# Effects of two Reading Approaches on the Achievement and Attitudes of Polytechnic Students in large classes

*by*

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**DEPARTMENT OF EDUCATION**
**FACULTY OF EDUCATION**
**AHMADU BELLO UNIVERSITY**
**ZARIA**

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**by**

**Margaret; 0. Osasona (Mrs)**

## DECLARATION

I hereby declare that this thesis, written by me, is a record of my own research work. It has not been presented anywhere for the award of higher degree.

All quotations and sources of information are acknowledged by means of references.

Signed: .....

MARGARET ODUNAYO OSASONA (MRS)

## CERTIFICATION

This Thesis entitled, "Effects of Two Reading Approaches on the Achievement and Attitudes of Polytechnic Students in Large Classes" by Margaret Odunayo Osasona (Mrs), meets the regulations governing the award of the degree of Doctor of Philosophy in the teaching of English as a Second Language (TESL), in the Department of Education of Ahmadu Bello University and is approved for its contribution to knowledge and literary development.

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## DEDICATION

This work is dedicated to the Almighty God, the Father and the Creator of the Universe, the helper of the helpless when all other comfort and helps cease; Joseph Babatunde, my Late Father, who through thick and thin, saw to my being educated; Ebun Joseph, my Late Mother, who rejoiced at my ability to write the first letter of the alphabet; and to my children, Olajide and Muyiwa, whose love, companionship and encouragement remained steadfast throughout the duration of this study.

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## ABSTRACT

The problems of reading comprehension have been identified as serious impediments to learning at all the educational levels In Nigeria. These problems are complicated by the large class situation that is prevalent in the tertiary institutions, especially at the Polytechnic level of education. The knowledge of those complex shortcomings have been responsible for the present study.

Two teaching approaches, interactive and the conventional or traditional were put side by side in order to see which of them would be more effective, or the aspects of the two that could be blended for the teaching of reading comprehension in large classes.

Two types of instruments were used for collecting data for the study. The reading comprehension test was used for measuring the subjects' achievement at the pre, post and feedback levels. The attitude questionnaire was administered on the subjects at the pre- and post-treatment levels in order to collect data for the five attitudinal variables investigated.

One hundred and eighty students drawn from two departments in the College of Administrative and Business Studies* consisting of ninety students from Accounting and Finance and ninety from Business Administration formed the subjects for the study. The research sample was made up

of two groups of experimental and control. Sixty hours (60) of teaching, thirty in each group were the treatment period (10 weeks). The theoretical framework adopted took into cognisance the linguistic, psycholinguistic, socio-linguistic and pedagogical parameters which are necessary for reading comprehension.

The statistics used for the computerized analyses of data were T-test, the ANOVA and the frequency distribution. The SPSS package at the Institute of Agricultural Research, ABU, Zaria and the Computer Centre, Kaduna Polytechnic, Kaduna were used for data analyses.

Various investigations through the achievement test showed that the interactive approach was better in some cases while the conventional was better in some others for the teaching of reading comprehension in large classes. This study therefore recommends a combination of specific aspects of the two approaches for teaching reading comprehension in large classes. Majority of the responses to the attitude questionnaire in both groups favoured the teaching of reading comprehension in large classes.

The study ends with various implications and suggestions for teaching reading comprehension in large classes.

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## LIST OF ABBREVIATIONS USED IN THIS STUDY AND THEIR FULL FORM IN ALPHABETICAL ORDER

| | |
|---|---|
| CABS | College of Administrative and Business Studies |
| CDELT | Centre for Developing English Language Teaching |
| COMSKIP | Communication Skills Project |
| EAP | English for Academic Purposes |
| EFL | English as a Foreign Language |
| ELT | English Language Teaching |
| ESL | English as a Second Language |
| NBTE | National Board for Technical Education |
| ODA | Overseas Development Administration |
| TESOL | Teachers of English to Speakers of Other Languages |
| TOEFL | Test of English as a Foreign Language |
| USAID | United States Agency for International Development |

## DEFINITION OF TERMS AND ABBREVIATIONS USED IN THE STUDY

Some terms used in this study which may be unfamiliar to the reader are defined below.

(1) Cloze Test (procedure)

The cloze procedure is a reading strategy that helps students to bring out meaning from context. It is an integrative test requiring the competencies in vocabulary and grammar. The 'nth' method, however, is frowned at while rational deletion is favoured.

(2) Coherence

This is the quality of the underlying thoughts and the way they are organised into a message.

(3) Cohesion

This is the way words or sentences are tied together in a text. The relationship may be in the form of reference,substitutions, ellipsis, lexical relationships and conjunctions.

(4) Competing Approaches

These are the conventional and interactive approaches (techniques or methods) that are put side by side in this study, for the purpose of comparison in order to see the better one for the teaching of reading comprehension in large classes. Approaches, methods and techniques are used interchangeably in the study.

(9) Large Classes

A large class is one whose numerical size does not permit the teacher to cope effectively with the demands of the individual student. In the present study, the large calss will operationally refer to any class that has more than thirty students.

(10) Prior Knowledge

Prior knowledge is the relevant previously acquired knowledge the reader brings to the text.

(11) Reading Comprehension

Reading with comprehension is an exercise that is aimed at improving the reader's understanding of the written language. Readers are said to have understood the text when they are able to find a configuration of hypotheses (schemata) which offer a coherent account for the various aspects of the text.

(12) Schema Theory

This is a formalisation of the background knowledge based on the fact that no text, whether written or spoken, has its own meaning, but it is there to give directions to the reader or listener on how to retrieve or reconstruct meaning from the previously acquired knowledge.

(13) Text

Text is used in linguistics to refer to any passage, spoken or written, of whatever length, that does form a unified whole. It may be a single verb or a whole play. A text may be a cry for help or an all day discussion on a committee.

(14) Utterance

This is a sentence in context or use and not merely cited. It has both value and signification.

# CHPATER ONE

## 1.0 THE PROBLEM AND ITS BACKGROUND

### 1.1 INTRODUCTION:

This study was motivated by experiential factors and personal observations. Before the study started, the researcher had been observing and compiling some of the problems experienced by students and lecturers in the teaching and learning of reading comprehension in the large classes at the College of Administrative and Business Studies (CABS). Reports from departmental and institutional workshops, seminars and conferences had pointed to a need for something to be done to improve the teaching and learning of reading comprehension, which is the primary focus of this study. Previous research findings, which gave a gloomy picture of reading comprehension problem of students, all pointed to a need for a study like this.

The researcher's personal observation of the classroom atmosphere, the seating arrangements, the constraints caused especially by the large class, the teacher's place and role in the classroom, as well as other environmental constraints like the problems of acoustics in the classroom, all contributed to the necessity for looking for a way of solving reading comprehension problems in large classes, which can be said to be a secondary focus of this study.

Despite the importance of reading comprehension at this level of education, the skill is fraught with a lot of problems both for the teacher and the learner. Some of these problems are non-availability of suitable reading materials; sub-standard text books; poor reading habits; poor teaching and learning of reading comprehension which have been transferred from the primary to the secondary and tertiary levels.

All problems stated above militate against coping with the large amount of reading that is required for purposes of self education, development and the expansion of general knowledge, as well as recreation which is required by the Polytechnic students.

An outstanding problem on the way of effective reading comprehension in most Nigerian institutions is the large class. This problem makes training in both intensive and extensive reading difficult. Students' needs are difficult to identify and so, the teacher is unable to solve students individual problems. Weak students suffer more and class control is at its lowest ebb (Habeshaw, et al, 1989). The large class situation being identified here is "one of the pre-eminent problems arising from enhanced access to higher education" (Olumide et al, 1987:153). The development of higher education brought about by the great improvement in the Nigerian economic sector during the oil boom led to higher demands for highly qualified personnel. Thus, more institutions came

into existence and education was extended to large number of children which was not matched with corresponding increase in teachers and available teaching facilities.

Previous approaches to the teaching and learning of reading comprehension have been proved ineffective to cater for the shortfall in reading pedagogy. (see Oruma, et al, 1990 four-Poly-Project, 1992). This made some scholars suggest more modern approaches which are yet to be put side by side with the conventional approaches in the Nigerian Polytechnics.

This study is therefore appropriate as it intends to identify more effective approaches by which reading comprehension could be taught and learnt in the large classes of the tertiary level institutions, the Nigerian Polytechnics being the primary focus.

## 1.3 THE TWO APPROACHES:

The two approaches compared in the study are for the sake of convenience referred to as the conventional and the interactive approaches to the teaching of reading comprehension. The terms' conventional' and 'interactive' are used loosely here because there is no approach that is truly conventional or non-interactive. Interactions in the interactive approach being juxtaposed with the conventional approach are multi-dimensional. They are at various levels, student-student, student-text, student-teacher, student-peer, whole class, peer and group interactions. What happens is that scholars bring in different approaches everyday, which they think can improve what they already have.

This stand agrees with Parry and Hill (1989) who found that the autonomous model of teaching literacy was inadequate and therefore put forward. the pragmatic model. It however, contradicts Freeman and Richard (1993) who say that no method can be said to be better than the other.

The present study is not giving any code name to the approach it is putting side by side with the conventional approach other than to call it the interactive approach to the teaching of reading comprehension in large classes because of its closeness to the communicatively-based interactive approach. This study is only interested in investigating whether the interactive approach will be able to compete effectively with the conventional approach which is currently in use at the Polytechnic.

It is necessary to state some of the qualities of both the conventional and the interactive approaches. The conventional approaches are interested in the theories of reading comprehension as propounded by the structuralists, the audio-linguals and grammar-translation experts, with emphasis on the structure of the word, sentence, syntax and collocation of words in the sentence. The approach is also interested in the bottom-up aspect of the schema theory which is evoked by the in-coming data. The conventional approach sees a text as discrete and every aspect has got to be treated in a discrete point. A sample method which is grammar-translation-based is the one that is often referred to as the classical method. This method was called the classical method because it was used in the teaching

of classical languages of Greek and Latin. The grammar-translation method was used in the past so that students would be able to read and appreciate foreign literatures or documents in foreign languages. The idea was that students' familiarity with the grammar of the target language would aid their better knowledge of their own native language.

Larsen-Freeman (1986:4-15) gives an example of the application of this teaching method as observed at a University in Columbia, as follows:

1. The class is reading an excerpt from Mark Twain's "Life on the Mississippi".
2. Students translate the passage from English to Spanish ( a few lines at a time).
3. The teacher helps with new vocabulary items. Students ask questions and teacher answers in the native language.
4. Students write answers to the reading comprehension questions at the end of the excerpt in English.
5. The teacher decides whether answer is correct or not.
6. Students translate new words from English to Spanish ($L_1$).
7. Students are taught about similarities that exist between the target language and the native language.
8. Students are given a grammar rule for the use of a direct object with two-word verbs.
9. Students apply a rule to examples they are given.
10. Students memorize vocabulary.

11. The teacher asks students to state the grammar rule.
12. Students memorize present tense, past tense and past participle forms of one set of irregular verbs.

In this teaching approach, students are taught to translate one language to another. They study grammar deductively, that is, by giving grammar rules and examples to memorize and apply to other examples. They also learn grammatical paradigms like verb conjugations and memorize native language equivalents (p.12).

The interaction in the classroom is from the teacher to the student. There is little initiation from the students. The teacher's role in the classroom is traditional and authoritative. Students' errors are promptly corrected by the teacher; they are not tasked to look for the correct answer.

The interactive approach, which is competing with the conventional approach in this study, sees the text in the discoursal way. That is, language in use in social context. The analysis of reading comprehension texts takes into consideration not only the linguistic forms, but also the purposes or functions which these forms are designed to serve (Brown and Yule, 1993). Meanings and the appropriacy of meanings are discovered within the context. In short, analysis of reading comprehension texts is analysing language in use called pragmatics, which is a type of reaction against the traditional treatment that sees language as an abstract device, a mental ability dissociable from the users and the functions

of language. It is a departure from the linguistic theories of the traditionalists which fail to account for things like units, social attitudes, implicit purposes, assumptions and figures of speech, which are effectively communicated by the use of language (Wilkins, 1975; Sinclair and Coulthard, 1975).

The interactive approaches are interested in the top-down aspect of the schema theory of reading comprehension, which treats the text globally. The reader sees utterance as the minimal meaning that can make sense unlike the traditionalists/ conventionalists who talk of the sentence.

Reading comprehension texts are analysed in the interactive approaches without following particularly given rules and regulations to be adhered to (Wilkins, 1976; Sinclair and Coulthard, 1975). It looks for cohesion and coherence of the text, its meaning, the grammatical and semantic means by which sentences are linked and the way references are made to parts of the text which are past and the parts which are yet to come. The references may be either endophoric which is within the text or exophoric, that is outside the text. They may also be anaphoric (backward) or cataphoric (forward). A student's knowledge of these various relationships in the text aids his reading comprehension.

An example of the interactive approaches is the communicative approach. The approach believes that structures and vocabulary are important in communication or language

learning, but that the knowledge of the rules is different from the ability to use language. It is necessary for students to know how to use language effectively and to be able to use their knowledge of language to negotiate or effect meaning.

The communicative approach stresses the use of authentic language as much as possible. The reader has to work out the writer's purpose and use the target language as the means of communication in the classroom.

Authentic texts are pieces of written or spoken language of the specific discipline which could be regarded as "genuine communicative acts" or real life situation language materials (Wallace, 1992:79). For a business student, the example of authentic materials may be business reports, correspondence or letters. For an Accounts student, they may be the auditor's report or correspondence on budgetary and expenditure control.

When language teachers encounter problems of getting authentic materials, they can solicit the assistance of the subject-area teachers or may ask the learners themselves to authenticate texts by adapting texts of their subject area to suit their own purpose. (Widdowson, 1979 and Breen,1985). In this case, authenticity is seen as an interaction between the text and the reader and not in the text only.

Other features of the communicative approach to teaching reading comprehension include:

(a) communication games in which students are made to play with words;

(b) working in small groups, whereby students learn from one another;

(c) the opportunity of students to express their opinions and errors are not made to deter them from trying;

(d) giving more meaning to the students context communicative events;

(e) working together in order to encourage communicative interaction;

(f) changing the teacher's role from that of the possessor of knowledge to that of an adviser, monitor or guide; and

(g) making the grammar and vocabulary items that students learn through reading of various paragraphs to follow functional situational context (Larsen-Freeman, 1986:130).

## 1.4 STATEMENT OF THE PROBLEM:

The poor reading comprehension level of students in the Nigerian tertiary institutions has been a source of concern for many scholars, parents, educators and even employers of labour. The problem is worsened by large classes which is a common phenomenon in the institutions (Coleman, 1989; Oruma, et al, 1990). For example, classes have about 70, 100 and 120 students at CABS. Reading comprehension is taught in the polytechnics through the traditional/conventional method of giving students texts to read and asking them

to answer the questions below the text. Corrections may be done during the class hour or in the next lesson. From experience and previous studies, see Hamp Lyons (1985) and Koh Moy Yin (1985), this approach has not helped students very much in the mastery of reading comprehension techniques and so their reading comprehension level is low. The shortfall noticed in reading comprehension ability of the students at this level necessitates a search for a better approach.

Many scholars have discovered problems that are related to the teaching - learning of reading comprehension. Oruma, et al, (1990) and the four-Polytechnic-projects (1992) categorised these problems in terms of lack of proper analysis of the needs of the students, Ndahi, (1977), Ubahakwe, (1979) and Adeyanju (1989) as resulting from students' poor English language background; and Komolafe, (1993) as students inability to read effectively. The findings of these studies however, have not been used effectively to proffer solutions to raise the reading comprehension level of the students very significantly. Thus, the need for this study which placed the conventional and the interactive approaches of teaching reading comprehension side by side, to determine which of them is more effective in not only solving the problems, but also raising reading comprehension standard of the students.

In order to determine empirically which method is more effective at this level and under large class conditions, the following research questions were asked:

(1) Which of the two approaches (conventional and interactive) is better for teaching reading comprehension in large classes?

(2) What is the effect of the two approaches on the micro skills of reading for information, inferences, vocabulary (or word power) and data analysis?

(3) Which of these approaches has a greater positive effect on the attitude of the students?

## 1.5 THE HYPOTHESES

The following hypotheses which are stated in the null form were tested in the study:

1. There is no significant difference in the performance of students taught by the conventional approach and those taught by the interactive approach.
2. There is no significant difference in the performance of the two groups (Experimental and Control) in the following reading comprehension sub-skills;
   (a) Word Power or Vocabulary
   (b) Reading for inferences
   (c) Information
   (d) Data Analysis.
3. There is no significant difference between the mean scores on attitudes of students in the conventional and interactive approach classes.

## 1.6 PURPOSE OF THE STUDY:

The purpose of this study includes:

(1) finding solutions to the problems of teaching reading comprehension in general;

(2) developing large class instructional approaches for the teaching of reading comprehension through the available literature;

(3) comparing the effects of the conventional approaches with the interactive large class approaches in order to determine effectiveness;

(4) using a student's questionnaire to determine their attitude to reading comprehension in large classes;

(5) finding out the pedagogical implications of the two approaches in relation to teaching reading comprehension in general and the teaching of reading comprehension in large classes at tertiary level;

(6) suggesting the most suitable approaches to handling reading comprehension in large classes at the tertiary level of education; and

(7) adding to the existing data on the teaching of reading comprehension in large classes of tertiary institutions.

## 1.7 BASIC ASSUMPTIONS:

This study is based on the assumption that:

1. interactive large class techniques of teaching reading comprehension may be suitable for training students to improve their reading comprehension skills;

2. interactive large class techniques could make reading comprehension "a highly attractive festival instead of the conventional teaching spectacle" (Coleman, 1989:11);
3. improved large class reading comprehension approaches could aid students' communicative competence in general and reading comprehension in particular; and
4. interactive teaching and learning approaches may positively affect students' attitude to reading comprehension.

## 1.8 NEED FOR THE STUDY:

Reading comprehension at the Polytechnic level is for the purpose of academic and intellectual development. It therefore, involves a complex activity of information processing and language comprehension which serve as stimulants to intellectual development (Tinuoye, 1991:73). This development, which is inherent in reading comprehension, affects the content areas of study, hence Banjo (1982) and Obah (1989) insist that reading comprehension requires an utmost attention in schools. This study is therefore out to give the necessary attention to reading comprehension. The study could be useful to syllabus designers, educators and even curriculum planners in planning relevant areas of reading comprehension in the tertiary level of education.

Of all the language skills, reading bears relevance to all facets of human endeavour (especially in the learning process). It is, therefore, a habit that must be cultivated in order to function properly in modern society. If at the

TABLE 1: WAEC Results in English Language between 1989 and 1991.

| Year | Total Entry | Total Sat | Credit and above 1 - 6 | Pass 1 - 8 | Failed |
|---|---|---|---|---|---|
| 1989 | 92.73% | 91.66% | 8,213 | 25,108 | 66,650 |
| | | | (9%) | (27.3%) | (72.7%) |
| 1990 | 197,012 | 195,840 | 12,382 | 54,637 | 141,203 |
| | | | (6.7%) | (27.9%) | (72.1%) |
| 1991 | 299,323 | 294,458 | 29,946 | 90,962 | 203,606 |
| | | | (10.2%) | (30.9%) | (69.1%) |

Source: WAEC (Nigeria) Statistics of entries and Results (1989 - 1991).

The Table shows that the failure rate is very high and the success rate is terribly low. The number of candidates increase every year and the yearly returns are nothing to write home about.

One of the major reasons why the candidates failed was because they have not learnt to read effectively. They did not comprehend the technicalities of the questions and their vocabulary level was very low. This low vocabulary level was also responsible for their poor finishing of the lexis and structure section of the examination. Candidates inability to infer meanings from texts and their inability to understand the author's message have been responsible for the dismal performances in English year in year out. These problems are also carried over to the tertiary level thus

making reading comprehension difficult at the level. It is part of the aim of this study to proffer solutions to these problems by exploring possible effective approaches to teaching reading comprehension at the tertiary level for better academic growth.

An efficient reader is one who is able to intelligently apply comprehension skills to achieving appropriate inferences of ideas from a text, selection of significant details, following directions or using context clues to get at the meaning of a message (Unoh, 1991:16). The skills for the achievement of all these have got to be formally taught in an atmosphere that is conducive to learning. This is not the case in the environment in which this study is situated. Thus it is expected that the present study will suggest ways of making the classroom atmosphere conducive to teaching and learning of reading comprehension.

The performance of students in the school under study is an important factor for this study. Every year, students have consistently performed poorly in communication skills, especially in the final year class (OND II). Reading comprehension which is an important aspect of the Communication Skills syllabus for this group of students continues to record the worst performance. The following Table shows the performances of the OND II students in three departments between 1988/89 and 1990/91 sessions.

TABLE 2: Reading Comprehension scores of OND II (Final Year) students of three departments in three sessions (1988 - 1991) at CABS.

| DEPARTMENT | SESSION | NO. OF STUDENTS | STUDENTS WHO SCORED 0 - 39% | STUDENTS WHO SCORED 40% & ABOVE |
|---|---|---|---|---|
| 1 Busines Admin. | 1988/89 | 159 | 95 (59.75%) | 64 (40.25%) |
| 2 Accounts & Finance | 1988/89 | 203 | 145 (71.43%) | 58 (28.57%) |
| 3 Secretarial Studies | 1988/89 | 97 | 50 (51.55% | 47 (48.45%) |
| 1. Business Admin. | 1989/90 | 85 | 45 (52.9%) | 40 (47.11%) |
| 2 Accounts & Finance | 1989/90 | 120 | 95 (79.17) | 25 (20.83%) |
| 3 Secretarial Studies | 1989/90 | 96 | 56 (58.3% | 25 (41.7%) |
| 1 Business Admin. | 1990/91 | 61 | 33 (54.55%) | 28 (45.3%) |
| 2 Accounts & Finance | 1990/91 | 61 | 33 (54.55%) | 28 (45.45%) |
| 3 Secretarial Studies | 1990/91 | 68 | 40 (58.82%) | 28 (41.18%) |

Source: CABS, Department of Mass Communication and Languages Examination Unit (1993).

It can be deduced from this Table that majority of the final year students have consistently performed below the pass mark level of 40% in reading comprehension, thus

search for a more effective approach or integrated approaches for effective teaching of reading comprehension in the adverse situation stated above.

The problem of the large class used to be a phenomenon of the third world, but now, it has seeped into the developed world. Research bodies and activities are now being funded by the developed nations to find solutions to the problems of "teaching English Language in under-resourced situations" (British Council Brochure 9261 of 1991). For example, the Lancaster/Leeds Language Learning in Large Classes is being funded by the British Council, the Centre for British Teachers and the Bell Education Trust.

In Ain Shams University, Cairo Egypt, the Centre for Developing English Language Teaching (CDELT) has been set up with the financial, material and staffing aids of ODA and USAID, to look into the problems of large classes and develop appropriate methodologies to combat the menace in the Egyptian Universities where English Language classes have between 60 and 450 students, with an average of 150 (Holliday, 1991:1).

The British Council has funded many Summer courses in Leeds and Lancaster as well as workshops and Seminars in Nigeria and elsewhere for the solution to large class problems, language teachers encounter in their various institutions. The Kano workshop of 1989 on large classes in Nigeria and the Nsukka International COMSKIP Workshop of 1992 were examples.

In Britain, large classes came into the higher institutions with the creation of polytechnics in 1969 - 1971. The squeeze that the funding body - Polytechnics and Colleges Funding Council (PCFC) - maintained on resources, and the instruction to institutions to provide more student places, led to large classes (Gibbs and Jenkins, 1992:151).

In the USA, there is now the need to "begin to think in terms of doing the best for the most, rather than the most for the best" (Massey, 1991:5). The USAID (an American Organisation) is funding the large class research of the CDELT in Egypt.

From the foregoing, a conclusion can be made that the large class in higher institutions of learning is not only a policy matter but also a universal phenomenon. The policy of the governments in the various countries of the word is more or less that of expansion in higher education without a corresponding match in the necessary resources and facilities. This study is therefore real, because it is trying to tackle a problem that is not just national but international. The solutions proffered by the present study may therefore be useful even outside the shores of Nigeria.

The objectives of the Nigerian technological institutions in structuring a "Use of English" course give credence to a study such as this. Students are expected to acquire proficiency in listening, speaking, reading and writing in

English language with emphasis on its functional use in technical and vocational subject areas (NBTE Information brochure, 1987). The use of English programme is expected to give suggestions to teachers and educators on how to go about teaching and planning reading comprehension "as a means of bringing humanistic and technological disciplines into a continuous dialogue", Aborisade, 1984:5). This NBTE Course structure brings in a need for the reading comprehension teacher to devise a suitable system of teaching that will facilitate communicative competence which is an important aim of the study.

Many students in the Nigerian Polytechnics think that they have had enough of reading comprehension in the primary and secondary schools and so are hostile to its learnig at the tertiary level. Some of them even feel that English is the language of the colonial masters and any attempt at making them to read or comprehend it better should not be viewed favourably. This rigid ethnocentric attitude (Wilkinson, 1974:53) cannot but work against reading comprehension in the Nigerian Institutions of higher learning. A study like this may help students to know that reading comprehension is necessary in many facets of life, no matter the language of presentation. If the study is able to devise a lively, motivating, captivating and interesting way of teaching reading comprehension in large classes, this rigid ethnocentric attitude may change and students may now start to show more interest in reading comprehension.

The knowledge of the in-house problems of the Polytechnic as reflected by the responses of some lecturers contacted in CABS and the reports of the Four-Polytechnic-Projects constituted another motivating factor for this study. Some of these are cited below.

Respondent 1:

> Students' problem in reading comprehension in my classes are: slow reading, sub-vocalization or vocalization, ineffective recall of what is read and verbatim copying of bits and pieces and even chunks of the passage to anwer set questions.

(Source: English language lecturer in the Department of Mass Communication and Languages, CABS).

Respondent II:

> My students' problems in reading comprehension are long pauses after each word or group of words, inability to distinguish main idea from supporting details.

(Source: English Language lecturer, CABS).

Other lecturers interviewed gave variations of the responses above which make an intensive study of an alternative approach to teaching reading comprehension at this level a necessity.

The awareness of students' problems in ELT in the Nigerian Polytechnics prompted the four-Polytechnic-projects (1992), sponsored by the British Council/ODA and NBTE, to conduct a research on students needs analysis in the language skills of listening, speaking, reading and writing. The group identified reading problems as those involving the ability to follow complex ideas, understanding what is read, interpreting graphs, diagrams, separating main ideas from supporting details and information recall.

These findings highlight the areas of interest for this study which are reading for information, analysis of data, inferences and vocabulary. One main weakness of the findings is that they failed to identify the large class as a factor in the teaching and learning of reading comprehension in the Polytechnics. It is part of the aims of this study to suggest ways of rectifying these problems by suggesting out of the two approaches compared either the better one or aspects of each that can be integrated for effective teaching of reading comprehension in large classes. If at the end of this study, a better methodology or approach emerges, it is hoped that many of the reading comprehension problems of Polytechnic students so far identified will be reduced.

The NBTE syllabus requires students to be able to demonstrate mechanical reading skills of skimming and scanning; to use the main thought to anticipate specific details in a passage; to use content clues to aid comprehension of definitions; derive meaning and interpret figurative expressions. All the skills required for the achievement of these objectives have got to be formally taught by the reading comprehension teacher. The ability of the teacher to teach these skills successfully through the application of appropriate large class teaching strategies is a factor of importance in this study.

The final year students of the Polytechnics will graduate into the labour market to present their institutions to the

whole world. Their communicative performance, especially in reading comprehension and interpretation of texts, journal articles, reports and graphic information will be ably applied. A right knowledge of all these skills through the institution of learning before the students graduate will prepare them adequately for what awaits them outside the four walls of the classroom which is the labour market. This study aims at helping students to master reading comprehension skills that will enhance their performance in the labour market.

## 1.9 THE THEORETICAL FRAMEWORK ADOPTED BY THIS STUDY

If language teaching must go professional, it has to evolve "sound theoretical framework" (Stern, 1983:35) in a scholarly and scientific way. This study is thus rooted in a sound theoretical framework.

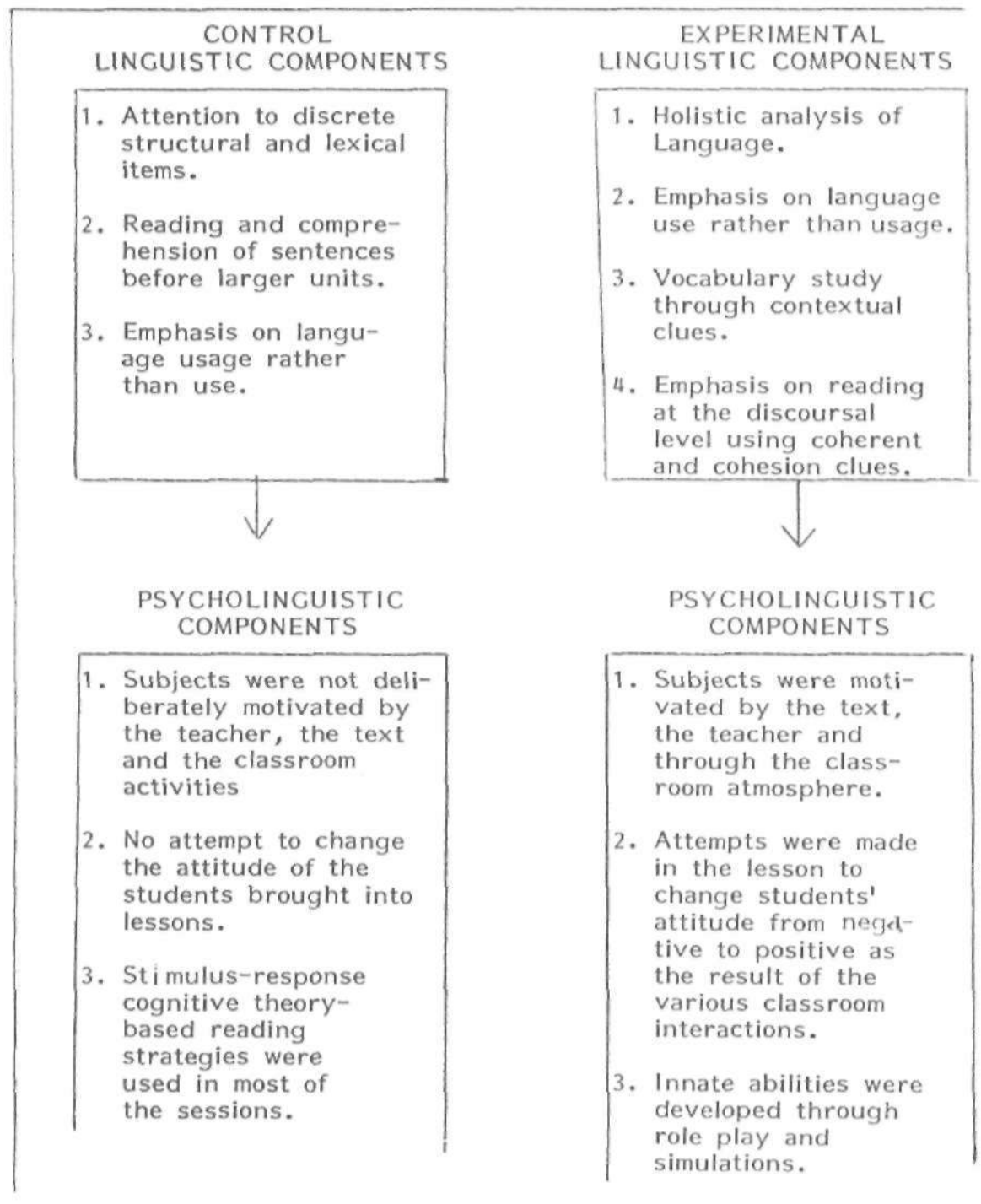
Many scholars have tried to look at the various aspects that are involved in language teaching, reading inclusive, and have designed various models. Campbell's (1980) framework sees linguistics, applied linguistics and pedagogy as necessary components that should be considered in any language teaching enterprise. Spolsky's (1978) model sees certain disciplines such as psychology, psycholinguistics, sociolinguistics and educational linguistics as important to teaching any component of language. Other scholars such as Ingram (1980), Mackey (1979), Strevens (1976, 1977) and Stern (1983) have proposed different types of framework which appear to be variations of Campbell's and Spolsky's.

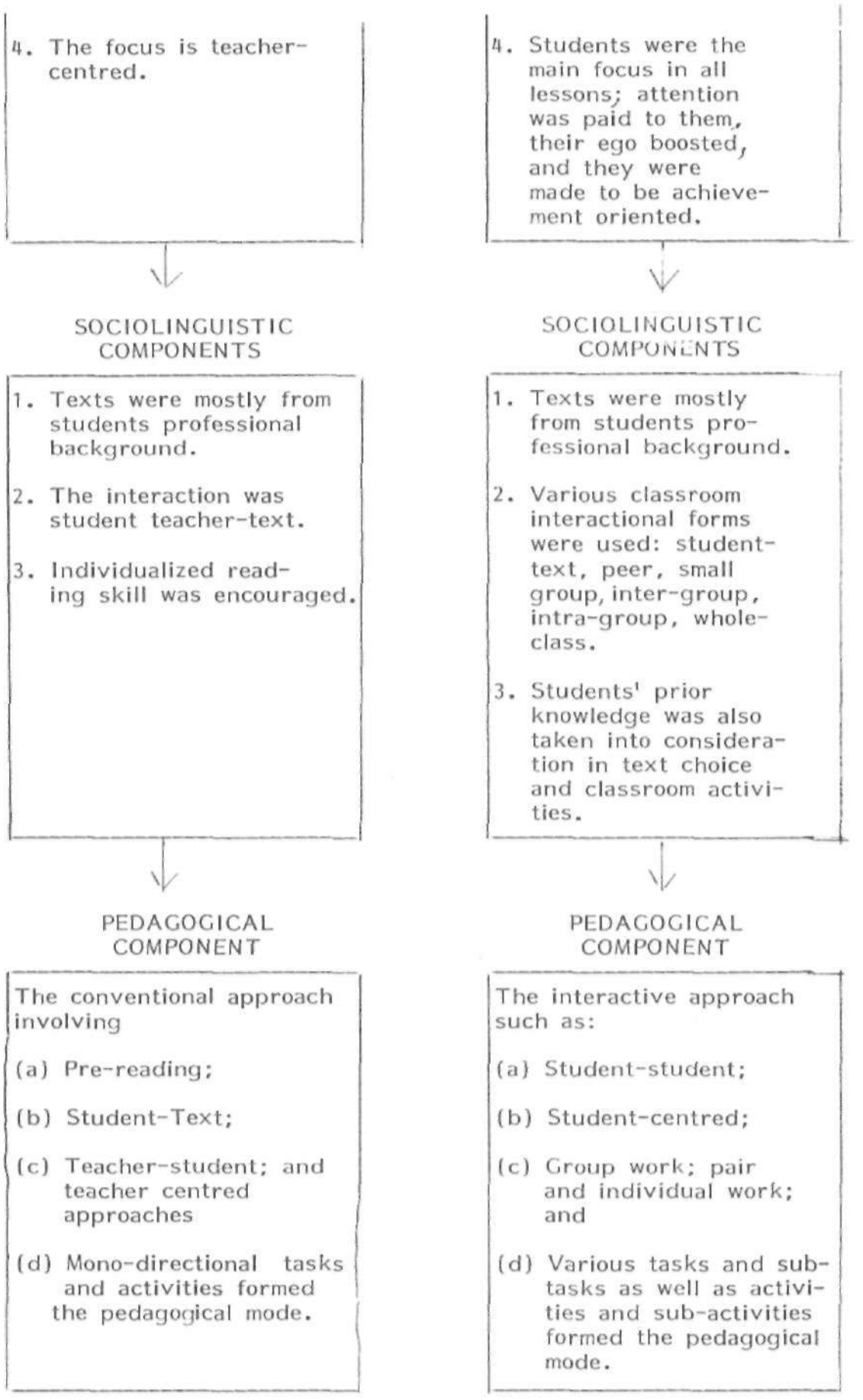
It means that any empirical study on teaching components such as reading skills and sub-skills should consider aspects identified by these scholars as fundamental.

Thus, the theoretical framework on which the present study is based is a synthesis of the language teaching models suggested by Spolsky (1978), Campbell (1980) and Stern (1983) as applied to the linguistic, psycholinguistic, sociolinguistic and pedagogical dimensions of reading comprehension. (See sections 2.5 - 2.5.4) for the detailed discussion of these components.

This is diagrammatically represented in figure I below:

FIGURE I: The Theoretical Framework Adopted by this Study.




4. The focus is teacher-centred.
4. Students were the main focus in all lessons; attention was paid to them, their ego boosted, and they were made to be achievement oriented.
SOCIOLINGUISTIC COMPONENTS
1. Texts were mostly from students professional background.
2. The interaction was student teacher-text.
3. Individualized reading skill was encouraged.
SOCIOLINGUISTIC COMPONENTS
1. Texts were mostly from students professional background.
2. Various classroom interactional forms were used: student-text, peer, small group, inter-group, intra-group, whole-class.
3. Students' prior knowledge was also taken into consideration in text choice and classroom activities.
PEDAGOGICAL COMPONENT
The conventional approach involving
(a) Pre-reading;
(b) Student-Text;
(c) Teacher-student; and teacher centred approaches
(d) Mono-directional tasks and activities formed the pedagogical mode.
PEDAGOGICAL COMPONENT
The interactive approach such as:
(a) Student-student;
(b) Student-centred;
(c) Group work; pair and individual work; and
(d) Various tasks and sub-tasks as well as activities and sub-activities formed the pedagogical mode.

## 1.10 SIGNIFICANCE OF THE STUDY:

This study is significant in that there are not many research activities, to the best of this researcher's knowledge, on the teaching of reading comprehension in large classes of the Nigerian tertiary institutions, especially at the Polytechnic level. Most of what have been done are on reading in general and not usually with particular reference to the pedagogical problems of reading comprehension at the tertiary level with specific reference to large classes. Some of the scholars who have worked in this area of interest are James (1984) who worked on reading instructions; Gibbs and Jenkins (1992) on general methodology of reading; Soola (1991) on material selection for reading; and Williams (1991) on vocabulary.

Reading comprehension which is the main focus of this study has not been properly taught at the primary and secondary levels, hence the problems students face at the tertiary level in this skill. This study is out to inject new dimensions into the teaching of reading comprehension in the large classes of the Nigerian tertiary institutions for improved achievement of students. It is also out to explore possible ways by which large classes can be used to the advantage of the students in the teaching of reading comprehension in situations where the resources are low.

The result of this study may help reading comprehension teachers to know the more effective approaches to the teaching

The study was restricted to CABS which is a unit of Kaduna Polytechnic because there were massive data to support the claim that the large class is more of a problem at CABS than the other units. In the other units of the Polytechnic, the nature of the core courses does not allow large classes. The Engineering, Computer Studies, the Environmental and Science units can ill afford large classes because of the dearth of personnel and materials for teaching. At CABS, most of the courses are taught without the use of sophisticated laboratory equipment. The institution cannot afford these because of financial constraints. The inexpensive manner of teaching various courses makes them prone to large class situations .

Another reason for the delimitation is that CABS holds the manpower of the nation by offering courses in Accountancy, Business Administration, Management Studies, Secretarial Studies, Social Services, Marketing, Purchasing and Supply, Government Procedures, Local Government and Mass Communication. Proper reading comprehension or lack of it, in these courses becomes a crucial national development issue. Thus the need to focus on certain courses offered at the centre. The exploration of the way reading comprehension is taught to these groups of students may come in useful to the other units of the polytechnic, such as the Engineering, Science, Environmental and Education, not considered in the study.

