

**ADJUNCT QUESTIONS IN TEXT AND READING
COMPREHENSION AMONG GOOD AND POOR
READERS IN STANDARD 6 IN NAIROBI.**

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**A thesis submitted in partial fulfilment of the
requirements for the degree of Masters of Education in
Educational psychology of Kenyatta University,
NAIROBI.**

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DECLARATION.

I MARY WAKA, declare that this is my original work and it has not been presented for a degree in any other university or any other award.

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Date 28/8/2001.

We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

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Acknowledgements

DEDICATION.

To my husband Sammy and our children, Brian, Diana and Paki for the support and encouragement you gave me in the course of this study.

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ABSTRACT

The aim of this study was to find out if reading comprehension among good and poor readers could improve when questions were interspersed in text. The insertion of questions in prose material has been shown to facilitate learning from the material (Rothkopf 1982). The adjunct question technique involves placing questions either before, or immediately after prose passages and asking learners to answer such questions while studying the passage. The sample was composed of 120 Standard 6 pupils attending City Council primary schools in Makadara Division of Nairobi Province. The experimental design was used where learners were divided into good and poor readers using the results of a Cloze procedure test that they took. The classroom English teachers were also to confirm that the subjects chosen were the actual good and poor readers. Each group was further divided into 3 sub-groups. The subjects then read different forms of the same text, that is, either text only, text with factual adjunct questions, or text with meaningful learning questions. Each subject read two passages that were very similar. After reading the passages, two written free-recall tests were administered. Two tests were given to increase the reliability of the scores obtained.

After the scoring of the posttests, a mean score per subject was obtained and a 2(reading ability) x 3(type of text) Analysis of Variance (ANOVA) done to test the hypotheses formulated. A Scheffe test was also done to compare various pairs of

means that were of interest in the study. Generally, adjunct questions were found to help in improving reading comprehension and recall of material read. Meaningful learning questions were better than factual questions because they led to more recall of material read among the poor readers. However, for the good readers reading comprehension did not depend on the type of text read. All the good readers performed well regardless of the adjunct questions. The poor readers who read text with meaningful learning adjunct questions performed as well as the good readers.

The results of this study show that the adjunct question technique can be used by the classroom teacher as a reading comprehension skill and it can be quite effective for the poor readers. The classroom teachers need to use meaningful learning questions more than factual questions. Curriculum developers can also include the use of adjunct questions in the curricula to help the poor learners. Publishers can intersperse questions in text to help the poor readers to read with meaning.

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CHAPTER ONE

INTRODUCTION.

1.1.0 Background of the Study.

Reading is the process of constructing meaning from text. It is a complex interactive process focussed on decoding and comprehension. Strategies refer to any organized sequence of voluntary purposeful actions taken to enhance a designed outcome. Strategies relevant to reading include use of contextual cues in word recognition, constructive processing of sentences, selective attention to main points, self-questioning, and drawing inferences (Glover, Ronning, & Bruning 1990). Expert adult readers read text strategically. They try to understand and remember information, and to assist them in doing this, they intentionally invoke fairly complex routines. Children tend to be less strategic about their text processing for various reasons. They may fail to monitor their comprehension (Garner, 1987). This happens when they fail to notice that they do not understand what they are reading so that they can seek a strategic remedy. Garner notes that the ideal reader continuously evaluates the success of the reading operation and provides remedies as needed. Anderson (1970), found that readers may encode text at phonological levels or at deeper semantic level. Semantic encoding would lead to better retention.

Children may also fail to be strategic due to a weak textual schema (Garner, 1987). They do not know as much as adults know about conventional locations for important information in expository text. They are therefore ill equipped for invoking any strategy that requires readers to distinguish important and unimportant information in expositions. Garner (1987) found that some children acquire partially effective strategies and take time to take up more effective strategies. She notes that the learners move from strategic deficiency to strategic inefficiency and then strategic efficiency. It is the children at a strategic inefficiency level who display partially effective strategies that operate as an impediment to deployment of more effective routines.

Guthrie (1976) found that deficiency in reading comprehension is at least partly attributable to a failure to identify completely a sufficient proportion of words during the course of reading. He suggests that such a failure involve a strategy deficiency, not a lack of ability. Hatcher (1977) and Ryan (1981) agree that comprehension difficulties of poor readers cannot be solely due to identification problems but may be largely attributable to the manner in which input is organized. They found that good readers impose organization whereas poor readers seem to require that organization be provided to them. According to Smith (1975), children

with low reading ability tend to read as if they neither expect nor care that the material might make sense but seem determined to get all the words right. Such children therefore do not read with understanding and therefore have a problem recalling what they read.

The Kenyan society has become more and more literate and therefore reading has become an integral part of Kenyans' lives. Reading exposes learners to new experiences. According to Owino (1987), routine work dictates that people read regulations, travel guides, and manuals. The mastery of the reading process is a pre-requisite for creating awareness to combat disease and ignorance too.

The Kenyan system of education is competitive. The examination is mainly written. The results the learners obtain at each level determine what level they can graduate to. It is therefore important that consideration is given to factors which intervene to exert either negative or positive influence on examination performance. One major area that is bound to determine how well a learner performs, is his/her reading ability. The Kenya National Examination Council (1989) advises that pupils should be encouraged to develop comprehension skills for use in the study of other subjects. It notes that reading is one way of furthering learners' language development and hence their comprehension skills. A study done on

curriculum development in the country indicated that the national examinations given to students seemed to favour pupils who had well-developed language skills (Government of Kenya 1972). This implies that for academic performance to be improved special attention must be given to the language skills of the learners particularly their reading comprehension skills. The syllabus for Kenya primary schools (1984) thus emphasizes that at the end of the primary course, pupils should be able to read and understand instructions and to read for information.

There is therefore need for the use of effective comprehension aids for learners to understand what they read and for them to be able to recall material read. Adjunct questions have been shown to improve recall of material read among learners (Andre, 1979; Duell, 1974; Hamilton, 1985; Rickards, 1976; Rothkopf & Bisbicos, 1967). Research has shown that the more information is processed the better it is retained (Andre 1979). Material that is understood is much more likely to be remembered than material that is not understood. He noted that different levels of questions differentially influence learning. The level of question refers to the nature of cognitive processing required to answer a question. The level of processing theory proposes that "deeper" (semantic) levels of processing enhance memory (Craik & Lockhart, cited in Reed, 1996). The theory holds that success in recalling information depends on the kinds of

operations carried out while encoding it. Hence retention is determined by the characteristics that are emphasized during initial perception.

The depth-of-processing hypothesis argues that presented information may be processed to a greater or lesser depth along a continuum ranging from superficial processing of perceptual features to processing for meaning of the information, that is, the greater the depth of processing the higher the probability the material will be retained (Anderson,1970; Andre,1979). The end product of processing is assumed to be memory trace. Craik and Lockhart (cited in Andre, 1979) noted that the strength of the memory trace is a function of depth of processing.

1.2.0 Statement of the problem.

For a learner to gain or learn from written material he/she must be able to extract meaning from words in text. In the Kenyan education system, much of the pupils' learning depends on their ability to extract meaning from written material because the teaching-learning process mainly takes place through the use of textbooks and teachers' notes. There are however poor readers at all levels of our education system. Some pupils are poor readers because they lack effective reading strategies (Garner 1986, Ryan 1981).

Poor readers are unable to understand the meaning of a paragraph. These readers tend to consider each sentence as a separate unit unrelated to the other sentences in the paragraph. It is possible for them to read and understand words, thought units and sentences and yet not comprehend fully the connected material in a paragraph. Some pupils are also unable to sense the relation between paragraphs in stories and various expository materials. Research has shown that there are strategies that can be used to improve reading comprehension (Garner 1987). The understanding of material read can be improved using adjunct question (Rothkopf, 1982).

In the Kenya Certificate of Primary Education (KCPE) newsletter (1989) it is observed, " that left alone to decide what to read, many pupils will tend to wander about and at the end of the day read very little" pg.5. Reading comprehension ability is important even among adults. Adults read to get various types of information from written material. Teachers therefore have to find ways that will help learners to be focussed in their reading so as to encourage comprehension and recall of material read. This will also ensure improved performance in other subjects.

Teachers use various strategies to aid learners in memory for prose. Learners are expected to acquire basic concepts and information from

individual reading. It is important that their attention to the material read is maintained.

Research that has been done in Kenya has mainly focussed on the relationship between reading comprehension and performance in other subjects. For example, Chege 1999, found that there is a positive relationship between reading comprehension and academic performance in English, Kiswahili, Mathematics, Science and History in primary schools.

There is therefore need to look at the inadequate development of reading comprehension skills. It is from this perspective that interspersed questions are seen as a potential instructional tool that can be manipulated by a teacher or instructional designer in order to produce certain learning outcomes.

1.3.0 Purpose of the study.

Reading assignments are among the most important instructional strategies teachers use to bring about new learning. Immediately children go to school, they are taught how to read. Reading comprehension then becomes instrumental for success in other areas of study. Without the

ability to read, a child's likelihood of achievement in virtually all other subjects is reduced. Beyond school, reading is critical to success in the workplace. It is also an important source of pleasure and entertainment for many adults. As learners become more mature, the emphasis on reading as a way to learn new material becomes more pronounced. For learners to be successful academically, they must be able not only to decode but also to comprehend text. Specifically, this study sought to find out:

- a. If reading comprehension among good and poor readers improve when questions are interspersed in text.
- b. If the level of questions (factual versus meaningful learning questions) interspersed in text has an effect on the amount of reading comprehension.
- c. If there is an interaction effect between the type of text read and the reading ability of the learners.

1.4.0 Significance of the study.

In Kenya presently, the educational practice of laying a lot of emphasis on the importance of written examination is on the increase. It is therefore important that consideration is given to factors which determine how well or how poorly a learner performs. Reading comprehension is one of the major factors that determine test performance. It is thus important that

ways and means be found to improve reading comprehension among learners.

The results of this study therefore would help in assisting curriculum developers in designing learning materials for pupils. This would be done with the poor readers in mind. Teachers would also modify their teaching methods as they pay attention to the poor reader and his/her special needs. Thus this study had a potential for improving reading comprehension.

1.5.0 Assumptions of the study.

1. The amount of learning that has taken place in the schools selected for the study is similar.
2. That all the subjects who participated in the study are of average or above intelligence and that they only differ in reading comprehension abilities.
3. That the Cloze passages used were applicable to this study.
4. That though English is a third language for most Kenyan children, it would not interfere with their performance in the tasks given in the study.

1.6.0 Definition of significant terms.

- a. **Question:** A statement that requires an answer.
- b. **Adjunct Questions:** These are questions interspersed in text. They are placed either before or after the information in the text needed to answer them and are believed to be comprehension aids.
- c. **Text:** Is a sequence of connected sentences in a natural language.
- d. **Text organization:** Extraction of meaning from units larger than the single word such as phrases, sentences, and paragraphs.
- e. **Factual Questions:** These typically ask the reader to supply or recognize some item of information given in a passage.
- f. **Meaningful learning Questions (Inference Questions):** These questions require a reader to state a relationship between elements of the passage that is implied but not explicitly stated in the passage (Rickards and DiVesta, 1974, Rickards, 1975).
- g. **Comprehension:** The skill of reading to extract knowledge or reading with understanding.
- h. **Good readers:** Readers who have decoding and vocabulary skills and can read text with understanding.
- i. **Poor readers:** Readers who have decoding and vocabulary skills but have difficulties in understanding text.

