96	23	6.7	12-0	68	VL	166	18	5.8	10-10	50	VL
97	28	7.7	13-0	77	VL	167	18	5.8	10-10	50	VL
98	33	8.8	14-0	91	L	168	16	5.0	10-4	46	VL
99	27	7.4	12-8	79	VL	169	18	5.8	10-10	50	VL
100	30	8.2	13-6	86	VL	170	19	6.0	11-2	52	VL
101	29	7.9	13-4	80	VL	171	20	6.2	11-5	55	VL
102	34	9.1	14-4	94	L	180	17	5.5	10-7	47	VL
103	25	7.0	12-3	69	VL	181	18	5.8	10-10	50	VL
104	30	8.2	13-6	83	VL	182	18	5.8	10-10	50	VL
105	32	8.6	13-10	88	VL	183	20	6.2	11-5	55	VL
106	21	6.3	11-6	58	VL	184	21	6.3	11-6	58	VL
107	24	6.8	12-1	66	VL	185	16	5.0	10-4	46	VL

Continuation: E8

MALES											
RCN						RCN					
	RS	RG	RA	%A	R		RS	RG	RA	%A	R
112	31	8.4	13-8	89	L	186	27	7.4	12-8	75	VL
113	25	7.0	12-3	69	VL	187	21	6.3	11-6	58	VL
114	34	9.1	14-4	94	L	188	18	5.8	10-10	53	VL
115	30	8.2	13-6	83	VL	189	20	6.2	11-5	55	VL
116	27	7.4	12-8	88	VL	190	19	6.0	11-2	52	
117	21	6.3	11-6	58	VL	191	17	5.5	10-7	47	VL
118	24	6.8	12-1	66	VL	192	17	5.5	10-7	47	VL
119	28	7.7	13-0	77	VL	193	24	6.8	12-1	66	VL
120	26	7.2	12-6	74	VL						
121	27	7.4	12-8	75	VL						

FEMALES											
RCN						RCN					
	RS	RG	RA	%A	R		RS	RG	RA	%A	R
2	20	6.2	11-5	55	VL	88	21	6.3	11-6	58	VL
5	23	6.7	12-6	64	VL	89	24	6.8	12-1	66	VL
7	33	8.8	14-8	91	L	90	28	7.7	13-0	77	VL
9	16	5.0	10-4	46	VL	91	26	7.2	12-6	74	VL
13	28	7.7	13-0	77	VL	92	29	7.9	13-3	80	VL
15	26	7.2	12-6	72	VL	93	27	7.4	12-8	75	VL
16	31	8.4	13-8	86	VL	94	23	6.7	12-0	68	VL
17	31	8.4	13-8	86	VL	108	28	7.7	13-0	77	VL
18	28	7.7	13-0	77	VL	109	31	8.4	13-8	89	L
19	27	7.4	12-8	75	VL	110	25	7.0	12-3	69	VL
21					VL	111	32	8.6	13-10	88	VL
22	26	7.2	12-6	72	VL	124	21	6.3	11-6	58	VL
24	33	8.8	14-6	91	L	125	27	7.4	12-8	75	VL
25	33	8.8	14-6	91	L	126	28	7.7	13-0	77	VL
26	32	8.6	13-10	88	VL	127	26	7.2	12-6	74	VL
27	30	8.2	13-16	83	VL	128	31	8.4	13-8	86	VL
28	27	7.4	12-8	88	VL	129	28	7.7	13-0	77	VL
29	30	8.2	13-6	83	VL	130	23	6.7	12-0	68	VL
31	34	9.1	14-4	94	L	131	26	7.2	12-6	72	VL
32	29	7.9	13-4	80	VL	132	25	7.0	12-3	69	VL
34	27	7.4	12-8	79	VL	133	29	7.9	13-4	80	VL
35	18	5.8	10-10	50	VL	134	27	7.4	12-8	79	VL
36	26	7.2	12-6	74	VL	172	17	5.5	10-7	47	VL
37	28	7.7	13-0	77	VL	173	21	6.3	11-6	58	VL
40	20	6.2	11-5	55	VL	174	24	6.8	12-1	66	VL
41	19	6.0	11-2	52	VL	175	21	6.3	11-6	58	VL
42	24	6.8	12-1	66	VL	176	21	6.3	11-6	58	VL
43	24	6.8	12-1	66	VL	177	17	5.5	10-7	47	VL
44	28	7.7	13-0	77	VL	178	26	7.2	12-6	72	VL
45	19	6.0	11-2	52	VL	179	27	7.4	12-8	75	VL
46	25	7.0	12-3	69	VL	194	21	6.3	11-6	58	VL
47	29	7.9	13-4	80	VL	195	21	6.3	11-6	58	VL

