INVESTIGATION AND EXPLANATION OF MAJOR FACTORS AFFECTING ACADEMIC WRITING: USING MULTIPLE SOURCES

Tecle Ghebremuse Emehatsion

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Institute of Education

University of London

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ABSTRACT

This study investigates whether teaching writing using multiple sources approach (TWUMSA) is more effective than the current traditional approach to teaching writing for academic purposes. The main research questions are: Can teaching which involves teaching writing using multiple sources (on a topic) lead to improved academic writing? And what is the nature of the intertextual links made by the subjects (students) in the study?

112 subjects (56 control and 56 experimental) served in the study. The experimental groups received instruction on the basis of a teaching approach using multiple sources which involves understanding and organizing texts, selecting, generating and connecting ideas, paraphrasing, and integrating citations and documenting sources. The control groups received instruction on the basis of the current traditional approach for 16 weeks. The statistical method of comparison of means of independent samples T-test was applied and the results of the post tests (phases I and II) show that there are statistically significant differences between the approach using sources and the current traditional approach. The relationship between prior knowledge of subject matter and post test is (positively) modest . The analysis of the subjects' essays reveal that more subjects in the control groups composed their essays using information from, for instance , the second text, then moved to either the first or the third text one after the other but they did not take any more pieces of information from the text/s they had already drawn, whereas more subjects in the experimental groups composed some content units from one text, moved to another text and moved now and then to the text/s they had already drawn pieces of information or content units. Thus, the intertextual links made by the experimental groups appear better and more interconnected and interwoven than that of the control groups.

Three major categories of composing content units (CUs) are established: (1) direct copy CUs, (2) paraphrased CUs, and (3) generated CUs . On the basis of the content units the subjects exhibited, they are classified into five kinds of writers: 'compilers', 'harmonizers', 'constructivists', 'dualists', and 'paraphrasers'.

Thirty-eight lecturers who were teaching sophomore level at the University of Asmara, Eritrea and 200 sophomores completed questionnaires accompanied by rating scales in verbal form such as a. Very high b. high c. moderate, and d. little. The lecturers' ratings to (some similar) statements in the questionnaires are lower than that of the sophomores' ratings. The students' responses to the statements in the questionnaire indicate their unfamiliarity with writing using sources, positive attitudinal changes toward writing using sources, and mostly moderate perception of their capabilities towards writing using other texts. The students also linked the benefits of writing using sources to other courses. The experimental groups appear better users of strategies or activities in the processes of writing using sources.

Analysis of the interview data revealed some causes of the problems the interviewees faced when they wrote using sources. The interviewees stressed the importance of prior knowledge to writing. They also reported positive attitudinal changes toward learning through TWUMSA.

ACKNOWLEDGEMENTS

Table of Contents

TABLES:

Figures :   78

Maps :

Chapter 1 : Introduction

1. 1. 0 Definition of Terms

Academic writing is the type of writing that takes place in the teaching/learning process in educational institutions. It involves the process of composing a new text from multiple sources. In this study it substitutes writing using multiple sources usually three texts on a topic.

Church schools refer to educational settings that were conducted by priests in villages usually in the evening, and at night. Church education had its own grade levels which does not correspond to western grade levels.

Intertextual links are the intersections and interactions of language elements from several texts in creating a new text.

Knowledge refers to mentally stored information which is accessible, retrievable, and available for use, in this context in academic writing. It can be knowledge of the language system or other relevant kinds of information.

Mother tongue is the language an individual acquires and uses first in infancy.

Multiple sources refer to two or three texts provided to the subjects as sources from which they created new texts.

Prior knowledge is any type of information about a specific topic already in the learner's mind before he or she is given new material on that topic.

Schematic knowledge is the configuration or the process of sorting out information about content or form stored in the learners mind available for retrieval and use.

Second language is the language an individual learns as a child or as an adult after he or she acquires his or her mother tongue or is learned with another language concurrently. In this study, it primarily refers to English introduced as a subject and later as medium of instruction above fourth and /or sixth grade.

1.1.1 Introduction

This chapter begins with an introduction to this study through brief discussion of the main reasons for looking for an alternative approach to teaching writing at advanced or tertiary levels. The alternative approach sought is teaching writing using multiple sources (on a topic) approach. This approach is chosen because it involves the strategies or activities students at advanced or tertiary levels are expected to know and use for academic learning (according to the literature on academic writing). It also reviews some approaches to teaching writing which seem to be prevalent in many textbooks for teaching writing for native speakers but also used for nonnative speakers. The review of some approaches lays the foundation for developing an argument for an alternative approach to writing. It explains the situation at the University of Asmara which led to the search for an alternative approach. It points out previous attempts to solve the problem. It also discusses the avenue to be investigated, the research questions to be answered, and the objectives of the study.

In addition to this, this chapter gives a short survey of educational background and development in Eritrea by referring to education under the Italians, the British Military Administration, the Federation, the Ethiopian rule and the State of Eritrea. It discusses some of the problems which might have contributed to the lower standard of English in Eritrea such as changing the media of instruction, pushing/moving English as a medium of instruction from above grade four to above grade six, the introduction of the double shift system, and the effects of the war for independence. It highlights the role of mother tongue in primary schools and the languages spoken in Eritrea. It also surveys where English in Eritrea on the English as a second/foreign language - medium of instruction continuum can be located.

1.1.2 The central concern of the thesis

"Many college and university students with four, five even six or more years of study of another language behind them are still unable to express themselves in a clear, correct, and comprehensible manner in writing" (Rivers 1981 : 291)_

Composing in English as a second/foreign language in general and in academic writing in particular has been a difficult skill to develop as quoted above. At advanced levels/higher institutions students are expected to synthesize from readings, to write lab reports, to summarize, to take lecture notes, to prepare outlines, to take essay type exams and to write reaction papers, research papers without necessary preparation. Lack of adequate preparation of students at some advanced/higher institutions results in problems in academic writing. There is not enough research done on how to prepare students to cope with their institutional expectations in L2 academic writing. Usually, the current traditional dominated approach to writing instruction prevails in L2 writing classrooms. In spite of the fact that much effort has been made by teachers and lecturers to improve the situation, students face problems in academic writing. The current-traditional approach to teaching writing failed to prepare students to meet institutions' expectations. Thus this study investigates whether teaching writing using sources (on a topic) at advanced/higher institutions can be an alternative approach to the current-traditional approach to writing in Eritrean context. (See 1.1.5).

The teaching of writing using multiple sources on a topic focuses mainly on techniques/strategies or activities such as understanding or interpreting sources, organizing texts, selecting, generating, and combining ideas, paraphrasing sentences and paragraphs and integrating citations and documenting sources. This approach may extend activities which are essential for academic writing at advanced or tertiary levels. Concerning academic writing at advanced levels, Grabe and Kaplan (1996) state "the advanced writer is also often concerned with analysing and interpreting information critically, synthesizing disparate sets of information, creating information, arguing alternative perspectives, and presenting

and promoting research" (p. 341). Knowing and using these activities may play a vital role in influencing the success of students in their academic writing. These activities are unlikely to be accomplished through 'the current-traditional approach' to writing (Burnett and Kastman (1997). (Please refer to 1.1.5 for details). This approach focuses on structure or elements or grammar, style, and correctness of texts. In relation to this, Burnett and Kastman (1997) state, " they [teachers] often emphasize rules and use of handbooks to define and illustrate those rules of grammar, mechanics, and style. "Attention given to textual conventions sometimes overshadows attention to individual voice, writing process, social context, or meaning making" (p. 268). Silva (1990) also noted that the current-traditional practices prevail and continue to influence second language textbooks. He states " Indeed, one could make a strong case for the notion that the current-traditional approach is still dominant in ESL writing materials and classroom practices today" (p. 15). Moreover, Silva (1993) examined 72 reports of empirical research in which L1 and L2 writing were compared. His findings indicate important differences with regard to composing processes as well as with features of written texts. Referring to theory of L2 writing he states "There exists, at present, no coherent, comprehensive theory of L2 writing" (p. 668). He also points out that this was due to the newness of L2 writing inquiry and the assumption that L1 and L2 writing are the same which led L2 writing experts to rely on L1 composition theories for direction. He says :

> L2 writing specialists need to look beyond L1 writing theories , to better describe the unique nature of L2 writing, to look into the potential sources(e.g. cognitive, developmental, social, cultural, educational, linguistic) of this uniqueness, to develop theories that adequately explain the phenomena of L2 writing (p.669).

In Eritrea, English functions as a medium of instruction above grade five. Its use within the school is limited to classroom instruction. Consequently, the sociolinguistic environment important for language development is not available because it is not spoken by the people in any of their everyday activities. Concerning to approaches of teaching English in general and writing in particular, there is not clearly stated specific approach but it seems that the syllabuses entail a structural syllabus dominated eclectic approach. This approach consists of almost all the features of the current-traditional approach. (See 1.1.5).

I would like to argue that better results may be obtained if writing using sources on a topic approach is taken as an alternative approach to the current-traditional approach. The primary reason why I would like to argue against the current-traditional approach is that Eritrean schools including the University of Asmara implicitly follow the features entailed in the current-traditional approach to writing. This approach was tried and it was found that it could not prepare the students to produce effective writing expected in academic writing such as writing lab reports, interpreting information, preparing notes for study, and promoting and presenting research. The decision to raise nine credit hours to twelve credit hours of English common courses at the Univ. of Asmara may serve as evidence that the students are not prepared for academic writing (Please refer see 1.1.5). In addition to this, Leki and Carson (1997) conducted a research on "EAP and the writing experiences of ESL students in university courses" in the U.S.A. They found out the ESL writing classes did not effectively prepare students for academic writing. They state "This [analysis of the epistemological consequences of separating writing and content) characteristic sets writing for writing classes very much apart from writing for academic contexts" (p.61). Thus, the students' inability to meet university writing expectations inspired me to look for an alternative approach to teaching academic writing. Hence, I shall apply the techniques or strategies of writing using sources on a topic such as interpreting or understanding sources, selecting, organizing, generating, and connecting and ideas, paraphrasing sentences and paragraphs, and integrating citations and documenting sources which have not received any attention in the approaches discussed in 1.1.5. The activities, techniques or strategies included in writing using sources on a topic approach may play an important role in improving academic writing at advanced or tertiary level. I shall apply the techniques or strategies of writing using sources on the basis of research studies initiated by Spivey (1983) and has developed since then by Spivey and King (1989), Kennedy (1985), Campbell (1988), Greene (1990) and others mainly to investigate the composing processes by less-skilled and skilled comprehenders. (Please refer to 1.1.7). I shall give a new perspective to writing from sources by implementing it in classroom instructional context.

1.1.3 The situation of academic writing at the Univ. of Asmara.

English has been used as a medium of instruction from middle schools and later from junior secondary schools to university level for about thirty years in Eritrea. The introduction of Amharic as a medium of instruction from grade one up to grade six worsened the already low standard of English in Eritrea (then part of Ethiopia). The University of Asmara used to admit students who had been studying English as a medium of instruction above grade four and above grade six up to 1992. At present, it admits students who study English from grade six up to grade eleven as a medium of instruction. Students take university entrance examinations when they complete grade eleven; all the University entrance examinations including the English language examination, are of the multiple choice examination format. This type of examination does not include writing tasks which would demand students be involved in some sort of writing in English. Consequently, students who join the University have little knowledge of English. Note-taking, outlining, summarization from a single source, drafting , writing lab.reports, essay type examinations, composition writing, research paper writing are usually introduced in freshman courses and become indispensable activities starting from sophomore courses. Nearly all the students are unfamiliar with almost all the types of writing. Their poor language background becomes the stumbling block to academic writing using sources in English as a second language.

1. 1. 4 Problems currently experienced by lecturers and students

Lecturers at the University of Asmara complain that their students have been unable to meet the University requirements in academic writing tasks. The students' problems are reflected in activities such a understanding or interpreting texts, organizing texts, selecting, generating and connecting ideas, paraphrasing, integrating citations and documenting sources and manipulation of sentence structure. These have been observed when students take notes, make outlines, write lab. reports, summarize single source, write essay type examinations,

compose essays, and write research papers because these are the writing tasks students are expected to do. In addition, the students especially freshmen and sophomores complain that they cannot communicate in English effectively because they are faced with problems related to the above mentioned activities of academic writing. Thus, both lecturers and students at the University of Asmara, Eritrea feel that the standard of English is low.