CHAPTER 2

REVIEW OF RELATED LITERATURE.

2.1.0 Introduction.

Reading instruction at all primary levels is meant to develop comprehension (Bond, Tinker, Wasson & Wasson (1984). The fundamental goal in seeking to produce effective readers is to enable them to comprehend whatever printed materials will serve their purpose. The acquisition of reading is aimed at achieving adequate understanding and interpretation of the meanings embodied in printed symbols. The extent to which these meanings are clearly and accurately understood and interpreted by the reader represents the degree to which he has become a good reader (Bond et. al. 1984).

The child who is a word-by-word reader seldom grasps the meaning of a sentence as a whole. When a child reads by thought units, the resulting organization of the material aids comprehension. A thought unit is a group of words, which make up a meaningful sequence in a sentence.

Proficiency in perceiving words helps in understanding of the material being read.

Attention must also be directed to comprehension of paragraphs and larger units. To comprehend the material in a paragraph requires an understanding of the relations between the sentences in that paragraph. This involves identifying the topic sentence containing the key idea and understanding its relation to the explanatory or amplifying sentences (Ryan, 1981).

This chapter contains a review of literature on adjunct questions. Research on adjunct questions has not been done in Kenya and therefore the review comes from sources outside Kenya.

2.2.0 The process of reading and reading comprehension.

One of the primary modes through which students acquire information and knowledge in a learning situation is by reading prose text. Such texts require that students comprehend and remember the meanings expressed in text. Most examinations are academic in nature and require the examinee to remember and use numerous facts, principles, rules, and procedures. Thus, the ability to remember is crucial in determining a pupil's success in Kenya's education system.

In order for a reader to efficiently extract information from text, certain sub-skills need to have been acquired. First, the reader must be able to *decode* or recognize individual words. Secondly, the reader must be able to rapidly obtain the meaning of these words. This is referred to as *lexical access* and it relies on the fact that the reader has a meaning for the printed word in semantic memory. This meaning is stored by the reader as part of the language acquisition process. The particular meaning or shade of memory the reader accesses may be influenced by the sentence context in which the particular word is found. The meaning of a sentence is however more than the sum of the individual meanings that make it up. Finally, a reader must have *knowledge of the syntax* of a language. The reader must extract the syntactic relations which hold between the words and relate the resulting information to his pre-existing knowledge system.

Researchers have noted that there is a relationship between poor reading comprehension and poor decoding skills (Golinkoff, 1975). Golinkoff and Rosinski (1976) found that poor comprehenders possessed weak decoding skills and that the good comprehenders seem to be capable of rapid and accurate word recognition and have automatized basic decoding skills. According to Golinkoff (1975), problems in decoding may affect reading comprehension process in one of two ways. They may disrupt the

reader's search for meaning of individual words or they may hamper the extraction of the relations specified between words by a more indirect process, for example the overloading of short-term memory.

Guthrie (1973) however found that poor readers did not differ significantly from the normal readers in pattern of reading errors. His results indicated that poor readers were deficient in amount of comprehension but not qualitatively different from good readers in syntactic processing during silent reading.

Cromer (1970) identified two types of poor readers. He found that the "deficit" ones lacked vocabulary and decoding skills, while the "difference" group seemed to possess vocabulary subskills but failed to read in units larger than single words. The "difference" group read as well as good readers when materials were presented in pre-organized phrases. The results suggest that some poor readers read word by word rather than in meaningful units such as phrases indicating that one source of reading comprehension difficulty may be the way in which poor readers organize reading input. Studies have shown that projects in which poor readers have been taught to predict, to test hypotheses, or to image sentence meaning offer much promise for remediation and suggest that deficiencies are at the level of strategies and not basic capability (Ryan,

1981). Ryan notes that whereas many children gradually acquire the effective sentence and passage processing skills necessary for good comprehension, poor readers appear to remain relatively deficient in the use of active organizing strategies.

2.3.0 Strategy use and reading comprehension.

Reading comprehension involves complex organizational strategies on the part of the reader, through which he detects meanings and interrelationships of the substantive material within the passage (Lewin 1973). A reading strategy is an action (or a series of actions) that is employed in order to construct meaning (Garner, 1987). One of the major factors in the development of reading strategies is children's acquisition of knowledge. Readers who know what strategies are, how to use them, and when they are appropriate are considered to be strategic readers (Kletzien, 1991). Factors that influence the encoding of stimuli, the selective attention to relevant features of events, and the ease with which information can be represented in memory all affect the state of a person's knowledge.

Garner (1987) proposed that skilled readers have three types of knowledge about strategies. They have *declarative knowledge*, that is,

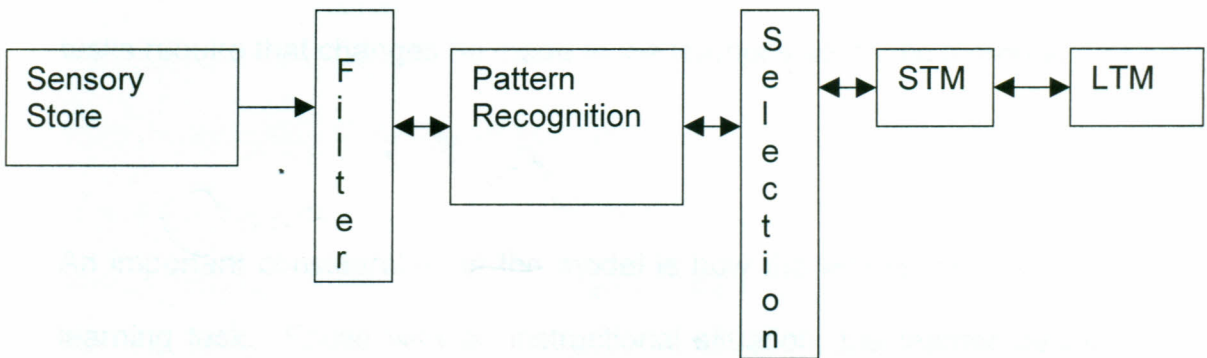
they know *that* reinspecting text for information once read, but no longer remembered, aids in question –answering. Secondly, they have *procedural knowledge*, which means that they know *how* to skim the text using vague spatial memory and key words in the question to locate relevant information to be reread. Lastly, they have *conditional knowledge*, that is, they know *when* to utilize the strategy, when questions cue access to text, not to general knowledge base. Conditional knowledge describes the circumstances for strategy application. Those with only declarative and procedural knowledge do not adjust behaviour to changing text and task demands and this is due to lack of strategies. Garner (1987) however noted that for most reading situations that present at least a moderate challenge to the reader, a single strategy or a set of strategies would assist readers in processing information effectively.

A study by Oakhill, Yuill and Parkin (1988) showed that the less-skilled comprehenders' problem cannot be attributed to any general memory deficit but to their failure to integrate and make inferences from information in the text. They suggested that this failure is related to the less-skilled comprehenders' poorer working memory skills.

2.4.0 Information processing model and knowledge acquisition.

The mind is conceptualized as a complex information processing system. The acquisition, storage, retrieval, and use of information comprises a number of separate stages and the information approach attempts to identify what happens during these stages Haber (cited in Reed 1996).

Figure 2.1 Stages of an information processing model. (Reed, 1996).



The sensory store provides brief storage for information in its original sensory form. After some time the information in this store is lost unless it can be described during the pattern recognition stage. The filter part is that part of attention in which some perceptual information is blocked out and not recognized while other information receives attention and is subsequently recognized. The selection stage determines which information a person will try to remember. Short-term memory is that part of memory that has limited capacity and that lasts only 20 to 30 seconds in the absence of attending to its contents. Long-term memory is the part of

memory that has no capacity limits and lasts from minutes to an entire lifetime.

The information processing system contains two types of long-term memory, the episodic and the semantic memory. Episodic memory contains representations of the events encountered by the system while semantic memory contains its generalized knowledge. Most educational tasks require that changes be made in the learner's semantic memory.

An important consideration in the model is how the learner perceives his learning task. Faced with an instructional situation, the learner decides what is supposed to be done and how to go about it. These decisions determine the strategy or set of procedures that the learner follows in doing the task. Therefore, pedagogical devices such as questions, influence learning by changing the learner's perception of his task and the strategies chosen to accomplish the task (Andre, 1979).

2.5.0 Elaboration in reading.

There is evidence that more elaborative processing results in better memory for material read (Reed, 1996). Elaborative processing involves embellishing a to-be-remembered item with additional information. Good memory for material therefore results when it is processed more elaborately. Frase (cited in Reed, 1996) found evidence for the benefit of elaborative processing with textual material. He compared two groups of subjects on their memory for text. One group had been given topics to think about (advance organizers) before reading the text and the other was a control group that studied the text without advance organizers. The group with advance organizers performed better than the control group in a subsequent test. The advance organizers thus influence the expectations of the learner and in the process increases recall.

2.6.0 Theoretical framework.

The framework for this study is derived from a consideration of the mathemagenic (Rothkopf, 1966), cybernetic (Frase, 1969), and additive (Boyd, 1973) models regarding the effect of adjunct questions on learning from text.

2.6.1 Mathemagenic View (Rothkopf, 1966).

This view assumes that adjunct questions differentially control the acquisition of intentional and incidental information through the relation of questions to text. Behaviours that result in successful performance (ability to answer questions successfully) are enhanced while those that result in failure are extinguished. The learner's successful use of postquestions not only increases the probability that the next passage will be studied in a similar manner but also leads to an increase in the acquisition of incidental information when compared to the use of prequestions only. Prequestions however, function as discriminative cues. They control the identification and achievement of information that the learner expects will be considered important by the teacher who sets the demands for a given study session. Acquisition of incidental information is inhibited because it is excluded by the question. Although prequestions do not facilitate the acquisition of incidental information to the same extent as postquestions, they do facilitate the acquisition of intentional information (Anderson & Biddle, 1975, Rickards, 1976, Rothkopf, 1966). Therefore depressed learning of incidental information (relative to the effect of postquestions) is due to the rejection of information unrelated to the questions, since by implication, the information is considered by the learner to be irrelevant to his or her immediate objectives (Duell, 1974).

The absence of adjunct questions may influence learner expectations by implying that since there is no definite basis for determining what is important, some amount of it should be learned, depending upon what the situational cues imply. Thus, only when the demands aroused by questions direct the student to information he or she would not ordinarily consider important under no questions will learning be facilitated by the use of questions (Duell, 1974).