Continuation: E8

FEMALES											
RCN						RCN					
	RS	RG	RA	%A	R		RS	RG	RA	%A	R
48	18	5.8	10-10	50	VL	196	18	5.8	10-10	53	VL
57	20	6.2	11-5	55	VL	197	18	5.8	10-10	53	VL
58	21	6.3	11-6	58	VL	198	20	6.2	11-5	55	VL
59	24	6.8	12-1	66	VL						
60	18	5.8	10-10	53	VL						
65	26	7.2	12-6	72	VL						
66	30	8.2	13-6	86	VL						
68	28	7.7	13-0	85	VL						
69	20	6.2	11-5	55	VL						
70	21	6.3	11-6	58	VL						
71	23	6.7	12-0	64	VL						
72	26	7.2	12-6	72	VL						
73	27	7.4	12-8	75	VL						
78	26	7.2	12-6	72	VL						
79	28	7.7	13-0	77	VL						
80	31	8.4	13-8	89	L						
81	25	7.0	12-3	69	VL						
82	34	9.1	14-4	94	L						
83	29	7.9	13-4	80	VL						
84	30	8.2	13-6	86	VL						
85	27	7.4	12-8	79	VL						
86	31	8.4	13-8	86	VL						
87	30	8.2	13-6	83	VL						

## Appendix E9

E9. Reading Grade and Reading Age for Speed for Percentage of Accuracy and Rating by Year Level.

RCN	FIRST YEAR						SECOND YEAR					
	RS	RG	RA	%A	R	RCN	RS	RG	RA	%A	R	RCN
1	28	7.7	13-0	85	L	<b>92</b>	29	7.9	13-3	80	VL	<b>147</b>
3	21	6.2	11-5	55	VL	<b>93</b>	27	7.4	12-8	75	VL	<b>148</b>
4	18	5.8	10-10	50	VL	<b>94</b>	23	6.7	12-0	68	VL	<b>149</b>
5	23	6.7	12-0	64	VL	<b>95</b>	26	7.2	12-6	72	VL	<b>150</b>
6	31	8.4	13-8	89	L	<b>96</b>	23	6.7	12-0	68	VL	<b>151</b>
8	26	7.2	12-6	72	VL	<b>97</b>	28	7.7	13-0	77	VL	<b>152</b>
9	16	5.0	10-4	46	VL	<b>98</b>	33	8.8	14-0	91	L	<b>153</b>
10	28	7.7	13-0	77	VL	<b>99</b>	27	7.4	12-8	79	VL	<b>154</b>
11	31	8.4	13-8	86	VL	<b>100</b>	30	8.2	13-6	86	VL	<b>155</b>
13	28	7.7	13-0	77	VL	<b>101</b>	29	7.9	13-4	80	VL	<b>156</b>
14	26	7.2	12-6	72	VL	<b>102</b>	34	9.1	14-4	94	L	<b>157</b>
16	31	8.4	13-8	86	VL	<b>103</b>	25	7.0	12-3	69	VL	<b>158</b>
17	31	8.4	13-8	86	VL	<b>104</b>	30	8.2	13-6	83	VL	<b>159</b>
18	28	7.7	13-0	77	VL	<b>105</b>	32	8.6	13-10	88	VL	<b>160</b>
19	27	7.4	12-8	75	VL	<b>106</b>	21	6.3	11-6	58	VL	<b>161</b>
21	20	6.2	11-5	55	VL	<b>107</b>	24	6.8	12-1	66	VL	<b>162</b>
22	26	7.2	12-6	72	VL	<b>108</b>	28	7.7	13-0	77	VL	<b>163</b>
24	33	8.8	14-6	91	L	<b>109</b>	31	8.4	13-8	89	L	<b>164</b>
48	18	5.8	10-10	50	VL	<b>110</b>	25	7.0	12-3	69	VL	<b>165</b>
49	21	6.3	11-6	58	VL	<b>111</b>	32	8.6	13-10	88	VL	<b>166</b>
50	16	5.0	10-4	46	VL	<b>112</b>	31	8.4	13-8	89	L	<b>167</b>
51	16	5.0	10-4	46	VL	<b>113</b>	25	7.0	12-3	69	VL	<b>168</b>
52	18	5.8	10-10	53	VL	<b>114</b>	34	9.1	14-4	94	L	<b>169</b>
53	19	6.0	11-2	52	VL	<b>115</b>	30	8.2	13-6	83	VL	<b>170</b>
54	17	5.5	10-7	47	VL	<b>116</b>	27	7.4	12-8	88	VL	<b>171</b>
55	17	5.5	10-7	47	VL	<b>117</b>	21	6.3	11-6	58	VL	<b>172</b>
56	16	5.0	10-4	46	VL	<b>118</b>	24	6.8	12-1	66	VL	<b>173</b>
57	20	6.2	11-5	55	VL	<b>119</b>	28	7.7	13-0	77	VL	<b>174</b>
65	26	7.2	12-6	72	VL	<b>120</b>	26	7.2	12-6	74	VL	<b>175</b>
66	30	8.2	13-6	86	VL	<b>121</b>	27	7.4	12-8	75	VL	<b>176</b>
67	31	8.4	13-4	86	VL	<b>122</b>	19	6.0	11-2	52	VL	<b>177</b>
68	28	7.7	13-0	85	VL	<b>123</b>	20	6.2	11-5	55	VL	<b>178</b>
69	20	6.2	11-5	55	VL	<b>124</b>	21	6.3	11-6	58	VL	<b>179</b>
70	21	6.3	11-6	58	VL	<b>125</b>	27	7.4	12-8	75	VL	<b>T -</b>