So, as a measure to improve the low standard of English at the University, it was decided that the credit hours for English common courses be raised from nine to twelve credit hours. This decision was made at the International Symposium (on Curriculum Development) for the revitalization of the University of Asmara from 25-28 August 1992.

Many departments at the University have been trying to accommodate the additional three credit hours; however, they could not define or describe specific skills their students need to improve. There are no clearly defined theoretical and/or practical approaches which especially deal with writing processes that enable students to create new texts using two or more texts on a topic. Teachers, lecturers and professors assign reading sources and they expect their students to synthesize ideas taken from the sources in activities such as note-taking, lab. reports, summarization, essay writing, essay type examinations, writing reaction papers, and research papers. Students who stored isolated pieces of information from different sources are unlikely to be academically successful. So, students need to know how to compose or synthesize from assigned reading sources. Synthesizing from sources may also encourage students to develop their own perspectives on a topic by comparing and contrasting some texts on a topic. They can see other possibilities of composing their own texts. They can also examine the divergent views and writing processes. Thus, my study aims primarily at investigating if teaching writing using multiple sources (on a topic) approach leads to improved writing ability for academic purposes in order to respond to the challenges students face at the University.

1. 1. 5 Approaches to and models of the writing process

Assuming that L1 and L2 writing are similar, L2 writing experts adopted L1 writing instructions, models and classroom procedures. However, L1 writing instructions, models, and practices have been tried and they are found ineffective in L2 writing. The decision to add three credit hours to English common courses at the University of Asmara may serve as evidence. In addition to this, Silva (1990) states "Though current-traditional practices have been regularly and vigorously attacked and inveighed against in the literature for a number of years now, their continuing influence is clearly reflected in many of the most well known and popular contemporary ESL composition textbooks" (p.14-15). So, this section briefly discusses some prevalent approaches to teaching writing in general in order to provide the rationale for looking for an alternative approach to teaching writing for academic purposes especially at advanced or tertiary levels.

Grabe and Kaplan (1997) consider the expressive approach, the cognitive approach, and genre based approach as types of approaches to the writing process. Similarly, Burnett and Kastman (1997) recognize current- traditional approach (that focuses on form), neoromantic (expressivist) approach (that focuses on creativity and expressive ability of individual writers), and neoclassical (rhetorical) approach (that focuses on audience, rhetorical elements such as purpose, organization, and context) as three conventional approaches to teaching writing. In addition to this, Raimes (1991) recognizes the form focused approach which is similar to current -traditional approach, the writer focused approach which is similar to expressivist approach , the reader focused approach which is similar to rhetorical approach and the content focused approach which emphasizes the content from which the topic for writing is selected as approaches to teaching the writing process. I would like to discuss the expressive approach, the cognitive approach, the genre-based approach and the current-traditional approach to writing because they, in one way or another, prevail in L1 and/or L2 teaching writing materials and classroom practices

The Expressivist approach

The features of writing for foreign language writing recommended by Rivers (1981) fall under the current-traditional approach. Rivers (1981) considers copying, reproduction, recombination, recombination dictation, guided writing, and composition as various activities in systematic study of writing (pp. 297-304). According to Rivers, in the reproduction phase students are expected to write from what they have learned orally or by reading relevant textbooks. The recombination phase is characterized by the ability to rewrite from memory what they have learned. In recombination dictation phase, students practice on what they have already learned by writing from dictation. In the guided writing, completion and substitution exercises are given. In the composition phase, students are expected to write dialogues, expressive and descriptive paragraphs, and they are also expected to note the differences between spoken and written language. The above writing activities show the characteristics of structural approach which focuses on the learning of forms through repetitions to the extent of memorization which in turn reflects the features of the current-traditional approach to writing.

Burnett and Kastman (1997) point out that the expressivist approach to teaching composition focuses on individual writers and it considers the teacher as a facilitator who prepares appropriate situations for writing. The expressivist approach seems to be based on the assumption that writers have the knowledge which enables the writers to write and what they need is a little instruction and opportunity to express their thoughts, ideas and feelings. This approach failed to consider the social context of writing. It also failed to design instruction which relates and expands expressive writing to their school subjects that play vital roles in students' success in academic writing. Referring to the major problem of this approach, Grabe and Kaplan (1996) state "It [the expressive approach] essentially ignored the context of writing and the social context in which writing is performed in the real world" (p.89). This approach also ignores fundamental factors of teaching writing using multiple sources approach (See 2.4.1).

The cognitive approach

The cognitive approach has been developed on the basis of research findings in cognitive psychology. It has been developed by researchers/writers such Hayes and Flower (1980), Odell (1980), Beaugrande (1984)and Scardamalia and Bereiter (1987).

Beaugrande (1984) proposed a model of text production . It is known as the sequential-stage relay model and it consists of several phases. It is a descriptive account of features of the writing process. Concerning the model, Grabe and Kaplan (1996) state "His analysis draws heavily from research in cognitive psychology, particularly the research on memory, attention, and reading" (p. 93). The model consists of programmatic (purpose), semantics, syntax, lexicon, and phonemics or graphemics. Beaugrande states "The popular, metaphoric "Black box" model considered only the input and output of each stage and disregarded internal operations" (p. 102). He also points out that it is impossible to move or jump from one phase to another phase. It seems that the model is too complex to be applied in classroom setting. Beaugrade did not mention any empirical evidence on how his model effectively worked in classrooms let alone to include factors of teaching writing using sources on a topic. Grabe and Kaplan (1996) state " It (the model) is not an operational model making specific falsifiable predictions" (p. 94).

Hayes and Flower (1980, 1986) have also developed a model of writing process which focuses on processes of writing. The model was derived from the analysis of two years writing protocols. It identifies subprocess of composing process as well as the organization of these processes. It also attempts to accommodate individual differences in composing style. Planning, translating and reviewing are the three major processes of the model. Hayes and Flower(1980) state that their model is not a stage model. They state "The model is recursive and allows for complex intermixing of stages " (p.29). However, the model does not describe the strategies that a beginner follows to become a competent writer. As they state " Our model is a model of competent writers" (p. 29). In addition to this, the model is based on analysis of writing protocols in which writers usually produce narrative

and expository writing from their minds. Hayes and Flower consider that the translating process involves producing "language corresponding to information in the writer's memory" (p. 12). Even Hayes and Flower (1980) express their reservations of the application of their model in school setting. They state " It is far too labourious a procedure to be used routinely in the classroom either for teaching or for evaluation" (p. 27). Referring to the application of Hayes and Flower's (1980) model, Sharples et al. (1989) point out that this kind of model describes " the writer's mental process and not of the operations, strategies, and techniques carried out on some external medium" (p.26). This may suggest the problems with this model for classroom teaching/learning process. Finally, the model does not include any of the factors important in writing using multiple sources approach (see 2.4.1).

In Canada, Scardamalia and Bereiter (1987) developed two models of cognitive approach to the writing process. Their models describe how and why less skilled and skilled writers compose differently. They do not , however, describe common features of writers. They were interested to answer questions related to the causes on how ability to use organization strategies, ability to make use of main ideas for planning, generating, and integrating information resulted in the differences between the compositions produced by novice and expert writers. On the basis of their findings, they associated the novice with a knowledge telling model in which writers tell what they know or write information that they have been given, for instance, by their teachers and the expert writers with a knowledge transforming model in which writers include essential information, satisfy their reader's expectations, and show organized, coherent and fully developed logical arguments. However the two models show many overlapping features of writing and they are not necessarily exclusive. The models seem different in degrees of complexity rather than in kind. It appears reasonable to collapse the two models into one model with lower and upper limits in a continuum. In addition to this Scardamalia and Bereiter (1987) do not clearly indicate or present any strategies or instructions on how the less-skilled writers can acquire what the skilled writers know and use. Flower (1989) points out that

Scardamalia and Bereiter's models do not include how context influences writing. Grabe and Kaplan (1996) also raise questions such as "A related question is whether or not it is possible to speak of a stage in which a writer has a partially developed knowledge-transforming ability. If it is possible, how can it be recognized, and how generalized is its applicability...? (p. 127). Scardamalia and Bereiter (1987) do not indicate any empirical evidence of implementation of these models in classroom context, although their studies contributed much to the development of writing.

Genre and academic writing

The genre-based approach to literacy began when the traditional curriculum, which was teacher-centred, prescriptive, and product-oriented , was officially abandoned in Australia in the 1970s. Although writers such as Winterowd (1975) defined genre in broad terms as " the internal set of consistent relationships perceived in any stretch of discourse whether poem, play, essay, oration, or whatever" (p. 165), its meaning expanded rapidly in Australia in the 1980s. The development of genre theory is associated with Michael Halliday who became professor of linguistics at the University of Sydney in 1975. Martin (1985) sees genres which facilitate how tasks can get done. She gives an example in a narrative in which one begins with an abstract, continues with orientation, follows on with a complication, inserts an optional evaluation, carries on with a resolution and ends with a coda (p. 251). She also states " All genres have a beginning-middle-end structure of some kind; and these structures will be referred to here as schematic structures" (p.251). This indicates that working with similar genres facilitates our ability to acquire and use relevant strategies to accomplish a given task for, instance, a given writing task. According to Kress (1986), genre refers to conventionalised differences of social occasions that lead to conventionalised differences of texts (p. 199). This shows differences of texts as a result of differences of social occasions in which the differences are accepted by the community. Swales (1990) explains consistency and similarity of typical genres and he states " In addition to purpose, exemplars of a genre exhibit various

patterns of similarity in terms of structure, style, content, and intended audience" (p.58). As to the acquisition of genres, he states:

> The acquisition of genre skills depends on previous knowledge of the world, giving rise to content schemata, knowledge of prior texts, giving rise to formal schemata, and experience with appropriate tasks. Thus, the teaching of genre skills essentially involves the development of acquisition-promoting task activities (pp. 9-10).

Thus, similarity of context, style, structure, audience' expectations, and retrieval of schematic knowledge relevant to the specific task may foster the acquisition of writing using sources on a topic. Once students understand one type of writing task, it may not be difficult to apply similar strategies to similar writing tasks. It may help them to concentrate their resources to the details of the writing task. Dechant (1991) notes that genre schemes such as conventions of style, typography and layout help " the writer to anticipate what the readers are likely to expect" (p. 133). Achieving readers' expectations is an essential requirement that a writer has to meet and knowledge and application of genre schemata may help to perform a given task. In addition to this, referring to the importance of teaching genre, Littlefair (1991) explains , for example, that the purpose of a novelist and the author of an instructional manual are quite different. She states "The written form of their work is characteristic, for we can more or less predict some of the features of genres they will write" (p. 8). She adds that we can help our readers by pointing out the linkage between purpose and genre. She also explains that genre forms have developed their meaning within cultures over time. Lemke (1995) also recognizes 'specialized way of writing' (e.g. scientific reports, legal documents, academic articles) as some written genres (p. 144). As to what constitutes genres, Lemke (1995) states:

> Some of these larger patterns (patterns of ideational meanings, interpersonal stances, and textual organization and informational prominence) become socially institutionalized in the sense that they come to be repeated, with variations, in recognizable ways from one text to another, one occasion of discourse to another. They come to be discourse formations, genres, text types (p.40).

Recognition and acceptance of a given pattern by the community, repetition with

little variation of information organization, structure of the text as a whole, and style may facilitate learners' understanding of similar genres once they know and are in a position to create themselves similar genres in a given writing task.

Christie (1993) considers the task orientation which refers to the general purpose of the teaching learning activity, the task specification which refers to the discussion of the content about which the students are expected to write, and the task which refers to the exploration of aspects of content as three obligatory stages in "the writing planning genre" (p. 166).

According to Callaghan, Knapp, and Noble (1993), the genre-based approach to teaching writing consists of three phases. In the first phase teachers select genres such as description of, for instance, animals, newspapers articles, manual instructions, etc. In order to teach the relatively consistent or repeated features of the genres, they teach several model texts. Callaghan, et al. (1993) say " In this modelling stage, the social purpose, text structure, and language features of the genre are investigated" (p. 181). In the second phase, teachers guide and support students to collect and organize information for writing. Gathering and organizing information can be done in groups or individually. In this phase, students study the content of their writing such as note taking, interviewing, discussing, and drawing relevant diagrams. Language development and familiarity of the genre for the writing task are indispensable for effective writing. Concerning the teacher's responsibilities, Callaghan, et al. state " The teacher's role is to take the students' spoken language and, through careful negotiation, transfer the speech into writing" (p. 182). When the students are able to handle the expected writing task, they move to the third phase, which is characterized by activities as preparing drafts, conferencing, evaluating and editing. Referring to language resources, they state " For students with limited control over written language, explicit guidance in understanding purpose, schematic structure and the language features of a genre is needed before they can launch into independent construction" (p. 182).