2.6.2 Cybernetic view. (Fraser, 1969).

This view is consistent with the mathemagenic approach. It assumes that an adjunct question is employed by the learner as a study guide. When a learner is confronted with a prequestion/ (or the possibility of a postquestion), the learner reads the text to find the answer to the question (or to the anticipated question). With positive feedback (i.e. the correct answer), a successful strategy is adopted and maintained in use. Failure to obtain a correct answer generates an error signal (negative feedback). The error signal directs the learner to alter the strategy applied to the subsequent paragraphs in order to increase the probability of obtaining positive feedback in the form of meeting some externally or internally imposed criterion. Therefore adjunct questions are seen as effective

stimuli when they evoke expectancies that guide the selection of specific learning strategies.

2.6.3 Additive model.

This model considers the effect of adjunct questions on two mental operations; attention and retention. Attention is the process of “putting information into some form of storage and is operationalized as immediate or nearly immediate recall of information” (Boyd, 1973, p.31). Retention means “to represent either or both the storage of information or the retrievability of the material from storage over time” (Boyd, 1973, p.31.).

Boyd argues that prequestions influence expectancies that facilitate intentional learning and postquestions influence expectancies that facilitate incidental learning. Thus prequestions seem to affect attention while postquestions affect retention or rehearsal. In the postquestion group the subjects attend to the material to the same extent as controls but the postquestions increase the ability to retain or retrieve intentional material over time (decreases the rate of forgetting).

In the control condition (no question group) the subjects may attend to all material at a level intermediate between that for intentional and incidental material.

2.7.0 Adjunct questions and reading comprehension.

The adjunct questions technique involves placing questions either in, before (prequestions), or immediately after (postquestions) prose passages and asking students to answer such questions while studying the passage. Students are later given a post-test which may repeat the adjunct questions or may also include new questions. They are intended to increase the likelihood that readers will correctly answer criterion test questions which are normally of two types. They can be *relevant / repeated / intentional criterion test questions* which focus on the same material as the adjunct questions and or *irrelevant / incidental/ new criterion test questions* which focus on material that was not the focus of any adjunct question.

Adjunct questions have been shown to improve recall of material read among learners (Duell, 1974, Hamilton,1985, Rickards,1976, Rothkopf & Bisbicos,1967). According to Anderson and Biddle (1975), adjunct postquestions more frequently produce a facilitating effect on

incidental criterion items, whereas pre-questions more frequently produce inhibiting effects on incidental criterion items. Pre-questions produce selective attention processes aimed at the information needed to answer the pre-questions.

A similar study by Frase (1967) also showed that the post-question group produced more recall of material not questioned than a pre-question group or a reading-only control condition. Fraser referred to this as the *mathemagenic (indirect) effect*. Mathemagenic activities are behaviours that support learning. Work on mathemagenic activities is focused on how environmental pressures can alter the transformation of information that takes place during reading because of the belief that any complex human activity is flexible and adaptive.

3.3.3.3. Adjunct questions

According to Rothkopf (1982) adjunct questions have at least two demonstrable effects on learning from text. They can either have a direct effect that strengthens recall specifically related to the subject of the question or they may modify mathemagenic activities and in this way influence learning of a reasonably broad class of information contained in the text. Rothkopf has illustrated that adjunct questions influence rehearsal-like activities and also influence performance by affording practice in retrieval. He however notes that too many questions may slow

down information processing and hence interfere with integration of scattered information in text. He therefore suggests that questions should be used sparingly.

Majority of research studies in this area have employed verbatim level questions requiring literal recall of specific facts in the associated passages (Anderson & Biddle, 1975, Frase, 1970). Such questions are likely to lead to rote learning of the entire passage. Each sentence is thus processed as a relatively discrete unit with the reader making little or no attempt to discern relationship among the various sentences of the passage (Rickards & Di Vesta, 1974). This study will therefore employ both verbatim and meaningful learning questions.

2.7.1 Types of adjunct questions.

When questions are placed before the material needed to answer them, they are referred to as prequestions. Postquestions are inserted after the text needed to answer them. Questions asked after the relevant passage have been found to be more facilitative than those asked before hand. Anderson and Biddle (1975) reviewed 17 experiments done on adjunct questions. They found that in 16 of them, postquestions resulted in better performance on new criterion test items than questions placed before

passages. Similarly Rothkopf (1982) had College students read a twenty-page, 5,200-word selection from a book on marine biology. Two questions were asked either before or after each two- or three-page. The questions were of the completion type requiring a one or two word answer. Subjects who received adjunct questions did substantially better than controls on repeated criterion test items regardless of the position of the questions in relation to the relevant text passage. Subjects who answered adjunct questions after, but not before, the relevant passage also showed a small but significant advantage on new test items.

Adjunct questions can also be classified according to the nature of cognitive processing required to answer the question. Factual (knowledge or verbatim) questions are believed to involve less complex cognitive processing (Andre, 1979). They normally ask a learner to repeat or recognize some information exactly as it was presented in instruction. The types of information requested normally include names, numbers, dates, definitions, and terms.

Paraphrased questions are factual questions written with no substantive word overlap between text and question (Anderson & Biddle, 1975, Andre & Sola, 1976). Application questions require students to select a new example of a concept or a principle employed in the text from among

alternatives (Watts & Anderson, 1971). Watts and Anderson found indications that questions which required the application of principles to new examples yielded better posttest performance than questions which required identification of names. Application of knowledge to new examples is thus important because it calls attention to the important principles and it requires a learner to test his or her comprehension.

Meaningful learning questions or inference questions require a reader to state a relationship between elements of the passage that is implied but not explicitly stated in the passage (Fraser 1969a, b, Rickards, 1976, Rickards & Di Vesta, 1974, Rickards & Hatcher, 1977).

2.7.2 Studies with factual and meaningful learning adjunct questions.

Rothkopf and Bisbicos (1967) studied the nature of content material required to answer questions and their findings demonstrated that questions could influence how students process material read. Some subjects received questions that required proper names or numbers as answers while other subjects received questions that required either common words or technical terms as answers; a third and fourth group of

subjects received either all types of questions or no questions respectively. All groups took a post-test containing all question types after reading. The subjects given proper name and number questions performed well on that class of material on the post-test, but poorly on other material. Subjects who received common and technical word adjunct questions, or mixed adjunct questions, performed well on all types of post-test question. These findings could be attributed to the influence of the question on the student's attention to the material. Subjects who received name and number adjunct questions could limit their attention to material of that type. Subjects who received mixed question type had to attend to all types of material in the passage, since common word questions is a broadly defined class.

Allen (1970) also reported an apparent attentional effect. Allen compared groups given either memory-level or higher-level questions during reading. His post-test consisted of factual questions dealing either with material referred to in the memory-level or higher-level adjunct questions. The basic result was that subjects performed better on questions related to the information they were asked about in the adjunct questions. This result is consistent with the hypothesis that questions serve to focus the students' attention on particular material.

Similar results were found by Felker and Dapra (cited in Hamilton, 1985). They presented subjects with a passage that was separated into 15 segments with adjunct questions occurring either prior to or after the relevant segments. Verbatim and comprehension prequestion and post-questions were used in the text. The verbatim adjunct questions required recognition of the exact wording of a sentence from the text. Adjunct comprehension questions required the subjects to either identify a new instance of a concept or in applying a principle, select the proper instance of the consequent conditions when given the antecedent conditions. They used a problem solving test and comprehension criterion questions which focussed on the same principles and concepts as the adjunct questions but which were worded differently.

The problem-solving test consisted of 5 situations requiring application of principles and concepts from text. The authors defined problem-solving as, "the ability to recall and appropriately apply rules to a problem situation and the ability to detect incorrect sequences or rules". Felker and Dapra also included a verbatim criterion test which asked questions focussing on incidental (nontarget) material in text.

Comprehension post-questions produced significantly better performance on the problem-solving test than all other types of questions. There were

however no significant differences between groups with respect to their ability to answer the criterion comprehension questions. This could have been due to ease or difficulty of answering the criterion comprehension questions or the subjects prior knowledge of the prose material. These results showed the importance or viability of the positive effect of comprehension post-questions on application of principles and concepts.

Rickards and Hatcher (1977), also sought to find out if interspersed meaningful questions aided poor comprehenders. They used 5th graders who were divided into good and poor comprehenders. Their findings suggested that good comprehenders spontaneously generate a context while reading text. That is, regardless of adjunct aids, these readers automatically engage in meaningful learning by assimilating new material to concepts already existing in their cognitive structures. They noted that even though poor comprehenders possess adequate vocabulary skills, when left to their own devices, they apparently failed to semantically organize and relate new material to the main ideas of the passage. For such readers, meaningful learning questions are quite effective in enhancing comprehension and recall when their performance on the test is compared to a similar group of poor comprehenders who were presented with no adjunct questions.

Consistent results were also found by Rickards and DiVesta (1974). They demonstrated that questions which required readers to relate passage details to higher-level ideas contained in the meaningful learning post-questions resulted in over twice as much recall as that produced by a control group. Such recall was highly structured and semantically organized. They suggested that such adjunct questions would induce poor comprehenders to organize and structure what they read because this is what they fail to do in their word to word approach to reading.

Findings by Rickards (1979), however showed that the pre-question group retains roughly the same amount of material directly questioned as the post-question group and that both adjunct question groups retain more of the questioned material than a reading-only control group. Rickards referred to this as the direct instructive effect.

Studies on adjunct questions have not always given positive results. A study by Glover, Zimmer, Ronning, and Peterson (1973) seem to indicate that highly specific adjunct aids such as objectives and questions do not facilitate readers comprehension of prose. Their subjects focussed on portions of the prose different from control groups, but this focussing had no mathemagenically positive effect. The processing activities used by the control group readers were as effective as those imposed on

experimental groups. Thus processing activities that direct reader attention to the overall semantic base of material should be encouraged.

Moore (cited in Andre, 1979) also found contradicting results. Subjects in Moore's study were given either verbatim, paraphrased, or application adjunct questions while studying a passage. Control groups received no questions. The subjects took tests on the material 1 and 8 days after reading the passage. No significant difference between groups was found. Moore's study was designed to test the general facilitatory effects of inserted questions and so, none of the post-test questions were directly or indirectly related to the adjunct questions. Moore's data therefore demonstrate the effect of adjunct application questions is specific to the content with which they are concerned. Such effects are however still educationally important if they facilitate learning of specific concepts and principles.

There is therefore preliminary evidence suggesting that "difference" poor readers' comprehension can be enhanced by interspersing in text meaningful learning questions that require the organization of passage details around concepts contained in the inserted questions themselves. Furthermore, Rothkopf (1982) found that some adjunct aids if properly managed can serve to directly strengthen and deepen subject matter

knowledge. He argues that once students have started to read, adjunct aids can make it more likely that readers will persistently seek the proper goals and hence read effectively.

He however, notes that “ teachers need to exercise proper caution in their use of adjunct aids. Adjunct aids such as questions are two-edged swords. The observed fact that students alter their reading activities because of environmental pressures means not only that the reading can be made more effective and responsive to the purposes of instruction; it also means that readers can be misled and seduced into adopting reading practices that are instructionally undesirable.” pg. 135.

2.7.3 Summary of findings on research done on adjunct questions.

Based on the literature reviewed, variations in the application of adjunct questions can have differential effects on acquisition of knowledge. This is because they induce expectations in the learner which in turn mediate the behaviours activated by various stimuli in the learning setting. A study by Rothkopf and Bisbicos (1967) demonstrated that questions could influence how students processed material read. They however found that students

limited their attention to the type of material required to answer the adjunct questions.