Continuation: E9

## Appendix F1

**Estimate of Readability Index of Social Science Texts/Material in SSCAF**  
(Based on Lorge Formula for Estimating  
Difficulty of Reading Materials)

## Work Sheet No. 1

**Title of Book : Introduction to Humanities:  
Arts for Fine Living  
1<sup>st</sup> Edition**

Author(s) : Josefina V. Estolas  
Clarita G. Javier  
Nieves Pada-Payno

Publisher : National Book Store, Inc.

Date of Publication: 1995

Location of Sample in Text: pages - - -  
3, 34, 63, 107, 140,  
165, 197, 221 and 245

## Basic Data

No. of Words in Sample	-----	1854
No. of Sentences in Sample	-----	106
No. of Prepositional Phrases in Sample	-----	183
No. of Hard Words in the Sample	-----	488

## Computation Results: Values

Average sentence Length	=	$17.491 \times 0.06$	=	1.0494
Ratio Prepositional Phrases	=	$0.0987 \times 9.55$	=	0.9426
Ratio of Hard Words	=	$0.2632 \times 10.43$	=	2.7453
				=====
		Total		4.7373
		Plus constant		1.9892
				=====
		Readability Index	→	6.7265

## Work Sheet No. 2

Title of Book : **Agrarian Reform Taxation and Cooperatives: A Social Science Perspective**

Author(s) : **Josefina V. Estolas  
Clarita G. Javier  
Nieves Pada-Payno**

Publisher : **National Book Store, Inc.**

Date of Publication: 1991

Location of Samples: **Pages ---**  
**1, 19, 37, 55, 73, 92, 111, 130,  
148, 166, 184, 202**

Basic Data :

No. of Words in Sample	-----	3639
No. of Sentences in Sample	-----	157
No. of Prepositional Phrases in Sample	-----	304
No. of Hard Words in Sample	-----	923

Computation Results: **Values**

Average Sentence Length	-----	$23.178 \times 0.06 = 1.3906$
Ratio of Prepositional Phrases	-----	$0.08354 \times 9.55 = 0.797807$
Ration of Hard Words	-----	$0.25364 \times 10.43 = 2.6455$
	=====	=====
Total		4.833987
Plus Constant		1.9892
	=====	=====
Readability Index	→	6.823187

## Work Sheet No. 3

Title of Book : Foundation and Dynamics of Political Science  
1<sup>st</sup> Edition

Author(s) : Francisco Zulueta

Publisher : Academic Publishing Corporation

Date of Publication: 1996

Location of Sample in Text: pages ---  
1, 19, 37, 55, 73, 91, 111,  
130, 148, 166, 184 and 202

Basic Data :