Referring to genre applied to writing Bhatia (1993) states " ...particularly the work of the associates of Halliday on genre analysis, have found useful applications in the teaching of writing to children" (p.4).However, this approach does not indicate its application to different grade levels in school setting.

Although the approach seems highly demanding and time consuming, it sounds effective for native language student writers. A genre-based approach to writing would be introduced to nonnative student writers when its implementation is supported by empirical evidence. In addition to this, genre-based approach does not include writing activities useful for academic writing using sources which students appear to need at advanced levels.

The Current-Traditional Approach

This approach focuses on types of content or activities such as teaching rules of grammar and mechanical conventions of language. In relation to the features of this approach to writing instructions Hillocks (1986a), who recognizes it as 'representational mode', indicates that this approach involves clear and specific objectives, lecture and teacher led discussion, instructional materials including models, pattern imitation focused assignments, and primarily teacher feedback (p. 117). Most of the above mentioned writing procedures are dominant in many L2 teaching materials and classroom writing assignments and exercises.

Concerning the content of this approach, Burnett and Kastman state " Because teachers emphasizing a current-traditional approach encourage students to give their primary attention to structure, organization and correctness of their text, they often emphasize rules of grammar, mechanics and style" (p. 268). In addition to this, less attention is given to writing processes, social context or meaning making.

Referring to the current-traditional rhetoric approach, Makinen (1995) points out that aspects of paragraph writing such as topic sentence, major ideas and details,

introduction, conclusion and modes of traditional discourse such as descriptive, narrative, expressive, and argumentative were emphasised in second language writing classrooms. The expressive , cognitive, and genre-based approaches are not considered as alternates because they seem to require a native-like sociolinguistic environment and most of them do not involve the activities or strategies expected to be acquired and applied in academic writing at advanced levels such as understanding or interpreting sources, selecting, organizing, generating, combining and integrating ideas, paraphrasing sentences and paragraphs, and integrating citations and documenting sources.

1. 1. 6 Previous attempts to solve the problem

The current-traditional approach as well as teacher-centred approaches with their emphasis on structural elements such as syntactic and morphological rules have not improved the low standard of English in general and academic writing in particular. In their secondary schools, students were given different types of activities such as reading and writing isolated sentences as well as reading passages with the hope of consolidating their knowledge of specific structural patterns. These approaches also assume that the various activities would lead students to eventually internalize the language system. Students do not get favourable conditions to develop their ability to express themselves, narrate, explain, describe, argue and reflect their ideas in the early stages of their school life. These deficiencies result in poor language background. In relation to approaches to teaching writing, Grabe and Kaplan (1996) state:

> Many ESL classrooms still rely on writing textbooks which stress paragraph models, grammar, and usage rules, and vocabulary development as their entire curriculum. The large majority of these textbooks, while advertised as process oriented, do not typically emphasize purposeful writing activities. 'Current traditional' approaches are also alive and well in L1 writing instruction, particularly in secondary and university level classes (p. 31).

When students join the University, there is a wide gap or mismatch between course demands and their writing abilities. At the university level as Grabe and

Kaplan (1997) also point out, analysing and interpreting information, summarizing, taking lecture notes, synthesizing different kinds of information, writing reports, taking essay exams, arguing alternative perspectives and conducting research are major activities in academic writing. It is a challenge to nearly all the students in that they are not prepared to meet these required writing tasks and it is a challenge to lecturers in that they are unable to devise courses which can help them to overcome the challenge. So, teaching writing using sources approach is chosen for investigation as an alternative to the current-traditional approach to teaching academic writing at advanced levels. It is hoped that the alternative approach would prepare students to meet their lecturers' expectations as well the University's educational objectives.

1. 1. 7 Theoretical Background

Teaching writing using multiple sources approach (TWUMSA) especially at an undergraduate level involves the use of L2 readings as sources for ideas in creating new texts. I believe that in suggesting ways of improving sophomores' academic writing ability, cognitive interactionist as well as cognitive constructivist approaches involve and extend process-based as well as student-based approaches to writing in which a technique known as TWUMSA can be usefully employed. It involves operations and activities such as understanding and organizing texts, selecting, generating and connecting ideas, paraphrasing, and integrating citations and documenting sources (See 2.4.1). These operations and activities seem to play vital roles in improving writing ability for academic purposes at advanced or tertiary level especially for those who are expected to write in English as a second or foreign language.

Thus, this study seeks to provide insight into major factors affecting academic writing using multiple sources. It will explore how interactions among components of TWUMSA are reflected in the students' essays from three sources on a given topic, the intertexual links made by the students, and what composing strategies the students followed to accomplish their composing task.

Researchers such as Garner (1982), Brown, Day, and Jones (1983), Hare and Borchardt (1984), and Hidi and Anderson (1986) investigated the cognitive processes involved in summarizing texts by novice and expert summarisers. Their studies have extended the dimensions of investigative writing processes when they studied from the perspective of summarizing single texts.

The desire to extend the use of reading materials as models for teaching writing in general to using texts for developing operations or activities which seem indispensable to academic writing at tertiary levels motivated this study. In connection to this, Campbell (1990) considers integrating information from readings as a feature of successful academic writing. She also points out that integrating information from other texts has scarcely been directly studied in the writing of native as well as nonnative speakers of English. She also states " Even rarer is documentation of the highly complex processes followed by academic writers using background sources - processes that involve reading, understanding, learning, relating, planning, writing, revising, editing, and orchestrating" (p. 211). Referring to her study on *The composing Processes of College Students Writing from Sources* Kennedy (1985) says " The writing across discipline movement provided an impetus for this research, as did the recent paradigm shift in many composition courses from using correlated readings as models for teaching writing to using them as information sources for paraphrasing, summarizing and synthesizing" (p. 436). She wanted to determine how student-writers at college level used assigned reading sources and she found out that competent readers use more strategies and they were more actively engaged in reading than less competent readers.

Concerning the role of arrangement of information in the writers' mind, Spiro et al. (1987) state " Coherent representation or configuration of meaning facilitates understanding and enables writers to access relevant strategies so that they can use what they know effectively" (p. 48). When writers compose from sources, they search for connections among ideas which may foster mental representation of meaning as well as form which may be retrievable for use.

In connection to essay writing using passage, Newell and Winograd (1989) point out that activities such as " examining evidence and marshalling ideas, integrate the important information into their knowledge of the topic" (p.200). In this case, Newell and Winograd emphasize the processes of how new knowledge from sources incorporate into the existing knowledge of the writer during composing. In relation to the process of constructing meaning from sources, Spivey and King's (1989) studies involve (hierarchical classroom setting of) 60 6th, 8th and 10th graders and one composing assignment from three descriptive texts on the same topic. The subjects produced their essays within three consecutive days. They examined mainly four composing variables such as quality of content, organization, connectivity and holistic quality. They found that the students who were not encouraged to include their own ideas inclined to depend on ideas from the source texts. Similarly, Spivey (1987) recognizes writing using source texts as the construction of composite mental representation which entails the connection of information from source texts and the writer's prior knowledge. In addition to this, Spivey's (1990) study involves 40 junior and senior university students who were given three encyclopaedia articles which provided the students with factual information on a single topic 'armadillos'. In this case, she describes the types of transformations made by the students in reference to the processes of organizing, selecting, and connecting information in writing from source texts. Referring to organizing, she states "...writers discover and invent relations as well as content units as they shape their mental representations and generate form for the texts they are creating" (p.265). Writing using source texts would invite and encourage writers to play an active role in transforming information from sources through creating (usually) a new organization, selecting salient points, paraphrasing author's ideas, and establishing connections among ideas. It may also inspire writers to contribute to the production of the new text by generating ideas from their existing knowledge. Connections made among ideas from the sources may also serve the writers as an anchor for future connection so that a network of interconnections may develop.

Flower et al. (1990), also consider reading to write as a literacy event in which the

writer's knowledge of linguistic, rhetorical, and contextual awareness and strategies interact with different types of information available in source texts, the writer's experiences and learning, and the context for constructing meaning. Ackerman's (1991) study includes forty graduate students from the Departments of Psychology and Business. The students were asked to write an essay that explained and showed their understanding of the nature and importance of one of two given topics from four passages for each topic. He stressed the importance of reading to write in order to construct a new mental and textual representation as ultimate outcome in comprehending and composing. Ackerman found that prior knowledge in reading to write plays an important role. He also found that the 'high knowledge' writers included more evaluative elaborations and new ideas in their essays than the 'low knowledge' writers. Referring to reading and writing he says " ...a constructivist perspective generally assumes a cognitive interplay of prior and immediate ideas in the mental representation of composers" (p. 135).

Greene (1993) investigated how different writing tasks affected student writers' composing from sources and she found out that the writers constructed different representations of meaning because report and comparison tasks seem to expect them to select, organize, and connect information differently (p. 48). So, lecturers need to design writing tasks that can prepare students to meet their departments' expectations.

Hartman (1995) investigated the intertextual links of competent readers and he recognizes those readers a. with many more links to endogenous [within the given texts) resources, b. with links to both endogenous and exogenous [outside the given texts] resources, and c. with many more links to exogenous resources.

Mayer (1992) recognizes learning as response acquisition, knowledge acquisition and meaning construction. Referring to learning as meaning construction from books, and lectures, he points out that selecting information, organizing new information and integrating the new knowledge from sources into existing knowledge play indispensable roles. In connection to the knowledge construction view, Mayer (1997) also says:

> The underlying premise of cognitive constructivism is that humans actively build their own knowledge. Rather than being a commodity that can be transferred from one person to another, new knowledge is constructed within the context of one's existing knowledge. ...Cognitive processing involves active construction including selecting, organizing, and integrating knowledge." (P. 479).

In relation to accessing existing knowledge, Franke and Grouws (1997) state "The connections between ideas enable an individual to search her mental structure, moving from connection to connection, in an attempt to gain access and combine information, so that it can be purposely put to use" (p. 311). They also point out that individuals' successful search for their mental connections rely on types of information, manner of connections, and the strength of their linkage. An individual who is unable to gain access to a piece of information cannot use it.

All the above mentioned studies have some common features such as that they did not involve intervention (teaching or instructing students); they were conducted with native language student-writers in a native language environment; most of them were outside the classroom setting and they involved a small number of students, and data were mostly collected through think aloud protocols and different forms of interviews.

Taking this brief review into account, my study involves learners of English as a second language - strictly speaking English as a medium of instruction. It includes a large number of student-writers in a non-native English speaking environment. It also includes teaching some strategies to improve reading and writing. The reading and writing strategies include lessons on:

understanding or interpreting sources,
organizing texts,
selecting ideas,
generating ideas,
connecting ideas,
paraphrasing words, phrase, sentences and paragraphs,
integrating citations and documenting sources

when the subjects write in English as a second language.

1. 1. 8 Main avenue to be investigated

This study investigates the role of cognitive and constructive processes in developing and improving writing ability from knowledge stored in the student writers' minds as well as creating new texts or passages from two or more texts or passages. Competence in writing ability becomes crucial as students' grade levels increase. At some point of the writing stage, Kress (1986) points out " he (*the child* italics added) is drawing on a large number of texts , remembered largely in schematic terms, and reproducing the 'reading' as a new text" (p.202). Kress calls this " writing at a general level" (p.202). This refers to ideas remembered from unidentifiable sources because the ideas from previous texts are integrated with the existing knowledge of the student-writer. Similarly, Short (1992) studied the intertextuality of a small group of first graders and he states " For many learners, their connections are not primarily between written texts but with visual texts, especially the mass media of television and movies"(p.331). He also states "Intertextuality is most commonly defined as the process of making connection between current and past texts; of interpreting of one text by means of previously composed texts"(p.315). Summerfield (1992) says about texts and intertextuality : " Texts, therefore, interact, interconnect, and intersect"(p.82). He sees the processes of intersection, interaction and interconnection of texts with each other as intertextuality.

When a student is required to create new texts using other texts, he/she needs to implement major writing components of teaching/learning writing using sources approach (please see 2.4.1).

Kennedy (1985) points out that there has been little research conducted " on the combined reading-writing process"(p.438). Regarding the importance of the area of study, Kennedy (1985) states "Writing about reading sources is a fertile untilled area for future research" (p.453). I also feel that writing using sources is a crucial and productive area for academic writing because it involves the nature of intertextuality from different dimensions and perspectives. Spivey (1990) states

as follows:

> Understanding the constructive processes in composing from sources is important not only for theory building, as we seek to flesh out and interrelate our theories to reading and writing, but it is important for pedagogical reasons as well (p.260).