In general, students have always done better on repeated than on new criterion test items. There is however, a possibility of a systematic bias favouring the repeated questions.

Questions asked after the relevant passage have been found to be more facilitative than those asked before hand. In 16 out of 17 experiments reviewed by Anderson and Biddle (1975) questions placed after passages resulted in better performance on new criterion test items than questions placed before passages. With respect to repeated criterion test items, these studies showed an effect regardless of question position, though there was a trend for it to be somewhat stronger and more consistent when the questions were asked afterward.

Several studies (e.g Watts & Anderson 1971; Berliner, Shavelson, Ravitch and Loeding (cited in Anderson & Biddle, 1975), Dapra & Felker (cited in Hamilton, 1985) have got positive results with "higher order" questions. Adjunct questions affect criterion test performance by influencing the processing activities of readers. Thus questions which require comprehension of the text will promote deeper processing and

therefore more learning and better remembering than questions that can be answered on the basis of surface features. Thus adjunct questions which entail paraphrase and application of principles and concepts to new situations are especially facilitative particularly when the criterion test makes similar demands. Bruning (cited in Anderson & Biddle 1975) suggests that the interrogatory format is atleast in part responsible for the facilitative effects of adjunct questions.

Adjunct questions can therefore be seen as a potential instructional tool that can be manipulated by a teacher to improve comprehension and hence recall of material read. Since there are no studies that have been done on adjunct questions in Kenya, this study sought to establish whether the findings from the western countries are consistent with the Kenyan population.

2.8.0 Research hypotheses.

From the literature reviewed, it was apparent that adjunct questions could improve reading comprehension and retention of material read among learners. It was therefore expected that learners who would read text with adjunct questions would perform better than those who read text only.

The following hypotheses were tested;

- a. There will be an interaction effect between the readers' ability and the type of text read.
- b. There will be no significant difference in reading comprehension between good readers who will read text only and the good readers who will read text with factual adjunct questions.
- c. There will be no significant difference in reading comprehension between good readers who read text only and good readers who read text with meaningful learning adjunct questions.
- d. There will be no significant difference in reading comprehension between good readers who read text with factual adjunct questions and good readers with meaningful learning adjunct questions.
- e. There will be a significant difference in reading comprehension between poor readers who read text only and poor readers who read text with meaningful learning adjunct questions.
- f. There will be a significant difference in reading comprehension between poor readers who read text only and poor readers who read text with factual adjunct questions.

- g. There will be a significant difference in reading comprehension between poor readers who read text with factual questions and poor readers who read text with meaningful learning adjunct questions.
- h. There will be no significant difference between poor readers who read text with meaningful learning questions and good readers who read text without questions.

3.1.6 Research design

The experimental design for this study is a 2 (Poor readers and Good readers) x 2 (Factual questions, Meaningful learning questions) factorial design. The good readers were assigned randomly to the three treatment conditions. The same procedure applied to the poor readers. Therefore, the design of the study is as follows:

CHAPTER 3.

RESEARCH METHODOLOGY.

3.1.0 Introduction.

This chapter describes the following:- Research design, population, sample and sampling techniques, instrumentation, and finally data analysis techniques.

3.2.0 Research design.

The experimental design was used in this study. The design of the experiment was a 2(Good reader and Poor reader) x 3(Text only, Factual Adjunct questions, Meaningful learning questions) factorial design. The good readers were assigned randomly to the three treatment conditions. The same procedure applied to the poor readers. Therefore the distribution of the subjects was as follows;

Table 3.1 Distribution of subjects to various treatment conditions.

Treatment	Good readers	Poor readers
Text only. (Control group).	20	20
Text with factual adjunct questions.	20	20
Text with meaningful learning questions.	20	20

The subjects who read text only formed the control group. The dependent variable in this study was the average score in the posttests that were given after the experimental passages.

3.3.0 Population.

The population from which the subjects of this study were selected was on average twelve year old standard six pupils. Pupils in standard six participated in the study because this class had had comprehension exercises introduced to them. Serious comprehension exercises begin in standard 4 and it is expected that for primary level it should have been perfected by standard 8. It was therefore expected that this would be an appropriate level for the introduction of additional comprehension aids in case the learners had reading problems.

The area selected for this study was Buruburu Educational Zone which has 14 City Council schools (See Appendix I) that mainly cater for children from the area. This area is in Makadara Division of Nairobi Province. The population in this area is mainly of the low-middle income group. For the purpose of this study, there was need for subjects to come from similar economic and social setting. This was to act as a natural control for confounding factors such as different language experiences, different levels of exposure to English, and different socio-economic background.

3.4.0 Sample and sampling procedure.

A list of the primary schools in the Buruburu Educational Zone was made and four schools were purposively selected. This was to ensure that the subjects selected for the study had similar environments both socially and economically. St. Michael's primary school was used in the pilot study. The schools used in the main study were Baraka, Bidii, and Harambee. The schools selected served children from the same neighbourhood. The subjects selected had to have been in the school for at least two years and had to have attended at least 3/4 of the lessons. The subjects were to be of average or above intelligence so that their main differences were to be in reading comprehension ability. A total of 120 pupils were selected from standard 6 after the administration of the Cloze procedure test. The

Cloze Procedure test was used to divide the subjects into two groups of good and poor readers. The English language classroom achievement test scores (reading comprehension section) was used to find out if the scores of the Cloze test were a true reflection of the learners' ability in reading comprehension. After the scoring of the Cloze procedure test a list was made and the top 1/3 scorers formed the good readers while the bottom 1/3 formed the poor readers. Therefore half of the subjects were poor readers while the other half were good readers.

3.5.0 Instrumentation.

This section describes the various instruments used for data collection.

3.5.1 Assessment of reading comprehension ability.

a) Cloze Procedure Test.

The Cloze Procedure is a common measure of reading comprehension ability. This is a technique developed by Taylor (cited in Bormuth, 1968). Many researchers have established the link between the ability to complete cloze exercises and reading achievement Bormuth, Jenkinson, Rankin and Thomas (cited in Kletzien, 1991). In the Cloze Procedure words are systematically deleted from a passage, and the reader is expected to replace the deleted word while reading. The Cloze Procedure

emphasizes the use of the context surrounding the word to aid the pupil in understanding the meaning of the word and of the passage. As an instrument to measure comprehension, the pupil uses the contextual setting of the missing word to determine what the missing word is. It is imperative for the pupils to comprehend the surrounding words and the syntactic and semantic structures of the sentence and even the passage in general. Layton (1979) notes that for a student to pronounce a word or attach meaning to it through the use of phonics or structural clues would be one step short of gaining the exact intent of the writer. He asserts that a word has no true meaning without a contextual setting.

They are based on:

Kletzien (1991) also found that the cloze task taps the reader's ability to make use of syntactic and semantic knowledge, an ability that is fundamental to comprehension. Jenkinson (cited in Kletzien, 1991) indicates that the intellectual processes involved in cloze (such as imagining, reasoning, evaluating, judging, and problem-solving) are the very processes that are essential in reading.

They are based on the following assumptions:

A shortcoming of the Cloze Procedure is that it cannot be used in testing for specific sub-skills in comprehension. It is however, very easy to construct and score. Cloze Procedure test can be administered within a short period of time and it does not require individual testing. The Cloze

Procedure is used widely in the school texts locally and the pupils are therefore familiar with it. The Cloze passages used in this study were the same ones used by Chege (1999) and they were quite effective in discriminating the good from the poor readers. These Cloze passages were used because the researcher assumed that they were applicable in this study and they would be useful in discriminating the good readers from the poor readers.

Example of the Cloze Procedure test.

Shops which sell clothes, particularly women's clothes, are seldom empty. They are found in most Kenyan towns. _____ they have displays of many coloured clothes in the _____. Sounds of music may be heard from a record player _____ : this is supposed to make customers to buy.

(Source: Curtis, A.(1987). Four Skills English: A Primary Course. Nairobi: Oxford University Press. P.21.).

The Cloze Procedure tests that were used were from, " Four Skills English: A Primary Course" by Curtis. The subjects attempted three different exercises and an average score was found.

Scoring of the Cloze Procedure test.

The correct response is:-

- a.) one that exactly replaces the missing word.
- b.) one that is a synonym to the missing word e.g. "Commonly" instead of "Usually"
- c.) One that does not change the meaning of a passage and no clues exist in the context to indicate that the response given is not the correct response e.g. _____ they have displays of many coloured clothes in the _____. The missing words are "Usually" and "Windows". However, a pupil may insert "Sometimes" instead of "Usually" and this neither changes the meaning of the passage, nor does the context suggest that it is incorrect. However if the pupil fills in the second blank with the word "shirt" this will be a wrong response as it does not fit into the context of the story.

Any correct or appropriate response is awarded 1 mark and no mark is awarded to any response outside of the 3 categories of correct or appropriate responses.

The three Cloze tests were scored out of 68. The subjects who scored above 46 were considered to be the good readers while those who scored below 23 were considered to be the poor readers. The readers who scored below 23 and were weak academically were however left out of the

study. The researcher tried as much as possible to have readers who were average or above average in class. The main difference between the good readers and the poor readers was their reading comprehension ability.

b) Teacher Achievement Test.

The normal classroom achievement test scores were also used to group the subjects into good and poor readers. The specific tests that were used were the end of term mark for the previous two terms in English language specifically the comprehension section. All the children in City council schools in this zone sit for the Makadara divisional exam every term and so it was possible to compare the scores across the different schools. An average of the two was found and the score was compared to that of the Cloze test to ensure that the subjects who participated in the study were the actual good and poor readers. Thus the classroom teachers assisted in the final selection of good and poor readers who participated in the study.

3.5.2 Experimental passages.

Two passages were used in the study. The two passages demanded approximately equal levels of background knowledge. The format of the two passages was the same.

a) The first experimental material consisted of a 600-word passage describing the characteristics of a fictitious African country called "IBOONA". The various paragraphs of the passage were unrelated to one another to the extent that each paragraph addressed a different aspect of the geography, economy, government, history, and social condition of this fictitious nation. Each paragraph consisted of a topic sentence (general idea) followed by related subordinate sentences (specific facts). The passage contained a topic sentence asserting the general quality about this country and three sentences which supported the assertion. The relationship between the topic sentence and the supporting sentences was not made explicit. There was a post-question inserted after every paragraph. The meaningful learning post questions required readers to organize paragraph details under the concepts contained both in the adjunct questions themselves and in the topic sentences of the paragraph to which they referred. There were also rote-learning post-questions

which required the readers to literally recall specific informational content contained in one randomly chosen sentence of a related paragraph.

b) Subjects also read a comprehension passage taken from a text book, *Comprehensive English for secondary schools*. The passage was modified to be at the reading level of standard 6 pupils by a teacher teaching English in primary school. The passage had approximately 600 words. The original passage had been simplified by changing some of the sentence structure and vocabulary in order to be certain that the passages were of equal difficulty in relation to the subjects reading level. A primary school teacher read both the original passage and the simplified passage to ensure that the same information was included in both and that the sense of the passage had not been altered. It described the African country of Swaziland (See Appendix IX). It also had post-questions inserted in it and the subjects took a written posttest on it after reading.