No. of Words in Sample	-----	4954
No. of Sentences in Sample	-----	210
No. of Prepositional Phrases in Sample	-----	569
No. of Hard Words in the Sample	-----	1144

Computation Results:	Values
Average sentence Length	= $23.590 \times 0.06 = 1.415$
Ratio Prepositional Phrases	= $0.1149 \times 9.55 = 1.097295$
Ratio of Hard Words	= $0.2309 \times 10.43 = 2.4083$
	=====
	Total 4.9202
	Plus constant 1.9892
	=====
Readability Index →	6.9094

## Appendix F2

The Profile of the Respondents in Terms of the Following  
Variants: academic level; sex; and age

### A. Course Year Level

<b>Year Level</b>	<b>Frequency</b>	<b>Percent</b>
First year	143	72.2
Second Year	55	27.8
<b>Total</b>	<b>198</b>	<b>100</b>

### B. Sex

<b>Sex</b>	<b>Frequency</b>	<b>Percent</b>
Male	108	54.5
Female	91	45.5
<b>Total</b>	<b>198</b>	<b>100</b>

### C. Age

<b>Age</b>	<b>Frequency</b>	<b>Percent</b>
14 - 19	183	92.4
20 and above	15	7.6
<b>Total</b>	<b>198</b>	<b>100</b>

### Appendix F3

The Average Reading Grade Capacity Levels of Student Respondents as per their Variates of academic level; sex; and age

A. Average Reading According to Year Level

<b>Year Level</b>	<b>N</b>	<b>Range</b>	<b>Average Reading</b>
First Year	143	3.3 - 7.4	4.98
Second Year	55	3.2 - 6.8	4.47

B. Average Reading According to Sex

<b>Sex</b>	<b>N</b>	<b>Range</b>	<b>Average Reading</b>
Male	108	3.3 - 7.4	4.65
Female	90	3.2 - 6.8	5.06

C. Average Reading According to Age

<b>Age</b>	<b>N</b>	<b>Range</b>	<b>Average Reading</b>
14 - 19	183	3.2 - 7.4	4.84
20 and above	15	3.6 - 6.4	4.75

### Appendix F4

Reading Retardation by Respondents' Variates Based on  
Expected Average Reading Grade Capacity Expected  
from an Average Grade 11.0 or First Year  
College Student (12.0 - Second Year  
College Level-Specific for AYL)

<b>V A R I A T E S</b>							
Frequency		ARGCL	Constant 11.0 D (R)	Frequency by Course		ARGCL	Constant 12.0 D (R)
<b>A. By Academic Year Level</b>							
1st	2nd						
143		4.98	6.02	BSA	14	4.96	6.04
	55	4.47	7.52	BSAgEd	33	4.94	6.06
				BAT	17	4.01	6.99
<b>B. By Sex</b>							
Male	Female			BSTN	2	4.90	6.10
108		4.65	6.35	BSAB	7	5.3	5.70
	90	5.06	5.94	BSSEd	21	5.61	5.39
				BSAE	17	6.14	4.86
<b>C. By Age</b>							
14-19	20-up			AIT	22	5.78	5.22
183		4.84	6.16	BSF	65	4.01	6.99
	15	4.75	6.25	Ave.	198	5.07	5.93

Legend:

AYL - Academic Year Level

ARGCL - Average Reading Grade Capacity Level

Constant (11.0)-First Year College Student Level

(12.0)-Second Year College Student Level

### Appendix F5

Respondents' Reading Speed and Accuracy  
Percentage Rating Interpretation  
(Based from Gate Manual-Table 9)

**A. According to Academic Year Level**

Course Year Level	Frequency	Speed & Accuracy Rating			
		L	VL	H	VH
First Year	143	5	138	0	0
Second Year	55	3	52	0	0
Total	198	8	190	0	0

**B. According to Sex**

Sex	Frequency	Reading Speed & Accuracy Rating			
		L	VL	H	VH
Male	108	2	106	0	0
Female	90	6	84	0	0
Total	198	8	190	0	0

**C. According to Age**

Age Range	Frequency	Reading Speed & Accuracy Rating			
		L	VL	H	VH
14-19	183	7	176	0	0
20 and above	15	1	14	0	0
Total	198	8	190	0	0

### Appendix F6

t-test for Significant Difference in Average Reading Capacity Levels of Student Respondents As per Their Variates of Academic Year Level, Sex, and Age