I strongly believe that the study of writing using multiple sources without investigating its relationship with reading results in vague understanding of the major factors affecting academic writing using multiple sources. Short (1992) believes that research conducted to explore intertextuality over time within classroom setting complicates data collection and data analysis. He states "Through this research we will gain better insights into students learning and effective learning environment and learn more about the nature of intertextuality" (p.332). Hartman (1995) suggests conducting research on intertextuality which includes classroom setting and different tasks. He also states " A design that included more students and students of varying reading proficiency would likely lead to a more generalizable and comprehensive understanding of the mental processes by which intertextual links are made" (p.559). So, major components of writing using multiple sources, relevant cognitive processes/strategies and intertextual links are the main areas to be investigated in this study.

1. 1. 9 Questions which should be answered

This dissertation seeks to investigate whether teaching writing using sources approach would lead to improved academic writing. It also investigates some problems the students faced in making intertextual links when they compose their own single text from three texts on a topic.

Main research questions : Can teaching which involves teaching writing using multiple sources (on a topic) lead to improved academic writing? And what is the nature of the intertextual links made by the subjects (students) in the study?

This research also tries to answer the following research questions.

1. How do students in academic writing compose new texts?

2. What problems do these student-writers face when they write using multiple sources on a topic?

3. What are the perceptions, familiarity, attitude, motivation, etc. of sophomores towards learning writing using multiple sources?

Thus, the study has the following objectives:

a. To describe the students' academic writing;

b. To identify the causes of the problems of student academic writing;

c. To seek insight into the nature of intertextual links, and

D. To suggest procedures whereby students can improve their academic writing.

1. 1. 10 Aims and importance of the study

The aim of the study is to explore innovative and practical approaches and to contribute empirical data to our knowledge of how English as a second language (ESL) student writers in particular and native language writers in general improve their academic writing ability. Hence, the study is hoped to be significant for :

a. motivating the University students to apply cognitive operations and strategies in academic writing using sources in their respective field of specialization;

b. Providing guidance and feedback to syllabus designers and textbook writers so as to develop materials for teaching/learning writing using sources for academic purposes;

c. Analysing and systematising effective writing strategies that involve writing from multiple sources;

d. Providing student-writers with explanation of intertextual links and;

e. Suggesting procedures for improving academic writing

1.2.0 History and Background

1.2.1 Survey of Educational Background and Development in Eritrea

Eritrea is situated along the west coast of the Red Sea in north Africa. It has 1072 kms. of coastline. It borders on the north and the west with the Sudan, on the south with Ethiopia and on the south east with the Republic of Djibouti. It has an area of 124,320 sq. Kms. (47,754 sq.miles). It is the size of England or Austria. Its population is estimated at about 3 million. (Papstein, 1991: preface).

Map 1: Location of Eritrea

DIAGRAM REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES
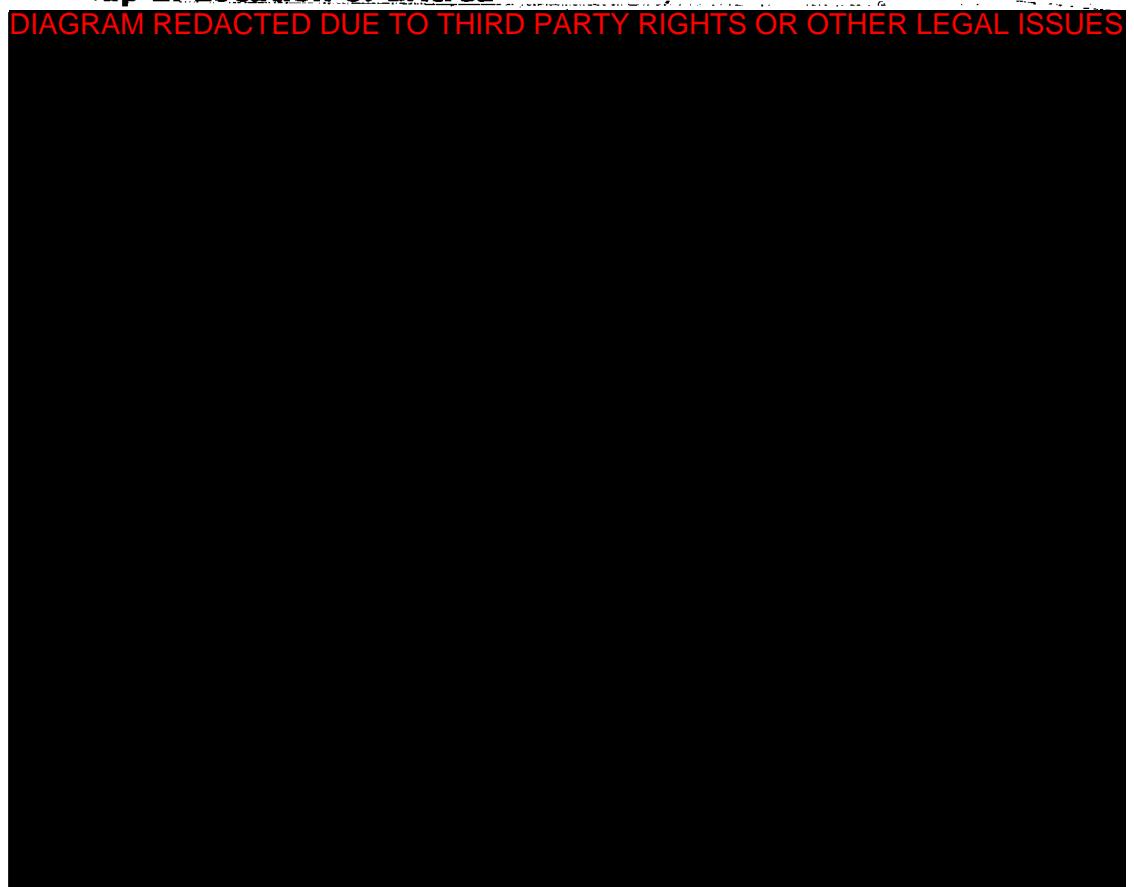
(Sourcre: Eritrea, Basic Statistics..., Nov. 1995)

1. 2. 2 Church, Koran and Mission Schools

Education in Eritrea has been dominated by religious teachings. Church schools and Koran schools have played significant roles in the transmission of Eritrean philosophy, social psychology, moral obedience and social responsibility. Church schools taught children church literature. "Timhirite nibab" is the school of reading in which children learn "fidel" (alphabet) instruction. The children are taught Ge'ez letters called "Fidel". Ge'ez consists of 34 letters with 7 forms (including diacritics) each and 5 letters with 5 forms each . Ge'ez letters have no relationship to any Latin alphabet. During Reading lessons the priest selects religious books for reading. Memorization and recitation were the main strategies of developing and mastering the reading ability.

In "timhirite kidase"- school of songs- children receive lessons in singing. These lessons prepare them to serve altar priests. "Timhirite zema" -school of poetry- is higher form of church education. Here, priests, studied forms and models of how to compose poems which were sung to celebrate church as well as political ceremonies because state and church were unitary.

In the school of books, the priests learn the tradition of the church, the theology, church history and laws through the interpretation of various writings. There are different areas of specialization. At this phase, studies focus on interpretation, translation and commentaries of some texts such as the New and Old Testaments, writings of church fathers, and calender calculation.

The contribution of church schools to modern western education was limited because only a few children attended church schools, which focussed on church literature. There were no specific lessons in writing until the last stages of church education. It seems that church education had created negative impact on the development of writing ability because it excluded writing tasks and encouraged recitation and memorization.

Koranic schools taught children Koran literature. Similar to church schools, the methods of learning were primarily based on listening, reading, oral recitation and memorization.

The Lazarist, Roman Catholic and Swedish Evangelical Missions introduced and developed modern western education. Mission education also introduced European technology and European religious attitudes to Eritrea. The Lazarists began to run schools in Eritrea in the 1880s. According to Stjarne (1972), the Swedish Evangelical Mission arrived in Massawa in 1866. According to Pankhurst (1962), Roman Catholic Mission established a seminary at Keren in 1872. These missions introduced printing presses and their education systems encouraged many children to attend school.

1. 2. 3 Education under the Italians, the British Military Administration and the Federation with Ethiopia

When Italy colonized Eritrea in 1889, a large number of Italians mainly soldiers and their families settled in Eritrea. As a result of this settlement,

Italian schools were established. During this period only a few schools were opened for Eritrean children.

Concerning schools during the Italian colonization, Allen (1953) states "Then schools were established for settlers, and eventually about twenty-five schools were in operation. For Eritreans, only six government schools were maintained through the country " (p. 83). In addition, Eritreans were allowed to study up to grade four; this was extended to grade five at the end of the colonization period. When the Italians were defeated Eritrea was ruled by the British Military Administration.

During the British Military Administration -April 1941 - Sept. 1952 - schools expanded rapidly. In 1941, a new educational system was established in Eritrea and Captain Kynaston Snell became the Director of Education and Mr. Isaac Teweldemedhin, an Eritrean who received his elementary school education at the Swedish Mission School, was appointed inspector of education. He had teaching experience before the Swedish Mission school was closed in 1932. Under the new education system many new schools were established and a system of teacher training was opened in 1943 to train elementary school teachers. In December 1943, there were 19 elementary schools. Regarding the expansion of elementary schools in Eritrea, Allen, (1953) states " The nineteen units which had been established in the first month of operation, 1943, had grown in December of that year to twenty-eight schools with fifty instructors, and the enrollment totalled over twenty-four hundred pupils"(p. 87). During this period, Tigrigna and Arabic (in separate schools) became the media of instruction in Eritrean elementary schools. Mr. Isaac Teweldemedhin and other Eritreans took the initiative of producing text-books in Tigrigna because there were no textbooks written in Tigrigna. According to Trevaskis (1960), Arabic textbooks for Eritrean elementary schools were obtained from Egypt and the Sudan.

The British education system was adopted in 1942. Thus primary schools included grades 1-4 and middle schools included grades 5-8. 1946 heralded the first time completion of primary education and the commencement of middle school education. At the end of the British Military Administration in 1952, there were only five middle schools in Eritrea. English which was introduced in the first/second grade as a subject became the medium of instruction above the third/fourth grade. Usually five/six periods a week were allocated to the study of English Language in Eritrean Schools. During this period writing in English as a second language commenced. The development of writing ability became essential for academic success because students were required to take written examinations.

During federation with Ethiopia (Sept. 1952 - Nov. 1962), the establishment of schools and progress of education were maintained although the Ethiopian government could not meet the high demand and expectation of Eritrean school children. In addition to elementary and middle schools, two secondary schools, a vocational trade school and a nursing school were opened. Generally speaking, education was limited to the completion of middle school education (grade 8). The standard of education and the standard of English as a second language were maintained. Students could take essay type examinations and most of them met the educational expectations. Writing was considered an essential skill for academic success.

1. 2. 4 Education under the Ethiopian Government (Nov.1962 -_May 1991)

After the abolition of the Federation on 14 November 1962, the Eritrean educational system was amalgamated into the Ethiopian educational system. Three terms a year was changed into two semesters a year. Middle school entrance examinations which were given on the completion of grade four were dropped. Elementary, middle and secondary education which was organized in three levels of four years each : 1-4 primary school, 5-8 middle school and 9-12 secondary school was restructured into 1-6 elementary school, 7-8 junior secondary school, and 9-12 senior secondary school. From 1964 - 1991 national school examinations were prepared on the completion of grades six, eight and twelve. Moreover, Amharic which was introduced as a subject in some Eritrean schools in 1958 became the medium of instruction first from grade one in 1962 and eventually from one to six. Thus the Ethiopian government substituted Amharic for Arabic and Tigrigna in Eritrean elementary schools. Eritrean elementary school children, especially Arabic and Tigrigna speakers were denied the right to learn in their mother tongue in elementary schools. Arabic and Tigrigna textbooks were abolished from schools and some of the textbooks

were burned. The use of Arabic and Tigrigna languages in regular academic settings was terminated.

English, which was taught as a subject beginning from third grade and as a medium of instruction usually at the beginning of grade five, continued to be taught as a subject up to the end of grade six starting from September 1967. Using English as a medium of instruction from grade 7 onwards was likely to contribute to the decline of the standard of English in Eritrean (then part of Ethiopia) schools. In relation to English Language examination Hudson (1968) states :

> The English Language of the Ethiopian School Leaving Certificate Examination will, hopefully, be almost totally objective for the first time in history. A controlled composition will be set. Many of the examinations in other subjects, however, will continue to have essay-type questions (p.35).