The questions asked in reading comprehension exercises normally test comprehension and in some instances, the ability to evaluate what has been read. The comprehension questions aim to test not only ability to understand, but also to infer meaning from what the learner has read. The questions are designed to test pupils' understanding of the language and their ability to reason and draw conclusions from the information given.

3.5.3 Administration of instruments.

The cloze test was given as a group test in the classroom. The papers were then collected and scoring done to separate the good readers from the poor readers.

Instrument for the test passages.

For the experimental passages a booklet was prepared for each subject containing one paragraph per page with a separate sheet of paper containing one test question per page (See Appendix VI). One sub-group read text with factual adjunct questions. The second group read text without questions while the last group read text with meaningful learning adjunct questions. The subjects read the passages in groups depending on the number of subjects that were participating from a particular school. The researcher ensured that the subjects were far apart from one another and therefore could not interfere with each other's work. Each subject took 20 minutes to read each of the passages. Subjects read the passages silently. After reading each passage a written free-recall test was administered. The questions asked as adjunct questions were not repeated in the final tests. (See Appendix VIII).

After reading the texts, all the subjects took the same posttest test which had items asking for both factual recall and items requiring higher-level processing. The subjects spent fifteen minutes answering questions on each test. Performance on the test was then compared among the different groups. There was a ten minutes break for the subjects in between the two passages.

3.6.0 Results of the pilot study.

3.6.0 Pilot study.

A pilot study was carried out with pupils from St. Michael's primary school. Pupils in this school did not participate in the main study. 40 subjects (a complete class) participated in this pilot study. There was need for a pilot study to ensure that the instruments that were to be used in the study were reliable and valid. The Cloze procedure test was administered to find out if it actually discriminated the good from the poor readers. This was confirmed by comparing the Cloze procedure test scores with the scores awarded by the classroom teachers in English language (reading comprehension section) in the previous two terms.

The pilot study was also done to help the researcher judge the difficulty of the experimental passages so that adjustments could be made before the main study. The pilot study was also expected to help the researcher obtain the appropriate style for the best instruction when administering the instruments. It was meant to estimate the time required in the reading of the passages and in the answering of the recall tests.

3.7.0 Results of the pilot study.

The average time required to read each passage was twenty minutes while each test took approximately fifteen minutes to complete. The instructions given and the questions asked were clear. There was a tendency for subjects to look back to get answers for the adjunct questions. This could have been due to their age. The subjects were on average twelve year olds and therefore their memory span is expected to be shorter. Most studies done have been with high school and college students. It was therefore decided that the subjects would be allowed to look back for answers when reading the passages.

3.8.0 Data analysis.

After the tests, the items were scored. The average score per subject was then calculated. The mean score per group was calculated. Using the two-way Analysis of Variance (ANOVA), the researcher found out if there was an interaction between the readers' ability and the type of text read. The researcher also found out if the treatment had any effect on reading comprehension. A Scheffe test was done to compare various pairs of means that were of interest in the study. The following statistical hypotheses were then tested:-

- a. There will be no interaction effect between the readers' ability and the type of text read.
- b. There will be no significant difference in reading comprehension between good readers who will read text only and the good readers who will read text with factual adjunct questions.
- c. There will be no significant difference in reading comprehension between good readers who read text only and good readers who read text with meaningful learning questions.
- d. There will be no significant difference in reading comprehension between good readers who read text with factual questions and good readers with meaningful learning adjunct questions.

- e. There will be no significant difference in reading comprehension between poor readers who read text only and poor readers who read text with meaningful learning adjunct questions.
- f. There will be no significant difference in reading comprehension between poor readers who read text only and poor readers who read text with factual adjunct questions.
- g. There will be no significant difference in reading comprehension between poor readers who read text with factual adjunct questions and poor readers who read text with meaningful learning adjunct questions.
- h. There will be no significant difference between poor readers who read text with meaningful learning questions and good readers who read text only.

CHAPTER 4

RESULTS AND DISCUSSION

4.1.0 Introduction.

The aim of this study was to find out if adjunct questions in text could improve reading comprehension among readers. The study also sought to find out if the type of adjunct questions (factual versus meaningful learning questions) asked affected the amount of comprehension among good and poor readers. This chapter presents the findings.

The subjects in this study were 120 primary school pupils in Buruburu educational zone of Nairobi province. An experimental research design was used. To investigate the hypotheses listed in chapter two, a 2 (reader's ability) x 3 (type of text read) between subject factorial design was used. The two independent variables in the design were reader ability which had two levels (good and poor), and type of text read which had three levels (text only, text with factual questions and text with meaningful learning questions). The dependent variable in this study was the scores in the reading comprehension posttests given after the reading of the text.

The texts read by the subjects were about two African countries; Swaziland and a fictitious one called Iboona. The subjects read three different forms of the same passage. One third of the subjects read the passage without adjunct questions, another one third read the passages with factual adjunct questions and the last one third read the passage with meaningful learning adjunct questions. The subjects then took tests on the contents of the same passages immediately after reading them.

4.2.0 Scoring procedure.

Each test was scored out of 20 marks. The first ten items in each posttest contained factual questions that required the subjects to supply some item of information given in the passage. The type of information requested included names and numbers (see Appendix VIII & XII). A correct response was awarded one mark.

The next five items scored in each test contained meaningful learning questions (see Appendix VIII & XII). These questions required the reader to state a relationship between elements of the passage that were implied but not explicitly stated in the passage. These are also known as inference questions. Each correct item scored gave two marks. If the subject

mentioned the correct answer but did not elaborate then one mark was awarded.

Each subject had two sets of marks (test 1 and test 2). An average score of the two tests per subject was then calculated. This was done to increase the reliability of the scores. The reliability of a test may be raised by increasing the number of tests of equal quality (Best & Kahn, 1989). The mean scores for the six different subgroups were also calculated. The results are shown in table 4.1.

4.1 Means and Standard deviations for good and poor readers reading different texts.

Reader ability	Type of text	N	Mean	SD
Good readers	Text only	20	12.95	2.10
	Text with factual Questions	20	12.80	1.40
	Text with meaningful Learning questions	20	13.48	2.22
Poor readers	Text only	20	7.53	3.37
	Text with factual Questions	20	6.32	2.34
	Text with meaningful Learning questions	20	10.45	2.76

The means in Table 4.1 show that the readers with the meaningful learning questions performed better than those who read text with factual questions and those who read text only. The readers who read text with factual questions performed poorer than the other two groups.

4.3.0 Effect of adjunct questions on good and poor readers.

To test the hypotheses formulated in chapter two a 2(reading ability) x 3(type of text) Analysis of variance (ANOVA) was done. The ANOVA results are shown in table 4.2 below.

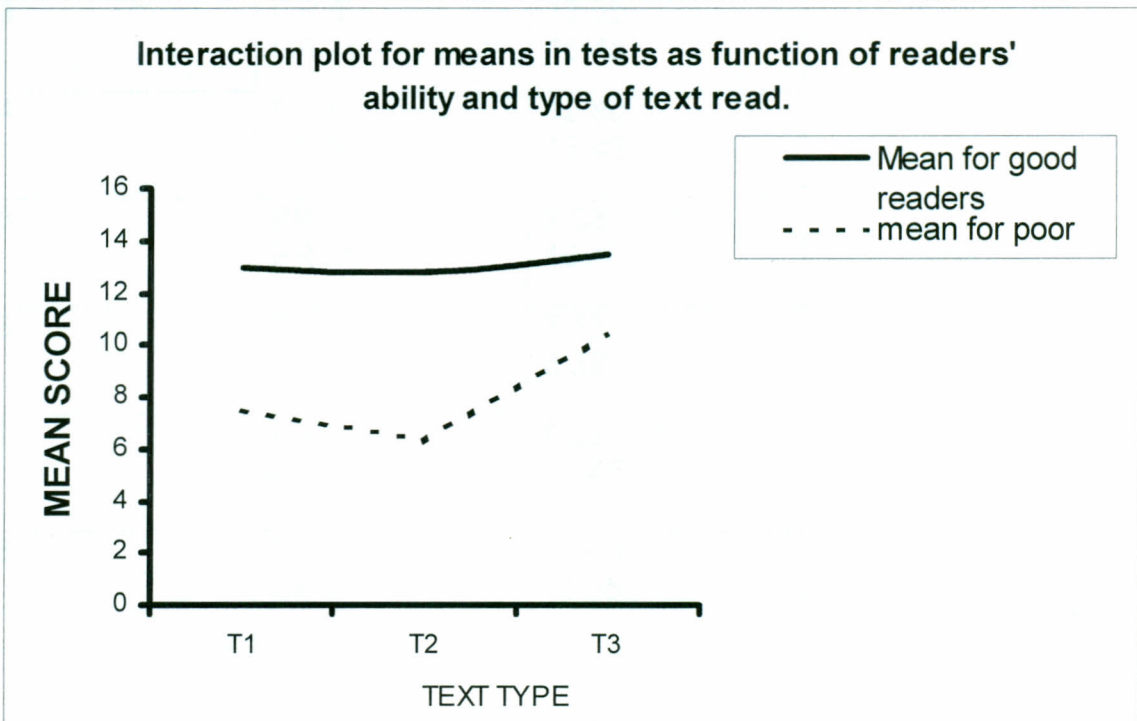
Table 4.2 Two-way ANOVA for good and poor readers reading different texts.

Source of Variation	SS	df	MS	F	p
Reader Ability(R)	742.5	1	742.5	124.7*	.000
Text type (T)	122 .6	2	61.3	10.3	.000
R x T	62.6	2	31.3	5.3	.007
Error	678.7	114	5.9		

Significance level = 0.05

The ANOVA results in Table 4.2 indicate that there was a significant interaction effect between the readers' ability and the type of text read $F(2,114) = 3.07, p < .05$. Thus, the first null hypothesis that there will be no interaction effect between the readers' ability and the type of text read was rejected. The main effects of reader ability and text type were also significant. This showed that the subject's reading ability determined his or her performance in reading comprehension. The type of text read also determined performance in the posttests. Figure 4.1 shows the means for the tests plotted against the type of text read to show the interaction.

Figure 4.1



The results in Figure 4.1 indicate that the effects of type of text depend on the reading ability of the subjects. For poor readers, performance on the tests depended on the type of text read. The main effects of reader ability $F(1,119)= 3.92, p<.05$ and text type $F(2,114)= 3.07, < .05$ were significant.

A Scheffe test was done to compare various pairs of means that were of interest in the study. The results are presented in Table 4.3 below.

Table 4.3 Results of the Scheffe test.

Hypotheses.	Comparisons.	Means.
2	GR-T GR-F	12.95 12.80
3	GR-T GR-M	12.95 13.48
4	GR-F GR-M	12.80 13.48
5	PR-T PR-M	7.53 * 10.45
6	PR-T PR-F	7.53 6.32
7	PR-F PR-M	6.32 * 10.45
8	PR-M GR-T	10.45 12.95

* Significant difference at 0.05 level of significance

Key to the above table.