The Ordinary National Diploma Two (OND II) students were used as the subjects for the study because they constituted the end product of each programme in the institution. As they are going to work in the labour market, their reading comprehension competence should be put to test. Many of them are going to work in different places or posts that require some degree of mastery in reading comprehension.

The subjects for this study were restricted to the Accountancy and Business classes. These two departments were chosen because of the comparability of the students in their basic educational background of WASC/SSCE/GCE with four credits including English and Mathematics, or four passes and a year in the Introductory class, before the main course. They operate the same syllabus in English, the same number of teaching time (three hours per week) and they have similar reading comprehension needs (Osasona, 1986:138 and 143). The subjects for the study were randomly chosen from two whole classes, one experimental, the other control.

The study was restricted to the same institution because the experimental nature of the study would make it difficult for the same teacher to monitor adequately the dependent variables in many different institutions.

The subjects offered at CABS represent the different groups in Nigeria. Even if this sample is small, it can adequately be applied to the other Polytechnics.

The research study was also limited by time constraints because reading comprehension could be taught only in the first semester.

## 1.12 SUMMARY:

This chapter has highlighted what prompted the researcher into embarking on this study. It gave an extensive background information that was inconclusive on reading comprehension in large classes in particular. The chapter also explained the two teaching approaches being investigated through reading comprehension in large classes. The framework adopted in the study was explained.

Three research questions raised in the statement of the problem were later stated in the null hypotheses. These questions highlighted the focus of attention in the study.

The section on the significance of the study stressed the fact that the research results could aid in the effective teaching of reading comprehension and reading comprehension in large classes. The limitations of the study emphasized its minimal scope, which left room for further research.

main ideas or concepts given in the material being read. This aspect of ELT goes beyond the facts the writer sets forth. It extends to drawing apt conclusions from the facts and ascertaining the writer's message and implications (Bonning, 1977:5 and Oyerokun, 1991:159).

For comprehension to take place, a reader applies different reading strategies. These differ from one type of reading to the other. Ability to develop the understanding of text and interpretive skills is what Koh Moy Yin (1985:380) believes to be reading comprehension. A reader should be able to develop "problem solving, creative and interpretive stategy in order to comprehend adequately the message of the writer" Koh Moy Yin (1985:280). He has to be creative in the sense that he can stretch his vision far and wide to his environment, his knowledge of the world and other areas of life, in order to interpret the text before him correctly.

Reading comprehension involves meaning. This is why Goodman (1990:16) says "any reading that does not end with meaning is a short circuit". A proficient reader is able to construct a meaning that he can assimilate from the text. He keeps on using strategies for reducing uncertainties, selecting the available cues with care and drawing on his "prior linguistic and conceptual competence" in order to arrive at the right meaning.

Anderson (1977:369) says "every act of comprehension involves one's knowledge of the world as well". The idea

expressed by Anderson had been expressed earlier by Kant in 1781. Kant said, "new information, new concepts, new ideas can have meaning only when they are related to something the individual already knows" (Kant 1781/1963 as quoted by Carrell, et al, 1990:73). This concept has led to the schema theory. It is believed that the concept applies to comprehension in general whether in the second language or one's own language. It also contradicts the traditional concept of reading comprehension in the second language which was errorneously believed to be "meaning in the utterance of text" that has nothing to do with either the speaker or writer and the listener or reader.

In the schema theory, the role of background knowledge is formalised and the proponents such as Rumelhart (1980), Rumelhart and Ortony (1982) and Bartlett (1932) believe that any text, whether spoken or written does not by itself carry meaning, but it provides directions for the listener or reader on how to retrieve or reconstruct meaning from their own previously acquired knowledge (Carrell, et al, 1990:76). The previously acquired knowledge structures are called schemata (Bartlett, 1932; Adams and Collins, 1979; and Rumelhart, 1980). The interpretive process is said to be guided by the fact that every input is mapped against some existing schema which are in agreement with the "input information". This principle has resulted in the "bottom-up and top-down processing". Bottom up is evoked by the

in-coming data and is therefore called "conceptually driven", because it occurs as the system makes general predictions based on higher level general schemata and looks through the input information to fit into the higher order schemata.

Bottom-up processing will make the reader sensitive to new information in the text, while top-down processing helps the reader to resolve ambiguities or "select between alternative possible interpretation of the in-coming data" (Carrell, et al, 1990:77).

In the bottom-up processing each information is a source of data for the next one. The processing technique is from the printed word (which is at the bottom level) to meaning (which is at the top level). Gough (1972), an exponent of the bottom up processing, believes that the mastery of the alphabet was important to the fluent reader, so that he could read easily, without guessing. Later research by Gough in 1985, however, made him to change his mind as he could see that context could effect word recognition. Therefore he concluded that reading is not totally a bottom-up process.

The top down processsing, according to Carrell and Eisterhold (1983), "occurs as the system makes general prediction based on higher level general schemata and searches the input for information to fit into these partially satisfied, higher order schemata" (pp 357). They contend that the top down processing is referred to as "conceptually driven".

Carrell and Eisterhold (1983) suggest that the top-down and the bottom up processing "should be occuring at all levels simultaneously". They explained that the bottom-up gives the data to fill out (instantiate) the schema. While top-down facilitates its assimilation if it is consistent with expectations of the reader/listener. They argue that:

> Bottom-up processing ensures that the listeners/ readers will be sensitive to information that is novel or that does not fit their on-going hypothesis about the content or structure of the text; top-down processing helps the listeners/ readers to resolve ambiguities or to select between alternative possible interpretations of the in-coming data (p.357).

Other scholars say different things on the bottom-up and top-down processes of reading. Wallace (1992:39) sees Goodman and Smith's top-down reading process (1970) as following Lunzer and Gardner's (1979) unitary system. This system pays too much attention to the top-down processing and neglects the bottom up. Eskey (1988) however, says that second language readers need to attend to the bottom-up processing because he believes that second language reader's linguistic competence is weaker than that of the first language reader. This claim of Eskey's (1988) can be challenged because the linguistic competence of the second language reader can be strengthened through useful activities in the classroom or even beyond.

This study accepts the schema theory from the perspective of reading as being a mixture of both the top down and bottom up processing techniques.

Coady (1979) has gone a step further in reading developmental strategies by elaborating on how background knowledge aids comprehension. He says such a knowledge interacts with conceptual abilities and process strategies to produce comprehension. To him, conceptual ability means general intellectual capacity, while process strategies are sub-components of reading ability which involve more general language processing skills that extend even to the morpheme, syllable, lexical and other language contextual meanings. Coady concludes that this is why students with a Western background learn English faster than those from a different background (Coady, 1979:7, In Carrell,et al 1990:75).

Coady's idea is rather inconclusive as Clark and Silberstein (1977:136 -137) argue that what the reader brings to the text is greater than the psycholinguistic model's schema theory. They say that the reader brings a lot of information and ideas, attitudes and beliefs to the text, which help him to understand the text and that "skill in reading depends on the efficient interaction between linguistic knowledge and knowledge of the world.

Clark and Silberstein's idea is relevant to this study because the researcher has been able to see through the various needs analysis identified by scholars that students problems in reading comprehension could be traced to their poor linguistic background and knowledge of the world. It therefore aims at solving the problems.

the right knowledge of reading comprehension by the teacher may aid his teaching and testing skills. The right knowledge acquired may also lead to a better approach to reading comprehension which may help develop students' reasoning ability.

Reading comprehension is seen as a two-way process by Morris (1963), Chull (1977) and Robinson (1977). They believe that the old idea of looking at comprehension as a one-way process which is just for the reader to understand the author's meaning is no longer tenable, as they argue that what the reader brings to his reading of text contributes a lot to the writer's message.

It is therefore necessary for the teacher of reading comprehension to know that students' previous knowledge may have an effect on the way they comprehend text and answer comprehension questions. This knowledge guides lesson plans and teaching in all the classes where conventional or the interactive approaches are used in teaching.

## 2.2 Problems of Reading Comprehension:

There are various problems attached to the different micro skills of reading comprehension but this study will concern itself with the ones that bear relevance to the four micro skills which are its foci. The four areas are vocabulary development or word power, reading for inferences, reading for information and data analysis.

Many scholars have worked on each of the four areas of focus and from their review, this researcher has come up with Table 4 which specified the probable problems and solutions in the related areas of focus. Some of the scholars whose studies have influenced the construction of this Table are those of Wallace (1984) on the problems of vocabulary and probable solutions; Joffe (1988:217 - 294) on steps to follow in understanding maps, charts, graphs, tables, reading for inferences, locating specific information and finding main ideas; Habeshaw, et al (1989:64 - 71) the general problems of reading and reading comprehension in schools; Nunan (1991:34 - 35) different reading skills required for everyday activities; and Oxford (1989:151 - 191) the application of the "indirect strategies" to solving the problems of the four language skills of listening, speaking, reading and writing.

TABLE 4 Probable reading Comprehension Problems and Solutions

| | Skills | Problems | Probable Solutions |
|---|---|---|---|
| 1 | Vocabulary or word power | 1. Inability to understand relations between the parts of a text through lexical and grammatical cohension devices. | Exercises should be based on:-<br>(a) Link words like but, and, yet because, however.<br>(b) Contrasts like either/ or, neither/nor, on the other hand.<br>(c) Comparisons, as big as, as well as, like his .... |

| Skills | Problems | Probable Solutions |
|---|---|---|
| | | (d) Words which build up pictures of things large, huge, small. |
| | 2. inability to understand the communicative function of sentecnes and utterances. | (a) Deduction of meaning from the context through turning each subsection into a question; re-reading the sub-section. |
| | | (b) Analysis of words that have literal sense but used metaphorically, for example:<br>1. He will man this ....<br>2. I am going to <u>table</u> the matter .... |
| | 3. Inability to deduce meaning and use unfamiliar terms. | Focus in teaching should be on:<br>(a) Derivation (Prefixes and Suffixes), homonyms and antonyms<br>(b) analysing the interna structure of words. |
| II Inferences | 1. Inability to use background information or knowledge of the world. | (1) Group discussion of some salient points in the text which should bring various experiences about the knowledge of the world. |

| | Skills | Problems | Probable Solutions |
|---|---|---|---|
| | | 2. Lack of understanding of implicitly stated information. | 2. Answering questions that are based on the implied meaning of the words and expressions in the text. |
| III | Reading for information | 1. Inability to read for the main idea. | Focus on the teaching of: (1) Skimming and scanning of texts. |
| | | 2. Problem of identifying the relaltionship between the main idea and the subsidiary ones. | (2) Reading the passage thoughtfully and slowly in order to evaluate relevant ones. |
| | | 3. Inability to recognise relevant information in the text. | (3) Note making of relevant points, summarizing and identifying relevant sentence patterns, as well as the topic sentence from the other sentences. |
| IV | Data Analysis | 1. Inability to understand the purpose of the writer. | 1. Answering questions that require indepth knowledge of the text. |

| Skills | Problems | Probable Solutions |
|---|---|---|
| | 2. Inability to distinguish between cause and effect. | 2. Exercises with graphs, statistical data, diagrams and descriptions which illustrate events that happen before and after. |
| | 3. Inability to speculate between events, actions or happenings and what will happen later. | 3. Exercises on interpretation of statements and data from the text. |
| | | 4. Communication game for data analysis. |
| | | 5. Reading texts that are subject area specific. |

The Table, though not extensive, has highlighted the areas of need in each of the micro-skills. These solutions may be interchangeable. They are interwoven and inter-related. For example, discussion can be for any of the problems. The Table has been useful at the treatment of this study and in the compilation of the reading comprehension text instrument.

## 2.3 Survey of Experimental Studies on Reading Comprehension

There have been many experimental activities in the area of reading comprehension. The object of focus of all the scholars however, has been improvement in whichever aspect they are working on.

Hamp-Lyons (1985:363 - 373) looked at the approaches to teaching reading comprehension, through a classroom based study, with the aim of exploring "the influence of EFL reading on the progress of students in academic reading classes of a university preparatory course. Two approaches, the traditional which was the conventional and the text strategic which was modern were investigated. The experiment used same text -book in both treatments and a matched group pre-test, post-test design. The pre-test, post-test gain scores of the groups' performances were also compared. The result showed that "the text-strategic approach was superior to the traditional approach" (p.373). The text-strategic approach which was Hamp-Lyon's own devising was used to better her students' reading comprehension and to help them "develop skills for approaching any text."

Every teacher who has the interest of his job and students at heart must always find ways and means of improving his teaching methods and strategies. Although, the text-strategic approach is not easy to follow, especially towards its end it has been an original outcome of Hamp-Lyons' search for better teaching and learning of reading comprehension in her institution. This study has borrowed the

Koh Moy Yin (1985) looked into the area of prior knowledge in reading comprehension. The experiment investigated the effects of previous or background knowledge on reading comprehension. Three groups of students in different disciplines and at different levels of competence in English were given a series of comprehension tests on four different texts. An inter-group comparison of their performance across the four texts revealed that knowledge of the language was necessary but not a sufficient condition for comprehension, and that the resources the reader brought to bear on the text was a sufficient variable.

This experiment is relevant to this study because four different texts were given to two different groups of students in order to validate the reading comprehension instrument and the effectiveness of the two approaches. The experiment is also important for teaching purposes because it reveals the value of "the enabling knowledge underlying any written text". Thus the teacher is able to develop in students the strategies to solve problems, interpret, create and even exploit their own knowledge for better reading comprehension.

Interpretive responses is a factor of importance in reading comprehension. This observation is stressed in Williams' (1973) research into the influence of specific factors on the interpretive responses of the pre-University May students to reading the short story in English. The subjects, who were 34 boys and 29 girls of MARA Institute of

Technology, Kuala Lumpur, were given tests of written comprehension on three Malaysian short stories and asked to express free responses to them in individual tape recorded interviews. The results revealed several problems in interpretation and a significant cause was the background of the readers. Other factors that influenced the responses were reading ability, sex and critical thinking ability.

Some parts of this experiment are relevant to this study. These include variables such as background knowledge and its effect on students' performance, reading and critical thinking ability which are all important variables relevant to reading comprehension.

Reading comprehension problems are common at the Polytechnic/tertiary level of education. This made Flick and Anderson (1980) to research into the reading comprehension problems of Science students of Iowa State University. They investigated the rhetorical difficulty of students in Scientific English and comprehension of implicit and explicit definitions. Sixty-seven ESL and thirty-six American undergraduates were the subjects. In order to test implicit and explicit definitions, ten paragraphs on a variety of topics were selected, each containing one definition. These definitions were re-written in order to cater for implicit and explicit definitions. The subjects were given the passages according to their groupings, to read and answer the questions below them. Results showed that there was a significant difference in

comprehension between implicit and explicit definitions for native readers of scientific discourse and a significant difference in the performance of foreign learners in the implicit and explicit definitions of scientific discourse.

Flick and Anderson (1980) were able through their study, to debunk the assumption that only non-native speakers would have problems in comprehending rhetorical information and that native speakers would not have such problems. There was no significant difference between students of similar educational background in ESL and the native American students as shown in their mean scores. This confirms that students' problems in comprehension are general; whether native speakers or not, as the experiment actually confirmed that "in fact, the explicit - implicit differential was approximately the same for both groups" (Flick and Anderson, 1980:350).

Flick and Anderson's (1980) work makes the present study pertinent to the Nigerian Polytechnics, as it has shown that reading comprehension problems are general to students in the tertiary institutions, no matter their area of specialisation. It has also suggested that students should be equally taught reading comprehension skills, their race or background not-withstanding.

Gbenedio (1993:82) carried out an experiment on the relative effectiveness of two methods of teaching reading (individualized reading strategy and conventional reading strategy). She used one hundred and sixty one students of

two secondary schools as her subjects and the pre-test, post-test control group experimental design. Sixteen experimental teaching sessions and an achievement test were employed for treatment and evaluative purposes in the study. The experimenter served as the teacher in both groups throughout the teaching sessions. The result of the study showed that individualized reading strategy was superior to the conventional reading strategy as reflected in the statistical differences between the two strategies.

The present study has borrowed a few things from Gbenedio (1993). It has made use of the pre- and post-test control group design. At the same time, experimental teaching sessions (thirty hours in each group) served as treatment between the pre- and post-test sessions. One of the instruments for this study was also an achievement test, though different from Gbenedio's which was made up of only multiple choice items. The present study also tried to see the differences between two approaches to the teaching of reading, but unlike Gbenedio's in a large class situation. The researcher alone was also the teacher in the two groups.

Another experimental study that is pertinent to this study is Obianika's (1981) study of the relative effectiveness of two methods of inculcating reading skills in secondary schools. She used the pre-test post-test control group design as well as sixteen experimental teaching sessions between the pre and post test levels. One of the instruments for the experiment was an attitude scale for measuring subjects'

attitude to reading. She found that a relationship existed between attitude and achievement and her comparision of methods was statistically significant. The present study measured subjects' attitude to reading comprehension in large classes for a possible relationship.

Thorndike's (1973) empirical study of reading comprehension was also relevant to the present study. It was a study which covered fifteen developed and developing countries. The reading comprehension test was of the conventional type in which a passage was presented with questions based on the passage, and the examinee was expected to refer back to the passage as often and as much as he needed to, in order to find the correct answers (p. 20). This aspect was useful in the control group of the present study where the conventional approach was used in the teaching of reading comprehension in large classes.

In order to validate Thorndike's study, a committee was set up to choose appropriate passages from a pool of passages. This was for face validity. Three lecturers did a similar thing for the instruments used in this present study to ensure face validity. In Thorndike's study, the selection of passages was to provide a range of difficulty level and diversity of items that would help in showing appropriate levels of discrimination of the items chosen. The present study followed a similar style in its choice of passages and items through item discrimination indices and

also correlation of passages to show relationship between texts. (See the Appendices).

Thorndike used paired words which were synonyms, to test word knowledge. The present study used the cloze test, as it was believed to be a pragmatic test item. The data collected in Thorndike's and the present study were subjected to statistical analyses. Results of Thorndike's study showed large differences between the reading comprehension ability of pupils from the developed and developing countries. In fact his report showed that only about 5 or 10% of students in a developing country scored as well as the average student in one of the developed countries. The present study does not have a scope that is as wide as Thorndike's because it is restricted to only one country, but one thing that is common in the two studies is the low reading comprehension level of students of developing countries, Nigeria included (See Unoh 1987; WAEC Chief Examiner's Report of 1989-91). This notion has been confirmed by McKillop and Yoloye's (1962) study that showed that the reading comprehension level of Nigerian students was low compared to that of their American counterparts. Although, the present study is not a cross-cultural comparison of reading comprehension ability of students, its interest is reading comprehension and reading efficiency of tertiary institution students which are basically the same as that of McKillop and Yoloye reviewed above.

Pillai (1991) gave reports of three investigations to support the psycholinguistic rationale for the "shared book approach".

The first was Elley's (1981) evaluation which compared the learning outcomes of the Fia Fia reading programme with the "shared book experience" approach and the Tate programme that employed the traditional audio-lingual approach. This experiment was at Nive (South Pacific). The three tests administered by Elley (1981) to assess the pupils' performance in English were reading comprehension, word recognition and oral sentence repetition. The results of the study revealed the superiority of the Fia Fia reading programme shown by the language test scores of the two groups.

Elley's investigation was different from the present study because the two groups were assessed at different times. Tate programme in 1978 and Fiafia in 1979. The only aspect of the instruments that agreed with those of the present study was the use of tests to assess reading comprehension. The present study is not looking for the rationale for using any particular theory of language in English language teaching, but it is interested in comparing the effects of two teaching approaches on reading comprehension.

The second investigation was from Fiji Islands. The investigation was conducted by Elley and Rickets in 1980. Classes Five and Six pupils of twelve primary schools were used as subjects. Pupils in each level were divided into three groups, two of which were experimental and one control. They were also

pre-tested. The two experimental groups had slightly different treatments. One had the "shared book experience" approach and the other had the "Silent Reading Method" or "The sustained Silent Reading Method". Each of the experimental groups was given 250 interesting children's books for their use during the year. The control group was not given any new book. Results showed significant differences in all categories of Reading Comprehension, Listening Comprehension, English Structures and Total (p.11). The investigation shows a new dimension in English language teaching research. It is interesting but hardly relevant to the present study, but for statistical analyses of its findings.

The third investigation was conducted by Jane Rickets in 1981 in Fiji Islands. There were only two groups - Experimental and Control and only class six pupils were used as subjects. The experimental group used the shared book experience approach, while the control group used the audio-lingual method, followed in the Tate syllabus. The teachers in the experimental group were supplied sixteen books each month for the classes being taught. The books were new and attractively illustrated. Both groups were tested after eight months of instruction. Results showed considerable difference between the achievement of the experimental and control groups, although not subjected to statistical analysis.

The new and well illustrated books could have motivated the pupils to achieve better results in the experimental group

than in the control group where there was nothing like this. The newness of the books every month apart from their attractiveness could have helped the pupils' achievement. Pillai (1991) concluded that motivation, opportunity for learning and increased exposure to the language to be mastered were responsible for the success of this third investigation.

The aspects of this third investigation that are related to the present study are: the use of two groups, experimental and control; the use of students (pupils) of the same level of education; the application of the pre and post-tests; and the investigation of two methods of teaching. Other areas of the report are not applicable to the present study.

From all these experimental studies, this study has been able to build up the design that was adopted in Chapter three, although there were some aspects in the design which these experimental studies did not touch which interest the present study. For example, the feeback effect in-built into the design was not investigated by the other studies reviewed above. This therefore differentiates the present study from the others. (See Section 3.2).

## 2.4 Studies on Reading Comprehension at the Tertiary level in Nigeria

Ressearch activities into reading comprehension at the tertiary level in Nigeria started with Brimer (1959) who investigated the reading difficulties of thirty-four students of the Department of English, University College, Ibadan.

He made use of easy and difficult passages and found that the students' level of comprehension in silent reading was inadequate for coping with the difficulty level of materials normally required in the freshman year; that their reading speed in both materials showed lack of knowledge of phonics; the speed was better with the easy material; and the vocabulary level of the students bore a relationship with their slow reading tendency.

All these problems as identified by Brimer in 1959 are still pertinent today. The problems today are aggravated by large classes which was not an identified problem at Brimer's time. Only the privileged few were in the University and the resources were high, unlike what obtains in today's tertiary institutions where resources and facilities are low and teachers are expected to teach more students. The present study however, is expected to suggest ways of utilising the status quo to advantage by devising an appropriate methodology that can cater for the major problematic areas in reading comprehension in large classes.

Yoloye and McKillop (1962) conducted a more comprehensive survey than Brimer's, researching into the reading skills of ninety-two students of the Faculties of Arts, Science and Social Sciences of the University of Ibadan. The test scores of the Nigerian students were compared with those scored by American students of comparable educational background and length of schooling. Results showed that the Nigerian students were at par with the Americans in the test of word

meaning (vocabulary) but inferior to the Americans in the test of comprehension and reading speed. All other areas were either statistically significant or negatively correlated.

As revealed by Yoloye and McKillop (1962), the reading comprehension level of Nigerian students was poor. Despite this knowledge, not much has been done to solve the identified problems since then. Yoloye and McKillop's (1962) study is of interest to the present study, especially in the areas of comprehension, word meaning (vocabulary) and statistical analyses of data. The present study is out to give suggestions that could help in solving vital problems of reading comprehension. Yoloye's research confirmed Coady's (1979) assertion that students with a Western background comprehend English faster than those from a different background. This assertion of Coady's however, has been disproved by Clark and Silberstein (1977) and Fuck, (1980) whose views were contrary to Coady's. The present research however, is not as large in scope as Yoloye's because it is limited to Nigeria and it does not have European or Americans among its subjects but purely African.

One point of interest to the present study in Yoloye's study is its investigation of three reading skills of vocabulary knowledge, comprehension, that is, understanding the author's expressed implied meaning in continuous prose when speed was not a factor; and also speed reading. This study investigated the effects of methodology on the reading skills of vocabulary, inferences, information and data analysis, while

Yoloye investigated which approach would suit the teaching of vocabulary, comprehension and speed reading better. Yoloye however, made use of mixed faculty students as his subjects, while the present study used students from two departments of the same institution. Yoloye (1962) is not concerned with the large class effect whereas this is one of the pre-occupations of the present study.

Unoh (1972) studied the reading problems of students in University of Ibadan for environmental and psycho-linguistic implications. He devised his own tests for reading speed and comprehension as well as for measuring reading difficulties. He also constructed and adapted suitable inventories and questionnaires for assessing reading difficulties, reading habits and leisure inventory (Odejide 1992:247-8). He found students most remarkable reading problems to be inability to skim read, slow reading, difficulty in interpreting, understanding and comprehending main ideas and details, as well as low level of word power and retention.

The present study has gained from Unoh's measurement patterns, especially the construction of the reading comprehension test which is an important instrument used in this study. The study constructed its own students attitude questionnaire and compiled the reading comprehension test used which Unoh's study did not do.

Obianika (1981) studied the relative effectiveness of two methods of teaching reading in the secondary schools in Benin City. He compared the conventional approach with the individualized approach. He also measured the relationship between attitude to reading and achievement as well as the effect of students' socio-economic background on their achievement in reading. The study made use of a multiple choice objective type achievement test, a reading habit inventory and an attitude scale as instruments. Sixteen experimental teaching sessions were employed and data were analysed using the factorial analysis of co-variance on the raw scores. Results showed a significant difference between the methods compared. The individualized approach was shown to be superior to the traditional approach. The result also showed a relationship between attitude to reading and achievement. The other areas of the result are not of interest to this study except the fact that the data were analysed statistically.

Obianika's (1981) study has brought a realization that research exercises are necessary for solving reading comprehension problems. It also shows that there are many variables that can contribute to the reading comprehension abilities of students. Since the bulk of the students in the tertiary institutions come from the secondary schools, there is a need for more activities towards the solution of reading comprehension problems.

There are however, very few scholars to the best of this researcher's knowledge who have worked on the Nigerian Polytechnics, especially in the field of reading comprehension in large classes. The focus of this study is the Polytechnic, so it is necessary to see what has been done so far. Oruma, (1991) and Oruma, et al (1990) presented papers on the problems of students in English language (Communication Skills) in Kaduna Polytechnic and found that students problems in reading were slow reading, sub-vocalization, vocalization, long eye fixation, long pauses after each word or group of words, regression instead of progression along the lines of the printed word, uncritical reading and uncreative reading behaviour. Oruma and others did not, however, discover the large class effect as a contributory factor to all the reading comprehension problems stated above. They did not also proffer solutions to the reading comprehension problems they identified at the Polytechnic level. Their study was not an empirical one. There was no data collection or analysis.

Babalola (1991) researched into the needs analysis of students of four Polytechnics in Nigeria in ELT and found that students have problems with the reading of technical journals and magazines, laboratory and technical reports. This study failed to look into areas of students' problems in reading for vocabulary, inferences, information and data analysis, which are relevant to academic pursuit in the Polytechnic and of interest to the present study.

She did not also look at the large class as a problematic area for reading comprehension.

The four-Polytechnic-projects' reports from commissioned Polytechnics on needs analysis found that students do not have much practice in the areas of understanding what is read, separating ideas, interpreting graphs, diagrams and recalling information.

Although, none of the studies cited above has proferred solutions to the identified problems and none of them identified the large class as a problematic teaching point in reading comprehension at the Polytechnic level, their findings have been of immense value to this study. In fact, this is why the present study is no longer interested in identifying students' reading comprehension needs, as these have been identified. This study therefore concentrates on those areas of reading comprehension which can improve the teaching of this skill at the Polytechnic level in particular and the tertiary institutions in general. Since these scholars have not touched many of these areas, this study is of great necessity.

## 2.5 Linguistic, Psycholinguistic, Sociolinguistic and Pedagogical Considerations in reading comprehension:

It is necessary to see reading comprehension from the various perspectives of other areas of learning that are directly related to it, in order to fully understand what is happening in the classroom situation. This section will

When these four perspective use of grammar are collapsed, the relevance of grammar to reading is seen in terms of the reader's linguistic knowledge of the passage being read, as well as the knowledge of the morphological and syntactical structures as contained in the particular language. The paradigmatic and syntagmatic relationships existing in grammar are of interest to reading comprehension. The paradigmatic forms suggest changes in linguistic forms which may affect the author's message to the reader. The syntagmatic relations show the unity of a number of linguistic units in a structural form.

Reading-linguistic relationship dates back to the early stages of linguistics (Banjo, 1982: 229 -239). Banjo quotes Bloomfield's (1925) criticism of the way initial reading was being taught, which at the one end sets reading (graphic symbols) with thoughts or ideas which could correlate with objects and situations and not with speech sounds; and at the other end, sets the teaching of reading through the phonic methods which confused learning to read and write with learning to speak. Reading to Bloomsfield, is an art by which one is able to establish phoneme-grapheme correspondence, so that the child can internalise the spelling system of the language. Bloomfield's idea stresses the fact that the word is the basic reading unit.

Yet modern linguistics stresses the sentence and discourse rather than the word as the basic unit of language (Lafevre, 1964 in Banjo, 1982:231). It means therefore that Bloomfield's method will be inadequate as the reader moves from initial reading to the realms of extensive and intensive as well as faster reading ability. In intensive and extensive reading, the reader's competence is necessary in the total grammar of the language and not just in the phonology.

This grammatical competence will take into consideration "segmental phonemes (realized as letters of the alphabet; supra-segmental phonemes realized as stress patterns; intonation, pause, as represented by punctuation marks; and syntax realized in the reader's eye span movements" (p.231).

In intensive and extensive reading, the linguist is interested in finding out the extent to which linguistic factors affect reading inefficiency, which might be in form of slow reading and inability to decode print. The solution to these problems may go farther than linguistics into psycho-linguistics or other areas of learning. The intensive reader needs to have the necessary tools for mastering the various phonological, syntactic and semantic structures of texts.

In the present study, four micro skills of reading comprehension were looked into. Each of these skills require

students to have specific linguistic knowledge for their understanding. A student who is deficient in the semantic knowledge will find reading for inferences difficult. He will have a similar experience with data analysis. Knowledge of syntax will aid the student's ability to tackle reading for information, while phonetic and phonological understanding of the context of the text will make for effective reading and comprehension.

The present study's choice of linguistic elements in the two groups (experimental and control) was determined by the knowledge of the difference between the traditional linguistics and modern linguistics. This difference is reflected in the way linguistic terms are applied at the conventional and experimental groups. In the conventional group, tasks are looked at from the traditional linguistic point of view which sees reading as an activity involving grammatical usage.

In the experimental group, texts are looked at from the level of discourse which is the highest linguistic layer of analysis. The lowest grammatical unit is the utterrance and not the word or morpheme. Texts are looked at globally and in a holistic way. Vocabulary or grammar items are not treated discretely but tackled through context clues. The scientific nature of modern linguistics is however adhered to.

Thus the overall comprehension of linguistic entity in this study has to do with the syntactic theory, sentence compatibility, discourse analysis, cohesion and coherence of texts, discourse categories, inter- and intra-sentence relationships, sentence as well as paragraph comprehension. The longer the sentence, the more difficult it is for students to understand and to unravel the entanglements such sentences contain.

Vocabulary study is very important in this segment of reading comprehension. The more frequent the appearance of diffcult lexical items, the more difficult it is for the student to get at the meaning of the text.

2.5.2 Psycholinguistic considerations in Reading Comprehension:

Weaver (1980) in Onochie (1989:97) says that a psycholinguistically based reading programme should aim at "not only to read but to engage the reader's enthusiastic co-operation in order to arouse and sustain his interest in reading and to have a continuous desire to gain information and pleasure from the printed word". The above assertion tallies with Smith, Goodman and Meredith's (1970:266) claim that "reading is a psycho-linguistic process". It involves the reader's thought processing interaction with the written language. "The reader utilizes his store of experience, developed

concepts, and learned responses through systems of signals in language which he has already basically mastered especially if he speaks the language he is learning to read".

The language of the writer interacts with the mind of the reader. So, reading comprehension has to do with the text and the reader. Unoh (1976:72-82) asserts that reading comprehension has to do with the text language and the reader's inherent ability, mental processes and strategies in comprehending the text. "Process will emphasize the effective mastery and application of the mechanics and structural essentials of language as well as emphasise the "perceptual-cognitive and information processing activities of the reader demanded by the reading task".

Psycholinguistically, reading is affected by general intelligence, visual, auditory perception and discrimination, physical maturity and health. Others are emotional and social adjustment, interest, motivation and attitude (Unoh, 1983:15). A highly intelligent person will comprehend text more quickly and readily than a person of low intelligence. A visually handicapped reader or a reader with auditory problems will have more problems in comprehending texts than a reader who is free from any of these defects. A healthy

person concentrates more on the text than a sick reader. All these help to show that a sound mind in a sound body is important for effective reading comprehension.

Motivation, drive, reward/punishment, interest and incentives are viewed by McDonough (1986:156) as important for reading comprehension. He emphasises the particular 'strengths' which a text should have to motivate the reader. They are:-

(a) Relevance: How relevant is the content to the students' language needs?;

(b) Completeness: Inclusion of all the language necessary for the stated aims of the course;

(c) Authenticity: the materials should be both linguistically and culturally authentic;

(d) Satisfaction: the students should leave each lesson feeling they have benefitted more than simply progressed; and

(e) Immediacy; the students can use the material in a lesson straight away.

All the points above cannot be achieved in one lesson. Points a - b have more relevance with whole courses. Points c - e apply to individual lessons. Authenticity is of special importance because it relates

to the suitability of the chosen texts to the students' areas of specialisation. In the present study, relevance, authenticity, satisfaction and immediacy were used as strengths for the choice of texts. The texts are relevant because most of their contents relate to students' language needs and field of specialisation. Satisfaction is embedded in the texts through the various class activities, especially in the experimental groups. The students in both groups can make use of the materials in a lesson immediately after the reading comprehension class. The knowledge gained can be transferred to the next lesson which may be different from English Language.

Thus in this study the attitudes of learners might have been affected by their increasing concern for employment since they were final year students. Their attitude to reading comprehension might have been affected by their desire to achieve as much as possible before leaving the Polytechnic environment for the labour market.

Psycholiguistics needs to be considered in matters that relate to reading methods and materials. This will look into the psycholinguistic validity of such methods and materials and the psycholinguistic process they develop (Goodman, 1969:254). This implies that

the method of instruction should make the learner an active participant in the reading and learning process.

The top-down processing was developed from psycholinguistics, especially from its congnitive dimension. Reading is viewed primarily as a language process, rather than a visual perceptual process. The reader contributes non-visual information which is used to formulate hypothesis on a text. He tests his hypothesis on the given text through listening and reading processes which Goodman (1976:23) refers to as "cycles of sampling, predicting, testing and conforming". That was why he referred to reading as a psycholinguistic guessing game. The non-visual information is explained by Smith (1973:6) as what is already known about reading, language and the world at large.

As an important contribution to psycholiguistics of reading, Goodman (1965) worked on the cueing system of language and the effect this could have on the reader. He grouped the cueing system into three (1) graphophonic (2) semantic (3) syntactic. These cueing systems, he says, are available to the reader from both the text and his background knowledge of the language of the text. Goodman analysed oral reading of subjects and was able to come up with the

various ways by which readers use the three cueing systems in the process of reading.

He also worked on the miscue analysis of readers and found that the contributions that the reader brings to the text affect the type of miscues he makes. His analysis of children's oral reading of words on a word list and the ability to recognise such words in the context of sentences, revealed that they improved in their word recognition, when reading in context. This made him to confirm that good readers make use of context cues in their ability to recognise words and that poor readers rely on graphophonic cues for word recognition.

Goodman (1967 in Wallace 1992:41) gives these examples to show how readers miscues can affect the author's message:

"He caught his small ball"

(a) He cough is small ball.
(graphophonic miscue)

(b) He caught the small ball.
(syntactic miscue)

(c) He caught his little ball.
(semantic miscue)

Although the examples are linguistic miscues, they show that the problems of reading comprehension are

multi-dimensional and inter-dependent. The problems whether linguistic or psycholinguistic are related because they deal with human beings and in the present study, they have the same focus, which is reading comprehension.

The assertions of Goodman above have been challenged by later research, especially the one by Nicholson Lillas and Rzoska (1988:9) who analysed poor and good readers separately and came to the conclusion that poor readers use context to help with reading, while good readers who already have the skill of decoding do not do this. Good readers already have access to contextual information, which they can use if need be, but they do not rely on it, because of their automatic and instant ability to decode. Other scholars like Turner and Cole (1985) say that good readers use their superior word-recognition skill to guide their comprehension. In other words, good readers can easily correct errors of syntax and semantics immediately after reading the text. Poor readers however, rely on the context which may not be enough for the comprehension of the text at all times, thus resulting in comprehension problems.

Text organization can be effective for recalling important information in the text. Britton, et al, (1986) looked at the effects of text organization on memory: test of a cognitive effect hypothesis with limited exposure time. They found that subjects spent more time on reading important information than unimportant ones in the twelve stories that were given as the instrument for the experiment. They also found that subjects freely recalled important information. They concluded that when subjects are not pressurised by time limit, they give more time to processing important information, but where processing time is limited, subjects exert "extra cognitive effort" to achieve the same objective.

There are many aspects of the human psyche that can affect reading comprehension. The level of intelligence could be an important factor. Titone (1986:24-36) worked on the relationship of bilingualism and intelligence on reading acquisition and basic education. He found that "balanced bilingual children demonstrate metacognitive/metallinguistic abilities which in turn lead to higher levels of academic achievement". It was also found that the ability of readers to consciously reflect upon and "manipulate thought

processes and language concepts and functions lead to enhanced reading skill". The conclusion of the experiment was that early bilingual reading could aid the formation of an all round personality, which includes intellectual capacity.

Age could be an important factor to reading comprehension, Bruck, et al (1988:77-92); looked into how age could affect reading comprehension. Children were identified at two age levels for developmental comparison. Results showed that older children performed better than the younger children. The experiment has been able to show that age (maturity) could have an effect on reading comprehension.

In the present study the variable age was not measured, although the average age of male subjects was twenty three years and that of the female was twenty-two years. All the subjects were in the same age bracket. Age could not have been an important factor in their reading comprehension ability and their achievement in the various tests.

The present study tried to make use of texts that would motivate the subjects. This, it did through text choice, which was mostly students' profession specific. The experimental group was specifically motivated by the type of activities embedded in the text. The bottom-up processing was applied in the conventional class while the top-down processing was applied in the experimental class. Students' miscues were corrected in groups in the experimental class

with minimal teacher interaction. Miscue corrections were done by the teacher in the conventional class. Students' interests were sustained through the choice of text, text language and activities embedded in the text. The various activities, especially in the experimental class, led to very healthy competition in the classroom; the groups competed with one another for success and achievement. The group activities were structured in a way that led to a kind of (espirit de corps) through group presentations by group representatives. Group leadership and responsible qualities in students were enhanced through role play and simulations developed in the experimental group. In the conventional group, the individual worked alone and tried to compete single-handedly with the other students for success.

2.5.3 Sociolinguistic considerations in Reading Comprehension:

It is believed in sociolinguistics that the way readers interpret texts depends on the social, ethnic, religious and political group to which they belong (Lyons, 1968: 300-301), Sapir (1971:207). Readers belong to multiple social groups and any of these groups can influence particular texts they read. Wallace, (1992:44) says "differing background knowledge and cultural assumptions may make it difficult

to interpret texts in a way which corresponds with the writer's schema". It is believed that writers expect their readers to respond either positively or negatively to their writings, but only special/ model readers are able to interpret the text correctly.

Studies have shown that reading comprehension is influenced by such factors as the general reading culture of the environment and type of teachers. Environmental influence may lead to what' Unoh (1983: 19-20) referred to as "relunctant reading and learning syndrome" whereby students are no longer interested in reading that is necessary for expanding intellectual horizons.