A. t-test of Independent Means According to Year Level  
(two-tailed at  $\alpha = 0.05$ )

Year Level	N	Mean	SD	t-computed	df	t-tabular
First	143	4.98	0.96			
Second	55	4.47	0.81	3.51	196	1.96

**Interpretation:** There is a significant difference, so reject null hypothesis.

B. t-test of Independent Means According to Sex  
(two-tailed at  $\alpha = 0.05$ )

Sex	N	Mean	SD	t-computed	df	t-tabular
Male	108	4.65	1.00			
Female	90	5.06	0.822	3.12	196	1.96

**Interpretation:** There is a significant difference, so reject null hypothesis.

C. t-test of Independent Means According to Age Group  
(two-tailed at  $\alpha = 0.05$ )

Age Group	N	Mean	SD	t-computed	df	t-tabular
14-19	183	4.84	0.959			
20 & above	15	4.75	0.775	0.384	196	1.96

**Interpretation:** There is no significant difference, so accept null hypothesis.

### Appendix F7

#### Lorge Formula Readability Index of SSCAF Social Science Available Teaching Materials

<b>S S R M</b>	<b>Readability Index</b>
1. Introduction to Humanities (Arts for Fine Living), 1 <sup>st</sup> Ed., 1971 by Josefina V. Estolas, et al	6.73
2. Agrarian Reform, Taxation and Cooperatives (A Social Science Perspective), 1991 by Josefina Estolas, et al	6.82
3. Foundation and Dynamics of Political Science - 1996 by Francisco Zulueta	6.91

Legend: SSRM - Social Science Reading Materials

## C U R R I C U L U M V I T A E

## CURRICULUM VITAE

### Personal profile

Name : **MARIETES NEYPES BEDUYA**  
 Date of Birth : **October 18, 1972**  
 Place of Birth : **Catbalogan, Samar**  
 Business Address : **SSCAF, San Jorge, Samar**  
 Civil Status : **Married**  
 Religion : **Roman Catholic**  
 Profession : **Teacher**  
 Husband : **Miguel C. Beduya**  
 Name of Children : **Kiella May**  
**Kristina Cassandra**  
**Karyl**  
**Michael Andrei**  
 Father : **Oscar M. Neypes**  
**SSCAF**  
**MS in Animal Husbandry**  
**Ed.D. – Academic Units Completed**  
**Pre-Oral-Dissertation – Defended**  
**(Deceased)**  
 Mother : **Teresita Ty Neypes**  
**MAT (Reading – U.P. Diliman)**  
**D.A. (Language – LNU)**  
**Professor VI –**  
**Samar State Polytechnic College**  
**(Retired-Dean College of Education)**

### **EDUCATIONAL BACKGROUND**

Graduate Studies	:	<b>Master of Arts in Teaching</b> Major in Reading SSU, Catbalogan, Samar
College Course	:	<b>Bachelor of Arts in Social Sciences</b> Major: Political Science U.P., Tacloban City 1989-1993
Secondary	:	<b>Samar state Polytechnic College</b> Catbalogan, Samar 1985-1989
Elementary	:	<b>Catbalogan I Central Elem School</b> Catbalogan, Samar 1979-1985

### **PROFESSIONAL ELIGIBILITIES**

Professional Board Examination for Teachers  
Rating (70.73%)-Year 1995

### **PROFESSIONAL EXPERIENCE**

Instructor I	-	SSCAF, San Jorge, Samar 1999-2008
Instructor II	-	SSCAF, San Jorge Campus 2009- to date

### **PROFESSIONAL GROWTH INVOLVEMENT (TRAININGS AND SEMINARS)**

#### **NATIONAL**

Regular AACCUP National Annual Conference, AACCUP,  
January 27 - 28, 2000

**REGIONAL**

PAGE 08 Annual General Assembly March 03, 2009,  
Tacloban, City

Zonal Assembly of the Philippine Association for Graduate  
Education – Visayas September 09, 2007, Tacloban,  
City

Trainor's Training on the Teaching of Politics,  
Philippine Political Science Association, October  
15-16, 1999

**LOCAL**

Enriching Research and Development Capability January 19,  
2009, SSCAF, San Jorge, Samar

Orientation Conference on Project: Remedial Instruction  
in Schools(RIS), DECS Division of Samar,  
September 2000

DECS Policies Relevant to Secondary Instructions, DECS  
Division of Samar, December 13, 1999

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