PR-T __ Poor readers with text only.

PR-F __ Poor readers with factual questions.

PR-M __ Poor readers with meaningful learning questions.

GR-T __ Good readers with text only.

GR-F __ Good readers with factual questions.

GR-M __ Good readers with meaningful learning questions.

From the results obtained from the Scheffe test the rest of the hypotheses were tested. In the second hypothesis it was proposed that there would be no significant difference between good readers who read text only and good readers who read text with factual questions. The results of the Scheffe test for this comparison was not significant and hence the hypothesis was accepted. The third hypothesis stated that there would be no significant difference between good readers who read text only and the good readers who read text with meaningful learning questions. This hypothesis was also accepted due to the results obtained from the Scheffe test. This showed that good readers comprehended well with or without comprehension aids. The fourth hypothesis which stated that there would be no significant difference between good readers who read text with

factual questions and the good readers who read text with meaningful learning questions was also accepted.

The fifth hypothesis stated that there would be no significant difference between poor readers who read text with meaningful learning questions and poor readers who read text only. This hypothesis was rejected. The poor readers with the meaningful learning questions had a significantly higher mean score when compared to poor readers who read text only.

There was however no significant difference between poor readers who read text with factual questions and the poor readers who read text only. Thus, the sixth hypothesis which stated that there would be no significant difference between poor readers with factual questions and poor readers with text only was accepted. The seventh hypothesis stated that there would be no significant difference between poor reader who read text with factual questions and poor readers who read text with meaningful learning questions. This hypothesis was also rejected. The poor readers who read text with meaningful learning questions had a significantly higher mean score when compared to the poor readers who read text with factual questions. This could be due to the fact that questions influenced how the subjects processed material read. Factual questions could have led to rote-learning. The subjects with the factual questions were therefore

disadvantaged because the posttest contained both factual and meaningful learning questions. The subjects who received factual questions could also have limited their attention to material of that type. However, meaningful learning questions induced poor readers to organize and structure what they read.

The eighth hypothesis stated that there would be no significant difference between poor readers who read text with meaningful learning questions and good readers who read text only. This hypothesis was accepted because from the Scheffe test the means of the two groups were not significantly different. The results indicated that poor readers who read text with meaningful learning questions performed as well as the good readers who read text only and the good readers who read text with factual questions. This implied that meaningful learning questions were quite effective in improving reading comprehension among poor readers.

These findings are consistent with previous research on adjunct questions. Anderson and Biddle (1975) and Hamaker (1986) reviewed several studies done on adjunct questions. They found that adjunct questions improved comprehension and retention of material read particularly among poor comprehenders. Rickards and Hatcher (1977) noted that even though poor comprehenders possess adequate

vocabulary skills, when left on their own they failed to semantically organize and relate new material to the main ideas of the passage. For such readers, meaningful learning questions were found to be quite effective in enhancing comprehension and recall.

The three subgroups of the good readers were very similar in their reading comprehension. Rickards and Hatcher (1977) found out that good comprehenders spontaneously generated a context while reading text. That is, regardless of adjunct aids, these readers automatically engaged in meaningful learning by assimilating new material to concepts already existing in cognitive structures. Rickards and Di Vesta (1974) and Hamaker (1986) obtained similar results.

4.4.0 Summary of results.

In general, the good readers performed better than the poor readers. The mean scores for the poor readers were lower than those of the good readers in all the three subgroups.

For the good readers there was no significant difference in the means of the three subgroups (good readers with text only, good readers with factual questions and the good readers with meaningful learning questions). Thus, adjunct questions did not have an effect on the reading comprehension of good readers.

The effect of adjunct questions was more pronounced among the poor readers. The poor readers who read text with meaningful learning questions performed better than the poor readers in the other two subgroups (text only and text with factual questions). The poor readers who read text with meaningful learning questions performed as well as the good readers who read text only and those who read text with factual questions. Therefore, meaningful learning adjunct questions can be used to improve reading comprehension among poor readers.

There was an interaction between the type of reader and the type of text read. Thus, the performance of a reader depended on his/her reading ability and the type of text read. This was especially true with the poor readers whose performance in the posttest depended on the type of text read.

CHAPTER FIVE.

CONCLUSION.

5.1.0 Summary of results.

The aim of this study was to find out the effect of adjunct questions on reading comprehension. The study also sought to find out if the type of adjunct questions (factual questions versus meaningful learning questions) differentially influence reading comprehension among good and poor readers

Generally, meaningful learning adjunct questions improved reading comprehension and recall among readers. Specifically, the poor readers' scores in the posttests were higher when they read text with meaningful learning questions. There was no significant difference between the readers who read text only and the readers who read text with factual questions. For the good readers, there was no significant difference among the three subgroups (good readers with text only, good readers with factual questions and good readers with meaningful learning questions). This means that good readers comprehend the texts they read with or without adjunct questions. There was however an interaction effect

between the readers' ability and the type of text read. This was particularly pronounced among the poor readers whose performance depended on the type of text read.

5.2.0 Implications of the study.

One of the implications of the study is that reading comprehension among poor readers can be improved using the adjunct question technique in the classroom. Teachers can intersperse questions in text in order to help the poor readers to read with a purpose. This will help them to read expecting to give feedback.

Teachers should also try to minimize the use of factual questions. Subjects who were given meaningful learning questions performed better than those who were given texts with factual questions and those who read text only. A possible explanation for this difference could be due to the fact that meaningful learning questions made the subjects to attend to more details of the passage. This helped poor readers to recall more. Drawing from the results it can be argued that readers who received text with factual questions tried to memorize the sentences as independent series of words. They did not encode the words into a unified cognitive structure. The group with the meaningful learning questions were led to

create a unified encoding in order to relate the sentences to the adjunct questions. Construction of a unified encoding increased performance on the posttests.

An improvement in reading comprehension would then lead to an improvement in performance in most of the subjects as confirmed by Chege (1999). She obtained a significant positive relationship among pupils between reading comprehension and performance in subjects notably English, Kiswahili, Mathematics, Science and History in primary school.

The study also suggests that good readers perform well in reading comprehension tests with or without the adjunct questions. The teachers should thus use other techniques to improve performance among the good readers.

The results from this study could also be of help to publishers. They can introduce adjunct question in text to help the readers to read the texts with understanding. This will help them to recall more of what they read. Curriculum developers could also incorporate the adjunct question technique in the school curriculum. This would help learners to strive to read for meaning from an early age. Parents can also help children at

home by inserting questions in the texts they read at home to help them in reading comprehension.

More research should however be carried out to find out if interspersed questions can improve comprehension at all levels of our education system. Research should also be carried out with a larger population to increase the generalizability of the results. The results should also be able to tell whether similar findings could be found both for urban and rural populations.

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APPENDIX 1: CITY COUNCIL SCHOOLS IN THE BURUBURU**ZONE - MAKADARA DIVISION.**

1. Bidii Primary School.
2. Harambee Primary schhol.
3. Ofafa Jericho Primary School.
4. Baraka Primary School.
5. Cannon Apollo Primary School.
6. Dr. Krapf Primary School.
7. Martin Luther Primary School.
8. Jogoo Road Primary School.
9. Nile Road Primary School.
10. Rabai Road Primary School.
11. St. Anne's Primary School.
12. St. Michael Primary School.
13. St. Paul Primary School.
14. St. Patrick Primary School.

APPENDIX II: Cloze passage: "A visit to the Hospital"

Name: _____

School: _____

INSTRUCTIONS:

Read the following passage carefully and fill in the spaces with the word that you think is the most appropriate. (15 minutes)

Gobi had every reason to be happy in April last year. The school holidays had just begun and he could _____ his time playing with friends from other schools. _____ was also waiting anxiously for the day when his _____ brother who worked in a local hospital would take _____ on a visit there. As a young boy Gobi _____ often said he wanted to become a doctor. The _____ to the hospital would help him make a _____.

At last the day came, and Gobi set off _____ on the visit. His brother took him first to _____ out-patients section. Most patients, Gobi learned, were received at _____ hospital here. Then they might be referred to other _____. Some might be sent to the operating theatre for _____, while others could be seen by physicians and given _____ attention. Patients came with all

sorts of complaints and _____. Some complained of severe pains in the stomach. Many _____ them were quickly treated and discharged.

A mother complained _____ her child had diarrhoea and vomiting. The doctor told _____ that diarrhoea could be serious. If the child was _____ treated quickly, it could die from loss of liquid. _____ the doctor prescribed some medicine for the baby. He _____ instructions about how many teaspoonfuls the child was to _____ each day. The mother was further advised to stir _____ medicine well before use and replace the cork _____ in the bottle.

(Source Curtis et. al (1987) Four Skills English. A Primary course Standard 6 pp. 151)

APPENDIX III: Cloze passage: "Moses in Trouble"

Fill the blanks with the most suitable words.

Name: _____

School: _____

(15 minutes)

(This story is told by Musa a pupil in a Uganda Secondary School called Mukibi's educational institute for the sons of African Gentlemen. His nickname in the school is Holy Moses or Moses for short. All the kitchen staff have gone on strike for higher wages. So the headmaster has said that each dormitory in turn must provide food for the whole school for a week. When it is the turn of Moses' dormitory, Dorm 3, they find it difficult to get any food at all. Moses discusses the problem one evening with friends Rukia, Mutagubya and Sebastian Mulutu who likes to be known as King Kong. By a series of accidents, Moses has missed his supper).

"I'm starving", I said bitterly, "I'll drop dead if _____ don't eat something soon" "All right" Rukia got to his feet. "This afternoon _____ talked of borrowing milk. Well, no matter what King Kong _____ I think it's a good idea and I'm ready _____ go borrowing milk now from the farm next door. _____ come with me and then you can have _____ drink of it and that should keep you

going _____ breakfast time". "I think you're both crazy", King Kong remarked, "_____ I'll come too and be on the lookout".

Mutagubya also said _____ would join us and then everybody else wanted to _____. However, I suddenly had another idea. While Rukia, King Kong, _____ and I were collecting the milk, the rest of _____ boys in our dorm could cut some of the sugarcane _____ grew wild all round the school and _____ boil it with breakfast tea in place of _____ sugar. We all left the dormitory and we who _____ going on the milking expedition took with us _____ four gallon can which normally held our washing water. "Heavens, _____ smells bad! complained King Kong, wrinkling his nose. "So _____ you if you held stagnant water for as long _____ that can does". Rukia replied.

"Well, I don't like _____ idea of putting milk in it." King Kong said. Nor _____ I, but there was no other container available. We _____ reached the field where we had earlier seen the _____.

APPENDIX IV: Cloze Passage: "Wildlife"

Fill the blanks with the most suitable words.

Name: _____

School: _____

(15 minutes)

The wild animals of Kenya are part of our country's wealth. In many countries wildlife has almost disappeared. Most of the animals have been hunted and killed _____ make more room for farming. But in Kenya _____ thousands of them survive and continue to live in our parks.

Why do we want to keep our wildlife? _____ should we not kill the animals and make _____ more land on which to keep cattle and plant _____ harvest crops.