From the exam evidence, it appeared that students could not write effective compositions. Hudson also adds " There is little sense of asking students to write "compositions" before they can write correct sentences and paragraphs" (p. 36).

School children in Eritrea were in a situation in which their mother tongue was used outside classrooms, and as media of instructions from grade one to grade six and from grade seven onwards Amharic and English respectively. This situation would create unfavourable conditions for learning English. If we see the use of English in academic settings, it came next to Amharic in beginning and as a medium of instruction. This curious situation might place English as a third language. Eritrean students were expected to know at least three languages : mother tongue, the language they started to speak as infants, and learned languages - Amharic and English. This could hinder the progress of English language learning in general and academic writing in particular because students were not prepared to use effective English in writing. Thus conditions

were unfavourable for improving the writing ability.

Education in Eritrea was also affected by the situation created in Eritrea. On 14 November 1962, Emperor Haile Selassie of Ethiopia abolished the Federation and the next day he proclaimed the union of Eritrea with Ethiopia but on 1 September 1961, the 30 year armed struggle for the independence of Eritrea began. Many students left school and joined the Eritrean Liberation Fronts. At the end of 1974, the Eritrean Liberation Front (ELF) and the Eritrean Peoples Liberation Front (EPLF) were prepared to liberate Eritrea. Hence, on Saturday evening on 1 February 1975, heavy and fierce fighting began in areas surrounding Asmara- the capital of Eritrea. Although the aim was to capture Asmara and to liberate the whole country, they did not succeed. This resulted in massacre, mass imprisonment, detention, blockage of main roads to Asmara, unemployment, and shortage of food, water supply, electricity and firewood. Consequently, many students left Asmara and other towns either to join the liberation fronts or to live as refugees through the world and still others were forced to serve in the military. Then the number of schools dramatically dropped from 472 in 1974 to 89 in 1976 and the number of students fell from 124,752 in 1974 to 34,678 in 1976 (Eritrean Schools report, July 1978 to 30 June 1979 E.C.). In the academic year 1990/91, there were only 214 government and non-government primary schools with 109,087 (Govt. 74,878) students, 59 middle schools with 27,556 (Govt. 21,671) students, and 19 secondary schools with 32,140 (Govt. 31,519) students. (Eritrea, Basic Educational Statistics and Essential Indicators Nov. 1995). As indicator of progress in education, in 1994/95 there were 510 primary schools with 224,287 students, 88 middle schools with 34,995 students, 33 secondary schools with 36,728 students and 3 government technical schools. (*Eritrea, Basic Education Statistics and Essential Indicators*. Nov. 1995).

So it was difficult if not impossible to continue to learn under these conditions. They were unfavourable to the development of academic writing ability which demands much student concentration and attention. In addition, a double -shift

system was introduced in 1973/74 academic year.

In the autumn of 1973, the student population expanded and as a result there was a shortage of space especially for secondary school students. To solve the problem of space, the Ethiopian Ministry of Education introduced the double shift system in 1973/74 (Report on the organization of Education in Ethiopia 1973). Nearly half of the students learnt(and still learn) in the morning shift while the remaining part of the students learn in the afternoon shift. The double shift system led to the reduction of students class attendance from eight hours a day to six hours a shift. This in turn resulted in the reduction of one period from 45 minutes to 40 (35) in exceptional cases) minutes a period. Generally speaking, five to six periods a week was allocated to the study of English Language as a subject in Eritrean schools.

Table : 1 School Organization (1889-1997) - Summary

under	year	primary	middle	junior	senior
Italian rule	1889 - 1941	1-4(5)	____	____	____
British Adm.	1941 - 1952	1-4	5-8	____	____
Federation	1952 -1962	1-4	5-8		9-12
Ethiopian rule	1962 - 1991	1-6		7-8	9-12
State of Eritrea	Since May 1991	1-5		6-7	8-11

School Organization from Italian rule to the State of Eritrea (Grades)

1. 2. 5 Medium/Media of Instruction

During the Italian rule, Italian was the medium of instruction in Eritrea. During the British Military Administration, Arabic and Tigrigna (in separate schools) became media of instruction in Eritrean elementary schools. English which was introduced as a subject in the first/second grade became medium of instruction in middle schools. The use of Arabic and Tigrigna in elementary and English in

middle schools as media of instruction also continued for the duration of the federation. However, the introduction of Amharic to some grades in some schools appeared in 1954 (Teshome 1979). It began to function as a medium of instruction to the first grade in 1962. In 1963-64 Amharic became the medium of instruction above grade six in Ethiopia but it was decided that special considerations were to be made to students for whom Amharic was a second language (*Elementary School curriculum, years 1-VI*. 1964. Ethiopia, Ministry of Education and Fine Arts). Hence, Amharic became the medium of instruction in Eritrean elementary school (grades 1-6) in 1967. English which was the medium of instruction above the third grade from 1948 up to 1963 in Ethiopia (Teshome 1979) and above third/fourth grade from 1946 up to 1967 was superseded by Amharic. Thus, English became the medium of instruction above the sixth grade in Eritrea in 1967. Amharic Language became a compulsory subject in the Ethiopian School Leaving Certificate Examination (ESLCE).The standard of education in general and the standard of English in particular began to deteriorate with the introduction of Amharic as a subject and as a medium of instruction (see 1. 2. 4). The introduction of Amharic made English the third language in Eritrea.

When Eritrea was liberated in May 1991, English became the medium of instruction from grade six onwards and the periods allocated to English Language were raised from five to six or seven in some schools with certain grades. After liberation, the department of education - Eritrea - has decided to develop all Eritrean languages. Consequently, students are allowed to learn either in their mother-tongue or in another language of their choice but in the autumn of 1995, it adopted the policy of learning in the mother tongue from grade one to five and it also decided to use English as a medium of instruction from grade six onwards.

Table - 2 Nine Eritrean Languages

No.	Language	Script/Alpha-bet	Where it is spoken (as a mother -tongue)
1	Tigrigna	Ge'ez	Eritrean highlands
2	Tigre	Ge'ez	northern stretch of the coastal plains, northern highlands and Barka lowlands
3	Saho	Latin	areas between Denakil and the eastern edge of the Eritrean highlands
4	Afar	Latin	southern stretches of the coastal plains and the Denakil areas
5	Bilen	Latin	end of northern highlands
6	Kunama	Latin	remote lowlands of Gash-Setit
7	Beja	Latin	north-western areas of Eritrea
8	Nara	Latin	northern lowlands of Gash-Setit
9	Arabic	Arabic	north eastern Red Sea Coast +(Moslem communities through learning Koran)

The Education department of the State of Eritrea has adopted the policy of learning in either the mother-tongue or a choice of another language as a medium of instruction in primary schools since the autumn of 1995. In the 1994/95 academic year Tigrigna in 355, Arabic in 97, Tigre in 25, Saho in 14, and Kunama in 13 schools have been used as media of instruction. In addition, Amharic in 2 schools(in Denakil) and Italian in 1 school in Asmara have been used as media of instruction in primary schools. There have also been 3 special schools : 1 for the blind in Tigrigna-Braille, and 2 schools for the deaf-sign language.

Map 2: Distribution of Nine Eritrean Languages

(Adapted from 30 Years Dream in Reality (1991) in Arabic and Tigrigna)

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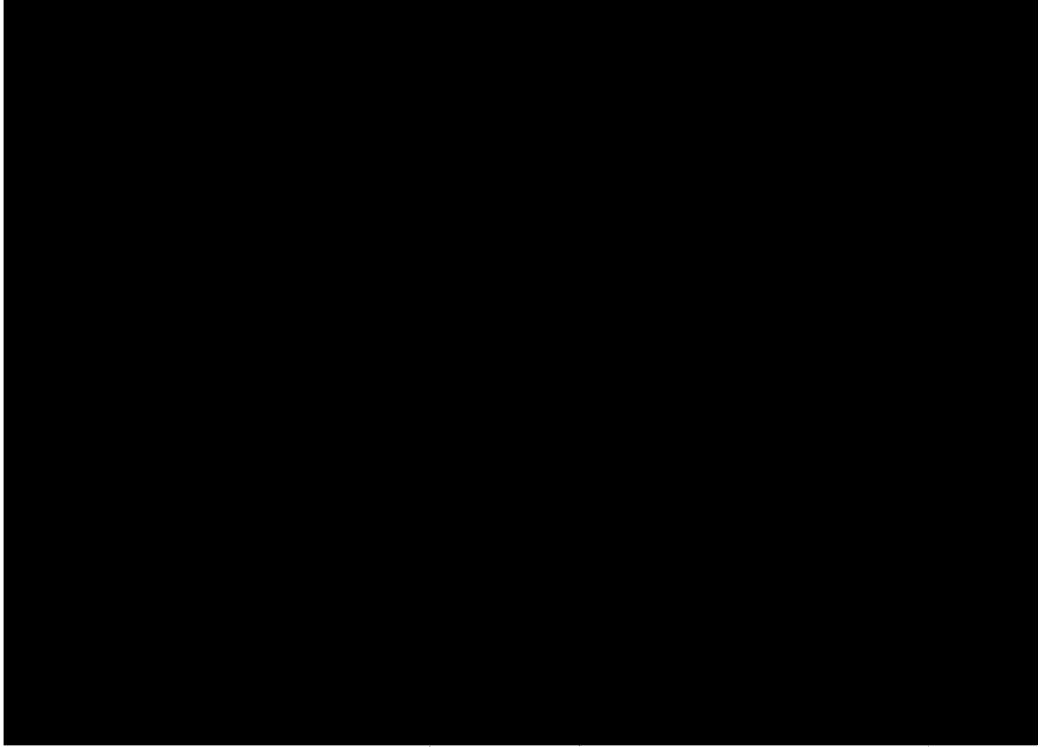
Map 3: Distribution of Nine Eritrean Nationalities

(Adapted from 30 Years Dream in Reality (1991) in Arabic and Tigrigna)

DIAGRAM REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES
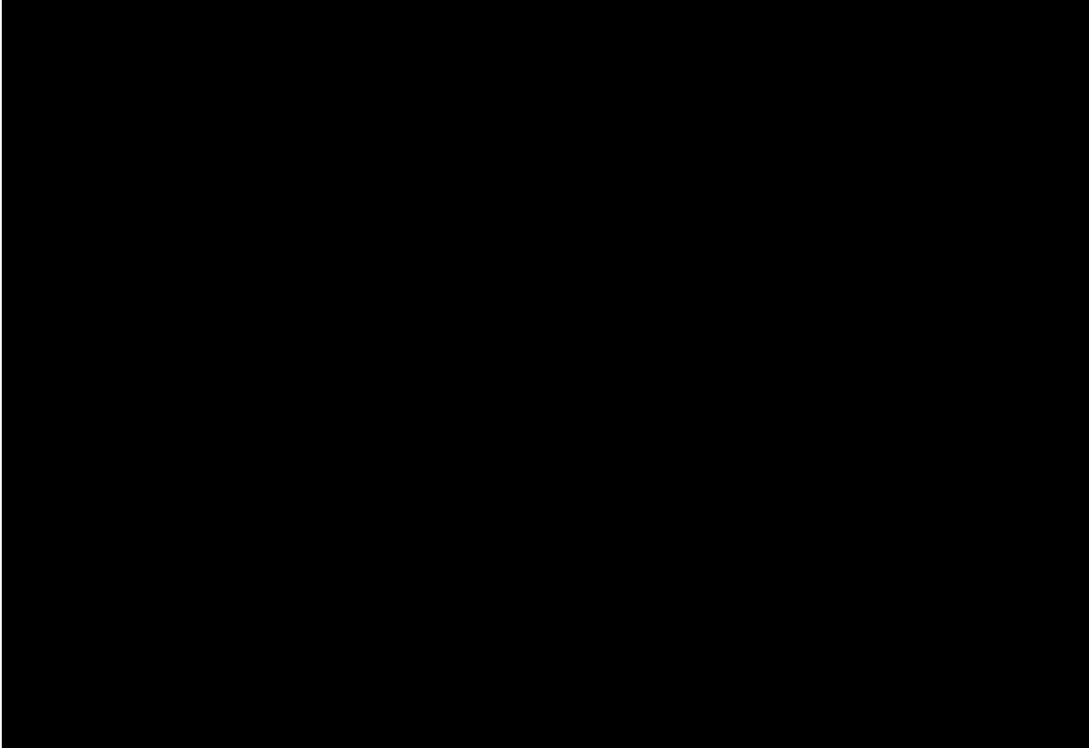
1.3.1 Where can we locate English in Eritrea on the English as a second/foreign language - medium of instruction continuum?