Sociolinguistics holds the belief that a language can influence the speaker's or reader's view. This agrees with 'Sapir-Whorf hypothesis' which says that a speaker's native language sets up a series of categories which act as a kind of grid through which he categorises and conceptualises different phenomena (Trudgill, 1976:25). Many European languages have common origins and are genetically related, so the world view of most of their speakers is similar. The African-American students approach Afro-American

literature texts differently from their mainstream peers both before, during and after reading, because Afro-American literature is part of their culture (Kinzer and Leu, 1992:248).

In the present study, students though, African have different world views. The world view of the Yoruba student is different from that of the Hausa and the Hausa world view is different from that of the Igbo. These differences could consitute a major problem to students' understanding of texts in the reading comprehension classroom.

Lack of understanding between people of different cultures are traced to linguistic and cultural differences. Dabene (1988: 18-23) researched into some cultural and linguistic obstacles to inter-ethnic communication and found that attitudes and cultural practices can distort the meaning conveyed by the language. She advised teaching strategies to be adapted to give "uniform behaviour for people of diverse origins". The reading comprehension teacher may need to explain the cultural background of the text to facilitate ease of understanding since students are from different cultural background.

The social group readers come from, could affect their reading comprehension ability. d'Anglejan and Masny (1987) looked on the socio-cultural

determinants of the learning of uncontextualised discourse in a school setting and found that the disparity between the performance of children of the majority and minority groups increased instead of decreasing with schooling.

The fact that it is necessary to effectively use cross-cultural texts in the reading comprehension classroom have been supported by the research activities of scholars such as Joagder and Anderson (1979), Carrell and Eisterhold (1983). According to Steffenson (1988), "when cultural background assumptions are missing, reading can become ... an unsatisfactory enterprise" (Steffensen, 1988:193).

Steffensen (1988) adapted Walworth's (1985) dialogue - Journal to teach ESL students' higher level reading and composing skills (P.194) as a way of improving cross-cultural reading comprehension at Illionois State University, USA. The method focussed on language use and the communicative aspects of language. The results showed that turning away from processing individual lexical items helped students to "process higher level units and to infer the meanings of words from context" (P.194). Through the use of questions and students' answers' Steffensen (1988) was able to understand why students misunderstood

American cultural items in the texts. She discovered a way of solving the problems by making students work through texts with different socio-cultural, political or religious background from theirs, by their participating in activities that were designed to go along with the texts either within or outside the classroom. The method emphasises the use of students' background knowledge which is a good base for students to build up the necessary "Schemata... for understanding, remembering and reading specific textual details" (P.201).

Steffensen (1988) made use of the novel but the present study used selected reading comprehension texts. Unlike Steffensen's method, particular details were given to vocabulary items.

Obah (1985) was aware of the importance of cultural components in texts to the Nigerian reading comprehension undergraduates when she illustrated through an empirical study and found that subjects did best in texts that had relevance with their cultural background. The cultural familiarity of the text had aided comprehension. Obah then concluded that students respond better to passages that are culturally closer home than those that are culturally remote (Obah, 1985:285).

In the present study, it was found necessary to satisfy the sociolinguistic needs of the students. Texts in majority of cases were chosen from students' professional background. This is to ascertain students' familiarity with the language of the texts and to kindle their overall interest in the texts. The various interactions in the classroom, especially in the experimental class helped to satisfy subjects' sociolinguistic needs. The interactions in the conventional group were student-text; student-teacher-text. The interaction in the experimental group were student-text, peer, small group inter-group intra-group and whole class with minimal teacher interference. Culture was not given primary focus in the choice of the texts and classroom activities because students came from different background.

2.5.4 Reading from Pedagogical Perspectives

Different reasons adduced for purposeful reading may influence pedagogical procedures to be adopted (Banjo and Unoh, 1976; Longe, 1979; Nunan, 1991; and Wallace, 1992). Banjo and Unoh (1976:38) identified the following as some of the reasons for reading:

1. finding and understanding the main ideas or following the trend of thought;

2. selecting significant details or comprehending detailed information;
3. answering specific questions, locating certain facts or information and making a general survey;
4. following given directions about how to do or make something;
5. critically evaluating the writer's style, ideas and information; and
6. deriving pleasure and general knowledge through various experiences and creative reading.

Points 1 - 4 are of interest to this study. Points 1 to 3 have to do with reading for information and inferences, while point 4 bears relevance with analysis of data. Vocabulary expansion which has been overlooked by these scholars is of utmost importance.

There are many reading pedagogical procedures that scholars have put forward for the achievement of purposeful reading and comprehension. Many of them however, are for the teaching of longer texts, although their techniques can be adapted to teach reading comprehension in the classroom. Some of these procedures are: Joffe's (1988) PQ3R and Robinson's SQ3R (adapted by Habeshaw, et al 1989). Joffe's (1988:2) PQ3R (Prepare, Question, Read, Recite and Review). The SQ3R is explained by Habeshaw, et al (1989: 65-68) as Survey, Question, Read, Recall, and Review.

The pedagogical procedures as suggested by Joffe, (1988) and Habeshaw et al (1989) have not provided for comprehension questions below the text. They appear to be useful for self-study purpose, as they seem to be general in scope and do not deal with specific areas of reading comprehension, especially as they relate to intensive reading. These procedures are more useful for textbook or long text types of reading. They are general and do not relate very well to sub-skills of reading. In fact, different strategies have been suggested for specific reading sub-skills. The strategy for speed reading may be different from that of reading for information or vocabulary development.

The pedagogical procedures suggested by various scholars for each of the skills of reading for inferences, information, vocabulary and data analysis are discussed in this section.

(a) Reading for inferences: This is a type of reading which makes the reader to find information that is not explicitly stated in the text.

The reader may need to use his background knowledge or intuition or that of the world in order to draw inferences from a text. Olaofe, (1991:8) gives the following as a possible procedure

for inferences:

1. understand the passage very thoroughly;
2. read between the lines in order to infer what is not explicitly stated;
3. determine relationships between the different parts of the text; and
4. put your previous (prior) and world experience to bear on what is being read.

The assumption of this writer is that reading comprehension should be adapted to real life situations. When a reader is able to interpret what is read into what is in existence, his comprehension is better and the text and the questions below it are tackled in a matured way.

Reading comprehension for inferences may involve the reader in taking down notes or points on the different aspects of the passage inferring certain pieces of information as he reads along using vocabulary and context clues and finally putting the points and inferences together to form a kind of summary (Banjo and Unoh, 1976; Allen and Vallete; 1977; and Olaofe, 1991).

(b) Reading for information:

A reader needs to develop ability to locate the main ideas of a text rapidly, if he is to read

with comprehension (Afolayan, 1978:40). Reading for information requires the use of the techniques of skimming and scanning.

When a reader skim-reads, he reads visually and rapidly with a view to locating and extracting "the most pertinent ideas or the desired facts and information (Banjo and Unoh, 1976:19). The text is not read critically but with a high speed in order to capture its essential points (Olaofe, 1991:49).

Scanning on the other hand, is more careful than skimming, although, it too, is a technique that facilitates speed reading. After skimming, you need to scan through your points in order to obtain a quick overview of the contents, extract particular pieces of information, like dates, figures or names. Proper reading is left out; the reader looks straight for what he is looking for.

For skimming and scanning to be effectively used for reading comprehension, the reader has to attend "more closely to the printed page, be aware of time and work more rapidly. He does not have to feel guilty at leaving out certain words in the passage, but needs to identify his purpose for

reading and limit himself to the achievement of that purpose (Afolayan, 1978:40; Redway, 1988:14-15; and Nunan, 1991:34).

A lot of practice may be necessary in the classroom if these two reading techniques have to achieve the teacher's set objective for reading comprehension, especially in a large class situation.

Mike and Glenda Smith (1990:79) give the following as the pedagogical procedure for reading for information:

1. look at the text title and decide what you think the text might be about;
2. ... think about what you know already about the subject of the text and what you need to know to answer the comprehension questions;
3. look for the key words and key terms in the passage;
4. look again at the text title and ask yourself questions that may lead you to the main points of the text; and
5. scan through the text to find what it is all about.

This pedagogical procedure has touched some salient points in reading for information which are useful to the present study. It gives the reader the opportunity of making use of his previous knoweldge together with the new information being passed to him by the author. The reader is given the opportunity to work as an individual, although, Smith (1990) suggested a possibility of working with a partner. The fact that this procedure can be shared by reading partners as well as the individual reader makes it relevant to this study because students may have to be asked to work with peers in the experimental group.

(c) Data analysis: This reading comprehension skill requires the student to be able to read non-literary materials presented in the form of advertisement, journalism, statistics and other tabulated information, graphs and diagrams (Seely, 1988). To be able to carry out this reading actively, Seely (1988:5) suggested the following pedagogical procedures:

(1) introduce the reesponse required which may be in the form of data, visuals or words;

(2) develop this into tasks that begin with simple short activities that build up to directed writing tasks which require a fuller and more independent response on the part of students.

The procedure above is not very detailed. It is however quite useful to this study because it is activity-based and the steps can be adapted for teaching in both the conventional and interactive approaches reading comprehension classrooms. Joffe, (1988:257-258) has a more detailed procedure:

(1) read the titles and sub-titles to know the purpose of the graphic material and its main idea;

(2) read the key or the legend and the scale of miles whenever any of these is present (they ordinarily appear on maps);

(3) read the information shown along the sides and the bottom of graphs, charts and tables, if any. This will help in the understanding of the quantities or qualities being presented or the comparisons being made. On maps, notice the relationships or the different parts of the maps;

(4) determine your purpose for reading the map, chart, table or graph; and

(5) read for your purpose.

The procedures above, especially steps 1 - 3 are useful in the teaching and learning of reading for data analysis because it is pertinent to the real life situation tasks of the subjects of this study. Steps 4 and 5 however, can be modified to suit any of the approaches that is being used in the class.

(d) Vocabulary or Word Power

Acquisition of vocabulary skills is important for reading comprehension. Since books read by students in tertiary institutions are ungraded, it is necessary for the students to have a wide range of vocabulary and for the language teacher to teach as many of the vocabubary skills as possible in order to enhance students' reading comprehension abilities. Bright and McGregor (1970:30-40) give the following as ways by which vocabulary skills can be developed. These are reading for:

1. inferences from context (p.30);
2. words related to items already known (p.32)

3. dictionary work (p.35); and
4. constructing definitions of words (p.40).

The procedure above is not detailed, but the points raised can easily be followed by the vocabulary teacher to achieve his set objectives especially in the conventional class.

Wallace (1984), on the other hand, suggests using the following vocabulary teaching procedures:

1. look for words in the passage which students might not have known, but which are fully supported by the context;
2. approach the meaning through the immediate context;
3. list words which are related in meaning;
4. list words which build up pictures;
5. analyse the internal structure of words; and
6. determine those that have literal sense but used metaphorically.

Wallace's (1984) procedure places too much emphasis on the teacher. Students are not given any encouragement to fish out the unfamiliar words or find the meanings except through the teacher's teaching or guidance. The processes enumerated above are useful to this study, especially in the

conventional class, because it is teacher-centred. However, the procedures could be adapted to suit the interactive approach where the teacher guides or monitors students' activities.

## 2.6 The Concept of Large Classes and its Implications for Teaching Reading Comprehension at the Tertiary Level:

Scholars such as Nolasco and Arthur (1991) contend that the definition of large classes is difficult because teachers who teach between 12 - 14 students might find a group of 20 large (Nolasco, and Arthur 1991:4) depending on the problematic situation they meet in such classes. Moreover, other scholars attempt the definition. Olumide, et al (1987:157) describe a large class as "one whose numerical strength does not permit the teacher to cope effectively with the demands of the individual student". (Holliday (1991:15) is more specific. He defines a normal classroom situation as less than thirty students. To him, any class that is larger than thirty students is a large class.

The Centre for Developing English Language Teaching (CDELT) sets the ideal class size at 32.5, while West (1960) regards an unfavourable classroom condition as "a class consisting over thirty pupils" (p.1). These arbitrary numbers have not particularly helped matters with regard to large classes.

The National Board for Technical Education (NBTE) guidelines for establishing new programmes in Polytechnics and similar tertiary institutions in Nigeria (1993:7) stipulates that "the number of staff shall be determined based on a staff student ratio of 1:20 ....."

In order to bring a kind of cohesion to all these inconclusive numbers, in this study, large class is operationally taken to be any class with more than thirty students. This brings about the need to justify the large class aspect of this study. Coleman (1989:1-6) suggested five criteria for justifying the study of large classes. These are:

1. personal experiences of some members of the research group;
2. little theoretical attention has been given to language learning in large classes;
3. large classes are of serious concern to teachers who are involved with them;
4. EFL training programmes have nothing for language learning in difficult situations; and
5. evidence to support the fact that ELT development programmes fail to recognise the existence of large classes.

The study wants to agree with Coleman (1989) that the study of large classes is necessary as it is a common phenomenon in the tertiary institutions in Nigeria. This study wants to recognise the existence of large classes and also see it as a concern for both the teacher and the EFL training programmes at large.

In addition to Coleman's justifications, other reasons for large class study can be adduced in the following sections:

(a) Large classes are obsessions for teachers. Many good lecturers either resigned or are frustrated because of the largeness of the classes to be taught. The frustration leads to some lecturers not attending classes regularly, or giving any written assignments. Even when the attendance register is introduced, teachers may either stop marking it or give it to the class captain for marking, thereby defeating its set goal of making students attend classes regularly. At Oxford Polytechnic, a head of dapartment complained, "we have lost staff ... because they cannot face standing in front of large group of people" (Gibbs and Jenkins 1992:23). There is the risk of this happening in CABS, if this problem is not tackled now.

(b) Teachers who teach in large classes are normally not formally trained for the purpose. According to Coleman (1989:6) "EFL teacher training programmes are not generally concerned with language teaching in difficult circumstances." This means that something has to be done in the area of research to find solutions to the problems of large classes in institutions of higher learning.

(c) There is evidence to show that the authorities of institutions of higher learning want large classes because they keep on pushing more students into the classrooms. In the institution under study, the problem became more acute when the old owner states (The former ten states of Northern Nigeria) sent in more candidates above the normal quota. The institution dared not reject them or else the subventions from such states would be stopped. Now that the institution has become a federal one, the situation is yet to change.

What all these large class justifications boil down to is that the large class is a reality in Nigeria and it should be faced squarely. If resources in the developed countries are becoming smaller on education and the teachers are expected to teach more students with the available resources and facilities, the teachers in the third world who are in a worse situation should be more concerned with what to do to solve large class related

if it is well managed, if the teacher is obviously well prepared and when the pace of the class is at par with students' learning pace. All that is required to make the large class effective is for the teacher to prepare adequately for the job and know his students' needs as well as try to satisfy those needs by working in collaboration with the students. This indeed is an important objective of the present study.

The large class could even be seen to be economic and cost effective. Bolton (1988) in his paper that was based on a research at Montgomery College, Washington D.C., titled "Larger is sometimes better" argues that:

> teachers have more quality time for students if they teach one large class rather than three or more medium-sized classes; and that large class students achieve results which are as good and sometimes better than in smaller classes.

This study is not unaware of the feelings of many scholars on class size and achievement, especially on the issue of teacher-student ratio, that where class size is cumbersome, no matter the approach, there is a limit to the teacher's achievement. McKenna and Olson (1975) in Splaine (1980:39) say "... few is unquestionably better than more". In the same vein, McLeod Nicki (1987) presented a paper at the TESOL Convention, at San Francisco, California, that "large is embarrassing" (In: Coleman, 1989:33). Carver (1988a) also reports a research of the Murray House teacher programmes at the Scottish Centre for Education Overseas and

says that respondents showed that "the problem of large classes was most frequently rated as very difficult to solve". Even Coleman (1989:4) quoted Hubbard Peter, Director of the Language Research and Development Centre, University of Guadalajara, Mexico as saying:

> John Roberts from CALS, Reading University, commented during a visit, that the large class phenomenon is not researched because most researchers react by saying (a) it is not theoretically interesting (b) it is insoluble, and the only solution is to avoid having large classes.

All these arguments seem to be old fashioned as Bourke (1986) found in a survey of teaching in Melbourne that learner achievement is not a function of class size per se, but that of a positive correlation between class size and learner achievement, when certain teacher practices are employed, and that of a negative correlation, when these practices are not employed. These practices, he identified as, teacher's probing activities, follow-ups and waiting for students to formulate answers (See, pp 558 - 571).

In another study based in France, which was a survey on 'whether learning takes place more effectively in smaller classes; Andre (1986: 97 - 126) found that the "highest scoring pupils tend to be found in classes of 26 - 35, rather than in classes of 16 - 25".

This idea is corroborated by Burgess (1989) in an unpublished thesis, when he says that teachers of large classes are "fortunate" in that they are forced to confront

issues of classroom interaction patterns, curriculum and syllabus design as well as evaluation more seriously than in small class situations. Bolton in a paper presented at the 22nd Annual TESOL Convention in Chicago, concluded that "... larger may be better. One large class may serve the students and their teacher at least as well as several small ones - perhaps better" (p.359). The large class therefore, prepares the teacher for more than just teaching his subject; he dabbles into areas of teaching and learning in general which are useful to his profession.

### 2.6.1 Large Classes in Nigeria: Issues and Problems

Large classes are common in the Nigerian tertiary institutions. They constitute a phenomenon in higher education.

Ihebuzor (1989:144 - 145), Holliday et al (1989), Holliday (1989) and Nolasco, and Arthur (1991:4-5) have given a character analysis of what a large class is by enumerating its problems, which are:

(a) students' negative attitude to learning new things;

(b) discipline problems;

(c) students using the mother tongue when asked to work in pairs or groups;

(d) noise making;

(e) lack of opportunity for developing individual communicative skills; and

(f) problems of boredom in teaching and testing, as well as teacher domination.

These problems make it possible to call large classes the art of teaching in an over-crowded or uncomfortable classroom atmosphere.

Large classes became more prominent in the Nigerian school system with the introduction of the Universal Free Primary Education in 1955 by the defunct Action Group Government of the old Western Region. During that period, primary school population rose from 456,600 in 1954 to 814,690 in 1955 (Ministry of Education Western Nigeria, Annual Report 1954-55 foreword). The legislative basis for this educational development was the comprehensive education law of 1954 No.6 of 1955) which came into effect on 14th April, 1955 (ibid).

The Universal Free Primary Education system (UFPE) of the 50s affected the old Western Region and Lagos only. It was tried for a while in the East with no success and was later abandoned. It was never tried in the North.

The one that affected the whole country was the Universal Primary Education (UPE) Policy of 1976 which made education compulsory and free at all levels. This led to large classes in both the primary and secondary schools.

Other measures that led to the large class situation in schools were the quota system of the Federal Government to satisfy the multi-lingual nature of the country (Bakoji,

et al, 1991:77), indiscriminate admission of students to state-owned secondary schools and the Federal Government's deliberate policy for all states to admit students from the various parts of the country.

In Nigeria, large classes have been largely caused by political decisions and ideologies; the demands of employers and sponsoring agents (notably, Federal and state governments), and governmental policies. These are in line with what caused large classes in some other countries like South Africa (Peachey, 1989) and Japan where LoCastro (1989) reported that large classes came into being as the result of historical explanations; and Guatemala (Williams, 1976) where large classes were caused by natural phenomena.

At the tertiary level of education in Nigeria, especially the Polytechnics, classes started becoming large in the 80s (Olumide, et al, 1987:153) when the Federal and State Governments wanted more students to be admitted in order to meet the pressing manpower needs of government at all levels. The old idea of higher education for the few, gave way to mass education, as a result of the nation's economic buoyancy of the 70s which opened up many job avenues without a corresponding number of qualified personnel to match these high demands.

Just as the classes were getting larger, the economy down-turned. The oil boom became oil doom; schools became worse of as teachers left the classrooms for greener pasture. Even in the 90s when resources have become more scarce, nothing has been done to reduce class size.

The structure of the classrooms has not changed. Students even in special schools have to carry chairs and tables from their homes to their schools. Students in some schools make use of cement blocks for sitting in the classrooms. Some schools have very few classrooms (especially in the villages), some classes are therefore held under the shade of big trees. In some secondary schools, students stand up in the classrooms or sit on windows for lessons. The situation is worse now than ever, as some states lay off teachers who are non-indigenes of such states.

The alarming situation in the schools is better explained by the Sunday Times newspaper article of January 7, 1996 captioned "Unity schools near collapse" by Gabriel Dike. The problems were listed on the front page of the paper as:

> acute under-funding, low morale of teachers; parents provide chairs, desks; some lack water, light, library; and resumption date unknown.

Dike went on to say that "the nineteen (19) newly established of these sixty-five unity schools, which are in the newly created states suffer more as they lack the necessary infrastructure and facilities to adequately cater for the large number of students admitted each year".

If special schools, which are established to promote unity and that admit only exceptional students selected after the National Common Entrance Examination, experience dilapidation and negligence of educational facilities and even lack basic teaching aids and infrastructure, the condition of the other schools that are less favoured can better be imagined!

As pointed out earlier in Sections 1.3 and 2.6, internationally, large classes are not new, especially in countries such as France, Italy and USA, (Gibbs and Jenkins 1992:12), but resources have not dropped as dramatically as they have in Nigeria. The dwindling economy in Nigeria led to lack of sufficient personnel and infrastructural facilities to teach in the schools, hence the resort to large classes.

The Polytechnic attempted to solve some of the large class problems by re-programming some of its courses, re-designing its examination patterns and building more classrooms. Unfortunately, the steps taken only led to more discomfort. The more classrooms

built, the more the number of students that were admitted and the worse the chaotic situation. This tallies with Coleman's experience in Indonesia where many new teachers were employed to solve the problem of large classes, the larger the classes as the result of bureaucratic decisions (Coleman 1989:19). All attempts of the teachers to force down class size yielded no fruit because of the over-riding power of politics on teachers' efforts. There is, therefore, no longer any need to dodge the large class problems, thus a need for a study like this in search for solutions to the problems.

## 2.7 The Conventional Approaches to Reading Comprehension in Large Classes:

Reading comprehension exercises in the past were based on the sentence and units smaller than the sentence (Grellet, 1988 and Wallace, 1992). The belief was that a text is a succession of separate sentences and for comprehension to take place, the teacher has to deal with the structure and meaning of the sentences. In the Nigerian Polytechnics, reading comprehension is usually taught by the traditional method of giving texts to students to read and answer the questions below them. The corrections of students' work may be done in the class or in the next lesson after the teacher might have marked students' answers. This approach emphasizes structural units rather than larger units at the

discourse level. It does not take the linguistic, psycholinguistic and socio-linguistic problems of students (see section 2.5) into consideration, but assumed that the students can read and understand the text and answer the questions below it. This presumptive attitude leaves a serious gap in the teaching of reading comprehension in the Nigerian Polytechnics which the present study is aiming at bridging.

Through the years, reading comprehension scholars have found that the various theories on reading and reading comprehension have affected classroom activities. The behaviourists favour the audio-lingual approach which places emphasis on the structural components of language (Wilkins, 1973 and Hemsley, 1981). Chomsky and grammarians like him believe in the cognitive nature of comprehension and so, recommend the grammatical approach which places emphasis on syntactic information which they believe holds the key to understanding. Comprehension practices are therefore placed "on various structural types and their manipulations" (Aliyu, 1977:9).

The eclectic group, notably represented by scholars like Rivers (1968) believes that practice drills of the audio-lingual group should be "linked with rule acquisition" of the grammarians (ibid). While the pragmatic group such as Bright and McGregor (1970), draws a distinction between intensive and the extensive reading for descriptive convenience.

Williams (1983:11), writing on the classroom procedure of reading comprehension, suggests the following steps:

1. pre-reading assistance in the form of background information, discussion or activities relevant to the topic or theme of the passage;
2. reading the passage aloud or silently by the teacher or student, depending on the type of the written comprehension;
3. questioning whereby the teacher using a vast repertoire of techniques for eliciting responses to direct reference, inferential and evaluative questions; and
4. giving oral or written supplementary activities, which may be done in class at the end of the lesson or as assignments or take home projects.

The pre-reading assistance, suggested above by Williams (1983), is useful for eliciting students' background knowledge (about the text) to facilitate comprehension. It also helps to prepare the students mentally for the work to be done in the text. Reading the text aloud by either the teacher or student is relevant to this study in the conventional group. Silent reading however, encourages faster reading which is necessary for the academic work load of students at the tertiary level. Of all the questioning techniques put forward by Williams (1983), none of them takes into consideration the issue of large classes or students working in groups, pairs or individually. Thus, Williams (1983) interactional pattern is teacher-student centred.

Finochiaro (1958) has a different approach from the one above. She proposes that all new words or aspects of the passage should first of all be cleared by the teacher and students before the text is read. This, she referred to as "clear up difficulties in the passage". In the approach, the teacher prepares a list of new words or patterns, to be taught through choral teaching before silent reading is done. This is followed by the teacher giving a brief summary of the story in the text, using the new words learnt during the lesson.

Finochiaro's suggestion places too much emphasis on the teacher. The students are not encouraged to utilise their own abilities for searching for new words, guessing meanings of words from the context as recommended by some other scholars like Paulston and Bruder (1976) who propose "strategies for intelligent guessing" in comprehension exercises.

White's (1982: 24) own proposal is more radical than the ones above.

Stage One: Arouse the students' interest and motivation by linking the topic of the text to their own experience or existing knowledge;

Stage Two: Give points to search for in the text or ask the students to suggest such points;

Stage Three: Ask students to read the text to find the specified information, also encourage discussions and alternative interpretations. Dealing with wrong answers can be just as looking at correct ones; and

Stage Four: Make students use the information they have gathered for a further task such as trying their hands on a piece of writing; as reading comprehension does not end with reading the text. The information gained from reading can be used for another purpose.

White's (1982) approach overlooks students working in groups, pairs or as individuals. Instead, it focusses attention on the whole class. Stage three however, can be adapted for group work. It can be given as different tasks to students in groups or pairs. This approach is different from the others reviewed above, as it links reading to other language skills such as writing and speaking in order to prove that language skills are interwoven.

Olaofe (1990:28) proposes the following as the approach to the traditional teaching of reading comprehension:-

(a) pupils are given the same passage to read irrespective of their reading ability;
(b) the passage is read silently or loud by the pupils;
(c) the teacher reads the passage, explaining the difficult words and expressions as he reads;
(d) the comprehension questions following the passage are answered either orally by the pupils and the teacher in a written assignment;
(e) the answers to these comprehension questions are marked and/or discussed orally by the teacher;

(f) the marked answer scripts are returned to the pupils for correction; and

(g) the teacher goes to the next reading comprehension passage, possibly during the next reading lesson.

There is not much difference between Olaofe's (1990) explanation of the traditional approach and that of the school under study. However, there must have been some good aspects in the traditional method/approach, or else it would not have been able to withstand so many years of usage. May be what makes it ineffective is the way teachers handle the various stages in the classrooms. Scholars who are researching today into new ways of teaching reading comprehension are products of the traditional or conventional approaches. As Pillai (1991:9) says, no method is particularly new. Every new approach is a colouration of one or a mixture of some past or previous approaches.

Hamp-Lyons (1985:363) explains the traditional approach to teaching reading comprehension at Edinburgh University, as follows:-

Duration: 50 Minutes

Preparation: read passage carefully at home

(Chapter 2)

Lesson Plan:

Take vocabulary questions (5 minutes), ask vocabulary questions (5 minutes) e.g. prism, flashlight, filter;

(a) literal (3 minutes) e.g. which wave-length bends the most?

(b) inferential (10 minutes) e.g. when does a desert look yellow?

(c) Critical (5 minutes) using vocabulary in context.

Homework: Outlining the passage.

Hamp-Lyons was so disturbed by the short-comings of this approach that she devised the "text-strategic approach", which was termed a modern reading comprehension teaching method. She believed that changes should occur in the reading comprehension methods as the teacher intimates himself with modern methodological literature on reading and reading comprehension. The emphasis she believed should shift from the traditional way of looking at bits and pieces of the discrete points about the text, to exploiting its generalisable features.

Coleman (1989) has been more specific than most scholars in pointing out the traditional methods of teaching reading comprehension that teachers use in large classes. He puts all of these methods under the plenary approaches. In these approaches, the teaching is teacher-centred and teacher controlled. The teacher does almost all the talking and student involvement is minimal. The interaction between the teacher and the student is very small and this sometimes leads to inattentiveness.

Coleman (1989) classifies the plenary approaches into two; 'There is no alternative' and 'let the people sing'. 'There is no alternative' assumes that the only method for teaching large classes is the plenary lecture method. Scholars like Byrd (1988), Brooks (1987) and Aronson (1987) are in support of the plenary approaches. For instance, Aronson (1987:15 in Coleman 1989:4) wants people to believe that the best way to keep students interest in large classes is to "deliver stimulating and exciting lectures".

'Let the people sing' is the opposite of 'there is no alternative'. It is the choral approach. A lot of choral drilling is done in the classroom. This approach is not particularly useful to this study except for choral answering of comprehension questions which is common in the conventional class. Oral drills are not part of the reading comprehension exercises which this study is interested in.

From what has been reviewed so far in respect of the traditional/conventional approaches to teaching reading comprehension in large classes the aspects that have direct relevance to this study are discussed below under linguistic, psycholinguistic, sociolinguistic and pedagogical headings.

(a) The linguistic aspect is concerned with reading based on the syntactic pattern, discrete words and sentence structure of texts. Reading comprehension is measured by the reader's ability to grasp the vocabulary as well as the syntactic and contextual levels of the texts.

(b) The psycholinguistic aspect is concerned with the motivation by either the text or the teacher. The classroom atmosphere is not to be intentionally made a source of motivation. The reading materials are not to be graded and some of them are not to be related to the students background knowledge or professions. The attitude of the learners is to be kept constantly low to the teaching of reading comprehension using the traditional methods.

(c) Sociolinguistic aspect is to be restricted to a mono-directional social context. Prior knowledge or socio-linguistic knowledge is not to be deliberately brought into the teaching of reading and socio-linguistic variables such as sex, parental background are to be neglected in the reading class.

(d) Pedagogical aspect is to be concerned with the teacher who is expected to restrict himself to giving the text, marking students scripts and firm control of activities in the class. The learner is to be reduced to the state of Pavlov's dog who is not to respond until an appropriate stimulus is present. Students are not allowed to make use of their own innovative activites but to solely rely on the teacher.

## 2.8 Interactive Large Class Teaching Approaches

The interactive large class teaching approaches regarded as modern in this study are meant to cater for a realistic problem posed.

by reading comprehension in large classes in under-resourced situations. The primary focus is to enhance reading comprehension ability at the tertiary level. The secondary focus is to tackle reading comprehension in large classes. The third focus is the teaching of reading comprehension at the polytechnic/tertiary level of education.

Everyday, scholars work on how teaching methods can be improved. Most of the teaching techniques evolved as the result of the situations which practising teachers and researchers found themselves in the language teaching environment. Many of the scholars have therefore suggested many approaches to teaching large classes. Carl (1986:20 - 21) suggests Community Language Learning (CLL) because "it is primarily concerned with learner's needs". Charles (1986:22) put forward the idea of suggestopaedia where the teacher will be able to "de-suggest" the psychological barriers students bring into the learning environment, by speaking in a friendly and re-assuring manner. Fusako (1986:12 - 22) suggests the 'Silent Way' where language can be seen as a process through which people use their own thinking processes or cognition to discover the rules of the target language. Allwright (1982: 50 - 55) wants group reports to be written as blackboard response, charts and posters as alternatives to group oral presentation. Fred (1987:1 - 16) proposed strategies where pair activities, quiz, game, indexing and information gap can

be effectively used. Jean (1964a) and Barker (1976:1-16) suggest instant English and related techniques which focus on drilling techniques. Vjekoslav (1974a:38-79; 1974b) and Billows (1961:72) suggest group work while Donn (1988) put forward the idea of simulation activities in large classes where every student is given a role to play.

All of the suggestions above are meant for the teaching of all aspects of ESL/EFL in large classes and not specific to reading comprehension. They are also not procedural in outlook but haphazardly suggested. There are other scholars or institutions who have worked specifically on suggested approaches that are basically meant for reading comprehension in large classes, although, they can be adapted for teaching the other skills. They are:

(a) CDELT's distance learning techniques

(b) Grabe's (1985), Coleman's (1986) and Frederick's (1987) Interactive techniques

(c) Olaofe's (1994) Balanced Approach

### 2.8.1 CDELT's Distance Learning Techniques

This methodology was the outcome of a research study conducted by CDELT Ain Shams University, Cairo, Egypt. It was meant to solve the problems of reading, writing and speaking skills in the large classes of the Egyptian Universities. In this method, the students are in possession of the data and study directions for

the whole course. The basic data and directions are made up of:

(a) texts for both reading and starting point for writing: and

(b) a bank of activities on an activity sheet (Holliday; et al 1989:5).

Each activity is made up of the following five steps:

(i) teacher sending out minimal instructions on one text and activity;

(ii) students working with peers;

(iii) student representative report;

(iv) lecturer's evaluation of the representative's report and teacher's own version on the activity; and

(v) students comparison of the teacher's version of the activity and the representative's reports with their own experience.

Students and teacher are actively engaged throughout. Students working in groups and the teacher working along on the same set of activities. The evaluative system helps both the teacher and students to gain from one another. The teacher's role is that of a guide. He instructs, monitors, filters and eventually evaluates (Holliday, et al 1989:6) Students work in small groups within the large class and the communication is mostly student-student in outlook.

The distance learning approach may be difficult to implement fully in the school under study because of its extensive nature, as the resources for the school are low, yet its interactive techniques of peer work, group work and simulation can be adapted to suit the needs of this study.

2.8.2 The Interactive Techniques

These techniques include those of Grabe (1985), Coleman (1986) and Frederick (1987). Grabe (1985:56) says that the interactive techniques are processes of combining textual information with the information a reader brings to the text. This view sees the reading process as a way of generating a lot of information contained in the text. The claim of the interactive approach is supported by Goodman (1971 and 1976); Smith (1982) and Carrell and Eisterhold (1983).

Coleman's (1986) 'The Risking Fun' procedure is a good example of an interactive approach. It presents a procedure that is made up of a series of interactive activities which function with large numbers of learners without constant teacher supervision. In Coleman (1987a:97 -103) the characteristics of 'the Risking Fun' are explained as the activity in which:

(a) all the participants are equally active for the duration of the event;

(b) the participants are involved in an interactive manner; and

(c) the distinction between teacher and student is minimized (at least for the duration of the event).

Both teachers and students are actively pre-occupied there is no room for laziness. The three sources of data for 'the Risking Fun' are the students who bring a lot of useful information into the classroom; the envirionment which contains facts that can be tapped for classroom activities; and the teacher who prepares or composes the various tasks which students are going to perform.

There are five modes of interactions and varying degrees of interaction predictability in 'the Risking Fun' approach (Coleman, 1986:133). The interaction types are:

(a) learner and text interaction in which the learner works alone with the text;

(b) monodyadic interaction which is pair work;

(c) polydyadic interaction that makes each student collect information from every other student in the class;

(d) intra-group interaction where learners interact with several people simultaneiously; and

(e) inter-group interaction which requires an already formed group to contact one or more other groups.

The process of working as an individual in the various group activities makes the classroom atmosphere lively and

joyful. Most lessons in 'Risking Fun' pass through three stages of:

(a) learner and text stage when learners read background information;

(b) the busy task oriented stage where randomly distributed data are gathered; and

(c) the sorting and analysis stage where data are sorted, analysed and interpreted through intergroup and intra-group tasks (p.131).

The background information prepares each student for the busy task-oriented stage which will make it easy for students to analyse and sort out data in the subsequent stage.

The 'Risking Fun' strategies are pertinent to this study especially in the experimental group because learners in the large class are engaged throughout the lesson through the multi-level interactive activities. Learners are actively engaged from individual to pair and to larger group tasks and there is no time for boredom or inactivity. It is also relevant to this study because it was conducted in a third world tertiary institution like the school under study, with similar background and under resource situations.

Another important strength of 'the Risking Fun' is that it keeps the teacher on his toes until the end of the lesson, as students have to be monitored and guided as they move

from group to group in order to reduce noise to the barest minimum.

'The Risking Fun', if not well handled, could make some students lazy as they would want to wait for whatever information they would collect from the various interactions in the classroom instead of working very hard on their own. Another weakness is that some groups may skip interacting with some others in the class, except the teacher gives clear-cut directives on students' movement from group to group and force them to write down what is discussed in each group. Except the teacher is very vigilant and attentive, teacher's eyes may not cover all activities going on in a very large class. Students who are expected to come out of their shells may remain permanently shy and only very few contributing to the group presentation, when the teacher is very active and innovative.

Fredrick's (1987) interactive technique sees the active learning process in the large class as following five processes:

(a) interactive lectures;

(b) questioning;

(c) using small groups in large classes;

(d) critical thinking and problem solving exercises; and

(e) large class debates, simulation and role playing.

and weak students, they may not gain much as the brilliant ones dominate the group discussions.

(d) Problem solving and Critical thinking: This entails students forming a theory or model, using their critical thinking and problem solving skills. This process is most valid in teaching analytical skills such as "quantitative analysis of graphs, charts, tables, census data and how to read maps" (Frederick, 1987:78).

(e) Whole Class Debates and Role Playing: Role playing and simulation add energy to large class interactions. Whole class debates enable students who have some points to talk on in the texts they are reading, to do so.

Frederick (1987) ends his five processes with the claim that his approach is in line with Dunham and Gleason's (1984) suggestion that instructional environments, especially at the higher level of education, should be "intimate, interactive and investigatory". This study is interested in this suggestion as it aims to achieve in the reading comprehension classroom a high degree of intimacy, interaction and investigation.

From a critical point of view, Frederick's (1987) approach seems to be a mixture of the conventional and modern approaches. While steps (a), (c), (d) and part of (e) are interactive, steps (b) and part of (e) are

conventional. This tends to suggest that the two approaches, if well mixed, may work perfectly well in the reading comprehension classroom.

2.8.3 Olaofe's (1994) Balanced Approach

This approach tries to integrate the teacher controlled approach with the interactive approach into a unified whole. According to Byrne (1988:10 -11) "the teacher can have the whole class at the beginning of a lesson and later decentralise so that students can interact with ... one another".

Olaofe (1994:10 - 13) proposes something in the line of the balanced approach in his approach to teaching listening comprehension in large classes. He divided the approach into:

(a) The brainstrorming session

(b) Let's do it or 'modelling' session

(c) Let's practise it session

(d) Do it yourself (D.I.Y.)

(e) Evaluative session.

Byrne, in his own case, divided his lesson into accuracy and fluency activities. The first of these activities is directed by the teacher, while the second is directed by the learner. Byrne's procedure is not itemised.

The balanced approach can be adapted to suit any ESL/EFL reading skill if it is in the hands of an experienced teacher of English. In the hands of a novice, however, the tendency to tilt towards the conventional at the expense of the interactive is possible. Again, Olaofe's (1994) brain storming session may be replaced by pre-reading exercises which prepare students for the text to be read. The interactive aspect of the balanced approach suggested can be of immense value to the present study, while the conventional part is useful at the conventional level.

2.8.4 The Overall Strengths and Weaknesses of the Interactive Approaches

Some of the areas of strength and weakness in the interactive approaches reviewed in this study are presented in this section.

I. The Areas of Strength

(a) The processes are adaptable for teaching both small and large classes. They can also be adapted to teach all the ESL/EFL skills of listening, speaking, reading and writing.

(b) The approaches are activity-based and they make the participants to be active throughout the lesson, thereby removing boredom from the classroom.

(c) There is a kind of intimacy among the students in the classroom. This intimacy leads to hard work and success.

(d) The small groups in the large class are mixed ability groups. Weak students are thereby helped by the brilliant ones.

(e) There are lots of useful talking, thinking, discussing and decision making in the classroom atmosphere through the various interactions.