The chief reason is that animals _____ beautiful creatures who enjoy their lives as much as _____ do. They are part of our environment that we _____ not want to destroy. The world would be a _____ poorer place without them. Another important reason is that _____ wild animals are rare in so many parts of _____ world, people in other countries want to come and

_____ them just as we do ourselves. Visitors to Kenya _____ the old days used to come with the idea _____ hunting. Nowadays hunting game is forbidden, and what people _____ is to watch the game and photograph it. They _____ with them not guns but cameras.

Several hundred thousand _____ came to Kenya every year, and the money they _____ for their holidays is an important part of the _____ income. In fact tourism has become our second most _____ industry. It earns more money for Kenya than any _____ industry except agriculture.

Source Arnold Curts (1987) Four Skills English. A Primary course standard 7 – pp 18).

APPENDIX V: IBOONA -Text only.

Iboona is the most populous African country with a population of about seventy million. It is found in the western part of Africa. It has two distinct geographical regions. The southern part has very rich agricultural soils with rainfall of about 1200mm per year. The northern part can be best described as a desert. Rainfall is less than 10mm per year and the soils in this area are either rocky or sandy. In the hot season temperatures have been recorded as high as 40 degrees centigrade in this northern part.

Presently, Iboona is one of the few democracies in Africa. There is a president who is aided by two vice presidents. There are also three hundred members of parliament who represent different parts of the country known as majimbos. National elections are held every five years when the people of Iboona choose their representatives.

The ancient Iboonians worshipped many gods, chief of whom was omun. Omun saw and knew everything, but none saw the god. The people saw and worshipped only great stone figures of him. His power, they thought, reached out to them through many lesser gods and through his priests at Buru. Religion was a mystery which only the priests understood, or pretended to understand. For centuries the power and wealth of the Buru

priests had been growing. They had a lot of money, land, animals and food, all of which they collected from the people, rich and poor. Early last century when Njomo became the King he decided to change all this. Religion, he said was the love of one God, whose power over everything was complete. The sign or symbol of this one true God was something that everybody could see. All life depended on it. It was the sun. However with the colonization of this country by the Americans, most Iboonians became Christians. The Arab traders from the east on the other hand introduced Islam. So these are the two main religions in Iboona.

The two main ethnic communities in this populous country are the majority Lwak who form 70% of the population and the Kik who are mainly concentrated in the south. The Kik are however the hardworking of the two communities. They are involved in large scale farming of cashcrops such as coffee and tea. They also grow foodcrops such as maize, beans and potatoes which are enough to feed the whole country. The Lwak are concentrated in the north where they mainly work in the minefields.

The economy of Iboona has not been doing well even 20 years after their independence from Americans who still have a strong influence on the minefields. This is because they provide the skills required in most of the in most of the operations in mining. The northern part of this country is

blessed with mineral deposits mainly copper and diamond. The people of Iboona who are lowly paid continue to labour hard in the mines while the fruits of their hard labour goes to America. The road system in the north is very poor while the schools and hospitals are poorly-equipped. This is quite a contrast when compared to the south where there is a good road network, well-equipped schools and hospitals.

It has been the aim of the government of Iboona to get rid of illiteracy. There is free primary education and so parents do not pay tuition fees. The government pays teachers' salaries. However, this has not increased the number of children going to school as expected. Parents have the burden of buying uniforms, books, equipping classrooms and workshops. This has kept away many children who now have to work as labourers to supplement the family income.

APPENDIX VI: IBOONA -Factual

Iboona is the most populous African country with a population of about seventy million. It is found in the western part of Africa. It has two distinct geographical regions. The southern part has very rich agricultural soils with rainfall of about 1200mm per year. The northern part can be best described as a desert. Rainfall is less than 10mm per year and the soils in this area are either rocky or sandy. In the hot season temperatures have been recorded as high as 40 degrees centigrade in this northern part.

(How much rainfall is received in the northern part of Iboona per year?)

Presently, Iboona is one of the few democracies in Africa . There is a president who is aided by two vice presidents. There are also three hundred members of parliament who represent different parts of the country known as majimbos. National elections are held every five years when the people of Iboona choose their representatives.

(How many vice-presidents are there in Iboona?)

The ancient Iboonians worshipped many gods, chief of whom was omun. Omun saw and knew everything, but none saw the god. The people saw and worshipped only great stone figures of him. His power, they thought, reached out to them through many lesser gods and through his priests at Buru. Religion was a mystery which only the priests understood, or pretended to understand. For centuries the power and wealth of the Buru priests had been growing. They had a lot of money, land, animals and food, all of which they collected from the people, rich and poor. Early last century when Njomo became the King he decided to change all this. Religion, he said was the love of one God, whose power over everything was complete. The sign or symbol of this one true God was something that everybody could see. All life depended on it. It was the sun. However with the colonization of this country by the Americans, most Iboonians became Christians. The Arab traders from the east on the other hand introduced Islam. So these are the two main religions in Iboona.

(Iboonians were colonized by the _____)

The two main ethnic communities in this populous country are the majority Lwak who form 70% of the population and the Kik who are mainly concentrated in the south. The Kik are however the hardworking of the two communities. They are involved in large scale farming of cashcrops such

as coffee and tea. They also grow foodcrops such as maize, beans and potatoes which are enough to feed the whole country. The Lwak are concentrated in the north where they mainly work in the minefields.

(Name one food crop grown in Iboona)

The economy of Iboona has not been doing well even 20 years after their independence from Americans who still have a strong influence on the minefields. This is because they provide the skills required in most of the in most of the operations in mining. The northern part of this country is blessed with mineral deposits mainly copper and diamond. The people of Iboona who are lowly paid continue to labour hard in the mines while the fruits of their hard labour goes to America. The road system in the north is very poor while the schools and hospitals are poorly-equipped. This is quite a contrast when compared to the south where there is a good road network, well-equipped schools and hospitals.

(Name one mineral mined in Iboona)

It has been the aim of the government of Iboona to get rid of illiteracy. There is free primary education and so parents do not pay tuition fees. The government pays teachers' salaries. However, this has not increased the number of children going to school as expected. Parents have the burden of buying uniforms, books, equipping classrooms and workshops.

APPENDIX VII: IBOONA –Meaningful.

Iboona is the most populous African country with a population of about seventy million. It is found in the western part of Africa. It has two distinct geographical regions. The southern part has very rich agricultural soils with rainfall of about 1200mm per year. The northern part can be best described as a desert. Rainfall is less than 10mm per year and the soils in this area are either rocky or sandy. In the hot season temperatures have been recorded as high as 40 degrees centigrade in this northern part.

(Why is there so much farming in the southern part of Iboona?)

Presently, Iboona is one of the few democracies in Africa. There is a president who is aided by two vice presidents. There are also three hundred members of parliament who represent different parts of the country known as majimbos. National elections are held every five years when the people of Iboona choose their representatives.

(Why is Iboona considered a democratic country?)

The ancient Iboonians worshipped many gods, chief of whom was omun. Omun saw and knew everything, but no one saw the god. The people saw and worshipped only great stone figures of him. His power, they thought,

reached out to them through many lesser gods and through his priests at Buru. Religion was a mystery which only the priests understood, or pretended to understand. For centuries the power and wealth of the Buru priests had been growing. They had a lot of money, land, animals and food, all of which they collected from the people, rich and poor. Early last century when Njomo became the King he decided to change all this. Religion, he said was the love of one God, whose power over everything was complete. The sign or symbol of this one true God was something that everybody could see. All life depended on it. It was the sun. However with the colonization of this country by the Americans, most Iboonians became Christians. The Arab traders from the east on the other hand introduced Islam. So these are the two main religions in Iboona.

(How did the Iboonians stop worshipping their many gods.)

The two main ethnic communities in this populous country are the majority Lwak who form 70% of the population and the Kik who are mainly concentrated in the south. The Kik are however the hardworking of the two communities. They are involved in large scale farming of cashcrops such as coffee and tea. They also grow foodcrops such as maize, beans and potatoes which are enough to feed the whole country. The Lwak are concentrated in the north where they mainly work in the minefields.

(Why are the Kiks considered hardworking?)

The economy of Iboona has not been doing well even 20 years after their independence from Americans who still have a strong influence on the minefields. This is because they provide the skills required in most of the in most of the operations in mining. The northern part of this country is blessed with mineral deposits mainly copper and diamond. The people of Iboona who are lowly paid continue to labour hard in the mines while the fruits of their hard labour goes to America. The road system in the north is very poor while the schools and hospitals are poorly-equipped. This is quite a contrast when compared to the south where there is a good road network, well-equipped schools and hospitals.

(Why is the road system in the north poor?)

It has been the aim of the government of Iboona to get rid of illiteracy. There is free primary education and so parents do not pay tuition fees. The government pays teachers' salaries. However, this has not increased the number of children going to school as expected. Parents have the burden of buying uniforms, books, equipping classrooms and workshops.

This has kept away many children who now have to work as labourers to supplement the family income.

(Why is the number of children going to school in Iboona lower than is expected?)

APPENDIX VIII: IBOONA TEST.

1. How much rainfall is received in the Southern part of Iboona per year? _____
2. How many members of parliament are there in Iboona? _____
3. Name the most popular religion in Iboona. _____
4. Give the name of the largest tribe in Iboona. _____
5. What is the population of Iboona? _____
6. In Iboona elections are held every _____ years.
7. How many gods did the ancient Iboonians worship? _____
8. In which part of Africa is Iboona located? _____
9. Iboona has been independent for the last _____ years.
10. What was the sign or symbol of king Njomos one God? _____
11. The northern part of Iboona is a desert. Give two reasons to support this statement.

12. The people of Iboona have not benefited much from the minefields as they should. Give a reason for this.

13. Why were the priests of omun very wealthy?

14. Give a reason as to why education in Iboona cannot be said to be free.

15. Why is the southern part of Iboona considered rich when compared to the north?

APPENDIX IX SWAZILAND –THE COLOURFUL KINGDOM. - Text**only**

If you can manage, take a drive to the small country of Swaziland that lies between South Africa and Mozambique. This is one of the most interesting countries on the continent. As you travel through it, you find that it is divided into three main physical regions, which run from north to south. In the west, you can see the highlands. It often rocky and broken, with the slopes too steep for cultivation; even grazing is poor. To the east of the highlands, you can see the middle lands. Here are many farms, as there is a lot of water in this area. As you proceed to the lowlands, you still see a lot of grazing land. Although the rainfall here is low, the soils are generally fertile.

After a long drive, you may wind your way down the Ezulwini Valley or the “Valley of Heaven”. Here, you will see some beautiful surroundings and meet interesting people. Found along the sides of the hills in groups are beehive huts, with smiling faces drawn on the windows and doorways. As you slowly move down the hills, towards Mbabane, the capital, the people cheer and wave happily to you from all sides.

The Swazis are a peace loving-people who welcome visitors to their country. They are not great fighters. In olden days, they were constantly

terrorized by the Zulus. The Swazis always went to the hills to hide; and when their enemies left, they returned to their homes again. They refused to fight the Boers and did their best to be friendly with them. In fact, they asked the British for protection against the invading Boers and they were granted this in the early years of the 20th century. Later, the country achieved independence and became the present Swaziland.