The problems Eritrean students face in learning English as a second/foreign language medium of instruction are also felt by some learners of English as a second language. When we observe the status of English in education in Eritrea, English may be located at almost the bottom of English as a second/foreign language - medium of instruction continuum whereas it may be located at the top of the continuum in countries like Nigeria, Zambia and Kenya. Some researchers felt that even students in countries like Nigeria face some problems. For example, in Zambia as Kashina (1994) points out English is the language of administration, commercial as well as industrial institutions. It is also the language used for personal and interpersonal communication. Kashina (1994) states " ...it [English] is the medium of instruction from grade 1(the lowest level) through to the university" (p. 19). Referring to the difficulties students face, he states "The truth is, however, that the use of English as a medium of instruction has continued to pose many complex problems" (p. 20). This shows that even students who use English as a second/foreign language- medium of instruction from the first grade, face problems with writing for academic purposes.

Similarly in Nigeria, Emenanjo (1992) says "English is the official language for formal literacy, the bureaucracy, secondary and higher education, the court of law, etc." (P.286). In relation to some problems students face, Adegbija (1989) states " In spite of such knowledge (English third person present tense an - s suffix) however, a typical undergraduate essay in English reveals many errors relating to the third person present tense, concord and agreement" (p. 199). He also pointed out that English was the only medium of instruction and the sociolinguistic environment for learning English was favourable.

In Kenya, according to Sure (1991) English is used in public and private sector

offices, in diplomacy, external trade, civil aviation, for personal and interpersonal communication among educated Kenyans of different language backgrounds and " as a medium of instruction in most of the educational system" (p. 136). However referring to problems students face in writing he says " ...poor writing ability was ranked high since English is generally associated with formal communication and not with casual, colloquial use " (p. 136). Similarly, in relation to problems pre-university students face in learning in English in Kenya, Nyamasyo (1994) states "Complaints by teachers, parents, lecturers, and employees have tended to focus on such students' inability to spell correctly, speak coherently, and even to express complete thought in writing" (p.79). This shows that writing ability is rather a difficult language skill and it requires much attention and concentrated effort.

Concerning English in Tanzania, Rubagumya (1989) pointed out that English was taught from grade three onwards as a subject and in secondary schools as a medium of instruction. Regarding problems in learning English, Rubagumya (1994) states "Pupils want to learn English, but they have problems coping with lessons in English" (p. 52). He also noted 'spoon-feeding' by teachers to prepare them for examinations of subject areas in English promoted what he called rote learning.

In Botswana, English is an official language, alongside, Setswana. It is also the language of the judiciary, government documents, and parliament. As to its educational function, Arthur (1994) indicates that English is the medium of instruction from Standard 5. In spite of the relatively favourable sociolinguistic environment, Arthur (1994) points out that in some areas " its use within the school is limited to classroom instruction" (p. 38). This is similar to the Eritrean classroom setting. Referring to Primary School Leaving Examination and Junior Certificate Examination English (at the conclusion of their first seven years in school) scripts in 1987, Nesbitt (1990) indicated that a large number of students were unable to write coherent prose. He states " Of that number, a

large majority were often unable to write simple (one clause) sentences correctly" (p. 127). For students who are unable to write even simple sentences correctly, it is unlikely that they understand subject areas in English. This shows how language barrier affects students' performance.

In Eritrea, English is taught as a subject from grade three onwards and it becomes the medium of instruction above grade five. The above raised points show that the relatively favourable sociolinguistic environment available to students in the above mentioned countries is not available for Eritrean students. So it is likely that much work will be needed to create English learning situations in general and writing using sources for academic purposes in particular to compensate what Eritrean students lack.

1.4.1 conclusion

In this chapter, it is noted that teaching writing in English as a second/foreign language for academic purposes has been a challenging task to many students in general and to Eritrean students in particular because the students have not got favourable environment for improving their writing ability for academic purposes through the current-traditional approach which focuses on form-grammar, mechanics, style, and correctness of language in general. The review on approaches indicate that they were primarily designed for L1 writing and they were adopted to L2 writing. The assumption that L1 and L2 writing are similar seems to change. The view that L2 writing is different from L1 writing and the search for L2 writing theories and models has been started. L1 approaches to teaching writing do not indicate how to use the approaches especially to second/foreign language contexts. Having reviewed the approaches, I would like to argue that an alternative approach should be looked for. I shall investigate TWUMSA as an alternative approach to the current-traditional approach (See 2.4.1 and 1.1.5). Teachers/Lecturers complained that

their students' writing was below their expectations as measured on the basis of the institutions' educational objectives. They found their students were ill prepared for the writing tasks the courses demanded of them (the students) to meet. The students also felt that they were not well prepared in academic writing to meet the University's standard. The decision that three credit hours be added to English common courses may serve as evidence for lecturers' and students' complaints. This initiated the need for investigation to seek for an alternative approach to writing. The investigation is based on studies begun by Spivey (1983) and followed by Kennedy (1985), Campbell (1988), Spivey and King (1989), Spivey (1990), and Greene (1993) (Please see 1.1.7). In these studies, writing from sources was used to examine the differences between less skilled readers and proficient readers. In this study, it is expanded and applied to teaching academic writing.

As to the development of education in Eritrea, the survey indicates that education under the Italians was limited to primary school(grades 1-4 (5)). During the British Military Administration, education expanded rapidly and middle school education was introduced. During the Federation, it expanded with certain limitations and by the end of the Federation, there were two secondary schools in Eritrea. During the Ethiopian rule, schools flourished but they could not meet the expectations of school children. In the meantime, the struggle for the Independence of Eritrea was intensified and many students joined the liberation fronts while others left the country. As a result many schools were closed and the number of schools and student population began to fluctuate from time to time till the liberation day. After liberation, schools flourished, and a policy which allows and encourages children to learn in their mother tongue in primary grades (one to five)was introduced.

CHAPTER 2: Review: Approaches, Theories, processes/strategies, and input of learning academic writing using multiple sources

2. 1. 1 Introduction

This chapter surveys the distinctions between academic and non-academic writing. It discusses the essential points of writing using sources. It also provides a review of the components of teaching writing using multiple sources approach. The role of intertextuality and intertextual links is stressed in connection with writing using sources because it may encourage students to establish connections among texts from different dimensions so as to help them widen their outlook and may enable them to entertain divergent views on understanding or interpreting texts. Three views on the role of input in second language acquisition are reviewed. In addition to this, the input-output section surveys the stages information has to pass through to be converted to output as well as to be stored in learners' memories. The rationale for preferring this model to writing using sources is also pointed out. The role of memories, schematic knowledge and prior knowledge of subject-matter is reviewed because learning new information or acquisition of new knowledge seems to be largely determined or influenced by these types of knowledge. The importance of cognitive strategies and cognitive processes to teaching writing is also discussed. Finally, the role of discourse analysis primarily in connection with analysing written essays is discussed.

2. 2. 1 Academic writing and non-academic writing

In relation to two settings of writing, Anson (1988) distinguishes academic writing as " writing produced within educational institutions" and non-academic writing as "the writing in the world of industry, and corporate management, the government and public service agencies"(p.6).

Academic writing is a type of writing that is concerned with the teaching-learning process at school setting. Horowitz(1986) sees "summary of or reaction to a reading, annotated bibliography, report on a specified participatory experience, connection of theory and practice, case study , synthesis of multiple sources and research project"(p.449) as some categories of academic writing whereas non-academic writing refers to the type of writing that deals with writing outside school setting such as writing books and other prints for unspecified grade levels on, for instance, advertisement, production, management, exhibition, recreation, instruction, etc. Academic writing and non-academic writing share many common features of writing and they are interdependent. Although they reflect overlapping characteristics, researchers find it useful to make distinction between them for the sake of convenience in conducting research.

Odell and Goswami (1982) note that academic writing may have remote consequences as compared to non-academic writing. What is written in school setting is usually read by the teacher as audience as Odell and Goswami state that the teacher is " a person who may not expect to learn something he/she does not already know or have to his/her feelings, thoughts or actions influenced by the substance of writing" (p.202). Here, academic writing involves less effect of change in the reader's/audience's mind as compared to writing in non-academic writing. However, in non-academic setting, as Odell and Goswami point out, writing may have immediate consequences as in the case of job-related writings which affect one's promotion and salary increment as the writing induces change in the reader's/audience's mind. In relation to this, Nystrand's (1982) use of the phrase "writer's audience" refers to "the speech community of the writer". Nystrand states " writers may easily address readers they will never meet - even

individuals who will be born long after they themselves have died"(p.15). This implies wide range of audience, along with wide range of purposes, mode of discourses, formats, stylistic variations of non-academic writing . Moreover, the writer expects to bring some sort of change to his audience through his/her writings.

Bridegeman and Carlson(1984) noted in their "survey of academic writing tasks" that their survey data show "that different disciplines do not uniformly agree on the writing task demands or a single preferred mode of discourse for evaluating entering undergraduate and graduate students"(p.279). This indicates diversity of writing in academic writing that require specified readers. However, Bartholomae (1985) referring to the novice in universities argues that writers have to know various skills such as "selecting, evaluating, reporting, concluding, arguing that define the discourse of our community"(P.134). Jolliffe and Brier (1988) also consider readers in academic writing as "intellectual community" . Bartholomae, and Jolliffe and Brier's view on "the discourse of our community" or "intellectual community" is useful for the early stages of university education when the student is demanded to write to different professors in different departments. Detailed knowledge of an entire discourse of a university may be beyond the student writer's knowledge in a university. It seems logical to consider various genres of departments than to consider discourses of a university as a whole although departments share some common features of writing.

In academic writing as Applebee (1984) points out, textbooks selected by teachers at students' expected grade level are the primary sources of writing in school setting and it is expected that the textbooks serve as models for writing. Kennedy's (1985) findings corroborate this view. Kennedy noted that competent readers extract and incorporate information from sources better than less competent readers. Similarly, Nelson (1990) found out that resources, from which students draw information for academic writing , interact to shape their approaches. However, in non-academic writing, writing is usually initiated by the writer and it does not necessarily require information from books selected for

readers at specific grade level.

In academic writing, the educational processes are strongly attached to power-relations. Consequently, the student writer is usually inclined to adopt the positions of the sources or his/her readers/teachers. McCarthy's (1987) findings with Dave, a case study, support this view of power-relation. McCarthy noted that Dave could not define "his own audience, purposes, or format"(p.261). This indicates that in school setting, the writer writes to reflect his/her socialization and adaptation to the group's or department's linguistic and socio-psychological conventions. Nevertheless, in non-academic writing , there is no clear and fixed point of reference and there may be loose power-relations between the writer and the audience/readers. In this case, the writer defines almost the criteria for effective writing from his/her prior knowledge , experiences, imagination, observations and creativity. Here, the writer has freedom to be critical or uncritical of his experiences, observations, imagination, abstraction, inferences and generalisations.

It is important to investigate how academic tasks, disciplinary conventions, and teacher - student relationships shape students' text production. The investigation can also help us to explain why some students simply reproduce the texts while others attempt to generate new ideas, infer or even argue for or against the ideas in given texts. So I would argue that students who know and use techniques of writing using several texts on a topic can improve their ability of producing new texts.

2. 3. 1 Academic writing using multiple sources

In academic writing using multiple sources, the writer uses texts to transform the contents and create new text. Professors at colleges and universities recommend several books for the courses they teach. Students are required to read, extract and store the gist of what they read in order to help them in answering

examination questions in which the sources are unidentifiable because the gist of their contents is completely integrated into their prior knowledge. The students may also be required to write notes, lab reports, expository or argumentative essays, critical papers, research papers and so on in which the sources are usually identifiable from the citation and paraphrasing. Thus, writing using multiple sources is an indispensable type of writing especially at the tertiary level. It is a skill worth developing and mastering because it plays a significant role in the academic life of students at tertiary level.

Writing using multiple sources is an extremely demanding activity which involves thorough understanding of the gist of the content, ability to identify essential information, ability to extract and then connect new knowledge from sources with prior knowledge stored in long-term memory, ability to create organizational structures appropriate to the newly created text which may be synthesized from the organization of sources incorporated into the organizational principles of the writer's prior knowledge, and ability to manipulate language in terms of appropriacy and correctness.