(f) The approaches help the teacher to think of how he can improve his teaching methods and bring joy into the classroom. This happens because the approaches call for innovation, adaptation and adjustment from stage to stage.

(g) Leadership qualities are developed through role play.

(h) The approaches expect the teacher and the taught to be hard working. The teacher has no time to sit down in the classroom because he has to prepare his lessons very well before coming to the class. The students have particular activities to perform and so they move from stage to stage in a systematic way.

(i) Students are free to use language in the way they know best without the fear of being ridiculed by their peers. Wrong use of the language is corrected in the group where necessary and sometimes by the teacher. The emphasis is language in use as opposed to language usage.

(j) There is a lot of freedom in the classroom through the various interactions.

(k) The group spirit is developed through group work and this can sometimes lead to success.

(l) There is a healthy competition in the classroom among the students, especially through the various groups.

(m) The acquired knowledge in the groups has a way of becoming permanent as it has been acquired through the playway, which can make learning permanent in the learner.

(n) The teacher, the students and the envirionment are useful sources of data for lesson development and teaching.

(o) Students become confident speakers as the result of exposure to other learners in the classroom. Shyness, if not totally removed, is drastically reduced.

(p) Students become more tolerant of one another when they work together as pairs or groups.

(q) The fear that the large class might deteriorate into time wastage and an uncomfortable teaching envirionment is removed through the various processes involved in these interactive approaches.

II Weaknesses:

The following are the weaknesses of these interactive approaches:

(i) None of them is cheap to run. The only joy here is that the materials can be kept and used from year to year.

(ii) In the hands of a lazy teacher, any of the approaches can pale into uselessness and rowdiness.

(iii) If care is not taken, pidgin English or the mother tongue may be the language of discussion in the various groups, thereby defeating the purpose of efficient use of English language.

(iv) They can give room for wrong assessment of students. If students work in groups all the time and their class assignments and course work are group based, lazy students may have high course work marks but fail at the end of Semester exam, when they need to work as individuals. This is why the teacher has to make sure that students work not only in groups but also as individuals.

The strength and weaknesses of the interactive approaches are brought out to show that this study is not taking a biased posture. This is why the comparative study of the approaches is a great necessity.

2.8.5 <u>The linguistic, psycholinguistic, socio-linguistic and pedagogical parameters on which the interactive approaches adopted are based</u>.

Just as the conventional approaches are based on certain linguistic, socio-linguistic, psycholinguistic and pedagogical reading theoretical constructs, so also the interactive approaches discussed so far in this section.

(a) <u>Linguistic Aspect</u>: In the interactive approaches, reading items are handled in the discoursal way. Vocabulary items are handled from the context. In order to make sure that students understand

the text, some exercises are used which elicit deep thinking ability. Students are made to use language as they like. Linguistic errors are treated in a global manner and corrections are made by peers with little teacher intervention. The background of the students and the content of texts are adequately utilised for solving problems of syntax, semantics and collocation through the various discussions, writings and group presentations. Evaluative exercises are also used as a stepping stone to other ESL skills through the display of group assignments and/or students' responses on charts or blackboard.

(b) Psycholinguistic Aspect: Psycholinguistically, the texts are chosen to serve as a source of motivation to the students. They are authentic and thus come from the students' professional background. Interest aroused in students is sustained through the various interactions in the classroom. Students' innate abilities of leadership and group instincts are aroused through role play and simulation which form additional factors for success in the various groups. This is expected to lead to the 'espirit de corps' and a healthy competition in the classroom.

Students' previously held negative attitude to reading comprehension are changed to positive because of the innovative tendencies that are embedded in the classroom activities. Rewards are given as incentives for improvement through the evaluative techniques which are adopted for grading and evaluating students' work. Students' personal egos are boosted through working as individuals or groups with little or no teacher interference.

(c) Sociolinguistic Aspect: Sociolinguistically, learning is done through the various interactional environment created in the classroom. Some of these are: individual-text, monodyadic, polydyadic, intra-group and inter-group inter-actions. The various interactions help to neutralise the effects of socio-cultural feelings of learners on the text, as they tackle the texts as they see them without relating them to any particular social or cultural bias. The texts however, are mostly from students' professional background, so they are conversant with the use of language in the texts. The various classroom interactions are basically student-student, student-text, student-group.

(d) The Pedagogical Aspect: The teaching technique is interactive in approach. The teaching method is

student-centred. The role of the teacher is primarily that of a guide or a monitor.

## 2.9 Summary of the Review of Literature:

This literature review has explained in detail the main concept of reading comprehension, the linguistic, psycholiguistic, scociolinguistic and pedagogical considerations in reading comprehension. It has looked into the procedures, problems and probable solutions to the subject of this study. The review has also been able to relate the past with the present through the studies on reading comprehension in the past and the present. The concept of the large class was discussed and various approaches to the teaching of reading comprehension in this difficult situation by both the conventional and interactive scholars explored.

From all these, the study was able to derive the two competing approaches that were put side by side in this work. The modern teaching approach chosen is basically the interactive approach which is expected to adequately provide solutions to teaching reading comprehension in large classroom situations which many other approaches have not been able to provide. The conventional and the interactive approaches adopted by the study are based on certain linguistic, psycholinguistic, sociolinguistic and pedagogical parameters which are also discussed in this chapter.

# CHAPTER THREE

## 3.0 RESEARCH METHODOLOGY

### 3.1 Introduction:

This chapter discusses the research design, it explains the method, process of the development and validation of the research instruments used in the study. The chapter also discusses the sampling procedures and the pilot study. The essence of the chapter is to prepare the ground for the data analysis and study implications to be discussed in chapters four and five.

### 3.2 The Design of the Study

The design adopted by this study and justified by the review of literature (See section 2.4) are described in this section.

1. Camparability Test: This was in the form of a 2o-item cloze test that was administered on the subjects at the beginning of the study. It was meant to ascertain if there were differences between the two groups, regardless of the same entry qualification they possessed. The cloze test was chosen because of the five reasons given by Rankin (1978), in his research on the cloze test as a research tool.

These are the fact that:

(a) cloze tests are intrinsic measures of the effectiveness of communication through sampling of the degree of language correspondence between a message source and a receiver;

(b) cloze tests measure comprehension in process not comprehension as a product or after the fact;

(c) cloze responses are based on the basic psycholinguistic process of inference which is intrinsic to all communication;

(d) cloze tests sample more or less randomly the choice points for predictability within a message; and

(e) cloze item writing lends itself to precise replication by independent writers (Rankin, 1978:148 - 153).

2. Pre-test:

(a) an achievement test on reading comprehension which tested the four micro skills in focus (vocabulary power, information, data analysis, and inferences).

(b) an attitude questionnaire that investigated students' attitude to reading comprehension in large classes.

3. Treatment: There were sixty experimental teaching sessions (thirty in each group). The teaching sessions were enough for the purpose of this study as Gbenedio (1993) made use of sixteen experimental teaching sessions in comparing the effects of two reading instructional strategies on achievement in reading; and Obianika (1981) used sixteen experimental teaching sessions in comparing the relative effectiveness of two methods of inculcating reading skills. This study used more hours than its predecessors and therefore expected more stable or effective results. More experimental sessions gave room for a better understanding of students' problems as well as opportunities for innovative approaches towards the solution of such problems. More hours helped to relax the tense atmosphere which experimental studies sometimes experience as students hardly remembered they were under treatment. They worked naturally. The treatment consisted of the conventional large class reading comprehension teaching approaches for the control group and the interactive large class reading comprehension approaches for the experimental group. (See Appendix C for the sample of the lessons for the sessions).

(a) The Conventional Large Class Reading Comprehension Procedures Adopted by this Study

The following are large class reading comprehension procedures followed in this study:

1. pre-reading assistance: In the form of giving background information, discussion of the theme of the passage;
2. students read the text and wrote answers to the questions below the text;
3. the answers to the comprehension questions were marked or discussed by teacher and students. Attention in the discussion was paid to discrete language items, syntactic and semantic structures represented in the passage. The discussion was also more teacher than student-centred. Interactive modes were student-text and teacher-student in out-look;
4. marked answer scripts were returned to students for correction; and
5. the teacher then went to the reading comprehension passage in the lesson.

(b) The Interactive Large Class Procedures Adopted by this Study

From the review of literature, specifically Williams (1983), Coleman (1986), Frederick (1987), Byrne (1988), Olaofe (1994) and in-put from the

researcher, the following has emerged as the procedure for teaching reading comprehension lessons in the experimental class of this study. This procedure is also adapted to the teaching of any of the micro-skills in reading comprehension in large classes. The procedure may be different from one teaching session to the other but all characteristics reflected in all the sessions.

Step 1: Pre-Reading Assistance: This is the form of individual students writing answers to questions that help in eliciting background information about the passage. It is in the form of discussion or activity that is relevant to the topic or theme of the passage.

Step II: Learner and Text Interaction: Students work on the passage individually.

Step III: Monodyadic Interaction: Students work in pairs, discussing the passage, the questions and comparing the work done individually.

Step IV: Group Work and Simulation: Students go to their larger group of six, to discuss the passage, the questions accompanying the passage, as well as compare the work they did in pairs. They work under a chosen group leader and secretary, the positions which are rotational.

Step V: Inter-group interaction: The various groups exchange some of their members to discuss the passage and compare their answers to questions below the text.

Step VI: Common intra-group work: Students go back to their various groups to compile their group answers to the reading comprehension questions which are presented to the whole class by the group/ representatives.

Step VII: Diverse intra-group tasks: Each group discusses the assignment for the group and the representative reads it to the class. Other students ask questions which are answered by either the group representative or any member of the group.

Step VIII: Evaluation: (a) The group assignments can be displayed on the corners of the classroom for students to go round to read.

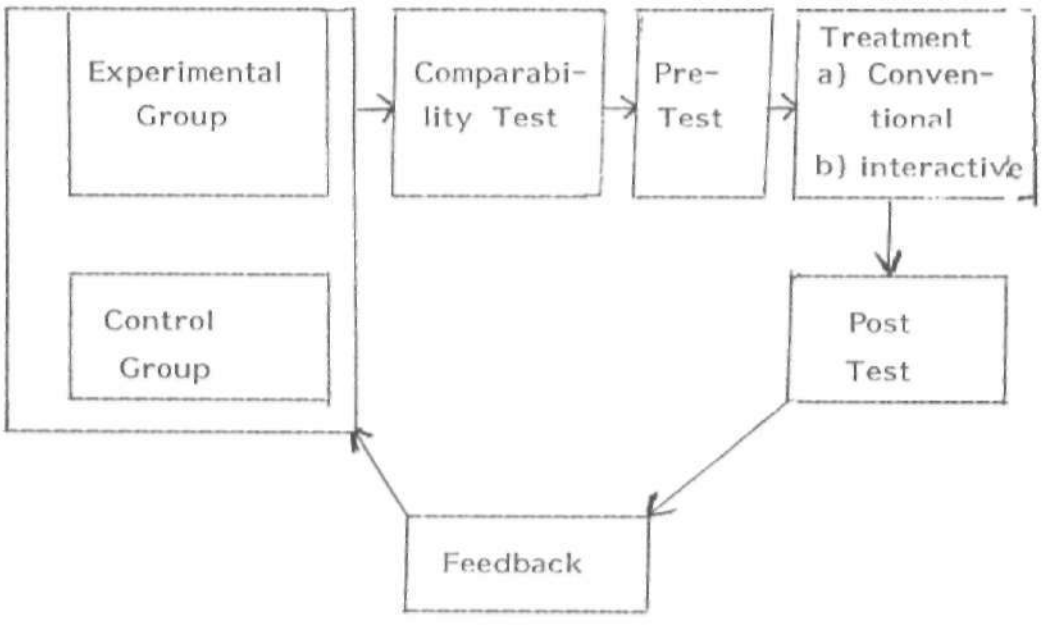
(b) Students' responses from the tasks can be on charts, graphs or on the blackboard.

Step IX: Feedback: From the display and group work which shows weaknesses to be corrected in the next lesson, feedback is obtained.

Step X The Home Work: Assignments include: extension of the classroom activities, library and project activities which are later reported to the class, at the next lesson.

4. Post Test Measurement This was made up of an achievement test on reading comprehension and an attitude questionnaire. Some scholars who have used pre-test, post-test control groups are Thorndike (1973 - 4), Hamp-Lyons (1985) and Siddiqui (1989).
5. Effectiveness This was the result of the various investigations on the two groups.
6. Feedback: This was made up of the information gathered from the two groups that would lead to improvement in methodology, learning and the teaching of reading comprehension in large classes at the tertiary level. The experimental design adopted in this study is diagrammatically represented in figure II below:

Figure II: The Design of the treatment



## 3.3 Population and Sampling Procedures

The population for this study is the College of Administrative and Business Studies (CABS). There are about six thousand students there. The sample for the study is from the Departments of Accounting and Finance and Business Administration, where each class was large. The sample was chosen because the subjects represented the core of courses offered at CABS. Commerce is the focus of the school and Accountancy and Business Administration represent what it takes to be commercial.

Ninety students were selected from each of the OND II classes of the two departments to make up one hundred and eighty (180) students who were the subjects for the study. Ninety students for the experimental group and ninety students for the control group. The ONDII class is the final year class for the Ordinary National Diploma Certificate which is the first of the two types of diplomas the polytechnic system of education can award. The other type of diploma is the Higher (National) Diploma, which as its name suggests is higher than the OND.

One hundred and eighty students were chosen because the study was an experimental one which required close observation and monitoring of subjects' performance and activities. Kreicle and Morgan's (1970:607 - 615) Table of

determiningsample size for a given population gave 301 (which is 5%), as the sample for a population of 6,000. A smaller sample of 180 out of 6,000 (3%) was chosen by this study because as Sax (1979:197) argued, a small sample is required or appropriate when the population is homogeneous in the attributes under investigation. The attributes such as class size and methodology being investigated in the present study agree with Sax's assertion. Other scholars who favour the idea of using small or a limited number of subjects as sample size are Carnicelli (1980), Lynch (1988) and Hill (1990); they supported the fact that a small number (sample size) will make for effective observation and monitoring of performance.

Two whole classes have been used as the subject for this study. This is in line with Gbenedio (1993) who used two intact classes for researching into "individualized reading instructional strategy and the development of good reading habits"; Onukaogu (1989) who assessed the reading comprehension of all the 2,349 students of Obafemi Awolowo University; Siddiqui (1989) who used the students in the JSS II ABCD and SSS III as the subjects for his experimental study in Sokoto State of Nigeria and Hamp-Lyons (1985 whose sample was made up of all the students enrolled in the spring semester 1982 in the level 2 WESL Univeristy, Western Illinois.

This study is primarily on reading comprehension and secondarily on large classes, and ninety is large enough either for the experimental or control group, because most of the scholars on large class investigations regarded any class that is more than thirty students as large (See, for example Williams and Williams, 1987; CDELT, 1987; Coleman, 1987; Holliday et al, 1989; Holliday, 1991; Nolasco and Arthur 1991; Ihebuzor, 1991; and Gibbs and Jenkins 1992).

The two classes were chosen because they were always large because of the high demand for the Business and Accountancy graduates by employers of labour and students' preference for the courses. They were also the end product of the OND programme who would go out to practicalise what had been learnt at school.

The two departments regard English as one of the core courses so, reading comprehension is very important to them. The students have the same academic and entry background. They all had at least four credits at the GCE 'O' Level/SSC or four passes with a year's course in the Introductory class. The students have also been exposed to English Language in the school under study for the same number of years, as they run the same syllabus given by the NBTE. The two departments do not expose their students to the three months industrial

attachment after the first year of their courses, so they were in school all throughout the four semester duration of their various courses.

3.4 Research Instruments

The following research instruments were used for the study:

(a) Reading Comprehension Test (Achievement Test)

(b) Attitude questinnaire.

Each of these instruments was administered on the subjects at both the pre-and post-test levels. The achievement test was also administered at the feedback level.

3.4.1 Reading Comprehension Test

The reading comprehension test was made up of four reading comprehension skills which were the foci of this study (reading for information, inferences, vocabulary and data analysis). The test items were compiled by the researcher into a booklet and was administered on the subjects at the pretest, post-test and feedback levels.

The test items were achievement tests which according to Anastasi (1976:398) "are designed to measure the effects of a specific programme of instruction or training". The items were selected from books for ELT in the polytechnic or Technical institutions as well as post OND II examination questions of the school under study.

The reading comprehension test was divided into four sections:

(a) Scanning and skimming for information;

(b) Vocabulary or word power at the level of the cloze procedure;

(c) Reading for inferences through multiple choice and open-ended questions and using charts to infer information;

(d) Data analysis which comprised extracting information through the analysis of data charts, graphs and texts. (See Appendix A for the sample of the instruments used in the study).

The reading comprehension tests were chosen because:

(1) they dealt with the four reading comprehension skills that were investigated by this study;

(2) the tests bore relevance to the subjects' professional areas;

(3) the passages/texts, though taken from subjects' professional areas, had not been used for any research in the school under study; and

(4) the passages/texts had no unusual expressions or words from the register of other professions that could have caused some problems for the subjects.

3.4.2 The Attitude Questionnaire:

The attitude questionnaire was used to determine the attitude of subjects to reading comprehension in large classes. It comprised twenty-five items originally, which were scaled down to twenty as the result of experts' advice. The questionnaire was scored on the likert scale of strongly agree, agree, undecided, disagree and strongly disagree. The instrument was administered at both the pre and post treatment levels in both the experimental and control groups. The items were developed to measure the following:

(a) attitude towards reading comprehension in large classes;

(b) attitude towards the large class;

(c) attitude towards the two teaching approaches of reading comprehension being investigated in this study;

(d) attitude towards classroom management in the reading comprehension large classes; and

(e) attitude to the micro skills being investigated in this study.

The attitude questionnaire was scored in the descending order of strongly agree (5 marks), agree (4 marks), undecided (3 marks) disagree (2 marks) and strongly disagree (1 mark). The responses of each subject were totalled up and used in grouping them into high positive attitude for those who scored

75% and above (only two subjects); Average positive for those who scored 60 - 74% (five subjects); Low positive attitude for those who scored 59% and below (five subjects). The criterion used for the grouping of subjects was similar to that of Gbenedio (1993:84) who used subjects scores in the pre-test to group them into high achievers 65% and above; average achievers 45 - 60%; and low achievers 40% and below. The highest scorers in the present study were in the 75% bracket, hence the difference in the grouping scores was more favourably deposed to the teaching of reading comprehension in large classes.

3.5 Construction and Validation of Research Instruments:

The research instruments were drawn up by the researcher after looking into the syllabus for the OND II on reading comprehension.

3.5.1 Validation of the Instrument (Reading Comprehension Test or Achievement Test):

(a) Face Validity: The achievement (reading comprehension) test was given to two lecturers of the ranks of Principal and Senior Lecturers in the Department of Mass Communication and Languages, CABS and a Senior Lecturer in the Department of Accounting and Finance for face validity. The lecturers were specialists

in their subject areas. The pieces of advice given by each of the lecturers were useful in the construction of the achievement test. The advice spanned through the structure of the questions after each passage, the number of questions and the syntactic arrangement of the questions.

3.5.2 (b) Content Validity of the reading Comprehension Or Achievement test: For content validity of the test, a table of specification was drawn up. Different areas covered in the test were shown on the table (see Table 5 below). It contains items on the four areas of focus of the study which have been used to investigate the objectives of the study.

TABLE 5: Table of Specification for the Reading Comprehension Or Achievement Test.

| Intellectual Objectives | Content Areas | Items | Number of Items |
|---|---|---|---|
| 1. Reading for Information | 1. (a) Scanning to locate specifically required information on a single point involving a complex search | All items in Text A | 10 |
| | (b) Scanning for more than one point | Item 4 | 1 |
| | ii. Skimming to obtain (a) the gist of the text | Items 1,3,7 | 3 |
| | (b) A general impression of the text; and | Item 6 | 1 |
| | (c) Particular pieces of information | Items 7,9,1 | 3 |

| Intellectual Objectives | Content Areas | Items | Number of Items |
|---|---|---|---|
| II. Reading for Data Analysis | The text used is the one entitled "Creation of deposit money" Transcoding information presented in diagramatic display involving:- | | |
| | (a) Interpretation of diagrams, tables, graphs and charts; | Items 1 - 5 | 5 |
| | (b) Transcoding reading comprehension answers into diagrams, graphs and tables; | Item 10 | 1 |
| | (c) Completing diagrams/ tables to answer comprehension questions | Items 5,3,1 | 3 |
| III. Reading for Vocabulary or word power | Understanding relations between parts of a text through lexical cohesion devices, especially: | The cloze Items 1-30 | 30 |
| | (a) lexical set/collocations (displayed through the cloze procedure); | | |
| | (b) understanding texts through grammatical cohesion devices and logical connectors | Items 1-30 | 30 |
| IV. Reading for inferences | The text is the passage on Accountancy. It entails: | | |
| | (a) using both anaphoric and exophoric references; | Items 1 - 4 'The Chart' | 4 |
| | (b) integrating data in the text with one's own experience or knowledge of the world; and | Questions on the Chart. | 5 |
| | (c) reading between the lines. | Items 1 - 5 (a - e) | 5 |

Table 5 represents the analysis of the content areas of the reading comprehension or achievement test used in the study. These items covered the requirements of the syllabus of the class under study, and so, they are real life situation items. As much as possible, the study attempted a fair coverage of the items in the syllabus. Reading for information covered 25% of the syllabus. Reading for vocabulary or word power covered 25%; Reading for inferences covered 25% and Reading for data analysis covered 25% all totalling up to 100%. This table of specification was drawn up by the researcher and could be used for learning purposes for teaching these aspects of reading comprehension.

### 3.5.3 Correlation of the items on the Reading Comprehension Test

What was done before choosing the reading comprehension test instrument was a kind of parallel form reliability. Four forms of the test were constructed and labelled A,B,C,D. They were alike in content and difficulty level but the specific items that measured each indicant of the property were not the same. The four forms of the test were administered to the same subjects at different times and correlated in pairs to ascertain the degree of relationship among them. The four tests correlated as follows:

1. Information 0.78
2. Inferences 0.52
3. Vocabulary 0.98
4. Data Analysis 0.84

(See Appendix H for details). The correlation is high in each case because according to Franziblau (1958:88). "only as we advance to the high correlation range do the predictive value rise to usable level"; lower correlation figures are almost of no value in prediction.

Item discrimination and difficulty co-efficients of the tests were carried out. Those items which discriminated very highly (those that fell consistently between .55 and above) were adjudged good for the test because they were not too cheap or too difficult as Carrell and Eisterhold (1983:10) say that cheep items may not always be the best.

### 3.5.4 Reliability of the Reading Comprehension Test

In order to determine the reliability of the instrument, a pilot study was conducted where the test was administered to a group of students who were similar to the experimental subjects. The scores from the pilot study were used to determine the reliability of the test using the Pearson product moment co-efficient r. The PPM r was used because all the conditions for using the PPM r were satisfied; such as the existence of two interval or ratio data series on a common set of elements;

there was a homogeneity of variance; and the distribution of the two variables were assumed to be somewhat spread out symetrically around a central point as well as the unimodality of the distribution (Van Dalen 1979: 400 and Hopkins, 1980: 491).

3.5.5 Validation of the Attitude Scale

The original twenty-five items drawn up were scaled down to twenty as the result of experts' advice on the wordiness, repetition and irrelevancy of some of them. The twenty items that finally emerged were used for the pilot study, as well as the main study.

This measure ensured face and content validity of the instrument.

3.5.6 Reliability of the Attitude Questionnaire

The questionnaire which consisted of twenty likert type items was pilot tested. It was administered on twelve students of Accountancy (6) and Busines Administration (6) at CABS during the pilot study.

In order to establish the construct validity and internal consistency co-efficients of the instrument, the Pearson Product Moment method was used to correlate each variable with the total. The correlation level of all the items was very high. The correlation range was between 0.78 and 1.00. This confirmed Franziblau (1958), Kible (1978), Sax (1979) and Oller (1986) findings that the higher the correlation level the more

reliable the test will be. Oller (1986:56) suggested that a very high correlation "is like a gold strike. The richer the strike, that is, the higher the correlation, the more easily it can be interpreted" (See Appendix G for the pilot study scores).

3.6 Data Analytical Procedures Followed in this Study

The hypotheses for the study were examined and various tests were conducted to ascertain the acceptance of each hypothesis. In order to do this;

(1) The differences between the groups at the pre-test level were examined through their pre-test scores;

(2) the effect of each treatment on the group was examined through the comparison of the pre-and post-test scores for the group;

(3) the comparison of the scores of the individual subjects at the pre and post test levels was done to ascertain the better teaching approach;

(4) the pre-test and post-test scores of the two groups were examined to ascertain the effects the treatments - conventional and modern interactive techniques of teaching reading comprehension in large classes have had on them.

(5) the pre-and post-test scores on the four micro skills were examined to ascertain the better teaching approach; and

(6) the statistics used for analyses were the t-test, ANOVA and percentages.

## 3.7 The Pilot Study

The purpose of the pilot study was to:

(1) help arrive at the best analytical method for the study;

(2) give a fore-taste of the problems to be encountered in the study;

(3) serve as a guide for the study; and to ascertain the validity and reliability of the instruments to be used;

(4) ascertain the validity to be used; and

(5) certify that the techniques were appropriate to the level of students.

The validity and reliability of the instruments were discovered during the pilot study as described in section 3.5 of the study.

After the validity and reliability of the instruments were ascertained as part of the pilot study, the test instruments were administered at the pre-and post-test levels. Between the pre-and post-test levels, were eight hours of teaching sessions given to twelve students which constitute the subjects for the pilot study: six experimental and six control. The texts for the teaching sessions were taken from books meant for use in the OND class.

Each of the sub-tests in the reading comprehension test was scored separately both at the pre and post test levels. The test scores are shown in Table 6 below:

Table 6: Analysis of the Pilot Data

| Micro Skill | Pre-Test Score | Post Test Score | Total Score |
|---|---|---|---|
| 1. Information | 7 - 10 | 7 - 10 | 10 |
| 2. Inferences | $4\frac{1}{2}$ - $9\frac{1}{2}$ | 7 - 10 | 10 |
| 3. Vocabulary | 5 - 14 | 7 - 19 | 30 |
| 4. Data Analysis | 2 - 5 | 2 - 9 | 10 |

The pilot study showed that the cloze procedure used for investigating vocabulary or word power needed some modification, as none of the subjects scored as high as 20 out of 30 in either the experimental or control group. It was also discovered that there was a disparity in the mark allocation and was corrected.

The pilot study confirmed that background knowledge could aid reading comprehension as subjects found it easy to answer questions that had to do with data, because of the knowledge of manipulating data in their subject areas. Texts that were related to areas of specialization scored higher than texts that were unrelated.

The teaching sessions were on the reading comprehension micro-skills of reading for information, inferences, vocabulary and data analysis. Through the exercises in the teaching sessions, it was found that students were weak in questions that required statiscal calculations . Subjects were encouraged to do the calculations through group work in the experimental group and to make use of calculators and listen to teacher's explanations in the control group.

3.8 Summary

This chapter has discussed the research design of the treatment and sampling procedures used in the study.

The research instruments, the methods of finding validity and reliability are also explained.

The data analytical procedures are stated and the pilot study discussed. The chapter ends with what is gained from the pilot study.

# CHAPTER FOUR

## 4.0 DATA ANALYSES AND RESULTS

### 4.1 INTRODUCTION:

This chapter presents the analyses of data based on the questions raised in the statement of the problem in section 1.4 and the null hypotheses advanced in Section 1.5. The chapter includes the descriptive statistics of the achievement test and attitude questionnaire, the comparability test, the testing of the various hypotheses advanced at the beginning of the study, the testing for the effectiveness of treatment and the feeback effect on the treatment.

The chapter ends with the overall findings and the discussion of the findings.

### 4.2 Analyses of the Achievement Test and Attitude Questionnaire:

The testing of the effects of two approaches the conventional and interactive on the teaching of reading comprehension in large classes are discussed in this section. The mean scores of the various groups (Experimental and Control) at the comparability level, pretest, post-test and feedback levels are tested for significance using the t - test and the one way analysis of variance (ANOVA) statistics. The effects the two

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### 4.2 Analyses of the Achievement Test and Attitude Questionnaire:

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approaches have on the four micro skills investigated in this study are also tested using the t - test statistics to compare the pre- and post-test mean scores of subjects in various groups.

The t - test statistics was used in this study to determine whether a significant difference existed between the mean scores of the two groups (Experimental and Control) at the pre-, post and feedback levels. The t - test statistics was also used because the samples for the groups were equal and there was a homogeneity of variance.

The ANOVA (One Way Analysis of Variance) was applied in the analysis of the data to determine the factors responsible for the outcome of subjects' achievement in this study. This is because ANOVA is capable of showing differences between and within groups.

In order to test for effectiveness of the achievement, the mean scores of the two groups were pooled together and compared at the pre- and post- test levels, using t- test statistics.

Two weeks after the research was over, the achievement test was re-administered on the subjects in order to test for the feedback effect. The feedback mean scores for the two groups, the pre- and the post- test mean scores were compared using the t- test statistics. Each group's mean scores at the

pre- test and feeback, post- test and feedback were compared, using the t- statistics. The test for significant differences within and between the groups in the achievement test was carried out using the one way analysis of variance (ANOVA) statistics.

Subjects' attitudes to the teaching of reading comprehension in large classes were investigated using percentages and the t-test statistics to compare if there were significant differences between the pre- and post treatment attitudes of subjects. Their responses were scored over one hundred and used to determine their attitudunal groups:

High Positive Attitude (HPA) for 75% and above

Average Positive Attitude (APA) for 60% - 74%

Low Positive Attitude (LPA) for 59% and below.

4.3 The Comparability Test:

Table 4.1 below is the result of the comparability test which was administered on the subjects before the treatment exercise began (See Appendix HI for the scores).

TABLE 4.1 T-test (unrelated): Initial Comparison of the (Experimental and Control Groups (Comparability Test)

| Group | N | Mean | S.E. | S. Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| E | 90 | 9.8444 | 2.345 | .247 | 0.09 | 89 | .928 |
| C | 90 | 9.8111 | 2.613 | .275 | | | |
| $p < .05$ | | | | | TABULATED T = 1.980 (NS) | | |

From the Table above, it is seen that the difference between the two mean scores is not statistically significant. The calculated t- test value of 0.09 is less than the critical value of t which is 1.980 at $P < .05$. There was therefore no significant difference between the two groups compared.

4.4 The Hypotheses for the Study:

The three hypotheses stated in the null form were tested in this section. Each of them sought to investigate a specific area that was of interest to this research study.

4.4.1 The Null Hypotheses $(H_0)1$

There is no significant difference in the performance of students taught by the conventional approach and those taught by the interactive approach.

This hypothesis sought to find out if there was any significant difference between the mean scores of the subjects in the two groups at the pre- and post- test levels using the t- test comparison of the pre- and post- test mean scores. The results are presented in Tables 4.2, 4.3 and 4.4. (Appendix J shows the scores of subjects in the achievement test).

TABLE 4.2 T-test (Related): Comparison of the Pre- and Post- test Mean Scores of the Control Group in the Achievement Test

| Level | N | Mean | SD | S. Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post-Test | 90 | 22.724 | 3.42 | 0.381 | 1.69 | 89 | .000 |
| Pre-Test | 90 | 21.794 | 3.750 | 0.395 | | | |
| p< .05 | | | | TABULATED T = 1.980 (NS) | | | |

In Table 4.2, the difference in the two means is minimal. It is only 0.93. The Computed t value of 1.69 is less than the critical value of t = 1.980 with p< .05, so the null hypothesis is not rejected as there is no significant difference in the two means compared for the control group. this means that treatment has not caused any significant gain in this group.

TABLE 4.3 T-test (Related): Comparison of the Pre- and Post- Test Mean Scores of the Experimental Group in the Achievement Test.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post-Test | 90 | 22.883 | 3.208 | 0.334 | 3.92 | 89 | .000 |
| Pre-Test | 90 | 22.244 | 3.361 | | | | |
| p< .05 | | | | TABULATED T = 1.980 (S) | | | |

In Table 4.3, the calculted t value of 3.92 is greater than the critical t value 1.980 at p< .05, so the null hypothesis is rejected because there is a significant difference in the achievement of subjects in the experimental group. This means that treatment is effective in this group.

TABLE 4.4 T-test (Unrelated): Comparison of The Post Test Mean Scores of the Two Groups in the Achievement Test

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Exp | 90 | 22.833 | 3.617 | .338 | o.214 | 178 | 0.13 |
| Control | 90 | 22.724 | 3.208 | .381 | | | |
| p< o.5 | | | | | TABULATED T = 1.980 (NS) | | |

In Table 4.4, the computed t value of 0.214 is less than the tabulated t value of 1.980 with p< .05. There is therefore no significant difference between the two approaches in the teaching of reading comprehension in large classes. The null hypothesis is therefore not rejected. This table shows that none of the two approaches is better than the other, although when taken singly, the experimental group was statistically significant (See Table 4.3).

The study showed that each of the two approaches had certain qualities which were good for teaching reading comprehension in large classes, although, the control group showed no significant difference when investigated alone, the experimental group was significant (See Tables 4.2, 4.3 and 4.4 respectively).

This means that the interactive approach can be better accepted than the conventional approach. The comparison in Table 4.4 points to the fact that there are still some qualities in the conventional approach that are yet to be unravelled.

4.4.2 The Null Hypothesis (H0 )II

There is no significant difference in the performance of the two groups (E & C) in the reading comprehension sub-skills of:

(a) Reading for information

(b) Reading for inferences

(c) Reading for vocabulary or word power

(d) Reading for data analysis.

This hypothesis aimed at testing the effect the two approaches had on the four micro skills investigated in this study. The t- test statistics was used to determine the effect of each approach on each of the four micro skills at both the pre- and post- test levels, using the achievement test scores for each micro skill. One way analysis of variance (ANOVA) was also used to see if there were differences within and between groups in the micro skills. Tables 4.5 - 4.12 show all these.

TABLE 4.5 T- test (Related): Comparison of the Pre- and Post- test Mean Scores of the Control Group in the Micro Skill Reading for information.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Test | 90 | 8.233 | 1.142 | 0.120 | 7.67 | 89 | .002 |
| Pre Test | 90 | 7.561 | 1.243 | 1.131 | | | |
| p< .05 | | | | TABULATED T = 1.980 (S) | | | |

There is a significant difference between the pre-and post-test scores of the control group in the micro skill of reading for information. The computed t value of 7.67 with p = .002 is greater than the tabulated t value of 1.980 with p< .05. So, the null hypothesis is rejected. The computed probability level is also significant at p.002. Treatment has therefore been effective in the control group on this micro skill.

TABLE 4.6 T- test Comparison on the Pre- and Post Test Mean Scores of the Experimental Group for the Micro Skill of Reading for information.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post- Test | 90 | 8.544 | 0.927 | .098 | 6.34 | 89 | .000 |
| Pre- test | 90 | 7.41 | 1.24 | 0.13 | | | |
| p< .05 | | | | TABULATED T = 1.980 (S) | | | |

In the experimental group, this micro skill is also statistically significant. The computed t- value of 6.34 is greater than the critical t- value of 1.980 at p< .05, so, the null hypothesis is rejected, as treatment had a significant effect on the experimental group in the micro skill reading for information.

Tables 4.7 and 4.8 show the pre- and post- test t- test comparison of the mean scores of the micro skill reading for inferences.

TABLE 4.7 T- test (Related): Comparison of the Pre- and Post- test Mean Scores of the Control Group in the Micro Skill Reading for Inferences.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post- test | 90 | 4.72 | 1.39 | 0.15 | 0.62 | 89 | 0.39 |
| Pre- test | 90 | 4.93 | 1.79 | 0.13 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (NS) | |

There is no significant difference in the control group in the micro skill reading for inferences. The calculated t- value of 0.62 is less than the tabulated t of 1.980 at p< .05. The null hypothesis is therefore not rejected as the treatment has had no effect on the achievement of students in this group.

TABLE 4.8 T- test (Related): Comparison of the Pre- and Post test Meant Scores of the Experimental Group in the Micro Skill Reading for Inferences.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Test | 90 | 4.71 | 1.33 | 0.14 | 1.983 | 89 | 0.058 |
| Pre Test | 90 | 4.31 | 1.44 | 0.16 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (S) | |

In the experimental group, reading for inferences was found to be statistically significant. The computed t - test value of 1.983 is greater than the critical t value of 1.980. The null hypothesis is therefore rejected, as treatment had a significant effect on the achievement of subjects.

Tables 4.9 and 4.10 present t - test comparisons of the pre- and post-test scores of the control group (4.9) and experimental group (4.10) in the micro skill reading for vocabulary or word power.

TABLE 4.9 T-test (Related): Comparison of the Pre- and Post-test Mean Scores of the Control Group in the Micro Skill Reading for Vocabulary or Word Power.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post test | 90 | 4.34 | 1.76 | 0.19 | 2.68 | 89 | 0.043 |
| Pre test | 90 | 3.52 | 1.63 | 0.17 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (S) | |

There is a significant achievement of subjects in the micro skill reading for vocabulary or word power in the control group. The computed t- test value of 2.68 with p0.043 is greater than the critical t value of 1.980 with p< .05. The null hypothesis is therefore rejected. Treatment has been effective in this micro-skill.

TABLE 4.10 T-test (Related): Comparison of the Pre- and Post-test Mean Scores of the Experimental Group in the Micro Skill Reading for Vocabulary or Word Power.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post test | 90 | 4.47 | 1.16 | 0.12 | 1.62 | 89 | 0.11 |
| Pre test | 90 | 4.14 | 1.57 | 0.17 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (NS) | |

In the experimental group, there was no significant difference in the achievement of subjects in the micro skill vocabulary or word power. The computed t value of 1.62 is less than the critical t value of 1.980. So, the null hypothesis is not rejected as treatment has had no effect on the subjects.

Tables 4.11 and 4.12 show the pre- and post- test t-test comparison of the control group (Table 4.11) and experimental group (Table 4.12) in the micro skill reading for data analysis.

TABLE 4.11 T- test (Related): Comparison of the Pre- and Post Test Mean Scores of the Control Group in the Micro Skill Reading for Data Analysis.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post test | 90 | 5.43 | 1.64 | 0.17 | 0.11 | 89 | 0.91 |
| Pre test | 90 | 5.46 | 1.64 | 0.18 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (NS) | |

There is no significant difference in the performance of subjects in the micro skill reading for data analysis. The computed t value of 0.11 with p at 0.91, is less than the tabulated t value of 1.980 with p< .05. So, the null hypothesis is not rejected. Treatment has been found to have no effect on the achievement of subjects.

TABLE 4.12 T- test (Related): Comparison of the Pre- and Post-test Mean Scores of the Experimental Group in the Micro Skill Data Analysis.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Test | 90 | 5.02 | 1.77 | 0.19 | 1.511 | 89 | 0.13 |
| Pre Test | 90 | 5.41 | 1.68 | 0.18 | | | |
| p< .05 | | | | TABULATED T = 1.980 | | (NS) | |

Table 4.12 above shows that there is no significant difference in the achievement of subjects in the micro skill reading for data analysis. The computed t value of 1.511 with p at 0.13 is less than the tabulated t value of 1.980 with p< .05, so the null hypothesis is upheld. Treatment has had no effect on the subjects' achievement in this micro skill in the experimental group.

In order to investigate the performances of subjects further, the one way analysis of variance (ANOVA) was used, to see whether there were significant differences within and between groups in the micro-skills investigated at both the pre-and post-test levels. These are presented in Tables 4.13 and 4.14. Table 4.13 is the summary of the ANOVA (pre-test) of the four micro-skills to show if there were significant differences within and between groups. Table 4.14 is the summary of the ANOVA (post-test) of the four micro skills which was used to show if there were significant differences within and between groups.