King Sobhuza II now rules the country, with the advice of his elders. He is the longest-reigning king in the world, having ruled for over fifty years. His Royal Palace is situated in Lombana. Surrounding the palace are the huts of his three hundred wives and his many children from the Dlamini clan in his tribe.

Swaziland is now a modern state, with the largest man-made forests in the world. There are also large orange and lemon farms in this country. Swaziland is also blessed with mineral deposits such as asbestos and iron. Thus, it can be considered as one of the rich countries in Africa. However, the country still guards all the old tribal customs with great care. Some of their ancient customs are most interesting.

The girls of Swaziland are among the most beautiful on the continent. Every year, they perform the "Reed Dance" before the king. The king

watches the dance, and then he chooses the most beautiful girl to be his wife. Thus, every year the king gets a new wife.

A group of warriors has the task of guarding the king and his many wives. These warriors too perform a dance before their king and his wives every year. This is the "Incwala" or "Dance of the Regiments". In the dance, they display their talents as they make mock attacks. It is an admirable dance as they hold their spears high and dance about with their headdresses flying in the wind. More dramatic perhaps is the sight of the king dancing at the head of these regiments. In the meantime, the wives wait and watch the dance. Once that is over, it is their turn to dance in honour of their king and husband. It is interesting to note that some of these wives are already grandmothers, while others are still young, just breast-feeding their first infants. The large number of women dancing before the king is really worth watching.

In such a society, you can see many "Inyangas" or witch-doctors. They are easily recognized by their red, matted, greasy hair. Some of them are liked by the members of the tribe. They possess a lot of magical power, and everyone in the tribe believes in their magic.

The customs and ceremonies of these people have attracted a large number of admirers from far and near. Consequently, many tourists visit this kingdom to observe these ceremonies and customs. Unfortunately, the Swazis' desire is to be left alone to observe their customs and religion by themselves.

APPENDIX X: SWAZILAND –THE COLOURFUL KINGDOM. –Factual.

If you can manage, take a drive to the small country of Swaziland that lies between South Africa and Mozambique. This is one of the most interesting countries on the continent. As you travel through it, you find that it is divided into three main physical regions, which run from north to south. In the west, you can see the highlands. They are often rocky and broken, with the slopes too steep for cultivation; even grazing is poor. To the east of the highlands, you can see the middle lands. Here are many farms, as there is a lot of water in this area. As you proceed to the lowlands, you still see a lot of grazing land. Although the rainfall here is low, the soils are generally fertile.

(Swaziland is divided into how many physical divisions?) _____

After a long drive, you may wind your way down the Ezulwini Valley or the “Valley of Heaven”. Here, you will see some beautiful surroundings and meet interesting people. Found along the sides of the hills in groups are huts, with smiling faces drawn on the windows and doorways. As you slowly move down the hills, towards Mbabane, the capital, the people cheer and wave happily to you from all sides.

(The capital of Swaziland is _____).

The Swazis are a peace loving-people who welcome visitors to their country. They are not great fighters. In olden days, they were constantly terrorized by the Zulus. The Swazis always went to the hills to hide; and when their enemies left, they returned to their homes again. They refused to fight the Boers and did their best to be friendly with them. In fact, they asked the British for protection against the invading Boers and they were granted this in the early years of the 20th century. Later, the country achieved independence and became the present Swaziland.

(The Swazis refused to fight the _____).

King Sobhuza II now rules the country, with the advice of his elders. He is the longest-reigning king in the world, having ruled for over fifty years. His Royal Palace is situated in Lombana. Surrounding the palace are the huts of his three hundred wives and his many children from the Dlamini clan in his tribe. Swaziland is now a modern state, with the largest man-made forests in the world. There are also large orange and lemon farms in this country. Swaziland is also blessed with mineral deposits such as asbestos and iron. Thus, it can be considered as one of the rich countries in Africa. However, the country still guards all the old tribal customs with great care. Some of their ancient customs are most interesting.

(Name the two types of fruits grown on a large scale in Swaziland.)

The girls of Swaziland are among the most beautiful on the continent. Every year, they perform the "Reed Dance" before the king. The king watches the dance, and then he chooses the most beautiful girl to be his wife. Thus, every year the king gets a new wife. A group of warriors has the task of guarding the king and his many wives. These warriors too perform a dance before their king and his wives every year. This is the "Incwala" or "Dance of the Regiments". In the dance, they display their talents as they make mock attacks. It is an admirable dance as they hold their spears high and dance about with their headdresses flying in the wind. More dramatic perhaps is the sight of the king dancing at the head of these regiments. In the meantime, the wives wait and watch the dance. Once that is over, it is their turn to dance in honour of their king and husband. It is interesting to note that some of these wives are already grandmothers, while others are still young, just breast-feeding their first infants. The large number of women dancing before the king is really worth watching.

In such a society, you can see many "Inyangas" or witch-doctors. They are easily recognized by their red, matted, greasy hair. Some of them are liked by the members of the tribe. They possess a lot of magical power, and everyone in the tribe believes in their magic. The customs and

ceremonies of these people have attracted a large number of admirers from far and near. Consequently, many tourists visit this kingdom to observe these ceremonies and customs. Unfortunately, the Swazis' desire is to left alone to observe their customs and religion by themselves.

(What colour is the witchdoctors' hair?) _____

As you drive towards Mopani, the lowlands of the most beautiful Swaziland are laid out before you. The road is a well-tarred, wide, straight road, which runs from north to south. The road is flanked by rolling hills. It often rocky and broken up with the occasional deep gullies. The grass is green. To the west of the road, you see a few small, white, rectangular buildings. There are many farms. There is a lot of hard work. As you proceed to the lowlands, you see a lot of hard work. The road is a well-tarred, wide, straight road, which runs from north to south. The road is flanked by rolling hills. It often rocky and broken up with the occasional deep gullies. The grass is green. To the west of the road, you see a few small, white, rectangular buildings. There are many farms. There is a lot of hard work.

(How is the landscape in the highlands?)

As you drive towards Mopani, the lowlands of the most beautiful Swaziland are laid out before you. The road is a well-tarred, wide, straight road, which runs from north to south. The road is flanked by rolling hills. It often rocky and broken up with the occasional deep gullies. The grass is green. To the west of the road, you see a few small, white, rectangular buildings. There are many farms. There is a lot of hard work. As you proceed to the lowlands, you see a lot of hard work. The road is a well-tarred, wide, straight road, which runs from north to south. The road is flanked by rolling hills. It often rocky and broken up with the occasional deep gullies. The grass is green. To the west of the road, you see a few small, white, rectangular buildings. There are many farms. There is a lot of hard work.

APPENDIX XI: SWAZILAND –THE COLOURFUL KINGDOM. –**Meaningful.**

If you can manage, take a drive to the small country of Swaziland that lies between South Africa and Mozambique. This is one of the most interesting countries on the continent. As you travel through it, you find that it is divided into three main physical regions, which run from north to south. In the west, you can see the highlands. It often rocky and broken, with the slopes too steep for cultivation; even grazing is poor. To the east of the highlands, you can see the middle lands. Here are many farms, as there is a lot of water in this area. As you proceed to the lowlands, you still see a lot of grazing land. Although the rainfall here is low, the soils are generally fertile.

(Why is there no farming in the highlands?)

After a long drive, you may wind your way down the Ezulwini Valley or the “Valley of Heaven”. Here, you will see some beautiful surroundings and meet interesting people. Found along the sides of the hills in groups are beehive huts, with smiling faces drawn on the windows and doorways. As you slowly move down the hills, towards Mbabane, the capital, the people

cheer and wave happily to you from all sides. The Swazis are a peace loving-people who welcome visitors to their country. They are not great fighters. In olden days, they were constantly terrorized by the Zulus. The Swazis always went to the hills to hide; and when their enemies left, they returned to their homes again. They refused to fight the Boers and did their best to be friendly with them. In fact, they asked the British for protection against the invading Boers and they were granted this in the early years of the 20th century. Later, the country achieved independence and became the present Swaziland.

(Give a reason from the passage that shows the the Swazis don't like fighting?)

King Sobhuza II now rules the country, with the advice of his elders. He is the longest-reigning king in the world, having ruled for over fifty years. His Royal Palace is situated in Lombana. Surrounding the palace are the huts of his three hundred wives and his many children from the Dlamini clan in his tribe.

Swaziland is now a modern state, with the largest man-made forests in the world. There are also large orange and lemon farms in this country. Swaziland is also blessed with mineral deposits such as asbestos and iron. Thus, it can be considered as one of the rich countries in Africa. However, the country still guards all the old tribal customs with great care. Some of their ancient customs are most interesting.

(Why is Swaziland considered one of the rich countries in Africa?)

The girls of Swaziland are among the most beautiful on the continent. Every year, they perform the "Reed Dance" before the king. The king watches the dance, and then he chooses the most beautiful girl to be his wife. Thus, every year the king gets a new wife. A group of warriors has the task of guarding the king and his many wives. These warriors too perform a dance before their king and his wives every year. This is the "Incwala" or "Dance of the Regiments". In the dance, they display their talents as they make mock attacks. It is an admirable dance as they hold their spears high and dance about with their headdresses flying in the wind. More dramatic perhaps is the sight of the king dancing at the head of these regiments. In the meantime, the wives wait and watch the dance.

Once that is over, it is their turn to dance in honour of their king and husband. It is interesting to note that some of these wives are already grandmothers, while others are still young, just breast-feeding their first infants. The large number of women dancing before the king is really worth watching.

(How does the king get his wives?)

In such a society, you can see many “Inyangas” or witch-doctors. They are easily recognized by their red, matted, greasy hair. Some of them are liked by the members of the tribe. They possess a lot of magical power, and everyone in the tribe believes in their magic. The customs and ceremonies of these people have attracted a large number of admirers from far and near. Consequently, many tourists visit this kingdom to observe these ceremonies and customs. Unfortunately, the Swazis’ desire is to be left alone to observe their customs and religion by themselves.

Source: Alter, J.B. (1977). Comprehensive English for Secondary Schools 5. Hong Kong: Times Educational Company Ltd.

APPENDIX XII : TEST - SWAZILAND

- 1) Swaziland lies between two countries. These are _____ and _____
- 2) The Swazis were terrorized by the _____. They hid in the _____ and only came back after their enemies had left.
- 3) The Swazis refused to fight the _____ and sought protection from the British.
- 4) King Sobhuza rules with the advice of his _____
- 5) King Sobhuza has how many wives? _____
- 6) A group of _____ has the task of guarding the king and his many wives.
- 7) Name one mineral found in Swaziland.

- 8) What is the importance of the reed dance?

- 9) The 3 main physical divisions in Swaziland run from _____ to _____
- 10.) King Sobhuza has ruled the country for over _____ years.

11.) Why is there so much farming in the middle lands?

12.) What attracts the tourists who visit Swaziland every year?

13.) Why are the Swazis considered a peace loving people?

14.) The age difference among the King's wives is very big. Give a reason for this.

15.) The witchdoctors or "Inyangas" are liked by the members of the tribe. Give a reason for this.

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