2.4.1 Components of teaching writing using a multiple sources approach

This section deals with a brief review of the components of teaching writing using sources (on a topic) approach such as understanding or interpreting sources, organizing the new text, selecting, generating, and connecting contents or ideas, paraphrasing, and integrating citations and documenting sources. It is hoped that this brief review will be useful to lay the ground for the chapters that deal with data analysis, findings and conclusions.

Understanding or Interpreting sources

Understanding or interpreting sources involves the ability of the writer as a reader to construct meaning from given sources i.e. making sense of sources. It appears

that there is no single best interpretation but the constructed meaning needs to reflect the intended meaning of the writers of the sources. Students use various strategies to construct meaning from sources such as looking at the relationships between form and ideas, the ideas and the way they are expressed, and denotative and connotative meanings of words. Understanding or interpretation entails the experience of the writer of the new text. The sources from which the writer constructs meaning are expected to reactivate the writer's stored knowledge. They need to help him or her to retrieve relevant knowledge or general representation of his or her knowledge which is known as schematic knowledge. If the writer of the new text fails to reactivate his or her prior knowledge, the sources alone do not make meaning.

Spatt (1987) considers interpretation as " the explanation or clarification of something that has been read, seen, or heard" (p. 138). To prove that a reader understood or interpreted the sources he or she is expected to answer relevant questions, to take notes, elaborate and expand the ideas expressed in the sources etc. Rosenblatt (1994) sees interpretation as " an effort to report, analyse and explain the evocation" (p. 1071). In order to explain what the reader has read, he or she is expected to construct meaning of words, phrases, and paragraphs. The reader who is unable to interpret or understand given texts, is unlikely to produce a coherent text from two or more sources on a topic. Identifying main ideas and supporting details, creating relationships and proper paraphrasing may be some features of understanding or interpretation.

In relation to understanding texts, Harris et al. (1986) state:

> Understanding what is written or spoken does not merely involve understanding the meaning of individual words plus their syntactic and semantic relations within a sentence. Language understanding also involves being able to relate the information in successive sentences, which is why psychologists have turned their attention to discourse interpretation, that is to the comprehension of whole passages rather than single sentences (p. 173).

The problem with learners of English as a second language in Eritrea seems to

be associated with the problem of creating relations beyond sentence level. Students may know lexical meanings, but establishing connections becomes an extremely difficult task to improve or to acquire effective knowledge which can foster their academic writing ability. Referring to interpretation, Widdowson (1990) states "Interpretation must always be a matter of matching up what is new to what is familiar : ideas can only be understood in reference to established categories of thought" (p. 38). In this case, the statements imply that relevant prior knowledge to what is to be understood or interpreted is a prerequisite for matching up of new knowledge and stored knowledge. Lack of matching up new knowledge and stored knowledge would likely lead to failure of interpretation which may result in distortion of information or avoidance or ignoring a given task - in this case, composing using texts. In relation to sentence comprehension, Beaugrande (1984) states "To comprehend a sentence is to compute its meaning, for which its syntax must be taken into account, but it cannot be separated from semantic and pragmatic consideration" (P. 46). Here, the reader seems to be expected to identify which possible meanings the words have in the given context so as to reconstruct the meaning intended by the writer. Regarding to the dimensions of interpretation Just and Carpenter (1984) consider "encoding, accessing meanings, determining syntactic status, the conceptual dependency role, its referent, and role in the discourse" (p. 311) as essential processes in interpreting texts.

As to what the reader can do as an outcome of his or her understanding, Kintsch (1988) states "Thus, after comprehending a text, one might reasonably expect to be able to answer questions about it, recall or summarize it, verify statements about it, paraphrase it and so on" (p. 163). In this case, comprehending seems to refer to the higher level of comprehension which is characterized by understanding for storage of information for learning as distinct from comprehension for answering multiple choice, or true-false questions, matching, and other recognition types of questions.

Organizing

Organization of a text is concerned with the general layout of its parts as well as the arrangement of main ideas and supporting details. When the writers of the new texts read for writing, they need to understand how the sources are organized so that they can create suitable organization for their new texts. They also need to know, for instance, what to include in the introduction, in the body, and in the conclusion. They need to understand the organizational structures such as chronological order, arrangement of topics and subtopics, or order of importance - the most important to the least important or vice versa. They are also expected to know and apply methods of developing texts such as comparison, contrast, cause-effect, argument, explanatory, expository, report, or problem-solution. Spivey and King (1989) noted that the proficient readers in their study organized their compositions better than the less proficient readers. They indicate that proper organization helped the proficient readers receive higher holistic ratings when they produced texts from sources. In addition to this, Spivey (1990) sees organizing as one of the three most essential factors when writers compose from given texts. She also points out that skilled readers followed the conventions of organizing texts implemented by expert writers. The studies conducted by Spivey and Spivey and King were based on data collected within a limited period of time. They did not involve any teaching on writing using sources so they do not indicate how to teach/learn writing using sources or how the less-skilled writers become proficient writers. In connection to elements involved in organization, Georgakopoulou and Goutsos (1997) consider conjunctions, pronouns, verb tenses, lexical patterning, sentence structure patterning as important aspects of discourse organization. Regarding the importance of text organization, Newton (1990) states " The better organized the material is, the more likely it is that it will be assimilated and remembered" (p. 35). This suggests that organization plays an important role in facilitating construction of meaning from sources.

Selecting

In writing using sources 'selecting' refers to the process of choosing main and relevant information that plays a vital role in constructing meaning. The pieces of information the writer as a reader selects are synthesized into a finished text that is to be understood or interpreted by the reader. The writer is expected to distinguish between major points and minor details. He or She is also expected to identify main ideas and details common in their sources to avoid repetition and redundancy from his or her text. Ranking of main ideas and details according to importance and eliminating or ignoring useless information is useful strategy in selecting information for writing. In reading for writing, students indicate their selection through underlining, bracketing, making asterisks or stars, annotating i.e writing on the margins, defining terms, clarifying questions for discussion, comments and so on. Thus selecting involves concentrated efforts in reading sources. Regarding selecting, Spivey (1990) states "When writers summarize the texts of other writers to produce isomorphic miniatures, they use the hierarchical placement of content to determine its relative importance" (p.274). In this case, writers first rank the pieces of information in the given texts according to their importance, eliminating or discarding trivial information. Spivey (1990) also points out that her subjects selected content units on the basis of 'intertextual' criteria such as inclusion of content units in the given texts, and their location in the textual hierarchies. When content units are repeated or appear in all the given texts, they are likely to be selected by the writers. Repetition helps the writers to focus attention and to establish relationships among contents or ideas expressed in the source texts. Prior knowledge of the topic is also necessary for selecting content units. As Voss (1984) points out, the reader is expected to interpret the contents of the texts in "terms of his or her own knowledge, interest, and attitude" (p.197) so that he or she can select contents for writing. Bazerman (1985) also found out that the physicists in his study selected contents piecemeal which was relevant to the nature of the field of study and to their schematic knowledge. In summarizing, Brown et al. (1983) also noted that writers selected contents that were important and that fitted into their text organization. Mayer (1984) also indicates that selecting involves "selecting information from the text and adding

that information to working memory" (p. 32). In this case, the writer combines new information from given texts with his or her stored knowledge in order to synthesize them into new texts.

Generating

Generating refers to the processes of adding contents or ideas to the content that can be constructed from source texts while producing new text. It may be by inferring information from given texts or from the writer's stored knowledge. The quality and quantity of generated ideas may be influenced by types of writing tasks. The student-writer needs to reactivate a lot of his or her mental activities such as comparing, contrasting, anticipating, generalizing, evaluating and judging when he or she is required to generate ideas and to make inferences. As studies by Greene (1993) and Spivey (1990) indicate, the writers engaged in problem solving writing tasks generated more ideas than the writers engaged in writing reports. Spivey (1990) points out that gaps between the problem solution, and having relevant stored knowledge are the primary conditions for generating contents. In writing using sources, the writer is usually expected to condense the texts by selecting the essential ideas and by incorporating them into a single text. He or She is not expected to elaborate. One of the differences between writing using sources and summarizing is that summarizing usually refers to condensing contents from a single source whereas writing using sources refers to condensing contents from two or more sources in order to compose a single coherent text. Some features of writing using sources overlap with features of summarization. Referring to the conditions under which writers add ideas or contents, Spivey (1990) states " 'Good summary ' writers, it seems make two important kinds of inferences that compress the text : inferring a superordinate item to subsume items in a list and inferring macro-propositions to replace several propositions" (p. 279). In this case, the writer does not produce new ideas or contents; he or she constructs ideas or contents that are in the sources. The process is not adding, but it seems substituting and replacing. It seems difficult to consider these processes or activities as generating.

When Hartman (1992) discusses how readers construct meaning, he states:

> she [the reader] generates intertextual links among textual resources to fit a particular content, borrowing, adapting, appropriating, and transforming texts in her mind. This entire act is an orchestrated effort to mobilize potential texts, which generate interconnections among many textual resources, resulting in a web of meaning" (p. 298).

Here, Hartman (1992) unlike Spivey (1990) clearly indicates that generating ideas is associated with the reactivation of writer's stored knowledge and I feel that generating is associate with new information evolved mainly from the writer's existing knowledge.

Connecting

Connecting refers to the processes of combining or joining words, phrases, and sentences as well as to establishing relationships of contents among sources and the writer' stored knowledge that the writer as a reader brings to the source texts. Hayes, Stahl and Sampson (1991) consider (1) activities that can " lead students to explore what they already know about a topic" (2) activities that can "lead students to construct coherent connection among various parts of the whole text-that is, constructing, storing, and relating main ideas and details" and (3) activities that "lead students to monitor and revise the meaning they have constructed" (pp. 93-94) as activities that encourage students to construct meaning from texts.

Ballstaedt and Mandl (1984) recognize 'Linking references' which give "deductive reason for relating two sentences" (p.395) as one type of constructing meaning. The writer as a reader may compare, evaluate and draw conclusions as to the relationship between sentences in given texts. Similarly, Johnson (1983) considers identifying the structure of the text, understanding individual propositions, establishing connections between propositions, remembering the content, selecting information, and verbal representation of the text as abilities useful in summarizing expository texts (p.346). In this case, establishing connections between propositions implies that the propositions are expressed in the texts. In addition to this, concerning to the types of connections the children made in his study, Short (1992) states " The students made intertextual links across a wide

array of textual resources including connections with specific text, between texts in their set, and to texts outside the text set" (P. 328). Here connection implies that at least there are two separated contents or ideas which need something to bring them together. So connection is the process of bringing separated contents or ideas together.

Regarding to connections among documents, Neusner (1987) notes that connections include relationships among documents, materials used in common, structural choices dominant in two or more documents. Thus this brief review, indicates that connection can take place at various levels- from a single idea or a single word to a whole document.

Paraphrasing

Paraphrasing refers to the process of repeating the same meaning in different structure and style. Ewald (1983) defines it as "converting the source's material into your own words with your own emphasis" (p.107). Hidi and Anderson (1986) also see paraphrasing as "constructing meaning in the writer's linguistic version of the original" (p. 486). Campbell (1990) recognizes paraphrasing as a writing activity that involves "more syntactic changes of the original" (p.216). Here, the definitions are more or less the same or similar in that the writer needs to make structural changes.

Spatt (1987) sees paraphrasing as restating main ideas point by point in the writer's words. He also considers it as complete translation of the original without changing the order of ideas. As to the size it seems possible to make it shorter or longer than the original depending on the complexity of the text to be elaborated or explained. Spatt (1987) states " it [paraphrasing] is the most reliable way to make sense out of a difficult text. Paraphrasing a sentence or two, together with a citation of the author's name, is the best method of presenting another person's ideas within your own essay" (p. 120). In addition to this Spatt recognizes literal paraphrase in which the paraphraser works out " a word-for-word-substitution, staying close to the sentence structure of the original" (p. 104), and free paraphrase in which the paraphraser does not reflect the words, phrases and sentence structure of the original because it is presented in the writer's voice

and style. It is possible that the writer changes literal paraphrase to free paraphrase through rephrasing and reconstructing the literal paraphrase. It appears true that literal paraphrase does not indicate understanding complex ideas. It is only when a writer uses free paraphrase that he can demonstrate the extent of his or her understanding of the paraphrased text. As to the importance of paraphrasing, Newton (1990) states " Paraphrasing is a popular means of initiating further mental processing and elaboration of the information : activities that are known to be capable of improving learning" (p. 62). When the writer looks up for the meaning of words in the dictionary for substitution, when he or she changes sentence structure, and when he or she uses his or her own style, it is likely to store information even for future use. In this connection, Bazerman (1992) states "...putting the meaning of a text into new words-makes you pay close attention to the author's ideas and thereby improves your level of understanding" (p.35). So paraphrasing may help writers to improve their understanding of source texts.