TABLE 4.13 ANOVA: Summary of the four Micro Skills to Show Significant Differences Within and Between Groups (pre-test).

| MICRO SKILL | SOURCE | DF | SS | MS | F |
|---|---|---|---|---|---|
| DATA | Groups 1 & 2 | 1 | 0.11 | 0.11 | 0.04 (NS) |
| INFORMATION | " | 1 | 1.09 | 1.09 | 0.17 (NS) |
| INFERENCES | " | 1 | 17.42 | 17.42 | 0.42 (NS) |
| VOCABULARY | " | 1 | 4.51 | 4.51 | 1.76 (NS) |
| p< .05 | | | | | |
| Critical F 3.17 | | | | | |

TABLE 4.14 ANOVA: Summary of the Post Test of the Four Micro Skills to show if there were Significant Differences Within and Between Groups

| MICRO SKILL | SOURCE | DF | SS | MS | F |
|---|---|---|---|---|---|
| DATA ANALYSIS | Groups 1 & 2 | 1 | 7.61 | 7.61 | 2.61 (NS) |
| INFORMATION | " | 1 | 5.87 | 5.87 | 5.42 (SIG) |
| INFERENCES | " | 1 | 0.01 | 0.01 | 0.00 (NS) |
| VOCABULARY | " | 1 | 0.80 | 0.80 | 0.36 (NS) |
| $p < .05$ | | | | | |
| CRITICAL F = 3.17 | | | | | |

In the Tables above, only the micro skill reading for information showed any significant difference at the post-test level only. All the others showed no significant differences within and between groups at the pre-and post-test levels. This confirms the information given by the t-test statistics that treatment has had a significant difference in the micro-skill of reading for information in both the control and experimental groups.

4.4.3 Testing for Effectiveness

In order to test if treatment had been effective on the subjects, the mean achievement scores for all the subjects were pooled together and compared at both the pre-and

post-test levels. The t test statistics was used for this investigation. Table 4.15 shows this.

TABLE 4.15 T - test: Pooled Comparison of Subjects Pre and Post- test Mean Scores in the Achievement Test.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Test | 180 | 22.778 | 3.407 | .254 | 5.43 | 179 | .000 |
| Pre- Test | 180 | 21.5194 | 3,561 | .265 | | | |
| p< .05 | | | TABULATED T = 1.980 (S) | | | | |

The computed t value of 5.43 with p.000 is greater than the tabulated t value of 1.980. There is therefore a significant difference in the achievement of subjects in the tests at the pre-and post test levels. The significant difference can easily be attributed to treatment, so, the two approaches have been effective in both groups. Effectiveness in the two groups might be due to the keen competition between the two groups and the location of the research.

4.4.4 Testing for Feedback on the Pre- and Post-test Mean Scores in both Groups

Two weeks after the post-test was given, the achievement test was re-administered on the subjects in both groups in order to test if what they had gone through in the tests and treatment had a lasting effect on them. This agrees with Lee et al (1985:43) that "Washback refers to the effect

a test has on teaching practices". Table 4.16 shows the pooled pre-test and feedback t-test comparison of the mean scores of subjects.

TABLE 4.16 T- test: Pooled Comparison of the Pre- test and Feedback Mean Scores of all the Subjects in the Achievement Test.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Feedback | 180 | 23.5778 | 3.156 | .235 | 9.54 | 178 | .000 |
| Pre Test | 180 | 21.5194 | 3.561 | .255 | | | |
| p < .05 | | | | TABULATED T = 1.980 (S) | | | |

There is a significant difference in the t value of the subjects' achievement scores. The computed t - test value of 9.54 with P< .000 is greater than the tabulated t value of 1.980 with p< .05. This significant difference in subjects pre-and feedback mean scores must have been due to the effectiveness of treatment.

Table 4.17 shows the pooled comparison of the post test and feedback mean scores of all the subjects in the achievement test.

TABLE 4.17 T-test: Pooled Comparison of the Post Test and Feedback Mean Scores of all the Subjects in the Achievement Test.

| Level | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Feedback | 180 | 23.5778 | 3.156 | .235 | 2.319 | 178 | .000 |
| Post Test | 180 | 22.7778 | 3.407 | .254 | | | |
| p< .05 | | | | TABULATED T = 1.980 (S) | | | |

The null hypothesis is also rejected here as the calculated t-value of 2.319 is greater than the critical t-value of 1.980 with p< .05.

The three levels of the test showed that the subjects' performance kept on improving. The mean score of the post-test was greater than that of the pre- test and that of the feedback was the greatest of all: Pre- test mean = 21.5194, Post Test Mean = 22.7778 anf feedback mean = 23.5778.

This improved performance could be used to dismiss the claim that diminishing returns could set in as the result of time-lag between tests. It is pertinent, therefore, to conclude that treatment has had a positive effect on the subjects in both groups in spite of length of time between tests. The two approaches, when pooled together, have shown significant differences from stage to stage. There

are, therefore, qualities that are good for the teaching of reading comprehension in both approaches.

4.4.5 The Null Hypothesis (H0) 111

There is no significant difference between the mean scores on attitudes of students in the conventional and interactive approach classes.

The investigative area for this hypothesis was the attitude of subjects in both groups to the teaching of reading comprehension in large classes. The items on the attitude questionnaire were developed to measure:

(a) attitude towards the large class;

(b) attitude towards reading comprehension in large classes;

(c) attitude towards the two teaching approaches of reading comprehension being investigated in this study;

(d) attitude towards classroom management in the reading comprehension large classes; and

(e) attitude to the teaching of the reading micro skills in large classes investigated in this study.

In order to investigate all the variables mentioned above, the student's attitude questionnaire which contained twenty questions was administered on the subjects before and after treatment. Their responses were divided into

the five areas of interest as indicated by the five variables mentioned above. The t- test statistics was used to investigate the difference between their pre-treatment and post-treatment attitudes. The responses were also divided into three attitudinal groups in order to know whether they were favourably or negatively deposed to the teaching of reading comprehension in large classes. Frequency distribution statistics was used in determining the various groupings. Appendix K shows the various responses in both groups. Table 4.18 indicates the t- test comparison of the pre-treatment mean attitudes of subjects, while Table 4.19 shows the post treatment mean attitudes of subjects.

TABLE 4.18 T- test: Comparison of Subjects' Pre-treatment Mean Attitude Scores for Both Groups.

| Test | Group | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|---|
| Pre Tr | Exp | 90 | 65.43 | 11.55 | 1.22 | 0.963 | 89 | .570 |
| Pre Tr | Con | 90 | 63.72 | 12.24 | 1.29 | | | |
| p< .05 | | | | TABULATED T = 1.980 (NS) | | | | |

TABLE 4.19 T- test: Comparison of Subjects Post-treatment Attitude Scores in Both Groups

| Test Group | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Tr Exp | 90 | 66.23 | 10.21 | 1.08 | 0.815 | 89 | .275 |
| Post Tr Con | 90 | 66.68 | 10.68 | 1.13 | | | |
| p< .05 | | | TABULATED T = 1.980 (NS) | | | | |

There is no significant difference in the mean scores of both groups at the pre- and post-treatment levels. The calculated t- test value of 0.963 with p.570 at pre-treatment and the post-treament calculated t- test value of 0.815 with p.275 are lower in each case than the critical t value of 1.980 with p< .05. So, the null hypothesis is accepted. The two groups have shown no significant difference in their attitudes to the teaching of reading comprehension in large classes.

In order to investigate further the claims of the Tables above (4.18 and 4.19) the two groups were individually examined at the pre and post treatment levels. Tables 4.20 and 4.21 show these. Table 4.20 is for the experimental group while Table 4.21 is for the control group.

TABLE 4.20 T- test Pre- and Post- Treatment Mean Attitude Scores of the Experimental Group compared

| Level Group | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Tr Exp | 90 | 68.23 | 10.21 | 1.08 | 1.73 | 89 | .275 |
| Pre Tr Exp | 90 | 65.43 | 11.51 | 1.22 | | | |
| p< .05 | | | TABULATED T = 1.980 (NS) | | | | |

TABLE 4.21 T- test: Pre- and Post- Treatment Mean Attitude Scores of the Control Group Compared.

| Level Group | N | Mean | SD | S.Error Mean | T | DF | P |
|---|---|---|---|---|---|---|---|
| Post Tr Con | 90 | 66.95 | 10.68 | 1.13 | 1.990 | 89 | .570 |
| Pre Tr Con | 90 | 63.72 | 12.24 | 1.29 | | | |
| p< .05 | | | TABULATED T = 1.980 (S) | | | | |

The two tables above, show that in the experimental group, there is no significant difference between the pre- and post- treatment mean attitude scores of the subjects. The computed t value of 1.73 with p.275 is less than the critical t value of 1.980 with p< .05. The null hypothesis is upheld that treatment has had no effect on the attitude of students in the experimental group. In the control group, however, the null hypothesis is rejected, as there is a significant difference in the attitude of subjects between

the pre- and post- treatment levels. The computed t test value of 1.990 with p.570 is greater than the critical t value of 1.980 with p< .05. This means that treatment has a significant positive effect on the attitude of subjects.

The responses to the questionnaire were scored over 100 and were grouped into three attitudinal profiles of High Positive Attitude (HPA), Average Positive Attitude (APA) and Low Positive Attitude (LPA) (following Gbenedio, 1993:84). Table 4.22 shows the attitudinal groups for the two groups at the pre- and post treatment levels.

TABLE 4.22 Attitudinal Profile for the Two Groups at Pre- and Post Treatment Levels in Frequency Distribution.

| | | CONTROL N = 90 | | EXPERIMENTAL N = 90 | |
|---|---|---|---|---|---|
| Profile | Scoring Range | C O U N T Pre Tr | Po Tr | C O U N T Pre Tr | Pro Tr |
| 1. HPA | 75% and | 18 | 26 | 23 | 28 |
| | above | 20% | 28.9% | 25.56% | 31.11% |
| 2. APA | 60% - 74% | 32 | 42 | 40 | 44 |
| | | 35.6% | 46.3% | 44.44% | 48.89% |
| 3. LPA | 59% and | 40 | 22 | 27 | 18 |
| | below | 44.44% | 24.8% | 30% | 20% |

The frequency distribution of the attitudinal profiles at the pre- and post- treatment levels in both groups shows that subjects are favourably disposed to the teaching of reading

comprehension using both methods. The number of low Positive responses in both groups at the pre- treatment level was as high as 40 (44.4%) for the control group and 27 (30%) for the experimental group. This, however, changed at the post-treatment level. The number of low Positive attitude responses fell to 22 (24.8%) in the control and 18 (20%) in the experimental groups. This change of attitude might have been caused by the effect of treatment (i.e. interactive approach) on the subjects.

The responses to the attitude questionnaire were grouped into five sub-headings: These were respondents' attitude to:

(a) large classes;

(b) reading comprehension in large classes;

(c) micro skills of reading for information, inferences, vocabulary and data analysis;

(d) management of large classes; and

(e) the effectiveness of the teaching approaches.

NOTE: The responses to all the variables tested through the questionnaire were grouped as follows:

(1) Strongly Agree + Agree as Positive Responses or Agree;

(2) Undecided;

(3) Disagree + Strongly Disagree + No Response as Negative Responses or Disagree.

The attitude levels were grouped as High Positive Attitude (HPA); Average Positive Attitude (APA); and Low Positive Attitude (LPA).

TABLE 4.23: Attitudinal Table for Both Groups

N = 90 FOR CONTROL (C) 90 FOR EXPERIMENTAL (E)

| VARIABLE Attitude to : | | PRE-TREATMENT MEAN ATTITUDE | | | LEVEL | POST-TREATMENT MEAN ATTITUDE | | | LEVEL |
|---|---|---|---|---|---|---|---|---|---|
| | | Positive or Agree | Undecided | Negative or Disagree | | Positive or Agree | Undecided | Negative or Disagree | |
| 1. Large classes | (C) | 90 | - | - | HPA | 90 | - | - | HPA |
| | (E) | 90 | - | - | HPA | 90 | - | - | HPA |
| 2. Reading comprehension in large classes | (C) | 44.8 | 10.4 | 34.8 | LPA | 49.9 | 10 | 29.9 | HPA |
| | (E) | 50 | 8.8 | 33.4 | HPA | 52 | 10.3 | 28.6 | HPA |
| 3. Micro skills | | | | | | | | | |
| (a) Information | (C) | 40.1 | 10.6 | 37.5 | LPA | 40 | 14.3 | 35.5 | LPA |
| | (E) | 44 | 11.3 | 34.4 | LPA | 41.2 | 11.3 | 38.2 | LPA |
| (b) Inferences | (C) | 50 | 11.6 | 37.6 | HPA | 40.5 | 15.8 | 30 | LPA |
| | (E) | 51.9 | 13 | 24.4 | HPA | 47.2 | 14.4 | 28.2 | APA |
| (c) Vocabulary | (C) | 53.5 | 10.5 | 25.8 | HPA | 55.8 | 12 | 24.3 | HPA |
| | (E) | 54 | 11 | 25.5 | HPA | 54 | 11 | 12.6 | HPA |
| (d) Data Analysis | (C) | 37.4 | 16.9 | 40 | LPA | 37.6 | 13.8 | 36.6 | LPA |
| | (E) | 37.6 | 13.6 | 37 | LPA | 36.4 | 13.2 | 40.4 | LPA |
| 4. Management | (C) | 49.1 | 8.6 | 31.7 | HPA | 55.7 | 10.1 | 25.5 | HPA |
| | (E) | 51.8 | 8.7 | 29.8 | HPA | 53.9 | 10.3 | 25.3 | HPA |
| 5. Teaching Approaches | (C) | 32.3 | 12.3 | 46 | LPA | 31.3 | 12 | 46.4 | LPA |
| | (E) | 57 | 8.4 | 24.6 | HPA | 58.9 | 10.3 | 21.6 | HPA |

(See Appendix K1 for the attitude of the control group and Appendix K2 for that of the experimental group).

(1) Respondents' Attitude to Large Classes:- Subjects attitudes to large classes were positive in all the responses (See Appendix K1 and Appendix K2 for the table of responses)

(2) Attitude to Reading Comprehension in Large Classes:- The questions and the responses for this variable are shown in Table 4.24 below. The relevant questions to this attitudinal variable are 2, 3, 8, 9, 10, 12, 15, 17 and 18 (See the Attitude Questionnaire for these Questions).

TABLE 4.24: Post-treatment Attitudinal Responses to the Teaching of Reading Comprehension in Large Classes.

| Summary of Questions | Responses Control N = 90 | | | Responses Experimental N = 90 | | |
|---|---|---|---|---|---|---|
| | Positive or Agree | Undecided | Neg. or Disagree | Positive or Agree | Undecided | Neg. or Disagree |
| The large class promotes:- | | | | | | |
| 2) Solutions to problems | 46 | 9 | 35 | 59 | 5 | 26 |
| 3) Answers to problems | 48 | 7 | 35 | 55 | 10 | 25 |
| 8) Faster Reading | 21 | 14 | 55 | 25 | 13 | 52 |
| 9) Silent Reading skills | 12 | 9 | 69 | 14 | 8 | 68 |
| 10) Hard work | 67 | 8 | 15 | 65 | 6 | 19 |
| 12) Distance between teacher and students | 72 | 8 | 10 | 62 | 8 | 20 |
| 15) Self study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 17) Modern teaching Techniques | 59 | 14 | 17 | 54 | 10 | 26 |
| 18) Vocabulary development | 73 | 5 | 12 | 75 | 6 | 9 |
| TOTAL | 449 | 90 | 271 | 454 | 77 | 279 |

From the Table above, it can be easily seen that only Question 8: "I can read faster with better comprehension in large classes" and Question 9: "I prefer the large classes because they promote silent reading skills"; show no favourable responses to the variable teaching reading comprehension in large classes. All the other responses in both groups favoured this variable.

(3) Respondents' Attitude to the Micro Skill of Reading in Large Classes:

(a) Reading for information:

The questions for eliciting subjects attitude to this micro skill are questions shown in both groups at the post treatment level.

TABLE 4.25: Attitude to the Micro Skill Reading for Information in both Groups at Post-treatment

| Summary of Questions | CONTROL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree | EXPERIMENTAL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree |
|---|---|---|---|---|---|---|
| The large class promotes: | | | | | | |
| 8) Faster Reading | 21 | 13 | 56 | 25 | 11 | 54 |
| 15) Self Study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 17) Modern teaching techniques | 59 | 14 | 17 | 54 | 10 | 26 |
| 19) Disciplined reading habits | 40 | 13 | 37 | 45 | 40 | 37 |
| TOTAL | 171 | 56 | 133 | 169 | 72 | 151 |

Majority of the responses above favoured the teaching of this micro skill (reading for information) in large classes. The responses to Question 8 which is 'I can read faster with better comprehension in a large class', however, did not support the micro skill. The reason for this might be because the students disapproved the claim of this question.

(b) Reading for inferences:

See Table 4.26:on the next page for the responses

TABLE 4.26 Attitude to the Micro Skill Reading for Inferences in both Groups at Post-treatment

| | CONTROL (N = 90) | | | EXPERIMENTAL (N = 90) | | |
|---|---|---|---|---|---|---|
| | Positive or Agree | Undecided | Neg. or Disagree | Positive or Agree | Undecided | Neg. or Disagree |
| The large class promotes:- | | | | | | |
| 5) Critical reading | 45 | 8 | 37 | 50 | 11 | 29 |
| 19) Disciplined reading Habit | 40 | 13 | 37 | 45 | 8 | 37 |
| 15) Self study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 17) Modern teaching techniques | 59 | 14 | 17 | 54 | 10 | 26 |
| 20) Reading for inferences | 51 | 21 | 18 | 49 | 25 | 16 |
| TOTAL | 246 | 72 | 132 | 243 | 65 | 142 |

Most of the responses favoured the teaching of this micro skill in large classes. Areas of disagreement include:

Question 5: A student can actively read to evaluate critically in a large class. The critical aspect of this question might have been responsible for the doubt cast on the minds of subjects.

Question 19: The large class encourages disciplined reading habits. The high negative response to this question in the Experimental group at the post treatment level (pre-treatment was lower, see Appendix K 2) might have been due to the fact that subjects found that the large class did not promote disciplined reading habits.

TABLE 4.27 Responses to the Micro Skill Reading for Vocabulary or Word Power at Post-treatment Level in both Groups

| | Summary of Questions | CONTROL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree | EXPERIMENTAL (N=90) Positive or agree | Unde-cided | Neg. or Disagree |
|---|---|---|---|---|---|---|---|
| | The large class promotes: | | | | | | |
| 15) | Self study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 17) | Modern teaching techniques | 59 | 14 | 17 | 54 | 10 | 26 |
| 18) | Vocabulary development | 73 | 5 | 12 | 75 | 6 | 9 |
| 19) | Disciplined reading habits | 40 | 13 | 37 | 41 | 12 | 37 |
| | TOTAL | 223 | 48 | 89 | 215 | 39 | 106 |

Most of the responses favoured the teaching of this micro-skill in large classes except question 19 which says 'The large class encourages disciplined reading habit'.

The high negative responses in the two groups show that the two groups did not appear to appreciate the fact that the large class could enhance disciplined reading habit.

(d) Reading for data analysis:

Table 4.28 outlines the responses in both groups at the post treatment level. Questions 4, 9, 15, 17 and 19 were used for the investigation

TABLE 4.28: Responses to the Micro skill Reading for Data Analysis at the Post-Treatment Level in both Groups.

| Summary of Questions | CONTROL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree | EXPERIMENTAL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree |
|---|---|---|---|---|---|---|
| The large class promotes: | | | | | | |
| 4) Interpretation of graphic data | 27 | 23 | 40 | 29 | 22 | 40 |
| 9) Silent reading skills | 12 | 9 | 69 | 13 | 9 | 68 |
| 15) Self study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 17) Modern teaching techniques | 59 | 14 | 17 | 54 | 7 | 29 |
| 19) Disciplined Reading Habits | 40 | 13 | 37 | 42 | 8 | 40 |
| TOTAL | 189 | 75 | 186 | 183 | 57 | 211 |

Questions 4, 9 and 19 which are as follows, gave very high negative responses:

Question 4: I prefer the large class because it does not constrain a student from reading to interpret graphs, tables, charts and maps.

Subjects' experience must have determined their negative response, the large class might have been a hindrance to their achievement of reading to interpret graphical materials. The general difficulty experienced in this task might also have biased their attitude to this reading sub-skill.

Question 9: I prefer the large class because it promotes silent reading skill.

Most of the responses were negative. A reason for this could have been that subjects found, through their experiences, that the large class was not able to promote silent reading skills, as noise making, whether positive learning promoting or negative learning promoting noise, was found to be a characteristic of large classes.

Question 19 has been seen in Table 4.27

4) Management of Large Classes: Attitudes towards management techniques employed in the large classes are presented in Table 4.29 below

TABLE 4.29: Responses for the Variable Management of Large Classes in both Groups

| Summary of Questions | CONTROL (N = 90) Positive or Agree | Undecided | Neg. or Disagree | EXPERIMENTAL (N = 90) Positive or Agree | Undecided | Negative or Disagree |
|---|---|---|---|---|---|---|
| The large class promotes: | | | | | | |
| 1) Interaction and learning | **73** | **3** | 14 | 71 | **3** | 16 |
| 2) Solution to problems | **46** | **9** | 35 | 59 | **5** | 26 |
| 6) Social skills | **80** | **3** | 7 | 82 | 1 | 7 |
| 7) Confidence | **71** | **4** | 15 | 70 | 9 | 11 |
| 8) Faster Reading | **21** | **14** | 55 | 25 | **13** | 52 |
| 10) Hard work | **67** | **8** | 15 | 64 | **6** | 20 |
| 11) Freedom | **47** | **20** | 23 | 52 | **10** | 28 |
| 12) Distance between teacher and students | 72 | **8** | 10 | 61 | 9 | 20 |
| 13) Leadership qualities | **63** | **10** | 17 | **72** | 9 | 9 |
| 14) Positive Attitude | **64** | **8** | 18 | 58 | **14** | 18 |
| 15) Self study ability | **51** | **16** | 23 | 45 | 11 | 34 |
| 16) After class teacher-student relationship | **16** | **5** | 69 | 14 | 9 | 67 |
| 17) Modern teaching techniques | **59** | **14** | 17 | 54 | **7** | 29 |
| 19) Disciplined Reading Habits | 40 | **13** | 37 | 41 | 8 | 41 |
| TOTAL | 770 | 135 | 355 | 768 | 114 | 378 |

Negative responses were noticed on a large scale in questions 8 and 16 while more positive responses were recorded in the other questions.

Question 8: 'I can read faster with better comprehension in a large class'. The respnses in both groups showed that the claim of this question was difficult to achieve in a large class situation.

Question 19 has been seen in Table 4.27

4) Management of Large Classes: Attitudes towards management techniques employed in the large classes are presented in Table 4.29 below

TABLE 4.29: Responses for the Variable Management of Large Classes in both Groups

| Summary of Questions | CONTROL (N = 90) Positive or Agree | Unde-cided | Neg. or Disagree | EXPERIMENTAL (N = 90) Positive or Agree | Unde-cided | Negative or Disagree |
|---|---|---|---|---|---|---|
| The large class promotes: | | | | | | |
| 1) Interaction and learning | 73 | 3 | 14 | 71 | 3 | 16 |
| 2) Solution to problems | 46 | 9 | 35 | 59 | 5 | 26 |
| 6) Social skills | 80 | 3 | 7 | 82 | 1 | 7 |
| 7) Confidence | 71 | 4 | 15 | 70 | 9 | 11 |
| 8) Faster Reading | 21 | 14 | 55 | 25 | 13 | 52 |
| 10) Hard work | 67 | 8 | 15 | 64 | 6 | 20 |
| 11) Freedom | 47 | 20 | 23 | 52 | 10 | 28 |
| 12) Distance between teacher and students | 72 | 8 | 10 | 61 | 9 | 20 |
| 13) Leadership qualities | 63 | 10 | 17 | 72 | 9 | 9 |
| 14) Positive Attitude | 64 | 8 | 18 | 58 | 14 | 18 |
| 15) Self study ability | 51 | 16 | 23 | 45 | 11 | 34 |
| 16) After class teacher-student relationship | 16 | 5 | 69 | 14 | 9 | 67 |
| 17) Modern teaching techniques | 59 | 14 | 17 | 54 | 7 | 29 |
| 19) Disciplined Reading Habits | 40 | 13 | 37 | 41 | 8 | 41 |
| TOTAL | 770 | 135 | 355 | 768 | 114 | 378 |

Negative responses were noticed on a large scale in questions 8 and 16 while more positive responses were recorded in the other questions.

Question 8: 'I can read faster with better comprehension in a large class'. The respnses in both groups showed that the claim of this question was difficult to achieve in a large class situation.

Question 16: 'I like the large class because it gives the teacher more time to attend to individual students after class hours'.

The high negative responses also confirm the fact that the claim of this question was found difficult to achieve in a large class situation under study.

(5) Teaching Approaches: The questions that were related to the conventional approach are 8, 15 and 19; while those of the interactive approach are 1, 6, 7, 8, 11, 13, 15, 17, 18 and 19.

Table 4.30 below gives the responses of the conventional group, while Table 4.31 gives those of the experimental group.

TABLE 4.30: Responses to the Conventional Approach in the Control Group at Post-treatment

(N = 90)

| Summary of Questions | Positive or Agree | Undecided | Negative or Disagree |
|---|---|---|---|
| The large class promotes: | | | |
| 9) Silent reading skills | 12 | 9 | 69 |
| 15) Self study ability | 51 | 16 | 23 |
| 19) Disciplined reading ability | 40 | 13 | 37 |
| TOTAL | 103 | 38 | 129 |

Responses to questions 9 and 19 showed that students responses were highly negative to the use of the conventional approach in teaching in a large class. Questions 19 and 9 have been discussed. See the discussion that follows Table 4.28.

The following Table 4.31 shows the responses of subjects to the interactive approach in large classes (experimental group).

TABLE 4.31: Responses to the Interactive Approach in the Experimental Group at Post-Treatment

| Summary of Questions | Positive or Agree | Undecided | Negative or Disagree |
|---|---|---|---|
| The large class promotes: | | | |
| 1) Interaction and learning | 71 | 3 | 16 |
| 6) Social skills | 82 | 1 | 7 |
| 7) Confidence | 70 | 9 | 11 |
| 8) Faster Reading | 25 | 11 | 54 |
| 11) Freedom | 52 | 9 | 29 |
| 13) Leadership qualities | 72 | 9 | 9 |
| 15) Self study skills | 45 | 11 | 34 |
| 17) Modern teaching techniques | 54 | 7 | 29 |
| 18) Vocabulary development | 75 | 6 | 9 |
| 19) Disciplined reading habits | 41 | 13 | 36 |
| TOTAL | 587 | 79 | 234 |

Apart from responses to questions 8, 15 and 19 where negative responses were highly noticeable, majority of the responses favoured the use of the interactive approach in large classes. This means that subjects endorsed the use of the approach for the teaching of reading comprehension in large classes.

## 4.5 LIST OF OVERALL FINDINGS

This section summarizes all the findings of this study. The findings are in respect of the research questions and the hypotheses advanced at the beginning of the study (See Sections 1.4 and 1.5).

1. The control group did not show any significant difference in its pre- and post- test mean scores in the achievement test.
2. There was a significant difference in the pre- and post- test mean scores of the experimental group in the achievement test.

3. There was no significant difference in the post- test mean scores of the two groups (compared) in the achievement test.

4. There were significant differences in the following areas in the achievement test (for the two groups together):

   (a) Pooled t- test comparison of the pre- test and post- test mean scores.

   (b) Pooled t- test comparison of the pre- and feedback mean scores.

   (c) Pooled t- test comparison of the post- test and feedback mean scores.

5. There was no significant difference between the pre- and post- test mean scores of the control group in the micro-skills reading for inferences and data analysis.

6. There was a significant difference between the pre- and post- test mean scores of the control group in the micro-skills reading for information and vocabulary or word power.

7. There was a significant difference in the pre- and post- test mean scores of the experimental group in the micro-skills reading for information and inferences. But there was no significant difference in the pre- and post- test mean scores of the experimental group in the micro skills reading for data analysis and vocabulary or word power.

8. The ANOVA showed no significant difference at the pre- test scores of the groups in the four micro skills.

9. The ANOVA showed a significant difference between and within groups at the post test level, only in the micro skill reading for information. All the other micro-skills at the post test level were proved by the ANOVA to be statistically not significant.
10. The pooled pre- treatment attitude mean scores (the two groups together) showed no significant difference.
11. There was a significant difference between the pre- and post-treatment attitude scores in the control group.
12. The pre- and post- treatment attitude scores of the experimental group showed no significant difference.
13. Responses to the five variables of the attitude questionnaire showed :

(a) high positive attitude to large classes in both groups at the pre- and post- treatment levels;

(b) low Positive attitude to reading comprehension in large classes at pre- treatment, which changed to high positive attitude at post- treatment in the control group. In the experimental class, the attitude was high positive at both the pre- and post- treatment levels;

(c) low Positive attitude in both groups to:

(i) reading for information at both the pre- and post-treatment levels;

(ii) high positive attitude at pre- treatment which later changed to low Positive attitude at post- treatment

in reading for inferences at the control group. In the experimental group, it was high positive attitude at pre- treatment and average positive attitude at post- treatment;

(iii) high positive attitude at both the pre- and post-treament levels in both groups for vocabulary or word power;

(iv) low Positive attitude responses in both groups at both the pre- and post-treatment levels for data analysis.

14. The responses to the management of large classes showed high Postive attitude at pre- and post-treatment levels in respect of the two groups.

15. (a) Attitude to the teaching approaches shows general low Positive responses at the pre- and post- treatment levels in the control group in respect of the conventional approach;

(b) and high positive attitude at both the pre- and post treatment levels in the experimental group in respect of the interactive approach. The findings are set in the Table 4.32 that follows.

TABLE 4.32: Overall findings in this study

| Hypothesis | Statistical Score | Table | Significant/ Not Significant |
|---|---|---|---|
| 1. No significant difference between the two groups (E and C) | | | |
| (a) Pre- and post-test of the control group in the achievement test | T = 1.69 | 4.2 | Not significant |
| (b) Pre- and post test of the experimental group | T = 3.92 | 4.4 | significant |
| (c) Post- test mean scores of the two groups compared in the achievement test | T = 0.214 | 4.4 | Not significant |
| 2. The two groups E and C will not differ significantly on the following sub-skills: | | | |
| (i) Pre- and post test of the control group in the micro skills: | | | |
| (a) Reading for: information | T = 7.67 | 4.5 | Significant |
| (b) Inferences | T = 0.62 | 4.7 | Not significant |
| (c) Vocabulary | T = 2.68 | 4.9 | Significant |
| (d) Data Analysis | T = 0.11 | 4.11 | Not significant |
| (ii) Pre- and post- test mean scores of the experimental group in the micro skills: Reading for: | | | |
| (a) Information | T = 6.34 | 4.6 | Significant |
| (b) Inferences | T = 1.983 | 4.8 | Significant |
| (c) Vocabulary | T = 1.62 | 4.10 | Not significant |
| (d) Data Analysis | T = 1.511 | 4.12 | Not significant |
| (iii) There is no significant difference between and within groups in the four micro skills in the pre- test (ANOVA) Reading for: | | | |
| (a) Information | F = 0.7 | 4.13 | Not significant |
| (b) Inferences | F = 0.42 | " | " |
| (c) Vocabulary | F = 1.76 | " | " |
| (d) Data Analysis | F = 0.04 | " | " |

4.5.1 Discussion of the Overall Findings

The overall findings as the result of the various statistical analyses of data are discussed in this section:

The fact that there was no significant difference between the pre- and post- test mean scores of the control group in the achievement test (t = 1.69; See Table 4.2) and a significant difference in the experimental group (t = 3.92 See Table 4.3) showed that there were certain qualities in the interactive approach which were absent in the conventional approach for the teaching of reading comprehension in large classes. One of the qualities could be motivation, which might have been created by the text, the teacher and the classroom atmosphere. Multifarious activity might have been another positive quality of the teaching approach, as students were channelled through various activities and tasks all through the lesson.

The comparison of the two approaches showed no significant difference (t = 0.214; See Table 4.4). This result has dismissed the claim that the interactive approach was better than the conventional approach. This deduction may seem to agree with Freeman and Richards (1993) who claimed that no approach is better than the other. A further investigation which led to the pooling together of the two groups mean scores at the pre- and post- test, pre- and feedback, post and feedback levels, using the achievement

test, showed that there were significant differences in their performances at all levels. This changed the idea of non-significant previously held. It can now be established that there are certain qualities in the two approaches which are good for teaching reading comprehension in large classes. The significant difference in the pre- test, post- test and feedback mean scores of the two groups showed that the two approaches have been effective.

The effectiveness or non-effectiveness of the two approaches was further seen in the results of the investigations into the four micro skills. The two approaches were statistically significant in the teaching of reading for information (control group, t = 7.67 See Table 4.5, Experimental group, t = 6.34; See Table 4.6). What the teacher did in teaching this micro skill was to explain what was meant by skimming and scanning to subjects before they went to work on the text (in both groups). Her reason for doing this was that the terms seemed new to the students. This explanation might have helped students' performance in this micro skill.

The interactive approach was more effective in the teaching of the mcro skill reading for inferences (t = 1.983) while the conventional approach was better in the teaching of vocabulary (t = 2.681; See Tables 4.8 and

4.9 respectively). The two approaches showed no significant difference in the teaching of data analysis (see Table 4.10 and 4.11).

Contrary to the claim of Prabhu (1990) and Freeman and Richards (1993) that it is errorneous to say that one approach is superior to the other, this study has been able to prove that the superiority or otherwise of an approach depends among other things, on the aspect being taught. It is possible for an approach to prove superior for the teaching of one aspect of a skill or sub-skill and inferior for the teaching of the other. The results here have also confirmed the claim that effectiveness of one approach should not be judged purely on being modern or outdated (Freeman and Richards 1993).

The conventional approach might have been more effective in the teaching of vocabulary because the approach was more structurally and sententially-based and thus lent itself to the mastery of discrete vocabulary items. The modern approach was more communicative, discoursal and put less emphasis on the discrete vocabulary forms.

The interactive approach was more effective in the teaching of reading for inferences in the experimental group possibly because of the extensive group work that was done in this class, which made the students to utilise and share their knowledge of the world in relation to the reading passage. Thus at the end of the lesson, each

student was better informed than at the beginning through the shared various experiences and cross fertilization of ideas.

In the control group, individual students answered the questions. The interaction was teacher - student and student - teacher. The utility of students' knowledge of the world as shared in groups was not adequate enough. Students could not benefit from the additional in-put from their fellow students and thus did not gain much from one another.

The two approaches have not been statistically significant in the teaching of reading for data analysis. This might have been caused by the low level of students with regard to anything that demands intense interpretation of statistical and mathematical data. Extra practice in class time and remedial measures to up-lift the linguistic level of the students would be needed to improve the students data analytical ability.

Closer investigations however, revealed that the interactive approach was more effective in data analysis in the experimental class. The computed t value was 1.62 in the experimental group and 1.1 in the control group. Although the differences were not statistically significant, it is possible to see some degree of improvement in the experimental group as shown in the computed t- value

which is in the same value bracket with the critical value of t = 1.980. The interactive approach, if well handled, could be better than the conventional approach in the teaching of reading for data analysis in large classes. Similar result is shown by the ANOVA statistics. The F value was 2.62 and the critical F = 3.17 at $p < 0.05$. The F value for this micro skill was not statistically significant, but as Van Dalen (1979: 527) says, whenever we obtain an F of more than 1, the difference exceeds chance alone, as the independent variable did cause a change in the dependent variable. There are therefore qualities in the interactive approach which may be recommended for the teaching of this micro skill.

The findings of this study confirm the claim of Freeman and Richards (1993:209) and Smith (1970) that the comparison of classroom practices provide only partial information and that research which has attempted to establish the efficacy of one methodology over another has been largely inconclusive. What can be done is to recommend the aspects of the conventional and those of the interactive approaches, which can be mixed or used differently, for teaching reading comprehension in large classes. The compromise between the conventional and the interactive approaches, which have been proved effective in this study are listed on the next page.

(A) CONVENTIONAL APPROACH:

(i) Plenary Session: Depending on the topic, the teacher can teach particular aspects of the text to the whole class in order to make students understand how to handle the text. Examples have been the teaching of skills of skimming and scanning for information which has proved effective in this study.

The other example is the teaching of vocabulary skills in the control group, which proved more effective than the experimental group.

(ii) Individualized work: The idea of making students to work on their own, to tackle the text and answer comprehension questions without any external help made students to have a lot of time for the work during the one hour class.

(B) THE INTERACTIVE APPROACH:

It seems there are many aspects of this approach which, if adequately handled, can aid the teaching of reading comprehension in large classes. Some of these are:

1. Social and interactive skills: These have been found to have made students to interact freely with peers, with little or no teacher interference in this study. If these skills are intensified in

the teaching of reading comprehension, students will be able to practise reading comprrehension on their own within and outside the classroom situations, even when the teacher is absent.

2. Leadership qualities: These are qualities that are promoted through the social skills which may enhance the performance of students. Through role play and simulation, various group activities, presentations, displays and reports, students were made to play leadership roles in this study, which were beneficial to one another. The brilliant ones helped the weak ones and shyness together with reticence were virtually swept under the carpet.

3. The playway approach: This is embedded in the interactive approach. Reading comprehension skills were learnt in the playway thus making them more permanent in the students' mind. Retrieval of such pieces of information when needed was easy and spontaneous as observed in this study.

4. Individualized work: This helped to prepare the students individually for the text, so that when they got to group work, they were able to contribute adequately to the various discussions in the groups.

5. Group and peer activities:- It was found in this study that group and peer activities helped students reading comprehension ability. This was ably demonstrated in the micro skill reading for inferences, where students' interaction through group and peer activities made them to achieve significantly.

The results from the interactive approach have confirmed the element of universality that if new teaching approaches are properly injected into teaching, there could be improvement in the performance of students. This agrees with most of the scholars such as Obianika (1981), Hamp-Lyons (1985), Steffenson (1988) and Gbenedio (1993). The results that were significant in the experimental group confirm the notion that new approaches cannot be thrown overboard because they are new. The results that were also significant in the control group signify that the old approach cannot be sidetracked because it is old. Each of the approaches contains elements that can challenge and sustain the reading comprehension ability and interest in the students.

The subjects' responses to the attitude questionnaire in the two groups were found to be positive in majority of cases. This points to the type of qualities embedded in the two approaches that have proved effective. The five variables were:

1. attitude to large classes;
2. attitude to reading comprehension in large classes;
3. the micro skills of reading for information, inferences, vocabulary or word power and data analysis;

4. management of large classes; and

5. teaching approaches.

Variable one had one hundred percent positive responses in both groups at the pre- and post- treatment levels. Variable two had low Positive attitude responses at pre- treatment and high Positive attitude at post- treatment in the control group, but high positive attitude at both the pre- and post- treatment at the experimental group. This might have been due to the effect of the interactive approach on the subjects in the experimental group. According to this group, the interactive approach did not change the positive attitude of the group at the post- treatment level.

The students' attitude to variable three are discussed below:

(a) Reading for information: There were low Positive responses to this variable at both the pre- and post-treatment levels in both groups. This means the treatment has not changed their attitudes to the teaching of this sub-skill at the end of treatment. The reason for this may be the psychological frame of mind of subjects as far as the effect of the treatment was concerned. The t- test statistics showed a significant difference in the two groups. This was corroborated by the ANOVA statistics used in the study. In any case, scholars have come up with results that showed no apparent

relationship between academic performance and attitude (Jackson, 1968:8-11).

(b) Reading for inferences:- At the pre- treatment level, in the control group, the result was high positive, but this later changed to low Positive attitude at post-treatment. It means that treatment did not meet up with the high expectations they had before the teaching sessions. Change of opinion was observed after the treatment sessions. In the experimental group, the pre-treatment was also highly positive but averagely positive at the post treatment level. This means that the high opinion the students had regarding the effectiveness of the approaches was not sustained at the end of the treatment. Secondly, the difficulty that students encountered in the reading tasks might have led to the change of opinion or attitude at the end of the treatment.

(c) Vocabulary or word power: The attitude in both groups at the pre-and post-treatment levels were highly positive. Subjects might have been impressed by the treatment sessions which sustained their interest in the skill all through the lessons.

(d) Data Analysis: Students' responses to this micro skill were low Positive in both groups at both the pre-and post-treatment levels. This might not be unconnected with their loss of interest in things that would make

them to elicit information from statistical data. It means therefore, that while the approaches could sustain the interest of the students in some reading sub-skills, they failed to do so in other skills.

Subjects' attitudes to the fourth variable which is management of large reading comprehension classrooms were highly positive in both groups at the pre- and post-treatment levels. The reason for this might have to do with the competent way the reseacher (teacher) managed both classes all through the study. This means that effective management of large classes does not depend solely on the approaches used but the teacher's initiative and effective managerial skills.

Teaching approaches is the last variable. With the conventional, the responses were low Positive at both the pre and post treatment levels for the control group.

Regarding the interactive approach, the responses were highly positive at both the pre and post-treatment levels in the experimental group. The reason for the low Positive attitude in the control group could have been that subjects were tired of the conventional approach and expected something different.

It also means that the conventional had some flaws that the students did not like and that the interactive approach has some inherent characteristics which can attract students and sustain positive attitude.

## 4.6 Summary

This chapter was able to use the various statistical modes described in chapter three to analyse the data collected using the two instruments developed for the purpose, that is the achievement reading comprehension test and the attitude questionnaire.

Three hypotheses were tested in the study. The first two were based on eliciting information from the reading comprehension test. The third was based on the attitude questionnaire. Five variables were adduced from the third hypothesis, and they were effectively treated.

The feedback exercise found that students' achievement improved significantly from stage to stage in spite of time lag between the levels.

The overall finding of this research exercise was that none of the two approaches was better than the other when pooled together and subjected to statistical analyses. The interactive approach proved effective in teaching some sub-skills of reading comprehension, while the conventional approach was effective in the teaching of some other sub-skills.

# CHAPTER FIVE

## 5.0 SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSIONS

This chapter gives a brief summary of the study with reference to the research questions raised at the beginning of the study. This is followed by the linguistic, psycholinguistic, sociolinguistic and pedagogical implications of the study to reading comprehension, in general, and for the teaching of reading comprehension in large classes and at the Polytechnic level, in particular. The implications for the teacher of reading comprehension in large classes are also discussed.

The chapter ends with the major contributions of the study to knowledge, recommendations for further studies and conclusions.

### 5.1 Summary

This study set out to investigate the effects of two approaches on the teaching of reading comprehension in large classes at the Kaduna Polytechnic. Subjects which comprised two groups, the control and experimental, were chosen from the departments of Accounting and Business Administration of the Polytechnic.

The conventional approach to the teaching of reading comprehension in large classes was employed in the control group, while the modern interactive approach was used in the experimental group.

In order to effectively compare these two approaches, specific research questions were asked:-

(1) Which of the two approaches (conventional and interactive is better for teaching reading comprehension in large classes?

(2) What is the effect of the two approaches on the micro skills of reading for information, inferences, vocabulary or word power and data analysis?

(3) Which of these approaches has a greater positive effect on the attitude of the students?

The researcher followed the research design and the theoretical framework adopted for the study. In each teaching session, all the necessary aspects of reading comprehension earlier mentioned in the review of literature (See Sections 2.2 to 2.5) were incorporated and utilised. Lesson plans were drawn up for each class in each lesson (See Appendix C for sample lesson plans).

The research instruments used were the achievement or reading comprehension test and an attitude questionnaire. The achievement test was applied at three levels of pre-test, post- test and feedback. The attitude questionnaire

was administered at the pre- and post- treatment levels. The conventional approach was used for teaching in the control group and the interactive approach in the experimental group.

The results of the findings on the first question showed that the conventional approach was not effective in the control group while the interactive approach was statistically significant in the experimental group. When the two groups mean scores were compared, the t test statistics showed no significant differences between them. The latter finding therefore nullifies the first assumption of one of the two approaches being better than the other.

Results of the various investigations into the micro skills showed that the two approaches were statistically significant in teaching reading for information. The conventional approach was more effective in the teaching of vocabulary or word power and the interactive approach was better for the teaching of inferences skills. The two approaches were not effective for teaching reading for data analysis. These findings showed that the two approaches were at par. They were 50 - 50 successful in the investigations because each of them was significant in two of the four sub-skills investigated.

Investigations conducted through the use of the students' attitude questionnaire, showed that majority of the responses favoured the teaching of reading comprehension in large classes.

Responses to the five variables adduced from the questionnaire used for investigation, were highly positive, averagely positive or low Positive attitudes. The interactive approach however appeared to be better favoured in the responses than the conventional approach.

## 5.2 Implications for the linguistic, psycholinguistic, sociolinguistic and pedagogical components of reading comprehension

In order to make reading comprehension an enjoyable learning experience, the linguistic, psycholinguistic, sociolinguistic and pedagogical components of it must be handled very effectively. The implications of these components for the teaching of reading comprehension in large classes are discussed in this section.

(a) The linguistic component:- The study observed that reading effectiveness has to take cognisance of linguistic aspects such as those that involve the teaching of sentence structures, words that carry grammatical meaning such as the inflections, meaning, the auxiliary, articles and conjunctions. The effect of these on reading comprehension should be the concern of the reading comprehension teacher.

As much as possible syntactic and lexical information should be made use of to unravel the message in the text. Paradigmatic relationships such as noun declensions as in;

man man's men

woman woman's women

boy boy's boys

Also verb conjugations as in:

write writing wrote written

*cook cooking cooked cooked*

(Tomori, 1982:21)

should be adequately taught to help broaden students' vocabulary and grammatical skills. Syntagmatic relationships at the levels of:

(1) Phonology, as in the word 'man' which is made up of the three phonemes of /m/ /æ/ /n/; 'meat' = /m/ /i:/ /t/;

(2) Morphology when words are structurally joined together as in 'building' = /build/ + /ing/; development = /develop/ + /ment/. Each of these words is made up of two morphemes.

(3) Syntax, the collocation of items is shown like Noun + Verb; Noun + Verb + Object; Subject + Verb + Object combinations (Wilkins, 1972:127).

(b) Psycholinguistic component: Psycholinguistics perceives reading comprehension as an interaction between language and thought (Obah,1985:278). The way the text motivates students was found in this study to be an importan t aspect that should not be neglected in the reading comprehension classroom. The teacher's motivating methods should elicit the interest of students voluntarily in order that reading achievement can be enhanced. It was discovered in this study that students' negative attitude

to reading comprehension might be changed for the better through the type of classroom atmosphere and ego boosting activities developed in varied classroom situations.

(c) Sociolinguistic component: The various social interactions that existed in the classrooms were used to enhance learning in this study. It means that for effective teaching of reading comprehension in large classes, chosen texts should have a kind of relevance with students' area of interest. Students in majority of cases should be familiar with the language and the socio-cultural aspects of the text. Where this is not possible, students should be guided to read the text with the understanding of the socio-cultural aspects through guided questions and answers on the particular socio-cultural items in the text. Texts with cross-cultural background should be explained with care in order to make students appreciate such cultures that are involved. The type of role plays and simulation that accompany the text should reflect what obtains in the real world as was the case in the present study.

(d) Pedagogical component: The method of teaching reading comprehension in large classes should be varied as the text demands. If there are aspects that deserve to be treated with appropriate component of the conventional or interactive approach, it should be used. There should be no rigidity in the choice of methods of teaching. The

ability of the teacher to be resourceful and initiative in his methods will surely enhance reading comprehension skills. The teacher should not allow the band-wagon effect to dictate his approach. He should look at any approach critically before choosing what to use. This study has shown that some aspects of the conventional and interactive approaches are good for teaching.

5.3 Implications for reading comprehension:

Reading comprehension should among other things aim at making the reader to answer the questions on the text because reading comprehension texts are language texts. In this study, different responses were expected for the various questions on the different micro-skills investigated. Reading comprehension in the present study is, therefore, made up of the text, the questions and the reader's responses. It was possible, especially in the experimental group, for the reader to understand the text, and make possible hypotheses which can help him to give a coherent account to the various aspects of the text. This area of reading comprehension should be learnt and mastered, especially in the reading comprehension large classes and reading in general.

Reading comprehension should be approached from an integration of sentential and discoursal routes rather than one route at the expense of the other. Texts should be treated in the discoursal way, it should also generate deep insight into the nature of inferences in discourse (Urquhart, 1987:393).

Reading comprehension should however, not overlook sentential and below sentential elements, especially where they influence meaning very significantly. Graphophonic cues which can help the reader to relate the text to his background knowledge and make him to search his memory for similar semantic or syntactic items that will make him to comprehend the text, should not be ignored. In the present study, especially in the experimental class, students discussed and had insights into the various aspects of discourse which were necessary for answering comprehension questions below the text.

Another implication of this study for reading comprehension is that texts should in majority of cases be task-based. In the present study, this was ably demonstrated in the teaching of reading for inferences in the experimental class where students' performance was statistically significant. Although, the conventional approach, competed very well with the interactive approach, the mean scores of the interactive approach were in majority of cases greater than those of the conventional approach (See Sections 4.21 - 4.26). Tasks within a text can lead to communicative reading comprehension. Although, some texts lend themselves to tasks more easily than others, the reading comprehension teachers should work hard to choose texts that can easily lead to tasks or that are task-based in order to make their work easy. This task-based aspect was adequately looked into in this study.

One other implication of this study is that of text interpretation. This, the study proposes, should be based on the reader's existing knowledge, as it is very difficult most of the time to really understand texts without understanding the language of the text. Specialised texts, like the ones on Accountancy and Finance or Business in this study, should be handled with a lot of care as Zuck and Zuck (1984) "have produced evidence that content specialists rate texts in their fields in ways *different from* EFL teachers" (In: Urquhart 1987:407).

## 5.4 Implications for Teaching Reading Comprehension in Large Classes

The implications this study has for the teaching of reading comprehension in large classes are summed up in Coleman's (1989:6) statement that "the larger a teacher's largest class is, the more tolerant of large classes that teacher is likely to be". In the present study, the large classes made the teacher to be innovative in her teaching methods. The results of the study have made the researcher to come to the conclusion that particular aspects of the two approaches investigated could make for better teaching and learning of reading comprehension in large classes. The teacher does not have to believe that scholars have said that one approach is superior to the other and so buy the idea wholesale. He has to try the idea and see how effective it could be in his own classroom.

Group and peer work could be effective for reading comprehension. In fact they formed part of the aspects of the interactive approach recommended for teaching in this study. They helped to bring a lot of liveliness and learning into the classroom. Group and peer activities could help students' reasoning, thinking and speaking abilities, which would in turn aid reading comprehension ability. The teacher is not seen as the all-knowing man, but as a guide, monitor and director of students' activities.

Individualized work has been seen in this study as very valuable, in both groups. It was used at the beginning of each lesson in the experimental group, where students had to work first on individual basis before working with peers. Individualized work should be encouraged as students are going to work on their own in writing class tests, examinations (both internal and external) with no-one coming in to help them in any way. In fact, the goal of any approach is the achievement of a situation where the student is able to read and comprehend on his own confidently without any interference from any other sources apart from himself and the text.

In order to make reading comprehension effective in large classes, students working on different parts of the text proved rather effective. In this study, when it was discovered that students reading comprehension level was very low, the various groups in the experimental class were asked to work on different

The compromise approaches should be practised by the reading comprehension teacher in situations that are within and outside the classroom environment since it was discovered in this study that there were certain aspects of the conventional and interactive approaches that were of great benefit, the compromise approaches are highly recommended for teaching reading comprehension in large classes.

The shop experience, described in Coleman (1989:18 - 19) is an example of the compromise approach. Students were in groups of three and given topics to work upon and later the groups brought reports on each topic to the class for the consumption of the members. Students really went a-shopping for information.

Another compromise approach which could be practised by the reading comprehension teacher is the written-oral interaction, (Coleman, 1989:16) where students will be given assignments. They come back to the class to submit questions on the work done. The teacher sorts out the questions and together with the students' responds to them later. All these attempts make the teacher and students to know that the classroom is not the only place for learning and that "language learning is assumed to take place outside the context of the language lesson" (Coleman, 1989:14 - 24).

The various approaches or management skills that are flowing around today on reading comprehension and large classes are very interesting but not necessarily the most adequate. There is a need to agree with Coleman (1989:23) that the reading teacher should make use of these approaches as appropriate in various classroom situations.

This may mean exploring interactive models in certain situations, compromise approaches in others, choral involvement where applicable as well as individualization where practicable. Large classes should give vent to innovation and activity on the part of the teacher and students alike.

Learners in the reading comprehension large classes should be given appropriate responsibilities in the new or old approaches. The innate tendencies of learners should be allowed to develop and be stretched through other communicative activities both inside and outside the classroom. Ability to use one's natural tendencies are of value to everyone in today's world and not only in the reading comprehension large classes.

One important implication of all this is that reading comprehension in large classes should be seen as an enjoyable learning subject, instead of a subject that provides nothing but noise making and wasting of time. Students should be guided to think actively both inside and outside the classroom, without necessarily waiting for the teacher to do everything for them. The teacher, in most cases, acts as a monitor or guide, especially where self-discerning, innovation and creativity are demanded of the students. He should blend the good aspects of both the conventional and the interactive approaches, in order to improve his teaching of reading comprehension. He should not allow the large class to be a source of discouragement to him, but rather, a challenge

which he must use his innovative, creative and critical abilities to face squarely.

Engaging students with tasks in the classroom either as individual or groups is more profitable in some reading comprehension situations, than allowing students to wait for the teacher for answers to reading comprehension questions or problems, except in situations where only the teacher can give the appropriate answer.

The reading comprehension teacher's vocabulary level should be higher than that of his students. He should know the areas of linguistics where his students are deficient and be ready at all times to meet the deficiency. Vocabulary problems are better tackled in context. The method of doing this should be made known to the students. They should also be guided to do this correctly. The problems of syntax and semantics which are also linguistic, can be handled through student-student interaction with minimal teacher interference. A lot of exercises including games, the cloze procedure, true/false, yes/no types of activities could be very useful in helping students to achieve the best in the large class reading comprehension classroom.

Students' attitude to reading comprehension can be changed for the better through motivating and exciting texts. The teacher can also motivate students to work hard by example. Students' interest in the lesson can be sustained through role

minimise the carry-over reading comprehension problems from the secondary schools to the polytechnic.

Remedial courses should be organised by the institution for students who are deficient in English in order to improve their linguistic quality which is expected to enhance their chances of success in all the other courses they offer in the institution.

Extensive reading should be encouraged. It should in fact, form part of the topics in the syllabus for this group of students. Extensive reading will broaden the vocabulary knowledge as well as the knowledge of the world which have been found to be highly deficient in this study. At present, the NBTE syllabus for this class OND II excludes extensive reading.

Reading in the library should be encouraged. Students should be given reading assignments that will take them to the library to look for books, journals and magazines that are both within and outside their professional interests. The implication of this is that the polytechnic should equip the library with useful books, journals and magazines that will help scholarship. At present, the library is sparsely stocked with books on reading comprehension.

There are many workshops and seminars on the teaching of reading, reading comprehension and English Language Teaching in large classes. The polytechnic should encourage

the teaching staff to attend these programmes, both within and outside the country. At present, bureaucractic measures make sponsorship for these programmes difficult.

The seating arrnagement in the lecture theatres was found to be poor during this study. Most of the plastic chairs, though joined together and tacked to the floor, were broken and uncomfortable for learning. Better quality chairs should therefore, replace the low quality ones.

There were the problems of poor acoustics and lighting in the classrooms. The researcher had to personally appeal to the maintenance officer to ensure adequate lighting facilities in the classrooms used for the study. The teacher's chair was too far from the students and there was no microphone for the teacher's use. The effects of all these were that students strained their eyes to read, or crowded together near the few places where lighting facilties were adequate for reading. In the case of the researcher, she had to strain her voice in order to get through to the students. The implication of all these uncomfortable situations is that the large class institution should strive to provide a more conducive classroom atmosphere for both the staff and students in order to facilitate better teaching and learning.

## 5.7 Implications for Small class - Large class Relationship

This study has been able to throw more light on the argument that what can be done in a large class can also be done in a small class. It has shown that there are certain

teaching-learning activities and issues that are peculiar to large classes. Some of these are discussed in this section:

a) A higher degree of tolerance: This is required in large classes than in small reading comprehension classes because of the large number of students with varying degrees of peculiarities;

b) Decision on class management: The teacher must exercise greater class control, be ready to reduce noise to the barest minimum and cater for the variety of individual behaviour patterns;

c) More economic use of materials: A lot of sharing goes on in the large class more than in the small class. The few teaching materials provided had to be stretched and shared judiciously across the large number of students in the class in the present study. This kind of sharing may not be necessary in a small class;

d) More innovative approach: The teacher had to be innovative in this study. She had to think of new ways of making her lessons interesting and capture the attention of large number of students in order to engage all the students in productive activities throughout the lesson to cut off boredom; and

e) Diverse Evaluative Strategies: More diverse evaluative strategies were employed in the large class in this study than would have been done in small classes. These the researcher did through students marking one another's papers; students taking on more evaluative responsibilities than would be necessary in small classes.

The large number of students and their diverse nature were utilized to greater advantage during group, peer and whole-class discussion and evaluation sessions.

## 5.8 Major Contributions of This Study to Learning

The major contributions of this study to learning are in the areas of table of specification, instrumentation, research design and theoretical frame work adopted.

The table of specification drawn up in this study, was original to this researcher in the area of course design. Other researchers can make use of this table as a kind of guide for their own work or study in the future. Course designers and curriculum planners may find this contribution useful in their search for better teaching of reading comprehension at the tertiary level.

The two test instruments used in this study are part of this study's contribution to learning and knowledge. The

that one approach is better than the other until they have investigated thoroughly and are sure of their claim. In the case of this study, it is advised that the reading comprehension teacher should look for the positive aspects in each approach, blend them together or use them differently in teaching comprehension for effectiveness. These positive aspects are shown in the Table 5.1 below.

TABLE 5.1 The Positive Aspects of the two Approaches for Teaching Reading Comprehension in Large Classes

| | Conventional Approach | | Interactive Approach |
|---|---|---|---|
| 1. | Teaching the whole class basic points/ things about the lesson | 1. | Working in pairs, groups and individually |
| 2. | Greater focus on indivualized work | 2. | Leadership qualities developed through role play and simulation. |
| 3. | Effective student-teacher interaction | 3. | Use of background knowledge through the application of the dis-coursal way for solving reading comprehension problems. |
| 4. | Interesting or stimulating lectures or teaching of reading comprehension. | 4. | Using language as flexibly as possible |

The interactive approach was more effective in the teaching of the micro skill reading for inferences (See Tables 4.5 and 4.6). It is therefore recommended that the teacher should handle the first part of the lesson in teaching this micro skill in large classes.

None of the approaches showed any significant difference in the micro skill reading for data analysis. (See Tables 4.14, 4.11 and 4.12). Van Dalen (1979) claims however, that when an F is greater than 1, as is the case here it means that there are qualities in the variable that had effected changes, other than chance alone. This shows that certain good qualities are within the two approaches which have not been fully tapped by this study, which could effect significant differences. The value for the two approaches, showed that the interactive has a higher t value of 1.511 in the experimental group as against that of t = 0.11 in the control group. This shows that the interactive approach has more potentials for teaching this micro skill than the conventional approach, as 1.511 is in the same value bracket of the critical t value of 1.980. So, the interactive approach is recommended for the teaching of this micro skill.

The responses from the attitude questionnaire showed that students in both groups favoured the teaching of reading

comprehension in large classes (See Table 4.35) at the post treatment level. This might have been caused by the . freedom, leadership and social skills that were promoted in the experimental group. In the control group, the reason could have been a kind of change of attitude from the low Positive at the pre-treatment to high positive attitude at the post treatment level. It is therefore recommended that the social skills which the interactive approach promotes, should be retained in the teaching of reading comprehension in large classes.

The study revealed that the cloze procedure and the pre-reading exercises were new to the students. Teachers should understand the good qualities of the cloze procedure and therefore use the cloze test as a pragmatic and integrative reading comprehension procedure. This agrees with the assertion of the New York City Board of Education (1982:1) that the cloze test can be administered to groups as well as individuals. It can be read silently without any disturbance from any other student in the classroom. There is no need to decode every word in order to get full comprehension of the text. Recall is not a critical factor as comprehension is processed as the passage is being read. There is no need for teacher constructed comprehension questions. It is easy to construct a cloze test from a variety of materials and the teacher does

adults. Although, present experiences are preparing them for their future roles in the society, they need to enjoy the texts set before them in order to appreciate, understand and interpret the message contained in such texts. Knowledge of psychology is therefore recommended for the reading comprehension teacher, especially the one who teaches large classes.

In conclusion, it is necessary for all that are concerned with the teaching of reading comprehension to be prepared to work hard and adjust to the large class situation in the areas of text selection, teaching, supervision and evaluation. They should be ready to dispel what Caprio (1989:39 -40) calls the myths that students can learn only within the classroom, that teachers must control learning and that students will not study unless they are tested.

## 5.10 Limitations in this Study

The study is not without some limitations. Two departments out of ten were chosen for the study; one hundred and eighty students out of six thousand formed the subjects for the study; and the study took place in only one unit of one polytechnic in Nigeria. The generalizations of this study therefore cannot be stretched too far, but the findings are however, valid for Polytechnics with similar characteristics.

The second limitation is that of the researcher teaching both groups (C & E). This could give room to bias as well as

contamination. Future researchers could train teachers to do the teaching instead of the researcher.

It was discovered that the pre-reading sessions and the idea of skimming and scanning for information were new to the students. This therefore limited the initial speed of comprehension of texts by the students in both groups.

The teacher was queried many times in the control group on why she had not grouped them like the experimental group. The students were taught the same thing by the same teacher. This showed that much as the researcher had controlled contamination by teaching the two groups on the same day, after class interaction could not be controlled. The two groups had been told that they were being put side by side to see a better group and that if what was learnt in one group was revealed to the other, it could be to the detriment of that group that was not careful enough. This might have been responsible for the keen competition between the groups.

There were problems with the teaching of vocabulary or word power in the two groups. Students were used to the pocket dictionary. It took a lot of supervision and moving around especially in the control group, before the problem could be solved. In spite of the fact that the teacher wrote guidelines on the blackboard for retrieving word meanings from context in both groups, a few students found the

teacher's system cumbersome and stealthily checked for word meanings from the pocket dictionary. Much as the teacher would not totally discourage the use of the dictionary, she told the students in the two approaches that the best method of getting the meaning of words was by using context cues. It may not always be possible to use the dictionary at all times and situations, and besides all these, the meaning in the context may be different from the dictionary meaning.

Another serious problem was that of a few students that could not make correct sentences, even after checking for the meanings of words from the context or even the dictionary. This was more common in the control group, as group activities took care of this in the experimental group. The teacher advised students to speak English more often to improve their spoken and written English.

Some students formed the habit of coming to the teacher at the end of class hours to ask one question or the other on the research exercise, the effect it would have on their academic life and questions on what was taught in the class. The teacher had little time for all these questions, as she had to mark the work for the control group and prepare for the next lesson.

At the beginning of the study, it was found that many of the students were not used to stretching their imagination

learners' needs (Adams, 1986); Suggestopaedia (Adamson, 1986); and the Silent Way in the large classroom (Fusako, 1986) are all new approaches to teaching and learning of ELT in large classes. As reading comprehension is an aspect of ELT, scholars can research into ways of adapting these new approaches to teach it effectively in the classroom.

(2) The study concentrated more on group work, peer work and individual activities. Other areas like whole class debate or group conferencing can be looked into by other researchers.

(3) Many audio-visiual aids were not used in this study. In fact, it restricted itself to the use of the blackboard, duster, chalk and handouts. The use of the computer, radio and video are areas that can be researched into for effective teaching of reading comprehension in large classes. Paulston and Bruder, (1987) designed programmes for teacher training with print materials. The computer can help to store information, create activity and a kind of concentration on classroom activities. Research into the use of the computer and other sophisticated audio-visual materials in the large class can start in Nigeria as is the case in China where a lot of research activities are going on in the use of computers in English language teaching and research. (Huizhong, 1985:86).

scholars like Coleman (1989) that teachers are not taught the techniques of large classes.

(8) Research activities are over-due in the area of books and materials essential for teaching reading comprehension and other language skills in large class situations.

(9) More research studies should be undertaken in the areas of reading for data analysis. It is necessary for students to know how to interpret the writer's message in graphical or statistical data.

(10) More research activities are necessary in the other language skills of listening, speaking and writing that are not covered by this study.

5.12 Conclusions:

Reading comprehension and the large class have been the two important variables investigated in this study. Particular attention has been paid to the four reading comprehension micro-skills of reading for information, inferences, vocabulary and data analysis. The independent and dependent variables of class size, two teaching approaches, achievement and attitude have been investigated through the control and experimental groups.

In spite of the fact that subjects for the study were final year students, their reading comprehension level was found to

be very low. They will need to work hard, practise many of the techniques learnt during treatment sessions in order to improve their reading comprehension skills.

The new approach being recommended is a mixture of the positive aspects of the conventional and the interactive approaches for the teaching of reading comprehension in large classes.

The findings of the present study did not agree fully with Obianika (1981), Parry and Hill (1989), Hamp-Lyons (1985) and Gbenedio (1993) who found that the other approach pitched against the traditional approach was more effective. The findings of this study did not also fully agree with Smith (1970) in Freeman and Richards (1993), who found that the superiority of one methodology over another was inconclusive. They also did not fully agree with Pillai's (1991:8) stand that "empirical evidence had not clearly demonstrated the superiority of the methods and approaches based on either the audiolingual or congnitive theories." They however, seem to agree with Scherer and Wertheimer (1964:208) who say that "on the long run, differences between methods even out and become statistically insignificant".

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# APPENDIX A

## RESEARCH INSTRUMENT

Reading Comprehension Test

Name of Candidate: .....

Department/Course: .....

.....

Age: .....

Sex. .....

General Directions:-

Candidates must not turn to the next page until the examiner tells them to do so. Four language Skills are tested here:-

1. Reading for Information
2. Inferences
3. Data Analysis
4. Vocabulary

All answers must be on this examination sheet.

The Directions for each part are printed at the beginning of the part. Read the instructions carefully before attempting the questions. Do not spend too much time on any one item or section.

NOTE: NO QUESTIONS MAY BE ASKED AS SOON AS THE EXAMINATION HAS BEGUN.

## READING COMPREHENSION, PART 'A' SCANNING

Instruction: Read the following questions first and then scan TEXT A quickly to find the answers. You need not write complete sentences for your answers. Time allowed: 5 minutes.

1. In what countries were the first attempts made to produce an internal combustion engine?

   .....

2. How were English Inventors handicapped?

   .....

3. How did most people regard early motor cars?

   .....

4. What were all early motor cars

   .....

5. Who was often seen experimenting in early motor cars about the same time as Benz?

   .....

6. When was a great step forward made regarding early motor cars?

   .....

7. What was the speed of these early cars?

   .....

8. Mention any four modern models of motor cars:

   .....

9. Mention any three disadvantages of the internal combustion engine:

   .....

10. What does "repealed" mean?

    .....

TEXT 'A'

## THE EARLIEST MOTOR CARS

It was in Germany and France that the first successful attempts were made to produce an internal-combustion engine driven by petrol. The English inventors were handicapped by a quaint old law which forbade any such vehicle to attain a greater speed than four miles an hour and compelled each one to be preceeded by a man carrying a red flag. This law was not repealed until 1886.

The earliest motor cars were looked upon as mere jokes, or as rather dangerous play things, by every one except their inventors. Some of them were single-seaters, others could carry two, or even three people, but all were noisy, clumsy, queer-looking things. When in 1888, Carl Benz, a German, produced a three-wheeled, internal combustion car, a great forward stride had been made. Another German, whose name, Daimler, is often seen on motor cars to this day, was experimenting about the same time, and testing a petrol-driven engine.

It is easy to understand how the introduction of the petrol driven engine revolutionized road transport throughout the world. Until then the necessary power to push a vehicle along could not be obtained without the cumbersome tanks and boilers and furnaces of the steam engine. The internal-combustion engine is light in weight and in size by comparison; the fuel is burned in it, so that there is no waste, like the dusty cinders of a coal-fire.

Read the Passage below carefully and answer the questions that follow:

## ACCOUNTANCY

The only purpose of accountancy is to provide information. The application of that information is a function of management and, while accountants can make a significant contribution to effective management by using their financial knowledge and experience to assist in arriving at the correct decision, they act as financial advisers.

Developments in management accounting, the application of forecasting techniques and the influence of material produced by computers, have tended to make the company accountant more a decision-taking manager than a provider of information.

It would be a great advantage to industry if managements and their accountants took a long, hard look at the information provided. In spite of its comparatively recent introduction, computer-based accounting has already created its own traditions just as a management consultant will often suggest examination of typists waste paper baskets to discover the time wasted in false starts and errors in letters, an examination of the bottom drawer and cupboards in managers' offices would probably unearth a mass of computer print-out material, probably largely unused and certainly not fully understood.

Graphs, charts and visual media can often make the significant information more effective than volumes of figures; attention to the fundamental purpose and effect of information can lead to its simplification and thus make it really useful.

The manager only really needs to know what is not going according to plan. If proper limits of tolerance are set, a mass of information can be kept from him but his attention can be drawn to those happenings which need his attention. Management by exception is not just a catchphrase: it becomes more important as the size of the business grows. It is the job of management to decide the information needed, in what form and who should receive it. The health of a business can suffer just as much from the obesity of too much confusing or misleading information as the health of a person carrying too much fat.

QUESTIONS:

1. What is the purpose of accountancy?
2. Who utilises the functions of the accountant?
3. What had made the accountant a decision-making manager?
4. In what form is the computer information?
5. Which of the following is not true according to the passage?
   (a) Both the manager and the accountant can make use of the information provided.
   (b) Neither the manager nor the accountant provides information.
   (c) Managers and accountants should examine thoroughly the information provided.
   (d) Lack of information or mis-information can lead to a waste of time.
   (e) Computers are a good source of collecting information.

Using the chart below, deduce the influence of accountancy in the following:

| ITEMS | INFLUENCE OF ACCOUNTANCY |
|---|---|
| 1. Management | |
| 2. Management Accounting | |
| 3. Computer | |
| 4. Industry | |
| 5. Business | |

## CLOZE TEST

INSTRUCTION: Fill in the gaps with appropriate words:

I sat down where the road passed by a hill top to examine my position. __1__ could see all __2__ me for miles __3__ there was no __4__ of human life. __5__ the sky the __6__ sang and then __7__ heard that hated noise __8__ .

I realised that __9__ position that I __10__ thought so good __11__ in truth be __12__, trap, for there __13__ no shelter anywhere __14__ these bare green patches, I __15__ quite still and hopeless __16__ the aeroplane came, __17__ high. It dropped several hundred feet __18__ began to circle __19__ the hill. Now __20__ was flying very low.

## CREATION OF DEPOSIT MONEY

Commercial banks can create (deposit) money through multiple expansion of bank credits. It is only possible for all commercial banks acting as a unit to create money. A single bank out of all the banking systems cannot create deposit money, unless it is a monopoly bank. That is, it is the only bank in the country, although it may have branches all over the country. In this case the monopoly bank does not lose money to other banks in creating credits.

It is possible for commercial banks to create credit money because the law requires them to keep a fractional part of the amount deposited with them. If they were to keep 100% of the amount deposited with them, it is not possible to create credits.

It is assumed that the legal reserve requirements are 20%. This means they have to keep 20% of the amount kept with them. They can give out the balance as loans and overdrafts.

Suppose a man (Mr. A) deposits ₦1,000 with Bank A. This Bank will keep 20% i.e. ₦ 200 with the Central Bank and it can lend out the remaining ₦800.00. We assume further that Mr. B. who borrowed ₦800.00 from Bank I, deposited the money with bank 2. Bank 2 will keep 20% of ₦800.00 (i.e. ₦160.00) as the legal reserve requirement. Bank 2 can lend ₦800.00 - ₦160.00 as loans and advances to Mr. C. It is also assumed that Mr. C deposits ₦640.00 with Bank 3. Following the same process bank 3 keeps (20% of ₦640 which is ₦128) and lends out ₦512 to Mr. D. It can be further assumed that Mr. D. deposits ₦512 with bank 4, which also keeps

( 20% of ₦512 i.e. ₦102.40) and lends out the balance of ₦409.60. The process continues until nothing is left to be lent out. But in the process of lending out money or creating credit by banks to the final bank, some amount of money has been created through the multiple expansion of credits.

This is explained below:

TABLE II. Multiple demand deposit creation (assuming 20% cash deposit ratio).

| BANK | DEPOSIT | AMOUNT KEPT | AMOUNT LENT OUT (NEW DEPOSITS) |
|---|---|---|---|
| 1. | ₦1,000 | ₦200 | ₦800 |
| 2. | 800 | 160 | 640 |
| 3. | 640 | 128 | 512 |
| 4. | 512 | 102.40 | 409.60 |
| 5. | 409.60 | 81.82 | 327.68 |
| 6. | 327.68 | 65.54 | 262.14 |
| 7. | 262.14 | 52.43 | 209.71 |
| All OTHER | 1,048.58 | 209.71 | 838.87 |
| | ₦5,000.00 | ₦1,000.00 | ₦4,000.00 |

QUESTIONS

A

Which of the following are true of the way banks create (deposit) money:-

(1) Through multiple expansion of bank credits

(2) Through a monopoly bank.

(3) Through the commercial bank.

(4) Through other banking avenues.

(5) Through project financing.

B

Study the table and answer the following questions:

(1) If Mr. A deposits ₦1,000 with Bank I, how much of his money will be used as deposit money? How much can be lent out?

(2) What percentage of Mr. A's money is used as deposit money?

(3) What is the bank reserve requirement meant for Mr. B's deposit in Bank 2?

(4) How much is lent to Mr. C. in Bank 3?

(5) What is the deposit money deducted from Mr. D's deposit in Bank 4?

Answers to the Comprehension questions on the reading comprehension instrument

Marking Guide for Text 'A'

INFORMATION

1. Germany and France
2. An old law which forbade a speed that was more than four miles an hour.

Vocabulary or Word Power

The Cloze Test

(1) I (2) around (3) but (4) sign (5) In (6) birds (7) I (8) again (9) my (10) had (11) was (12) a (13) was (14) in (15) sat (16) and (17) flying (18) and (19) over (20) it

Marking Guide for Creation of Deposit Money. (Data Analysis)

1. True
2. True
3. True
4. True
5. True

B

1. ₦200, ₦800
2. 20%
3. ₦160
4. ₦640
5. ₦102

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 1. I like the large class because it gives me the opportunity to interact and learn actively. | | | | | |
| 2. I prefer reading comprehension in large classes because one can solve quite a number of problems. | | | | | |
| 3. I like the large class because it helps reading to answer specific questions. | | | | | |
| 4. I prefer the large class because it does not constrain a student from reading to interpret graphs, tables, charts and maps. | | | | | |
| 5. A student can actively read to evaluate critically in a large class. | | | | | |
| 6. I like the large class because it promotes social skills | | | | | |
| 7. I prefer the large class because it helps in reducing shyness. | | | | | |
| 8. I read fast with better comprehension in a large class. | | | | | |
| 9. I prefer the large class because it promotes silent reading skills. | | | | | |
| 10. I prefer the large reading comprehension class because it encourages students to be hard working. | | | | | |

| | SA | A | U | D | SD |
|---|---|---|---|---|---|
| 11. I like the large class because it gives a lot of freedom. | | | | | |
| 12. I hate learning reading comprehension in large classes because it does not allow the teacher to have individual contacts with students. | | | | | |
| 13. I prefer the large class because it can help my leadership ability. | | | | | |
| 14 My attitude to class work can be improved through the large class. | | | | | |
| 15 I prefer reading comprehension in large classes because it enhances my self study ability. | | | | | |
| 16. I like the large class because it gives the teacher more time to attend to individual students after class hours. | | | | | |
| 17. The large class makes English comprehension more interesting because students are exposed to modern teaching techniques. | | | | | |
| 18. I like the large class because my vocabulary power can be improved. | | | | | |
| 19. The large class encourages disciplined reading habits. | | | | | |
| 20. I like the large reading comprehension class because reading for inferences can be achieved. | | | | | |

## APPENDIX C

### LESSON PLAN 1

CLASS: OND II Students CABS; Kadpoly

GROUP: Experimental Group

TOPIC: Reading Comprehension

TIME: 1 Hour

Skill to Teach: Reading for information

AIM: To teach students to locate particular pieces of information as well as read for gist in a given text.

Performance Objectives:- At the end of the lesson, students should be able to:

(a) Scan for particular ideas in the text

(b) Skim for the gist about the main idea(s) in the text.

Pre-reading Assistance:- Let the class have a lively discussion on what men can do which women cannot do.

STEP I: Students to scan through the passage individually for 3 minutes and tackle the multiple choice questions.

STEP II: In pairs, they should scan through the passage quickly and compare their answers.

STEP III: Let them go to their larger groups and compare their answers to the multiple choice questions. Let them skim through the passage and identify the main ideas in each paragraph.

STEP IV: Groups should exchange some of their members to discuss the sentence pattern.

STEP V: Members go back to their groups to discuss the passage and all the questions. The representative for each group or group Secretary will write down the agreed answers which will be presented to the class.

STEP VI: Group representative reads his reports. In all the activities, the teacher should be a guide, monitor and supervisor.

CLASS: OND II STUDENTS CABS, Kadpoly

GROUP: Control Group

TOPIC: Reading Comprehension

TIME: 1 Hour

SKILL TO TEACH: Reading for information

AIM: To teach students to locate particular pieces of information as well as read for gist in a given text.

Performance Objectives: At the end of the lesson, students should be able to:

(a) Scan for particular ideas in the text,

(b) Skim for the gist about the main idea(s) in the text.

Pre-Reading:- Let the class have a lively discussion on what men can do which womment cannot do.

STEP I: Give the text to the students and let them work on it individually while you sit down to collect their work.

STEP II: Collect the answer scripts from the class.

STEP III: Do the corrections with the class by showing them how to scan and how to skim for information.

STEP IV: Discuss all the questions with the class.

TEACHING READING FOR INFORMATION TO
ACCOMPANY LESSON PLAN NUMBER ONE

INSTRUCTIONS:

Scan through the following passage and answer the questions below it.

Women superior to men? Impossible, they say. This has been the verdict throughout most of the world's history. Nowadays, however, we are beginning to re-examine this verdict.

Let us go back to the fundamentals of human life. The chromosomes, small cellular bodies that contain the genes, are the starting point, since the genes contain the ingredients of our heredity. There are two kinds of sex chromosomes, X and Y chromosomes. All the female ova are made up of X chromosomes. When an X-bearing sperm fertilizes an ovum, the offspring is always female. When a Y-bearing chromosome fertilizes an ovum the offspring is always male. Now, the interesting point is that Y chromosomes are smaller and structurally less complete than the X chromosomes. Females, we can then say, develop from two large well developed chromosomes, whereas males develop from the complete X chromosome and one less satisfactory Y chromosome.

From such a defective beginning, it may be thought that the male has less chance than the female of successful survival. It is unfair to compare one child in a family with another. There is no reason to expect that the achievements of one will be the same as

those of another child in the family. Yet many parents and teachers will shower praises on an older child for some achievement, with the aim of spurring a younger one on to do likewise. If this does not result in the younger one opting out of the race altogether, it will certainly not endear the paragon to him.

Expectations on our part of unrealistic standards of behaviour may often lead to quarrels. When quarrels arise, we should be careful to what extent we have to intervene. Obviously if we sense danger we have to separate the antagonists. If possible, we should do so without apportioning blame. If everyone has a chance to cool down, it is very probable that the cause of the quarrel, and who started it, will be forgotten.

1. This passage would lead one to believe that:-

   A. Women are not superior to men

   B. Men are more likely to survive than women

   c. The difference between male and female is not decisive until the baby is born.

   D. There is no difference in the genes

   E. Women have an advantage from the beginning.

2. From the passage, one can conclude that

   A. The sex of a baby depends on the ovum

   B. The composition of the sperm decides the sex

   C. The sex of a baby depends on the chromosome carried by the fertilizing sperm cell.

   D. The sex of a baby depends on the habits of the mother before birth.

   E. All chromosomes are identical.

3. Which of the following equations would seem to represent one of the facts of sex differentiation?

   A. X + Y = Female

   B. X + X = Male

   C. Y + X = Male

   D . Y + Y = Female

   E. X + Y = Male.

4. The writer says that people are beginning to re-examine the belief that men are superior to women. What reason does he give for this?

   A. All the female ova are made up of complete X

   B. Chromosomes are responsible for sex differentiation

   C. No reason is given in the passage

   D. Women are stronger than mem.

   E. The chromosomes have just been discovered.

5. Males are said to have a defective beginning because

   A. They have some defect from birth

   B. They are formed from only Y chromosomes, which are often malformed.

   C. They have less chance of survival than the females

   D. Unlike females, males are formed from one complete X chromosome plus one less satisfactory Y chromosome.

   E. Females develop from X and Y chromosomes while males develop from just X chromosomes.

Skim through the passage and identify the main ideas of each paragraph.

III SENTENCE PATTERN:

Complete these sentences with suitable structures from the passage.

1. Chromosomes are small: .....

   .....

2. Half the sperm cells carry: .....

   and .....

3. When ..... an ovum, the offspring is always female.

4. We should do so .....

5. The cause of the quarrel .....

Answers to the comprehension questions

(1) E

(2) B

(3) E

(4) B

(5) D

LESSON PLAN Number Two

CLASS: OND II Students CABS, Kaduna Polytechnic

GROUP: EXPERIMENTAL GROUP

SUBJECT: COMMUNICATION SKILLS

TOPIC: READING COMPREHENSION

SKILL TO BE TAUGHT: READING FOR INFERENCES

TIME: 1 HOUR

PASSAGE/TEXT: PASSAGE I ON THE HANDOUT

AIM: To teach the students to develop and demonstrate inferences skills in reading comprehension

PERFORMANCE OBJECTIVES: At the end of the lesson, subjects/ students should be able to:-

(a) Identify implicitly stated information in a given text.

(b) Use their background knowledge or knowledge of the world to extract information from a given text.

PRE-READING ASSISTANCE: Discuss the pre-reading questions at the top of the passage with the class.

STEP I: Ask students to read the text individually and write answers to questions I & II.

STEP II: Let them work in pairs, reading the passage, discussing it and comparing their answers to questions I & II.

STEP III: Let them go to their larger groups to discuss the passage and compare their answers to questions I & II.

STEP IV: Let the groups be mixed up by some group members going to the other groups to discuss the passage and the questions.

STEP V: Group members should come back together to discuss the passage and the questions. Group representatives should write down the groups answers. Teacher should supervise, monitor and guide students activities.

STEP VI: Group representative presents each group's answers which may be accepted or rejected (Evaluation).

STEP VII: Group members should come together again to discuss the group's assignment.

STEP VIII: The group representative presents the group's report of the assignment to the class. Questions may be asked by members of the class which may be answered by the representative or any member of the group. The group assignment can later be displayed at the corners of the classroom for students to move around to read.

Home work/Assignment:- As at the end of the handout.

CLASS: OND II Students CABS, Kaduna Polytechnic

GROUP: CONTROL GROUP

SUBJECT: COMMUNICATION SKILLS

TOPIC: READING COMPREHENSION

SKILL TO BE TAUGHT: READING FOR INFERENCES

TIME: 1 HOUR

PASSAGE/TEXT: PASSAGE 1 ON THE HANDOUT

AIM: To teach the students to develop and demonstrate inferences skills in reading comprehension.

PERFORMANCE OBJECTIVES: At the end of the lesson, subjects/students should be able to:

(a) Identify implicitly stated information in a given text.

(b) Use their back ground knowledge or knowledge of the world to extract information from a given text.

PRE-READING:- Answer the pre-reading questions.

STEP I: Read the passage (Passage 1 on the handout) carefully and answer the questions below it.

STEP II: Collect students work for marking.

STEP III: Teacher reads the passage and picks on individual students to answer the questions. Where they fail, the teacher should supply the snswer.

Home work/Assignment:- As at the end of the handout.

TEACHING READING FOR INFERENCES

TO ACCOMPANY LESSON PLAN NUMBER TWO

READING EXERCISES

Before reading the passage answer these questions:

1. Write five things about the train.
2. The train is a means of ..... in Nigeria.
3. The passenger train carries .....
4. Students like travelling by .....
5. There are many passengers at the .....

Now read the passage and answer the questions that follow.

Ding dong: Ding dong: The bell marked the arrival in fifteen minutes of the Kano Lagos train. Instinctively, people became eager to catch first sight of the train. Long before it arrived passengers and their friends had been pouring into the station. The late arrivers were, however, still battling to weigh their luggage and pay their fares. Those who merely came to meet or say good-bye to their friends were at the booking office collecting their platform tickets, without which they would not be able to leave the station.

After doing all this, people stood around chatting. Schools were to re-open on that day and so students formed the majority of the passengers still in holiday mood, they gossiped gaily as they recounted their holiday experiences. People who were at the Lafenwa-Abeokuta railway station for the first time explored every-where with their eyes. The whole station was alive with people; some were sitting

down, others were walking up and down, selling, laughing and gossiping. One worker in a Khaki uniform stood with whistle in mouth; another with flag in hand, and yet another was holding a staff to perform its ceremonial handing over to the in-coming train. The rhythmical noise of the approaching train grew louder and louder, until, with a long and piercing whistle, it came to a halt at the station. The disembarking passengers alighted from the train, and quickly collected together their loads. Those who were travelling left their seats briefly in search of refreshments. Travellers, particularly the teenagers, grew sad as the moment to part with their loved ones came. Well wishers were already trying to find the friends and relatives they had come to welcome. It was an exciting moment.

Soon the passengers who had arrived and those who had come to welcome them began to leave the station by car or taxi. At this time too, two police constables were on duty at the railway station for the dual purpose of keeping the peace and hunting down light-fingered men who might be loitering there, but they were there too to help the passengers in whatever way they could.

The Kano-Lagos train with its long coaches had now been lying in the station for a quarter of an hour. Suddenly, the whistle blew. The travellers got into the train again, the doors were shut and the diesel - operated engine was in action again. As the train left Lafenwa station, there were farewell waves and shouts until it had disappeared from sight on the last lap of its journey to Lagos.

QUESTIONS: (I)

1. What made the station particularly crowded this day?

2. Mention four different types of people at the station.

3. Explain in not more than one sentence what you understand by "Rhythmical noise"

4. Suggest a title for the passage.

5. Replace the underlined words in the passage with the appropriate word or phrase:

   (i) instinctively, (ii) halt (iii) alighted (iv) dual

   (v) light-fingered

6. Which of the following cannot be inferred from the passage?

(a) The Kano-Lagos train had been in the station for half an hour.

(b) The Kano-Lagos train had been in the station for a quarter of an hour.

(c) The travellers got into the train again.

(d) The train left Lafenwa Station.

(II)

Write True or False

1. The bell marked the arrival of the train.
2. There were no late arrivers at the station.
3. Friends came to say good-bye at the station.
4. Friends collected platform tickets.
5. Schools re-opened that day.
6. The Lafenwa-Abeokuta railway station is in Lagos State.
7. Travelling by train brings many people together.
8. One of the means of transport in Nigeria is the train.
9. The station master is not a railway worker.
10. The engine driver sits with the passengers.

(III)

Group Work

Grp I: In your group , discuss the activities at the Abeokuta Lafenwa railway station.

Grp II: Discuss the *usual activities from your experience*, at Kaduna railway station.

ASSIGNMENT:

After the school hours, go to the railway station and see what happens there, *especially* at the *peak period*.

Answers to the comprehension questions:-

(1) The station was perticularly crowded because schools were re-opening and students were returning to their schools by train.

(2) Passengers and their friends, railway workers, policemen and light-fingered men.

(3) Rhythmical Noise means regular succession or recurrent noise.

(4) The Lafenwa Railway station

(5) (i) Instinctively = naturally

(ii) halt = stop

(iii) alighted = came down

(iv) dual = double

(v) light-fingered men = thieves

(6) (a)

(II)

(1) True (2) False (3) True (4) True (5) True (6) False (7) True (8) True (9) False (10) False.

TEACHING VOCABULARY TO ACCOMPANY

LESSON PLAN NUMBER THREE

Read this passage and answer the questions that follow:

> Many people fear that certain animals which add colour to our earth will become extinct before long. Elspeth Huxley here discusses this question and describes the Mara, a game sanctuary in Tanganyika.

In Tanganyika lions are threatened with extinction, but on the Mara, where game is still under tsetse protection, they rule the bush-clad gullies and thorn studded plains. We saw our first lioness within half an hour of leaving our shady camp on the Telek river. She was sitting under a bush beside a stream and three small cubs rolled about beside her; disregarding them, she gazed out over the plain with that detached, contemptuous impassivity of lions, her eyes focused on the far horizon. Deliberately, slowly, she turned her glance towards our Land-Rover, her eyes hard and opaque. Then she withdrew her glance, a glance neither fearful nor angry, interested nor concerned - a glance of utter indifference and resumed her watch on the horizon, somewhere beyond our sight? Or was she waiting for a signal?

Beyond the gully lay an open sunlit plain knee-high with red oat grass, which grows here wherever bush is kept down by fire. The Masai burn these plains every year to encourage fresh pasture for their sheep, which do not mind tsetse flies; their cattle, which do, stay out. Without these fires, the red oat grass would succumb

to stubborn, vicious forms of bush. Vegetation here is in a state of balance easily upset. Fires, correctly timed, are beneficial; even man can be beneficial when he exercises moderation. The trouble comes when the balance is upset.

QUESTIONS:

I. Go through the text to give the meaning of the following words as used in the passage:

(a) threatened

(b) Extinction

(c) game

(d) disregarding

(e) detached

(f) Impassivity

(g) indifference

(h) succumb

(i) Plains

(j) Vicious.

II. Give one word from the passage for each of the following expressions:

(a) not allowing light to pass through

(b) look down upon

(c) a narrow channel

(d) harmony of design or proportion

(e) Line at which the earth and the sky seem to meet.

Answers to comprehension questions

I. (a) threatened = warned
(b) extinction = elimination
(c) game = hunting
(d) disregarding = unmindful of
(e) detached = removed
(f) impassivity = carelessness
(g) indifference = disinterest
(h) succumb = give way
(i) plains = lowland areas
(j) vicious = useless

II. (a) opaque
(b) contemptuous
(c) gully
(d) balance
(e) horizon

LESSON PLAN 3

CLASS: OND II STUDENTS CABS; KADPOLY

GROUP: EXPERIMENTAL GROUP

SUBJECT: COMMUNICATION SKILLS

TOPIC: READING COMPREHENSION

SKILL TO TEACH: VOCABULARY

TIME: 1 HOUR

AIM: To teach students to retrieve vocabulary that has been taught in the lesson

Performance Objectives:- At the end of the lesson, students should be able to:-

(1) Explain relations between parts of the text through lexical cohesion devices.

(2) Identify relations between parts of the text through grammatical cohesion devices.

(3) Explain the meanings of the difficult words in the passage.

Pre-Reading:-

I: Ask students to name some of the animals they saw when they last went to the zoo.

II: Spelling Game

Write these on the blackboard

Spell by adding more letters:-

--reaten, dis--gard, ho--zon, moderat---, bal--ce, impass--e, indif--rence.

STEP I: Teacher to write the following guidelines on the blackboard and ask students to utilise them for getting at the meaning of the difficult words in the text:-

(a) The use of prefix and suffix e.g. threatened
threat (root word)
(en (suffix)
(ed (suffix + past tense)

(b) Getting meaning through the immediate context e.g. sentence 1.

(c) Through words that build up a particular picture. In this text, words that show the attributes of the lion - of fearlessness, courage and keenness.

STEP II: Ask students to handle the text and the questions individually.

STEP III: In pairs, let them work on the text and the questions comparing notes.

STEP IV Let them go to their large group to discuss the text and the questions.

STEP V: Ask students to go to any member of the class they had not worked with to discuss the text and the questions.

STEP VI: Group members should come together again to decide on the correct answers for the questions. Their representative will present the answers to the whole class for evaluation.

STEP VII: Assignment:

Check through your dictionary for ten new words. Write their meanings and try to use them in sentences.

CLASS: OND II STUDENTS, CABS Kadpoly

GROUP: CONTROL GROUP

SUBJECT: COMMUNICATION SKILLS

TOPIC: READING COMPREHENSION

SKILL TO TEACH: VOCABULARY

TIME: ONE HOUR

AIM: To teach students to retrieve vocabulary that has been taught in the lesson.

Performance Objectives:- At the end of the lesson, students should be able to:

(1) Explain relations between parts of the text through lexical cohesion devices.

(2) Identify relations between parts of the text through grammatical cohesion devices.

(3) Explain the meanings of the difficult words in the passage.

| | | |
|---|---|---|
| Pre-Reading: | | As for the Experimental Group. |
| STEP | I: | As for the Experimental Group. |
| STEP | II: | Ask the students to individually read the text silently and answer the questions in the written form. |
| STEP | III: | Collect the answer scripts. |
| STEP | iv: | Read the text to the class and teacher and students to answer the questions. |
| STEP | V: | Assignment as for the experimental group. |

TEACHING READING FOR DATA ANALYSIS TO

ACCOMPANY LESSON PLAN NUMBER FOUR

Read this passage and answer the questions that follow:

THE PRICE OF A COMMODITY

In the case of almost all commodities, the quantity demanded increases as the price of the commodity falls, income, tastes and *all other prices remaining constant*. As its price falls, a commodity becomes cheaper relative to its substitutes and it is therefore easier for it to compete against these substitutes for the household's attention. If, for example, carrots become very cheap, the household will be induced, up to a point to buy more carrots and less of other vegetables whose prices are now high relative to the price of carrots.

To illustrate the relation between the quantity of a commodity demanded and its price, we shall take imaginary data for the prices and quantities of carrots. The table is an example of what is called a demand schedule. It shows the quantity of carrots that a household would demand at six selected prices. For example, at a price of ₦40.00 per ton, the quantity demanded is 10.25lbs per month. Each of the price quantity combinations in the table is given a letter for easy reference.

We can now plot the data from the table on a graph, with price on the vertical axis and quantity on the horizontal one. In the graph we have plotted the six points corresponding to the price-quantity combinations shown in the table. Point 'N' on the

graph shows the same information as the first row of the table: at ₦20.00 a ton, 14lbs of carrots will be demanded by the household each month. Point 3'f' shows the same information as the last row of the table: when the price is ₦120.00 a ton, the quantity demanded will be only 2.5Lbs per month.

QUESTIONS :

1. Complete these sentences from the information given in the text:
   (a) If ....., then it will become cheaper relative to its substitutes.
   (b) If the commodity becomes cheaper relative to its substitutes .....
   (c) If carrots cost ₦60.00 per ton, then the quantity demanded .....

2. After reading the text, study the table and the graph and answer the following questions:

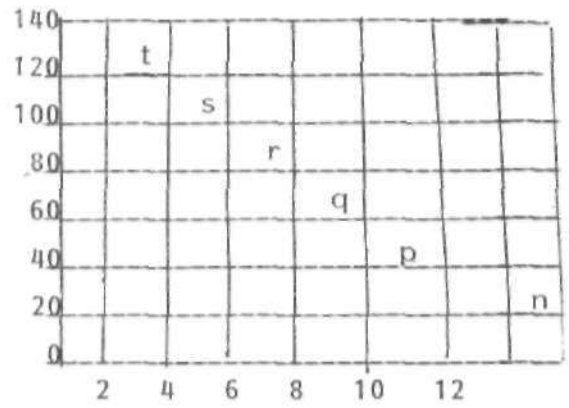
TABLE

A household's demand schedule of carrots

| | Price ₦ Per ton | Quantity demanded (lbs per month) |
|---|---|---|
| n | 20 | 14.0 |
| p | 40 | 10 25 |
| q | 60 | 7.5 |
| r | 80 | 5.25 |
| s | 100 | 3.5 |
| t | 120 | 2.5 |

GRAPH

A household's demand curve for carrots




(a) At what point is the highest demand for carrots?

(b) What quantity of carrots is demanded by each household at ₦20.00 a month?

(c) Between points 2 and 8, what was the price of carrots?

(d) What is the total demand for carrots between the prices of ₦20.00 and ₦100.00?

(e) What is the difference between the demands for carrots between points t and r?

II. Plot a graph to show this household's demand curve for carrots between points p and s.

ANSWERS TO THE COMPREHENSION QUESTIONS (NO.4)

1. Sentence completion

(a) If the price of a commodity falls

(b) It is easier for it to compete against its substitutes

(c) Will be 7.5lbs

2.(a) point n

(b) 14lbs

(c) ₦60.00

(d) 36,5lbs

(e) 3lbs

LESSON PLAN IV

CLASS: OND II students CABS; Kadpoly

GROUP: Experimental Group

SUBJECT: Communication Skills

TOPIC: Reading Comprehension

TIME: One Hour

SKILL TO TEACH: Data Analysis

AIM: To teach students to answer questions on given data through the process of transcoding tables diagrams or graphs.

PERFORMANCE OBJECTIVES: At the end of the lesson, students should be able to:

(a) Answer questions based on given data which are in the form of a graph, table or diagram.

(b) Answer questions by transcoding information into graph.

Pre-reading:- Ask students to say what they know about the law of demand and supply.

STEP I: Let students tackle the text and the questions individually.

STEP II: Let them work in pairs on the text and the questions.

STEP III: Let groups exchange some of their members to discuss the text and the questions.

STEP IV: Let groups exchange some of their members to discuss the sentence patterns.

STEP V: Ask them to go back to their various groups and write down the groups' answers to the questions.

| | | |
|---|---|---|
| STEP | VI: | Group representative to read the answers for the group to the class. This will be evaluated by the whole class including the teacher. The representative will also plot the graph as agreed upon by the group, on the blackboard. All mistakes/ errors will be corrected by the students with minimal teacher intervention. |
| STEP | VII: | Class assignment. After the school hours go to the market to enquire about the effect of sales promotion on the goods sold in the market. Then write a report on your findings, to be read in the next lesson. |

| | |
|---|---|
| CLASS: | OND II STUDENTS CABS, Kadpoly |
| GROUP: | CONTROL GROUP |
| TOPIC: | COMMUNICATION SKILLS |
| TIME: | ONE HOUR |
| SKILL TO TEACH: | DATA ANALYSIS |
| AIM: | To teach students to answer questions on given data through the process of transcoding tables, diagrams or graphs. |

PERFORMANCE OBJECTIVES: At the end of the lesson, students should be able to:

(a) Answer questions based on given data which are in the form of a graph, table or diagram.

(b) Answer questions by transcoding information into graph.

Pre-Reading: Teacher and students say what they know about the law of demand and supply.

STEP I: Give the text to students to read silently and write down the answers to the questions.

STEP II: Teacher collects students answers for marking.

STEP III: Teacher reads the text and picks on students to answer the questions. Teacher corrects students mistakes and helps to supply the correct answers where they fail.

STEP IV: After the school hours go to the market to enquire about the effect of the various sales promotions on goods being sold in the market. Bring the report of your studies to the next class.

APPENDIX D

NBTE SYLLABUS
OND II 1ST SEMESTER



PROGRAMME: GENERAL STUDIES

COURSE TITLE: USE OF ENGLISH II

CODE: GNS 201

PRE-REQUISITE: GNS 102

COURSE UNIT: GNS 30

DURATION: THREE HOURS PER WEEK (45 HOURS PER SEMESTER)

SCHEDULE: 1ST SEMESTER

GOAL(S): This course is designed to consolidate the student's competence in the use of English. At the end of this course the student should understand the rules and techniques of English

GENERAL OBJECTIVES:

On completion of this course the student should:-

1,0 Understand the rules of grammar.
2,0 Know how to write good essays.
3.0 Comprehend the difference between denotative and connotative uses of words.
4.0 Understand the techniques of comprehension and summary writing.

| GENERAL OBJECTIVES | SPECIFIC (PERFORMANCE) OBJECTIVES |
|---|---|
| 1.0 Understand the rules of grammar | On completion of this course the student should be able to identify Grammatical Rules. |
| | 1.1 Identify parts of speech in context. |
| | 1.2 Explain the functions of parts of speech. |
| | 1.3 Provide suitable synonyms and antonyms for words. |
| | 1.4 Use a good dictionary for various purposes, e.g. word meanings, sentence patterns, usages, etc. |
| | 1.5 Define phrases. |
| | 1.6 Identify the different types of clauses. |
| | 1.7 Define clauses |
| | 1.8 Identify different types of clauses. |
| | 1.9 Define sentences. |
| | 1.10 Identify different types of sentences. |
| | 1.11 Use simple compound and complex sentences. |

| GENERAL OBJECTIVES | SPECIFIC (PERFORMANCE) OBJECTIVES |
|---|---|
| 2.0 Know how to write good essays | ESSAYS:<br>2.1 Identify the topic sentence in a paragraph<br>2.2 Write topic sentences on given subjects<br>2.3 Develop sentences into paragraphs<br>2.4 List steps in organising an essay<br>2.5 Identify the features of argumentative and expository essays<br>2.6 Identify the features of narrative and descriptive essays<br>2.7 List ways of achieving coherence between paragraphs<br>2.8 Write good essay outlines<br>2.9 Write a good essay on a given topic with effective topic sentences. |
| 3.0 Comprehend the difference between denotative and connotative uses of words. | DENOTATIONS AND CONNOTATIONS:<br>3.1 Explain the term denotation<br>3.2 Identify words used denotatively<br>3.3 Explain the term connotation<br>3.4 Identify words used connotatively<br>3.5 Use words connotatively<br>3.6 Compare denotative with connotative usage. |
| 4.0 Understand the techniques of comprehension and summary writing. | COMPREHENSION AND SUMMARY WRITING:<br>4.1 Answer questions on comprehension passages at a higher level of difficulty.<br>4.2 Give contextual explanations of statements from the texts<br>4.3 Identify figures of speech in given passages<br>4.4 Identify colloqualisms, slangs and jargons<br>4.5 Read through a given passage eliminating unnecessary materials<br>4.6 Write, within a specified length, a good summary of a given passage. |

## APPENDIX E

### PILOT STUDY SCORES
### READING COMPREHENSION TEST

| NAMES | PRE TEST | POST TEST | PRE TEST | POST TEST | PRE TEST | POST TEST | PRE TEST | POST TEST | PRE TEST | POST TEST | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | INFORMATION 10 MARKS | | INFERENCE 10 MARKS | | VOCABULARY 30 MARKS | | DATA ANALYSIS 10 MARKS | | TOTAL 60 MARKS | TOTAL 60 MARKS | d | $d^2$ |
| 1. AJALA | 8 | 9 | 7½ | 8½ | 14 | 15 | 8 | 9 | 37½ | 41½ | 4 | 16 |
| 2. MARO | 8 | 10 | 4 | 5½ | 13 | 13 | 7 | 8 | 32 | 36½ | 4½ | 20.25 |
| 3. MARTINA | 10 | 10 | 6 | 7½ | 13 | 15 | 5 | 7 | 34 | 39½ | 5½ | 30.25 |
| 4. KABIR | 8 | 8 | 7 | 7½ | 8 | 14 | 6 | 8 | 29½ | 36 | 6½ | 42.25 |
| 5. SALAU | 9½ | 9½ | 9½ | 8½ | 14 | 13 | 6 | 7 | 39 | 38 | -1 | 1 |
| 6. FADA | 10 | 10 | 4½ | 8½ | 14 | 18 | 6 | 8 | 38½ | 40½ | 2 | 4 |
| 7. SAFIYA | 7 | 9 | 5 | 9½ | 14 | 16 | 9 | 8 | 34 | 43 | 9½ | 90.25 |
| 8. DASHE | 8 | 8 | 7½ | 9½ | 14 | 16 | 9 | 9 | 38½ | 42½ | 4 | 16 |
| 9. SAIDU | 10 | 9 | 5 | 7 | 5 | 7 | 2 | 2 | 22 | 25 | 3 | 9 |
| 10. DANTANI | 8 | 8 | 9 | 7½ | 12 | 14 | 6 | 4 | 35 | 33½ | -1½ | 2.25 |
| 11. EDITH | 8 | 9 | 7 | 9 | 11 | 13 | 5 | 7 | 31 | 38 | 7 | 49 |
| 12. BILIKISU | 7 | 9 | 6 | 8 | 13 | 15 | 6 | 9 | 32 | 41 | 9 | 81 |
| TOTAL = | 101.5 | 107.5 | 87 | 96.5 | 145 | 169 | 75 | 87 | 403 | 455.5 | 57.5 | 361.25 |
| $\bar{x}$ = | 8.46 | 8.96 | 7.25 | 8.04 | 12.08 | 14.08 | 6.25 | 7.25 | 33.58 | 37.96 | | |

Pre-test total = 403
Post-test total = 455.5
Mean of Pre-test = 33.58
Mean of Post-test = 37.96

Standard Deviation = 5.67
Variance = 32.12
t = 5.95
Signif. Level = 1.80 $P < .05$

## APPENDIX F

### FORMULAE USED IN THE PILOT STUDY

1. *Formula for 't' related sample*

$$t = \frac{d}{\sqrt{\frac{N\Sigma d^2 - (\Sigma d)^2}{N - 1}}}$$

**Where:**

$d$ = Sum of the differences between each paired observation

$d^2$ = The square of the differences between each paired observation.

2. Formula for standard deviation.

$$\sqrt{\frac{\Sigma(x_1 - \bar{x})^2}{n - 1}}$$

3. Pearson's correlation co-efficient r

$$r = \frac{\Sigma x_1 y_1 - \frac{\Sigma x_1 \Sigma y_1}{n}}{\sqrt{\left[\Sigma x_1^2 - \frac{(\Sigma x_1^2)}{n}\right]\left[(\Sigma y_1^2 - \frac{(\Sigma y_1)^2}{n}\right]}}$$

# APPENDIX G

## PILOT STUDY SCORES FOR THE ATTITUDE QUESTIONNAIRE

| QUESTIONS | $Ex_1$. PRE-TEST SCORES | $Ex_2$. POST-TEST SCORES |
|---|---|---|
| 1. | 47 | 51 |
| 2. | 46 | 43 |
| 3. | 38 | 45 |
| 4. | 35 | 35 |
| 5 | 41 | 46 |
| 6. | 50 | 49 |
| 7. | 47 | 49 |
| 8. | 34 | 39 |
| 9. | 30 | 28 |
| 10. | 48 | 53 |
| 11. | 36 | 42 |
| 12. | 46 | 48 |
| 13. | 47 | 46 |
| 14. | 45 | 49 |
| 15. | 43 | 43 |
| 16. | 30 | 31 |
| 17. | 47 | 46 |
| 18. | 46 | 53 |
| 19. | 32 | 45 |
| 20. | 32 | 46 |

# APPENDIX H

## CORRELATION OF TEXTS FOR READING COMPREHENSION TEST (PILOT STUDY)

The Spearman's rank order correlation co-efficient was adopted. The formula is:

$$r = 1 \frac{- 6(d^2)}{N(N^2 - 1)}$$

I DATA ANALYSIS

Texts 1 & 2 correlated at r = 0.84
" 2 & 4 " at r = 0.49
" 2 & 3 " at r = 0.78 ✓
" 3 & 1 " at r = 0.52

II VOCABULARY POWER

Texts 1 & 2 = 0.189
" 3 & 4 = 0. 98
" 1 & 3 = 0. 20
" 2 & 4 = 0.811 ✓

III INFORMATION

Texts 1 & 2 = 0.15
" 1 & 3 = 0.78 ✓
" 3 & 4 = 0.05
" 2 & 4 = 0.432

IV INFERENCE

Texts 3 & 4 = 0.27
" 1 & 2 = 0.84 ✓
" 1 & 3 = 0.20
" 4 & 2 = 0.52

# APPENDIX HI

## COMPARABILITY TEST SCORES

### CLOZE TEST OVER 20

| | | |
|---|---|---|
| 1. | 12 | Accounts |
| 2. | 14 | |
| 3. | 13 | |
| 4. | 14 | |
| 5. | 16 | |
| 6. | 18 | |
| 7. | 16 | Business |
| 8. | 19 | |
| 9. | 11 | |
| 10. | 10 | |
| 11. | 12 | |
| 13. | 13 | |

## APPENDIX I(a)

### GROUPS IN THE EXPERIMENTAL CLASS

N = 90

6 students per group = 15 groups in all.

GROUP I

1. Ogorure Uzobe Moses
2. Adedayo Olatunji Waheed
3. Vivian Odiase Umar (F)
4. Alaci Lade Angelina (F)
5. Justina Garba (F)
6. Peter Y.G. Zakari - Group Leader

GROUP II

1. Aliyu Mohammed Halidu
2. Fatima Binta Ali (F)
3. Glory U. Johnson (F)
4. Umar Ibrahim Dika
5. Peace Ogwo (F) Group Leader
6. Ibrahim Mohammed

GROUP III

1. Adamu Dogo Yusuf - Group Leader
2. Ukeme Nelson James
3. Hussaini Ibrahim Halilu
4. Helen O. Ogalah (F)
5. Maryam Ismail (F)
6. Fayam Eunice Talatu (F)

GROUP IV

1. Bubayo James
2. Akwa-Owo Okon - Group Leader
3. Victoria Sabo (F)
4. Lydia Ojuola Fanso-Babarinsa (F)
5. Adaji Mamman Nasir
6. Caroline Jacob (F)

GROUP V

1. Hauwawu E. Abubakar (F)
2. Ishaya Rueben
3. Faruk Mohammed - Group Leader
4. John Ozor Atama
5. Khadijat H. Haruna (F)
6. Larai Abdullahi Bawa (F)

GROUP VI

1. Obaba Samuel Umaru
2. Emeka L.J. Onjehe
3. Rekiya M. Hussaini (F) - Group Leader
4. Joseph Attahiru
5. Irene Noruwa (F)
6. Maimuna Musa (F)

GROUP VII

1. Maimuna Musa (F)
2. Sherifat Y. Mohammed (F)
3. Maikudi Ali Aminu
4. Salamatu Salisu (F)
5. Ibrahim A. Jama'a
6. Goma Awalu Shehu - Group Leader

GROUP VIII

1. Ukumi Janet (F)
2. Aminu Ahmed
3. Adams Idris Tahir
4. Gaius Danladi Dasan
5. Rita R. Orkuma (F) - Group Leader
6. Arewa Olubunmi Blessing (F)

GROUP IX

1. Mahmud Aliyu Mohammed
2. Mujidat Aliyu (Mrs) (F) - Group Leader
3. Victoria Bisi Ajiboye (F)
4. Aliyu A. Ibrahim
5. Bashir Moh'd Ali
6. Hurera Isa Kaita (F)

GROUP X

1. Zainab Salau (F) Group Leader
2. Lionel O. Yueme
3. Oseni Olajide
4. Mainu Gambo
5. Egungbohum Ajibike (F)
6. Uchenna Ikeji (F)

GROUP XI

1. Anna Paul Zoaka (F) Group Leader
2. Ashu Roland Ashu
3. Umaru Saleh Adamu
4. Omale A. Benjamin
5. Ngodoo Atetan (F)
6. Taiye B. Olatunde (Mrs) (F)

GROUP XII

1. Stephen K. Ibiejemite - Group Leader
2. Mkurtar Alubem
3. Yahaya Audu Bojude
4. Sadiq Osuwa Jibril
5. Kemi Morenike Famola (F)
6. Hannatu Mustapha (F)

GROUP XIII

1. Catherine Anyebe (F)
2. Gyuse Linda Dooshima (F)
3. Reuben Attah - Group Leader
4. Peter Abah Agbo
5. Magaji Alhassan
6. Avong J. Bobai

GROUP XIV

1. Rachel R. Bafai (F)
2. Moh'd Mukhtar Umar - Group Leader
3. Momoh Jimo Salihu
4. Obasa Oloye Justin
5. Oyidi Abel
6. Khadijat Hamid O. (F)

GROUP XV

1. Bamgboye Soji Oluwaseni
2. Moh'd R. Sharubutu - Group Leader
3. Yusuf Demisiya
4. Grace Adams (F)
5. Peter A. Achaka
6. Rose Lami Peter (F)

MALE 49 FEMALE 41

## APPENDIX I (b)

## STUDENTS IN THE CONTROL GROUP

N = 90

1. Richard Tope Oladipo
2. Lukeman D. Ibrahim
3. Nuhu S. Karo
4. Dudu Moh'd Mustapha
5. Salamatu I. Imana (F)
6. Usman Alhaji Saidu
7. Modupe Olowoniyi (F)
8. Larai Abubakar Sanusi (F)
9. Adegboyega R. Funke (F)
10. Solomon I. Akut
11. Foluso Ologundudu
12. Lawrence Adamu Manu
13. Hassan Gadi
14. Pius Mancha
15. Abu Onotu
16. Saratu Isa (F)
17. Sule M. Damina
18. Malgwi M. Nziwahyel
19. Magaji Y. Bakori
29. Adeiza R. Tenufa
21. Justin D. Katung
22. Adeogun Tunde
23. Ndace Mohammed
24. Yusuf Y. Yusuf
25. Rakiya M. Kadir (F)

26. Martha Kile (F)
27 Akinwande Adijat (F)
28. Asabe Diya Yakubu (F)
29. Musa Dunlya Mudu
30. Rabi Abba Rimi (F)
31. Abdullahi M. Rufai
32. Dangombe Emmanuel
33. Ali Adamu Isimbabi
34. Mwuese B. Abayol (F)
35. Bello Funke Janet (F)
36. Kevin Linus
37. Cheyere Obiyo (F)
38. Hassan N. Musa
39. Dorcas M. Daniel (F)
40. Adebayo Dunmoye
41. Godwin Thompson
42. Hadiza Abdul (F)
43. Fatima K. Bagudu (F)
44. Hadiza Abubakar (F)
45. Hauwa Abdulkarim (Mrs) (F)
46. Adeniyi A. Olufunke (F)
47. Rabi Garba S. (F)
48. Abdusalaam Sa7ad
49. Maimuna Usman (F)
50. Adamu Shuaib
51. Mohammed Rabiu
52. Paul O. Omale

53. Buhari A. Abimbola
54. Usman D. Mohammed
55. Danladi Lamah D.T.
56. Abdullahi Kasim, M.
57. Hamadu T. Haruna
58. Isiaka Hamidu
59. Mohammed Dauda
60. Dlai Ogochukwu (F)
61. Gbenga Ojukannaiye
62. Habiba Abubakar (F)
63. Usman P. Yusuf
64. Ali Bellow Abubakar
65. Bello Gambo
66. Belabo D. Ann (F)
67. Fatima Yahaya (F)
68. Odion L. Ehimare
69. Mary L. Achimugu (F)
70. Aiyetan E. Kehinde (F)
71. Hauwa Abdullahi (F)
72. Christianah Iyortye (F)
73. Idris Fatima Tani (F)
74. Grace Obokhale (F)
75. Bala Esther Galadima (F)
76. Ochigbo Ada Kate (F)
77. Eucharia Osuman (F)
78. Lydia Alhassan (F)
79. Aisha Musa Musawa (F)

80. Zainab Dantoro (F)
81. Moh'd Sanni Babayo
82. Amodu Emmanuel
83. Buba Dauda Ali
84. Tijjani M. Baba
85. Faith Esther Fwah (F)
86. Akpa Ladi Lillian (F)
87. Salamatu Sule (F)
88. Hassana Ibrahim (F)
89. Samaila D. Kogi
90. Nuhu Sule.

MALE 50

FEMALE 40.

Corr. of the test.
Pre-Test 0.602
Post-Test 0.618
Feedback 0.860

APPENDIX J GROUP A

| S/NO | AGE | SEX | FATHER'S EDUCATION | MOTHER'S EDUCATION | COMPATIBILITY TEST OVER 20 | ACHIEVEMENT TEST (TOTAL) | | | TEACHING VARIABLES (PRE-TEST) | | | | ATTI-TUDE QUES-TION-NAIRE | | TEACHING VARIABLES (POST TEST) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 40 | 40 | 40 | 10 | 10 | 10 | 10 | 100 | 100 | 10 | 10 | 10 | 10 |
| | | | | | | PRE-TEST | POST TEST | FEEDBACK | INFORMATION | INFERENCES | VOCABULARY | DATA ANALYSIS | PRE-TREATMENT | POST-TREATMENT | INFORMATION | INFERENCES | VOCABULARY | DATA-ANALYSIS |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 1. | 24 | M | 3 | 2 | 8 | 22 | 17½ | 25 | 7 | 3 | 3 | 9 | 64 | 87 | 8 | 1 | 3½ | 5 |
| 2. | 30 | M | 1 | 1 | 8 | 21½ | 22 | 22 | 9 | 4½ | 2 | 6 | 64 | 76 | 9 | 4½ | ½ | 8 |
| 3. | 23 | F | 2 | 2 | 13 | 20 | 25½ | 25 | 8 | 5½ | 1½ | 5 | 80 | 69 | 7 | 7½ | 6 | 5 |
| 4. | 22 | F | 1 | 1 | 9 | 22½ | 21 | 22½ | 7 | 9 | 2½ | 4 | 71 | 94 | 7 | 5 | 6 | 3 |
| 5. | 23 | F | 4 | 1 | 9 | 23 | 23½ | 24 | 8 | 3 | 4 | 8 | 62 | 48 | 9 | 5 | 4½ | 5 |
| 6. | 26 | M | 5 | 2 | 5 | 17 | 17 | 18 | 7 | 3½ | 3½ | 3 | 73 | 72 | 7½ | 6 | 3½ | 0 |
| 7. | 27 | M | 6 | 6 | 7 | 16½ | 12½ | 17 | 7 | 2½ | 1 | 6 | 80 | 68 | 7½ | 3 | 1 | 2 |
| 8. | 23 | F | 3 | 2 | 7 | 19½ | 21½ | 21 | 7 | 6 | 2½ | 4 | 47 | 57 | 8 | 6 | 2½ | 5 |
| 9. | 20 | F | 1 | 1 | 12 | 10 | 12½ | 13½ | 1½ | 1 | 3½ | 4 | 55 | 62 | 6 | 3½ | 0 | 3 |
| 10. | 27 | M | 1 | 1 | 8 | 25 | 23½ | 25 | 9 | 6 | 2 | 8 | 67 | 64 | 6 | 6 | 4½ | 7 |
| 11. | 21 | M | 4 | 2 | 9 | 21½ | 22½ | 22 | 8 | 4 | 1½ | 8 | 70 | 60 | 7 | 5½ | 5 | 5 |
| 12. | 23 | F | 6 | 5 | 8 | 20½ | 22 | 22 | 7 | 4 | 4½ | 5½ | 48 | 88 | 9 | 3½ | 4½ | 5 |
| 13. | 28 | F | 3 | 2 | 9 | 25½ | 26½ | 26 | 9 | 6 | 5 | 5½ | 48 | 63 | 10 | 5½ | 4 | 7 |
| 14. | 25 | M | 5 | 5 | 12 | 25 | 26½ | 27 | 9 | 5½ | 4½ | 6 | 60 | 48 | 9 | 6 | 4½ | 7 |
| 15. | 25 | F | 6 | 5 | 8 | 21½ | 25 | 26½ | 9 | 3½ | 3 | 4 | 70 | 78 | 9 | 4½ | 6½ | 5 |
| 16. | 20 | F | 6 | 5 | 7 | 23 | 24 | 24 | 8 | 8 | 4 | 3 | 51 | 77 | 9 | 5 | 4 | 6 |
| 17. | 20 | F | 1 | 1 | 5 | 20 | 21 | 21 | 8 | 5½ | 2½ | 4 | 82 | 79 | 7 | 3½ | 4½ | 6 |
| 18. | 22 | F | 4 | 3 | 10 | 16½ | 23 | 16½ | 8 | 2½ | 2 | 4 | 86 | 82 | 9 | 5½ | 5½ | 3 |
| 19. | 23 | F | 2 | 1 | 15 | 27 | 25 | 27 | 10 | 6 | 5 | 6 | 57 | 73 | 9 | 5½ | 5½ | 3 |
| 20. | 23 | M | 4 | 2 | 11 | 23½ | 23 | 25 | 9 | 6 | 4½ | 4 | 68 | 67 | 9 | 4 | 5 | 5 |
| 21. | 23 | F | 5 | 4 | 14 | 23½ | 28 | 30 | 9 | 4 | 5½ | 5 | 70 | 70 | 10 | 7 | 6 | 5 |
| 22. | 23 | M | 2 | 2 | 10 | 14½ | 15 | 16 | 6 | 2½ | 3 | 3 | 51 | 58 | 10 | 0 | 3 | 2 |
| 23. | 23 | F | 1 | 2 | 10 | 21½ | 28 | 29 | 8 | 5 | 3½ | 5 | 82 | 65 | 10 | 7 | 6 | 5 |
| 24. | 20 | F | 4 | 2 | 9 | 19 | 21 | 22 | 8 | 4½ | 2 | 4½ | 86 | 60 | 8 | 6 | 3 | 5 |
| 25. | 24 | M | 3 | 2 | 10 | 20 | 23½ | 24 | 4½ | 2½ | 7 | 5 | 57 | 61 | 9 | 5½ | 4½ | 4½ |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26. | 21 | M | 5 | 4 | 10 | 18 | 21 | 25 | 8 | 4 | 2 | 4 | 68 | 63 | 8 | 3 | 4 | 6 |
| 27. | 23 | F | 4 | 3 | 12 | 21½ | 21½ | 22 | 7 | 5½ | ½ | 8 | 70 | 78 | 8 | 3 | 4½ | 6 |
| 28. | 24 | M | 4 | 3 | 14 | 22 | 22 | 22½ | 9 | 4 | 3 | 6 | 62 | 66 | 8 | 6 | 3 | 5 |
| 29. | 21 | M | 2 | 2 | 8 | 20 | 19 | 21 | 7 | 4 | 2 | 7 | 65 | 66 | 10 | 3½ | 1½ | 4 |
| 30. | 23 | M | 1 | 1 | 11 | 18½ | 20½ | 21½ | 9 | 2 | 2½ | 7 | 71 | 79 | 9 | 4 | 2½ | 5 |
| 31. | 29 | F | 3 | 3 | 8 | 17 | 19 | 20 | 7 | 3½ | 2½ | 4 | 88 | 78 | 8½ | 2 | 4½ | 4 |
| 32. | 21 | F | 2 | 1 | 9 | 21 | 21 | 21½ | 8 | 3 | 2 | 8 | 80 | 75 | 7½ | 4½ | 3 | 6 |
| 33. | 23 | M | 5 | 5 | 9 | 22½ | 22 | 22 | 8 | 5 | 5½ | 4 | 56 | 68 | 7½ | 5½ | 3 | 6 |
| 34. | 24 | M | 1 | 1 | 7 | 25 | 27 | 27½ | 9 | 7 | 4 | 5 | 59 | 62 | 8 | 6 | 8 | 5 |
| 35. | 24 | F | 1 | 1 | 7 | 23 | 22 | 22 | 7 | 7 | 4 | 5 | 68 | 72 | 7 | 4½ | 3½ | 7 |
| 36. | 29 | M | 1 | 1 | 11 | 20½ | 21½ | 22 | 8 | 3½ | 4 | 5 | 50 | 53 | 7½ | 7 | 1 | 6 |
| 37. | 24 | F | 2 | 2 | 8 | 22½ | 24½ | 24 | 6 | 7 | 4½ | 5 | 67 | 70 | 9 | 5 | 4½ | 6 |
| 38. | 22 | M | 3 | 2 | 7 | 24 | 22 | 22 | 8 | 5 | 5 | 6 | 77 | 53 | 8 | 7 | 1 | 6 |
| 39. | 22 | F | 1 | 1 | 7 | 19½ | 18 | 18 | 8 | 4½ | 3 | 4 | 43 | 56 | 8½ | 3 | 3½ | 3 |
| 40. | 20 | F | 3 | 2 | 9 | 21 | 21½ | 21½ | 8 | 5 | 2½ | 5 | 55 | 66 | 7½ | 7 | 1 | 6 |
| 41. | 21 | F | 1 | 2 | 13 | 21 | 24½ | 25 | 5 | 4 | 5 | 7 | 48 | 47 | 7 | 5 | 4½ | 8 |
| 42. | 26 | M | 5 | 2 | 9 | 22 | 22 | 23 | 6 | 7 | 3 | 6 | 74 | 78 | 9 | 4 | 4 | 5 |
| 43. | 22 | F | 2 | 1 | 14 | 31½ | 28½ | 28½ | 10 | 8 | 6½ | 7 | 47 | 50 | 9 | 6½ | 8 | 5 |
| 44. | 22 | M | 6 | 5 | 10 | 17½ | 18 | 20 | 7 | 5 | ½ | 5 | 62 | 62 | 8½ | 3 | 3½ | 3 |
| 45. | 22 | F | 3 | 2 | 12 | 21 | 22 | 23 | 8 | 5 | 2 | 6 | 82 | 80 | 8 | 5 | 3 | 6 |
| 46. | 23 | F | 6 | 2 | 13 | 26 | 26½ | 27 | 8 | 6 | 6 | 6 | 76 | 76 | 8 | 5 | 6½ | 7 |
| 47. | 22 | M | 3 | 1 | 11 | 21 | 23½ | 24 | 8½ | 3½ | 5 | 4 | 73 | 66 | 9 | 4½ | 4 | 6 |
| 48. | 21 | M | 1 | 1 | 15 | 27½ | 28 | 28½ | 9 | 5½ | 7 | 6 | 77 | 73 | 8 | 6½ | 8 | 5½ |
| 49. | 24 | M | 2 | 2 | 13 | 23½ | 25½ | 26½ | 8 | 5½ | 4 | 6 | 66 | 56 | 9½ | 3 | 4 | 9 |
| 50. | 22 | F | 1 | 1 | 9 | 26½ | 27 | 28 | 8 | 5 | 5½ | 8 | 62 | 64 | 8 | 6 | 8 | 5 |
| 51. | 30 | M | 5 | 1 | 13 | 28 | 28½ | 28½ | 8 | 5½ | 5½ | 9 | 81 | 71 | 10 | 5½ | 6½ | 6½ |
| 52. | 22 | M | 5 | 2 | 4 | 24½ | 26½ | 26½ | 9 | 5½ | 5 | 5 | 57 | 56 | 8½ | 6½ | 6½ | 5 |
| 53. | 24 | F | 6 | 6 | 14 | 19 | 21 | 21 | 7 | 5½ | 1½ | 5 | 68 | 68 | 8 | 5 | 3 | 5 |
| 54. | 24 | F | 3 | 2 | 13 | 25 | 25½ | 26 | 7 | 7 | 6 | 5 | 78 | 70 | 10 | 5 | 4½ | 6 |
| 55. | 24 | M | 1 | 1 | 8 | 20½ | 20½ | 21 | 7 | 5 | 4½ | 4 | 51 | 63 | 6 | 5 | 4½ | 5 |
| 56. | 22 | F | 1 | 1 | 13 | 26½ | 25½ | 26½ | 8 | 6 | 5½ | 7 | 48 | 59 | 8 | 5½ | 5 | 7 |
| 57. | 23 | M | 4 | 2 | 6 | 20½ | 25½ | 26 | 8 | 5½ | 2 | 5 | 57 | 70 | 10 | 5 | 5 | 5½ |
| 58. | 21 | M | 6 | 5 | 5 | 21 | 22 | 22 | 7 | 0 | 7 | 7 | 55 | 62 | 7 | 4½ | 6 | 5 |
| 59. | 23 | M | 3 | 1 | 11 | 19 | 22 | 20½ | 7 | 5½ | 2½ | 4 | 49 | 53 | 9 | 5 | 3 | 5 |
| 60. | 25 | F | 5 | 5 | 12 | 23½ | 27 | 27 | 7 | 5 | 4½ | 7 | 54 | 65 | 10 | 5 | 6 | 6 |
| 61. | 22 | F | 6 | 5 | 12 | 26½ | 22 | 27 | 8 | 6 | 5½ | 7 | 67 | 75 | 8 | 5 | 5 | 4 |
| 62. | 25 | M | 6 | 5 | 12 | 22 | 22 | 24 | 8 | 5 | 4 | 5 | 55 | 67 | 7 | 5 | 5 | 5 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63. | 23 | F | 1 | 1 | 7 | 24 | 26 | 26 | 6 | 6 | 4 | 8 | 50 | 78 | 10 | 5½ | 3½ | 7 |
| 64. | 22 | F | 4 | 3 | 10 | 17 | 18 | 20 | 7 | 2 | 4 | 4 | 59 | 58 | 8 | 4 | 2½ | 3 |
| 65. | 25 | M | 2 | 1 | 9 | 25 | 23 | 25 | 9 | 5½ | 4½ | 6 | 55 | 71 | 9 | 4 | 6 | 4 |
| 66. | 23 | F | 5 | 2 | 12 | 24 | 25½ | 25 | 6 | 3 | 7 | 8 | 59 | 54 | 9½ | 5½ | 3½ | 7 |
| 67. | 22 | M | 5 | 4 | 10 | 24½ | 26 | 26 | 8 | 3½ | 5 | 8 | 58 | 56 | 9 | 5 | 5 | 7 |
| 68. | 22 | M | 2 | 2 | 12 | 18½ | 19 | 19½ | 5 | 5½ | 2 | 6 | 71 | 76 | 5 | 3½ | 5 | 5 |
| 69. | 26 | M | 1 | 2 | 9 | 23½ | 25½ | 26 | 7 | 3 | 6½ | 7 | 68 | 63 | 9 | 3½ | 5½ | 7½ |
| 70. | 21 | F | 4 | 2 | 9 | 31 | 28½ | 30 | 9 | 7½ | 6½ | 8 | 77 | 86 | 10 | 6 | 5½ | 7 |
| 71. | 22 | F | 2 | 2 | 8 | 14 | 18 | 19½ | 5 | 3 | 3 | 3 | 63 | 63 | 7 | 4 | 6 | 1 |
| 72. | 24 | F | 2 | 2 | 5 | 22 | 22 | 23 | 8 | 5½ | 3½ | 5 | 73 | 73 | 7 | 6 | 3 | 6 |
| 73. | 23 | F | 2 | 2 | 9 | 23½ | 26 | 26 | 8 | 7 | 4½ | 4 | 88 | 86 | 9 | 5 | 4 | 7 |
| 74. | 27 | M | 1 | 1 | 10 | 27½ | 28 | 28 | 7 | 8 | 5½ | 7 | 48 | 51 | 9 | 6 | 6½ | 6½ |
| 75. | 27 | M | 2 | 1 | 11 | 27½ | 27½ | 27½ | 8 | 8 | 4½ | 7 | 60 | 63 | 8 | 6½ | 8 | 5 |
| 76. | 23 | M | 2 | 2 | 13 | 22 | 26 | 25 | 8 | 7 | 3 | 4 | 63 | 63 | 8 | 5½ | 6½ | 6 |
| 77. | 23 | M | 2 | 1 | 4 | 20 | 20½ | 21 | 7 | 6½ | 2½ | 4 | 77 | 77 | 7 | 4 | 4½ | 5 |
| 78. | 29 | M | 2 | 2 | 10 | 24½ | 25 | 25 | 7 | 9 | 3 | 5½ | 54 | 62 | 9 | 3 | 4 | 9 |
| 79. | 22 | M | 1 | 1 | 9 | 13½ | 17 | 17½ | 7 | 3½ | 2 | 1 | 40 | 59 | 8 | 3 | 1 | 5 |
| 80. | 37 | M | 6 | 5 | 11 | 19½ | 21 | 22 | 8 | 6½ | 4 | 1 | 76 | 72 | 7 | 4 | 3 | 7 |
| 81. | 20 | F | 1 | 1 | 12 | 19 | 17 | 19½ | 8 | 3 | 3 | 5 | 42 | 53 | 7 | 5 | 2 | 3 |
| 82. | 25 | M | 6 | 5 | 5 | 23½ | 25½ | 26½ | 8 | 7 | 4½ | 4 | 67 | 65 | 9½ | 3 | 4½ | 8½ |
| 83. | 21 | F | 2 | 1 | 6 | 15 | 16 | 18 | 6 | 3 | 4 | 2 | 42 | 42 | 6 | 3 | 3 | 4 |
| 84. | 25 | F | 1 | 1 | 9 | 26 | 26½ | 28 | 8 | 7½ | 5½ | 5 | 76 | 76 | 8½ | 5@ | 6½ | 6 |
| 85. | 27 | F | 1 | 1 | 11 | 15½ | 16½ | 17½ | 7 | 3 | 1½ | 4 | 78 | 75 | 7 | 4 | 2 | 3½ |
| 86. | 25 | M | 2 | 1 | 12 | 20½ | 20 | 22 | 7 | 4 | 4½ | 5 | 46 | 48 | 6 | 2 | 5 | 7 |
| 87. | 22 | M | 1 | 1 | 12 | 24½ | 25 | 25½ | 8 | 3½ | 5 | 8 | 74 | 75 | 9 | 5 | 3 | 8 |
| 88. | 30 | M | 3 | 2 | 12 | 23½ | 23½ | 24½ | 7 | 3 | 6½ | 7 | 47 | 56 | 7½ | 3½ | 5½ | 6 |
| 89. | 23 | M | 3 | 3 | 12 | 23½ | 22½ | 25 | 7 | 5 | 4½ | 7 | 72 | 84 | 7 | 3½ | 5½ | 7 |
| 90. | 23 | F | 5 | 4 | 12 | 20 | 24 | 26 | 8 | 3 | 4 | 5 | 68 | 80 | 8 | 3½ | 5½ | 7 |

GROUP B

| S/NO | AGE | SEX | FATHER'S EDUCATION | MOTHER'S EDUCATION | TEST OVER 20 COMPATIBILITY | ACHIEVEMENT TEST | | | TEACHING VARIABLES (PRE-TEST) | | | | ATTITUDE QUESTIONNAIRE | | TEACHING VARIABLES (POST-TEST) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PRE-TEST 40 | POST-TEST 40 | FEEDBACK 40 | INFORMATION 10 | INFERENCES 10 | VOCABULARY 10 | DATA ANALYSIS 10 | PRE-TREATMENT 100 | POST-TREATMENT 100 | INFORMATION 10 | INFERENCES 10 | VOCABULARY 10 | DATA ANALYSIS 10 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 1. | 23 | M | 2 | 2 | 8 | 23½ | 23½ | 24 | 10 | 5 | 3½ | 5 | 56 | 68 | 8 | 6½ | 4 | 5 |
| 2. | 23 | M | 3 | 2 | 8 | 20 | 20½ | 20 | 8 | 5½ | 2½ | 4 | 70 | 65 | 8½ | 3 | 3 | 6 |
| 3. | 20 | F | 1 | 1 | 10 | 25 | 23 | 25 | 8 | 4½ | 4½ | 8 | 57 | 59 | 8 | 8 | 1 | 6 |
| 4. | 32 | M | 3 | 2 | 7 | 19½ | 20½ | 22 | 6 | 7½ | 2 | 4 | 79 | 61 | 9 | 4 | 2½ | 5 |
| 5. | 25 | F | 6 | 6 | 9 | 22 | 21 | 24 | 7 | 4½ | 3½ | 7 | 54 | 86 | 9 | 4½ | 3½ | 4 |
| 6. | 22 | F | 4 | 1 | 11 | 17½ | 25½ | 20 | 8 | 5 | 1½ | 3 | 65 | 68 | 9 | 7 | 4½ | 5 |
| 7. | 24 | F | 2 | 1 | 9 | 22 | 21½ | 21½ | 8 | 6 | 4 | 4 | 62 | 68 | 10 | 3 | 4½ | 5 |
| 8. | 27 | M | 1 | 1 | 8 | 24 | 23½ | 24 | 8 | 5½ | 4½ | 6½ | 82 | 77 | 9 | 5½ | 4 | 5 |
| 9. | 17 | M | 5 | 4 | 10 | 20½ | 24 | 25 | 7 | 4 | 4½ | 5 | 78 | 76 | 9 | 5 | 4 | 6 |
| 10. | 23 | M | 2 | 2 | 12 | 18½ | 23½ | 23½ | 7 | 2½ | 3½ | 5½ | 51 | 67 | 7 | 6 | 5 | 5 |
| 11. | 24 | M | 3 | 2 | 8 | 18½ | 24 | 24 | 7 | 3½ | 3½ | 4½ | 48 | 44 | 8 | 6 | 4 | 6 |
| 12. | 20 | M | 1 | 1 | 11 | 21½ | 22 | 22 | 7 | 6½ | 4½ | 3½ | 82 | 83 | 7 | 5 | 5 | 5 |
| 13. | 20 | M | 5 | 3 | 8 | 16 | 17 | 20 | 6 | 5 | 4 | 1 | 66 | 67 | 9 | 4 | 4 | 0 |
| 14. | 23 | F | 5 | 4 | 9 | 23½ | 22 | 24 | 7 | 3½ | 7 | 6 | 69 | 75 | 9 | 3 | 5 | 5 |
| 15. | 23 | F | 5 | 2 | 10 | 24 | 21 | 22 | 8 | 4½ | 6½ | 5 | 61 | 68 | 8 | 4 | 4 | 5 |
| 16. | 20 | M | 1 | 1 | 9 | 20½ | 23 | 23½ | 8 | 4½ | 4 | 4 | 38 | 57 | 10 | 5½ | 3½ | 4 |
| 17. | 23 | F | 1 | 1 | 7 | 22 | 23½ | 23½ | 8 | 7 | 3 | 4 | 53 | 71 | 10 | 5 | 3½ | 5 |
| 18. | 23 | F | 4 | 2 | 10 | 18 | 23 | 24 | 5 | 5½ | 2½ | 5 | 58 | 57 | 9 | 4 | 5 | 5 |
| 19. | 23 | M | 1 | 1 | 13 | 19½ | 20 | 25 | 8 | 3 | 5½ | 3 | 76 | 77 | 8 | 5 | 2 | 5 |
| 20. | 21 | M | 1 | 1 | 9 | 16½ | 26 | 26 | 6 | 6 | 1½ | 3 | 67 | 68 | 8 | 4½ | 6½ | 7 |
| 21. | 24 | M | 4 | 2 | 10 | 29½ | 21 | 20 | 9 | 7½ | 6 | 7 | 57 | 64 | 9 | 6 | 6 | 0 |
| 22. | 23 | M | 6 | 5 | 7 | 25 | 26 | 21½ | 9 | 6½ | 5½ | 2 | 64 | 75 | 8 | 4½ | 6½ | 7 |
| 23. | 27 | F | 1 | 1 | 14 | 25 | 21 | 21½ | 8 | 5 | 7 | 5 | 61 | 64 | 9 | 6 | 6 | 0 |
| 24. | 24 | M | 1 | 1 | 5 | 21 | 21½ | 21 | 6 | 5 | 3½ | 6½ | 52 | 53 | 8 | 4 | 4½ | 5 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25. | 21 | M | 1 | 1 | 13 | 22½ | 23½ | 22½ | 7 | 3½ | 5 | 7 | 63 | 64 | 7½ | 6 | 5 | 5 |
| 26. | 27 | M | 1 | 1 | 11 | 21½ | 24 | 23 | 6 | 5 | 2½ | 8 | 80 | 80 | 9 | 5 | 5 | 5 |
| 27. | 26 | M | 4 | 1 | 13 | 23 | 22½ | 22½ | 8 | 4 | 6 | 5 | 69 | 75 | 7½ | 5½ | 4½ | 5 |
| 28. | 23 | M | 1 | 2 | 13 | 16½ | 17 | 18 | 5 | 4½ | 2 | 5 | 57 | 64 | 8½ | 3 | 4½ | 1 |
| 29. | 28 | M | 1 | 1 | 13 | 25½ | 13 | 19 | 8 | 5½ | 6 | 6 | 49 | 53 | 7 | 3 | 1 | 2 |
| 30. | 24 | M | 3 | 3 | 13 | 19½ | 23 | 25 | 8 | 4 | 3½ | 4 | 67 | 67 | 9 | 4½ | 4½ | 5 |
| 31. | 20 | M | 2 | 2 | 14 | 24 | 20½ | 22 | 8 | 4½ | 5½ | 6 | 46 | 46 | 8 | 4 | 4½ | 4 |
| 32. | 25 | F | 6 | 3 | 10 | 27½ | 27½ | 29 | 9 | 8 | 4½ | 6 | 75 | 73 | 8½ | 6½ | 4½ | 8 |
| 33. | 23 | F | 5 | 5 | 8 | 22 | 23 | 23 | 9 | 5 | 3½ | 4½ | 41 | 59 | 8½ | 4½ | 4 | 6 |
| 34. | 20 | M | 5 | 3 | 9 | 24 | 24 | 26 | 8 | 4½ | 6 | 6 | 81 | 76 | 8 | 4½ | 5½ | 6 |
| 35. | 22 | F | 6 | 5 | 11 | 21 | 28 | 28 | 8 | 5 | 4 | 4 | 78 | 76 | 10 | 6½ | 5½ | 6 |
| 36. | 19 | F | 4 | 4 | 12 | 25 | 24½ | 25 | 8 | 5½ | 6 | 5½ | 78 | 78 | 9 | 4½ | 6 | 5 |
| 37. | 22 | F | 3 | 2 | 19 | 22 | 24 | 24½ | 8 | 5½ | 4 | 4 | 52 | 48 | 8 | 6 | 4 | 6 |
| 38. | 19 | F | 5 | 4 | 7 | 25 | 24 | 26½ | 8 | 5½ | 2½ | 9 | 54 | 65 | 7½ | 3½ | 6 | 7 |
| 39. | 23 | M | 2 | 2 | 12 | 22 | 22 | 24½ | 8 | 4 | 3½ | 7 | 43 | 54 | 8 | 5 | 5 | 4 |
| 40. | 25 | M | 5 | 3 | 11 | 25½ | 26 | 27 | 9 | 6 | 4½ | 6 | 62 | 71 | 10 | 6½ | 4½ | 5 |
| 41. | 19 | F | 4 | 1 | 5 | 20 | 23½ | 27½ | 7 | 3½ | 4½ | 5 | 59 | 50 | 9 | 5½ | 4 | 5 |
| 42. | 23 | M | 3 | 3 | 9 | 22½ | 26½ | 27½ | 8 | 6½ | 2 | 6 | 61 | 48 | 10 | 6 | 5½ | 5 |
| 43. | 23 | M | 1 | 1 | 10 | 20 | 23½ | 25 | 5½ | 6½ | 2 | 6 | 72 | 73 | 10 | 5 | 3½ | 5 |
| 44. | 25 | M | 5 | 4 | 10 | 23½ | 22 | 23½ | 8 | 4 | 5½ | 6 | 52 | 56 | 9 | 3 | 5 | 5 |
| 45. | 18 | M | 5 | 4 | 13 | 25 | 27 | 25 | 8 | 6½ | 2½ | 8 | 48 | 55 | 7½ | 5 | 6½ | 8 |
| 46. | 24 | M | 1 | 2 | 7 | 21 | 22½ | 20 | 7 | 4 | 5 | 5 | 61 | 67 | 9½ | 5 | 5 | 3 |
| 47. | 21 | M | 1 | 1 | 10 | 23½ | 24½ | 21 | 8 | 3 | 5½ | 7 | 51 | 51 | 9 | 7 | 5½ | 3 |
| 48. | 24 | M | 6 | 5 | 10 | 22½ | 24½ | 24 | 8 | 5 | 4½ | 5 | 76 | 76 | 9 | 7 | 5½ | 3 |
| 49. | 20 | F | 3 | 2 | 9 | 20 | 25 | 25 | 7 | 4 | 4 | 5 | 61 | 67 | 9 | 5½ | 5½ | 5 |
| 50. | 25 | M | 2 | 2 | 12 | 22 | 26 | 26 | 8 | 5 | 4 | 5 | 63 | 67 | 9 | 6 | 3 | 8 |
| 51. | 23 | F | 4 | 3 | 9 | 25 | 23½ | 22 | 8 | 4 | 4 | 9 | 47 | 55 | 8 | 5 | 5½ | 5 |
| 52. | 27 | M | 2 | 1 | 13 | 21 | 24 | 22½ | 8 | 4½ | 3½ | 5 | 53 | 56 | 9 | 4½ | 5½ | 5 |
| 53. | 29 | M | 1 | 1 | 10 | 15½ | 26½ | 27 | 4 | 2½ | 3 | 6 | 78 | 84 | 9 | 5 | 5½ | 7 |
| 54. | 20 | F | 4 | 3 | 6 | 21½ | 15½ | 19 | 9 | 4 | 3½ | 6 | 72 | 74 | 9 | 2½ | 3 | 1 |
| 55. | 22 | M | 1 | 1 | 8 | 18 | 27½ | 29½ | 8 | 2½ | 2½ | 5 | 69 | 72 | 10 | 6 | 5½ | 6 |
| 56. | 22 | F | 2 | 2 | 6 | 19 | 18½ | 20 | 8 | 3 | 4½ | 4 | 69 | 70 | 6 | 4½ | 4 | 4 |
| 57. | 21 | M | 6 | 5 | 9 | 21 | 25½ | 27 | 6 | 2 | 5 | 8 | 70 | 70 | 9 | 6 | 4½ | 6 |
| 58. | 27 | M | 3 | 2 | 9 | 12½ | 23 | 23 | 4 | 3 | 2 | 3½ | 44 | 45 | 8½ | 3 | 4½ | 7 |
| 59. | 21 | M | 5 | 3 | 8 | 19½ | 15 | 18 | 9 | 4 | 1½ | 5 | 86 | 86 | 7 | 4 | 1 | 5 |
| 60. | 23 | M | 1 | 1 | 8 | 14 | 24½ | 26 | 6 | 1 | 3 | 4 | 71 | 71 | 8 | 5 | 3½ | 8 |
| 61. | 22 | M | 3 | 2 | 8 | 19 | 17½ | 20 | 7 | 2 | 4 | 6 | 83 | 84 | 7 | 4 | 3½ | 3 |
| 62. | 27 | M | 1 | 1 | 5 | 19½ | 22½ | 25½ | 6 | 6 | 4 | 3½ | 79 | 80 | 7 | 4½ | 4 | 7 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63. | 23 | F | 3 | 2 | 7 | 20½ | 23 | 24 | 6 | 3½ | 3 | 8 | 67 | 65 | 7 | 5 | 5 | 6 |
| 64. | 23 | F | 1 | 1 | 14 | 18½ | 16½ | 20 | 7 | 3½ | 3 | 5 | 78 | 86 | 9 | 2 | 3½ | 2 |
| 65. | 24 | M | 6 | 3 | 12 | 20½ | 21 | 22 | 7 | 2½ | 5 | 6 | 71 | 66 | 9 | 4 | 4 | 4 |
| 66. | 25 | M | 6 | 4 | 14 | 19 | 19½ | 21½ | 8 | 2½ | 3½ | 5 | 70 | 70 | 7½ | 2 | 5 | 5 |
| 67. | 23 | M | 6 | 6 | 10 | 15½ | 25½ | 27 | 5 | 6½ | 1 | 3 | 58 | 60 | 10 | 6 | 5½ | 4 |
| 68. | 24 | F | 2 | 3 | 15 | 22½ | 26 | 28 | 6 | 4½ | 4 | 8 | 76 | 82 | 10 | 6 | 5 | 5 |
| 69. | 21 | M | 2 | 2 | 11 | 23½ | 24 | 26 | 7 | 4 | 6½ | 6 | 81 | 82 | 8½ | 2½ | 6½ | 6½ |
| 70. | 23 | F | 5 | 3 | 9 | 24 | 23½ | 25½ | 8 | 5 | 5 | 6 | 80 | 75 | 9 | 4 | 4 | 6½ |
| 71. | 24 | M | 2 | 1 | 9 | 27 | 28 | 27½ | 9 | 4 | 7 | 7 | 64 | 79 | 10 | 5 | 6 | 7 |
| 72. | 20 | F | 5 | 5 | 10 | 19½ | 19½ | 21½ | 9 | 3 | 1½ | 6 | 67 | 70 | 8 | 2 | 4½ | 5 |
| 73. | 22 | F | 4 | 5 | 10 | 21½ | 22 | 22½ | 8½ | 2 | 7½ | 4 | 81 | 82 | 8½ | 4 | 4½ | 5 |
| 74. | 22 | F | 3 | 3 | 11 | 18 | 17 | 19½ | 6 | 4½ | 0½ | 7 | 67 | 75 | 6½ | 3 | 3½ | 4 |
| 75. | 21 | M | 6 | 4 | 9 | 22½ | 23 | 22½ | 8 | 4 | 5 | 5 | 74 | 72 | 10 | 3 | 5 | 5 |
| 76. | 24 | F | 1 | 1 | 9 | 15½ | 19½ | 20 | 7 | 4½ | 4 | 0 | 63 | 59 | 8 | 2 | 4½ | 5 |
| 77. | 21 | M | 3 | 1 | 11 | 23½ | 26½ | 25½ | 8 | 3 | 6½ | 6 | 75 | 72 | 9 | 4 | 6½ | 7 |
| 78. | 23 | M | 6 | 4 | 9 | 17½ | 25 | 25 | 7 | 1½ | 4 | 5 | 69 | 71 | 9 | 4 | 4 | 8 |
| 79. | 23 | F | 3 | 1 | 9 | 24 | 28½ | 28 | 9 | 3 | 6½ | 6 | 65 | 74 | 9 | 5½ | 5 | 9 |
| 80 | 20 | M | 5 | 1 | 12 | 23 | 23½ | 24 | 9 | 3 | 6 | 5 | 76 | 74 | 8 | 6½ | 5 | 4 |
| 81. | 22 | F | 5 | 1 | 10 | 28 | 29 | 30 | 9 | 5½ | 5½ | 8 | 58 | 64 | 10 | 6 | 5 | 8 |
| 82. | 20 | M | 5 | 4 | 11 | 20½ | 20 | 21 | 7 | 2 | 6½ | 5 | 72 | 74 | 8½ | 4 | 3½ | 4 |
| 83. | 23 | M | 5 | 2 | 11 | 13½ | 20 | 20 | 4 | 2½ | 2½ | 4½ | 64 | 69 | 8½ | 4 | 3½ | 4 |
| 84. | 22 | M | 6 | 4 | 8 | 16 | 18½ | 18 | 6 | 4 | 2½ | 3½ | 62 | 70 | 8 | 3 | 3½ | 4 |
| 85. | 24 | F | 2 | 1 | 14 | 28½ | 30 | 30 | 8 | 5½ | 6 | 9 | 72 | 79 | 10 | 8 | 6 | 6 |
| 86. | 29 | M | 2 | 2 | 7 | 25 | 25 | 26 | 7 | 4 | 5 | 9 | 49 | 61 | 9 | 5 | 5½ | 5½ |
| 87. | 24 | F | 4 | 4 | 12 | 20½ | 23½ | 24 | 9 | 2 | 4½ | 5 | 82 | 76 | 8 | 6½ | 5 | 4 |
| 88. | 25 | M | 6 | 5 | 14 | 18½ | 21 | 22½ | 6 | 2½ | 4 | 6 | 52 | 61 | 9½ | 4 | 2½ | 5 |
| 89. | 25 | M | 6 | 4 | 8 | 21 | 23½ | 25 | 8 | 4 | 3 | 6 | 61 | 66 | 9 | 4½ | 4 | 6 |
| 90. | 21 | F | 4 | 2 | 5 | 19½ | 20½ | 22 | 7 | 1 | 6½ | 5 | 85 | 84 | 8 | 4 | 4 | 4½ |

# APPENDIX K 1

## RESPONSES TO THE ATTITUDE QUESTIONNAIRE IN THE CONTROL GROUP AT THE PRE AND POST TEST LEVELS

N = 90

| QUESTIONS: | SA | | A | | U | | D | | SD | | No Answer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pr | Po | Pr | Po | Pr | Po | Pr | Po | Pr | Po | Pr | Po |
| 1. | 27 | 36 | 31 | 37 | - | 3 | 24 | 11 | 8 | 3 | - | - |
| 2. | 15 | 16 | 27 | 30 | 6 | 9 | 27 | 23 | 13 | 12 | 2 | - |
| 3. | 15 | 27 | 30 | 30 | 11 | 7 | 23 | 28 | 10 | 5 | 1 | 2 |
| 4. | 6 | 3 | 24 | 23 | 16 | 23 | 28 | 27 | 12 | 10 | 4 | 4 |
| 5. | 6 | 16 | 33 | 29 | 5 | 7 | 28 | 29 | 14 | 8 | 4 | - |
| 6. | 33 | 34 | 48 | 46 | - | 3 | 6 | 3 | 3 | 1 | 2 | 3 |
| 7. | 30 | 32 | 32 | 39 | 3 | 4 | 14 | 10 | 10 | 3 | 1 | 1 |
| 8. | 9 | 7 | 14 | 14 | 6 | 13 | 34 | 41 | 25 | 14 | 2 | 1 |
| 9. | 5 | 5 | 5 | 7 | 15 | 5 | 40 | 33 | 25 | 36 | - | 2 |
| 10. | 35 | 32 | 28 | 35 | 5 | 8 | 20 | 11 | 2 | 4 | - | - |
| 11. | 18 | 14 | 34 | 33 | 16 | 19 | 14 | 18 | 8 | 5 | - | 1 |
| 12. | 25 | 38 | 24 | 34 | 10 | 8 | 20 | 4 | 10 | 6 | 1 | - |
| 13. | 26 | 27 | 30 | 36 | 14 | 10 | 12 | 11 | 8 | 5 | - | 1 |
| 14. | 20 | 23 | 35 | 41 | 8 | 8 | 22 | 13 | 5 | 4 | - | 1 |
| 15. | 12 | 13 | 31 | 38 | 11 | 16 | 20 | 17 | 14 | 6 | 2 | - |
| 16. | 5 | 7 | 10 | 9 | 8 | 5 | 40 | 37 | 25 | 32 | 2 | - |
| 17. | 20 | 23 | 40 | 36 | 12 | 14 | 8 | 13 | 10 | 4 | - | - |
| 18. | 28 | 30 | 40 | 43 | 10 | 5 | 7 | 10 | 5 | 2 | - | - |
| 19. | 20 | 10 | 24 | 20 | 8 | 13 | 32 | 39 | 7 | 8 | 1 | - |
| 20. | 21 | 13 | 39 | 38 | 15 | 21 | 7 | 11 | 7 | 5 | 1 | - |

# APPENDIX K 2
## RESPONSES TO THE ATTITUDE QUESTIONNAIRE IN THE EXPERIMENTAL GROUP AT THE PRE AND POST TEST LEVELS

N = 90

| QUESTIONS: | SA | | A | | U | | D | | SD | | No Answer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pr | Po | Pr | Po | Pr | Po | Pr | Po | Pr | Po | Pr | Po |
| 1. | 28 | 36 | 33 | 35 | 2 | 3 | 15 | 12 | 11 | 4 | 1 | - |
| 2. | 21 | 19 | 32 | 40 | 7 | 5 | 18 | 20 | 12 | 6 | - | - |
| 3. | 7 | 10 | 33 | 45 | 12 | 10 | 26 | 20 | 10 | 4 | 2 | 1 |
| 4. | 8 | 5 | 25 | 24 | 20 | 22 | 25 | 30 | 9 | 7 | 3 | 2 |
| 5. | 9 | 11 | 38 | 39 | 14 | 11 | 21 | 22 | 6 | 7 | 2 | 1 |
| 6. | 41 | 34 | 38 | 50 | 1 | 1 | 5 | 2 | 2 | 2 | 3 | 1 |
| 7. | 33 | 27 | 36 | 43 | 6 | 9 | 8 | 5 | 7 | 2 | - | 4 |
| 8. | 7 | 6 | 14 | 19 | 10 | 11 | 35 | 32 | 23 | 20 | 1 | 2 |
| 9. | 4 | 6 | 5 | 7 | 11 | 8 | 43 | 37 | 27 | 31 | - | 1 |
| 10. | 38 | 25 | 26 | 39 | 4 | 6 | 19 | 15 | 3 | 4 | - | 1 |
| 11. | 18 | 15 | 37 | 37 | 14 | 9 | 15 | 20 | 6 | 7 | - | 2 |
| 12. | 23 | 32 | 27 | 29 | 11 | 8 | 16 | 14 | 12 | 6 | 1 | 1 |
| 13. | 27 | 22 | 32 | 50 | 12 | 9 | 14 | 5 | 3 | 4 | 2 | - |
| 14. | 23 | 26 | 32 | 32 | 6 | 14 | 21 | 13 | 6 | 5 | 2 | - |
| 15. | 15 | 17 | 30 | 28 | 10 | 11 | 24 | 28 | 11 | 6 | - | - |
| 16. | 3 | 5 | 11 | 9 | 10 | 9 | 35 | 35 | 30 | 29 | 1 | 3 |
| 17. | 22 | 24 | 37 | 30 | 12 | 7 | 9 | 7 | 9 | 19 | 1 | 3 |
| 18. | 31 | 32 | 39 | 43 | 7 | 6 | 8 | 2 | 4 | 3 | 1 | 4 |
| 19. | 16 | 10 | 26 | 31 | 10 | 8 | 29 | 26 | 8 | 11 | 1 | 3 |
| 20. | 22 | 18 | 38 | 28 | 24 | 14 | 25 | 8 | 7 | 6 | 1 | 3 |

KEY

SA = Strongly Agree

A = Agree

U = Undecided

D = Disagree

SD = Strongly Disagree

No Answer = No Response.

APPENDIX L

COMPARABILITY TEST

CLOZE TEST

Although Mary was responsible _____ her mother for the safe-keeping _____ the baby, she often wished she could rid hereself _____ the burden. She was confined _____ the house when she would rather have gone out. When she compared her life _____ that of her friends, she thought she was hard done _____ She looked _____ the other girls with envy, and wasn't interested _____ the fact that her mother really needed her. When her mother reminder her _____ this, she was all the more resentful _____ her baby brother.

One can see many things _____ a town. _____ instance there are shops _____ the windows of which are displayed interesting things. _____ lamp-post,on the pavement, we saw a man with a monkey. The animal danced _____ a box, climbed _____ a hoop, and, _____ a panny, took its owner's hat and made a sweeping bow. _____ the open doorway of a cafe we saw food laid out _____ tables. We felt hungry and went _____ to try some.