Integrating citations and documenting sources

Citation is the process of indicating other people's ideas, words or sentences either by inserting them inside quotation marks or by writing them in a style different from the text such as use of indention and single space. Citation is useful in writing using sources. When students are introduced to writing from sources, they need to be taught to become aware of the importance of integrating citations into their texts because it seems that it is associated with establishing relationships between their texts and other people's texts. The students are expected to integrate citations to demonstrate ideas taken from other people's texts through quotations and paraphrases. It can be observed that the task is very challenging even to graduate students. For instance, Dong (1996) studied how three non-native speakers of English who had problems of integrating citations later became competent through the feedback they received from their advisors/supervisors. Dong noted that the students developed different strategies to make 'knowledge claims'. Dong (1996) states "Sam created a research space through contrastive argumentation, Helen provided a chorological account of her

topic's evolution and Mike synthesized his experimental findings into a coherent story" (p.451). This may indicate that practice, concentrated effort, and effective feedback could lead the students to better ability to integrate citations.

Kamberelis and Scott (1992) consider direct quotation as a " form of re-envoicement of the discourse of others" (p.370) in which the speaker or writer directly appropriates and clearly shows that it is other's discourse.

Reep (1994) notes that citation is used when a writer directly quotes from a source and when he or she paraphrases information from other texts. He notes facts such as to indicate the original sources, to distance oneself from responsibility for the very fact, to avoid the illegal use of sources (plagiarism) as reasons for using citation. However, he does not indicate how students develop the ability to integrate citations into their texts. Similarly, Spatt (1987) notes that one's intention to analyse the quotation, its essence to one's argument and the difficulty to write in one's own words are some of the conditions for a direct quote.

Swales (1990) recognizes integral citation in which the writer of the source becomes part of the sentence element , and non-integral citation in which the author of the source is located in parenthesis or indicated by a raised numeral - superscript. Swales' investigation deals with citations made by experts in research articles so he does not indicate or show how beginners can learn to integrate citations into their texts. Regarding the size of citations, Ewald (1983) advises the writer to quote not more than one-tenth of the text.

Moravcsik and Murugesan (1975) conducted research to identify the functions of reference as one element of citations in journal articles. They asked questions such as :

1. Is the reference made in connection with concept or theory that is used in the referring paper or is it made in connection with a tool or physical technique used in the referring paper? 2. Is the reference truly needed for the understanding of

the referring paper or is it mainly for acknowledgment that some other work in the same general area has been performed? 3. Is the referring paper built on the foundations provided by the reference or is it an alternative to it? 4. Is it claimed by the referring paper that the reference is correct, or is its correctness disputed? (P.88). They found out that some references were used to make connection with theory as well as with a tool; about 60% were used for laying foundations, and 40% as alternative to the reference; about two-fifth to indicate that work has been conducted , and about one-seventh to indicate dispute on the correctness of the reference.

The above mentioned functions of citation may be important for the teacher to enable him or her to know where and why citations are needed but students (beginners to citations) usually use citations to support their statements and in some cases to argue against the referring paper as noted above. Citations seem to involve establishing relationships between the ideas of the writer and the ideas cited which are likely to create problems of integrating citations into their (writers') texts.

2. 5. 1 Studies of summarizing

Summarizing as condensing information from a single source is part of writing from sources because it shares some of the characteristics of writing from sources as selecting ideas, writing coherent text, manipulation of syntactic structures. It does not involve much discourse reorganization and implementation of connecting ideas from other sources, though.

Brown , Day, and Jones (1983) point out that factors such as learning activities that foster direct attention, background knowledge, important ideas and their configuration and criteria for evaluating writing tasks are crucial in summarizing (p.978). In their study, Brown et al. asked their students to write down what they recalled from the texts read a week before. However, this type of summarizing focuses on retention (or remembering) rather than summarizing from a single

text. It is also extremely difficult if not impossible to isolate knowledge acquired prior to reading the texts and knowledge recalled from what they read from the given texts. It is also likely that the students might read texts on the same topic between the reading of the texts and taking the test after a week.

Hare and Borchardt (1984) point out "that identifying and representing new ideas and identifying and eliminating unimportant ideas are required in summarizing. Their findings indicate that students who were taught macro rules of summarizing improved their summarizing ability.

Taylor and Beach (1984) conducted a research on two groups : an experimental group which received instruction and practice in hierarchical summarization procedures and a control group which did not receive any instruction. Their findings indicate that the treatment group made improvements in overall writing ability of expository writing.

Hidi and Anderson (1986) state" summarization... involves operations based on already planned and generated discourse" (p.473). This indicates that summarizing is less demanding than other types of writing that involve careful planning of contents and generating main ideas. Hidi and Anderson also state:

> The usual reasons associated with inadequate written productions, such as lack of language competence, difficulty with having to sustain discourse without a responding partner, and frequent need to search memory to access world knowledge appropriate to the new content being generated, do not appear to be responsible for the production of poor summaries. Rather, inadequate summarization is more likely to result from their inability to coordinate and integrate different parts of discourse "(p.474).

I disagree with this view because I believe even if we assume native language writers do not show lack of language competence, we cannot rule out the crucial role played by language competence and prior knowledge. Assuming that native language writers do not have problems related to language competence, this view

may be true with native language writers but it excludes second language summarisers. It is not appropriate to discuss inappropriate choice without speaking of background knowledge. We cannot certainly speak of inability to coordinate and integrate different parts in summarizing because they involve levels of language competence and background knowledge.

Referring to the process of language use in interpreting and expressing meanings, Widdowson (1990), considers two types of knowledge. He states:

> One of these (two kinds of knowledge) is indeed knowledge of the formal properties of language, its semantics and syntax, the meanings of words and their combination in sentences, a knowledge of the properties of the medium, *systemic knowledge*. The other kind of knowledge is that which we have of the particular world we live in, our beliefs, ideas, experiences, cultural values, and so on, *schematic knowledge* (p. 163. Italics in original)

This indicates effective language use is determined by these two types of knowledge. It is lack of adequate knowledge of the language system that poses more challenge to student-writers than the knowledge of the world because they are unable to translate the knowledge of the world they have acquired through their mother tongue into the target language when they summarize from a single source. Hence, it appears important to know and use the language system as well as knowledge of the world for good summarization. Studies of summarizing involve primarily selection of main ideas and details which is one aspect of synthesizing from multiple sources.

2. 6. 1 Intertextuality and intertextual links

Beaugrande (1980) considers intertextuality as the process of interpreting a text by referring to previous texts. Roudiez (1980), who translated *Desire in Language* by J. Kristeva,(1980) states "This (intertextuality `intertextualite') French word was originally introduced by Kristeva and met with immediate success" (p. 15). Kristeva (1980) also recognizes intertextuality as the "permutation of texts" (p.36).

This reflects the different arrangements, reorganizations and interconnections among texts to make a new text.

Intertextuality may be considered an indispensable subarea of academic writing using multiple texts or passages as sources. It has a determinant role in the teaching/learning process. The various interconnections made among different types of texts and with the prior knowledge are fundamental factors in facilitating writing using multiple sources.

Intertextuality is useful to my study because my investigation involves understanding or interpretation (of sources) texts, organization of new texts, selection, connection, generation and integration of ideas, paraphrasing and integration of citations and documenting sources with which intertextuality concerns in one form or another. In relation to this, Bloome and Egan-Robertson (1993) state " intertextuality can occur at many levels (e.g. words, the organizational structure of texts, register levels, genre type, content and the situational contexts in which texts occur) and in many ways (e.g. mixing registers, genres, content and social situations) " (p. 306). Intertextuality is a broad area of study and it makes different meaning to different people.

Researchers in different fields of study approach intertextuality in reference to the nature, purpose and ultimate goal of their investigation and their views of intertextuality. Most researchers/writers recognize intertextuality as intersection and interpenetration of texts as a whole. As to how it emerged and developed, Wang (1992) states "it [intertextuality] is an ideological instrument designed to attack the concept of the founding subject as the originating sources of fixed meaning in the text" (p. 7). It has developed to shift the focus from the assumption that meaning is in the text to the view that meaning is the outcome of the interaction between the text and the reader who brings his knowledge of other texts. Wang's (1992) view seems to correspond to the view in theology, for instance, Neusner (1987) referring to the ways the Gospels of Matthew, Mark and Luke share sayings drawn from a prior source, states "Intertextuality takes place

when two or more documents go over the same material and the connection at hand derives from that intersection" (p. 31). According to Neusner's discussion, meaning is fixed in the source text and the reader is expected to discover the meaning and to investigate how the same sayings, for example, interact, intersect and interpenetrate each other. This view differs from Kristeva's (1980) view of intertextuality. Referring to one novel- *Antoine de La Sale's* text- she states " Latin as well as other books (already read) penetrate the novel's text either as directly copied (citation) or as mnesic traces (memories). They are carried intact from their space into the space of the novel being written" (p. 54). In this case, her discussion focuses on how a text is shaped by other texts outside itself. These outside texts contribute to its production and give it a new life. They invest ideas for future intertextuality. Kristeva does not, however, clearly indicate the types of relations within a single text and she does not also set any criteria to identify intersection of texts as 'mnesic traces (memories)'. Regarding this issue, Neusner (1987) says "Where we have difficulty is demonstrating...intertextuality in texts in which there is no clear paraphrase, citation, or commentary" (p. 152). It is important to set some sort of criteria which can help us to identify different segments of a given text. For example, Fillmore (1985) recognizes intratextual, intertextual and extratextual relations as dimensions in language users' knowledge organization. According to Fillmore, intratextuality, has to do "with relations between given pieces of a single text" (p. 11). In this case, references, repetitions, and substitutions can help us to recognize intratextuality. The difficulty arises when he refers to intertextuality as "relations between the piece of text at hand and other potential texts or text segments that are partly like it and partly unlike it" (p. 11). Here, he does not clearly indicate how one can identify in what sense potential texts are like the text at hand or unlike it. 'Potential texts' is too general and too vague to convey clear meaning. There is similar difficulty with extratextuality which he refers to as"the connection between a text and its "worlds" (p. 11). Fillmore (1985) does not make clear distinction between intertextual relations and extratextual relations.

Bakhtin (1986) notes "the influence of extratextual reality in the shaping of the

writer's artistic vision and artistic thought" (p. 163). He points out that sources of extratextual influences are stored in words and he says "these words are the words of other people" (p. 163). He seems to be mainly interested in demonstrating how texts are continually shaped and reshaped by outside texts.

Hartman (1994) considers intratextual, intertextual and extratextual relations as aspects of intertextuality. He shows how students could produce texts mainly from three texts (through interview). According to Hartman, some students exhibited features of intratextual relations (when they mark their think aloud protocols of the passages, 'prompting questions' that reveal the students thinking and the ways they made the links, and 'debriefing interviews' that described what the students did while reading) that focus on ideas, words, and phrases that were taken from different parts of the same text plus their personal experience or their knowledge of the world; others exhibited features of intertextual relations that focus on ideas, words, and phrases that were taken from the given two or three texts plus the students' personal experience or world knowledge; and still others exhibited features of extratextual relations such as ideas, words, phrases etc. which were primarily based on students' personal experience or knowledge of the world with least attention to or ignoring the given texts from which they were expected to synthesize. The investigation was on comprehension not on writing. so it does not indicate organization of texts, paraphrasing words and sentences and integrating citations and documenting sources. It is not specific on what was to be selected and what was actually selected. The investigation does not clearly indicate specific criteria for ranking the comprehenders into three groups except the general features of intratextual, intertextual and extratextual relations.

Wang (1992) considers a broad scope of the term "intertextuality". He states "...intertextuality not only includes identifiable prior codes and conventions that help to ensure and constrain the production of meaning, it also incorporates unconscious signifying practices and lost intertexts that undergo infinite dissemination into other unidentifiable intertexts" (p. 28). In this case, we may deal with the difficulty of specifying identifiable texts through direct quotations,

paraphrasing, or commentary but the difficulty remains with 'other unidentifiable texts'. Wang (1992) does not indicate whether these 'other unidentifiable texts' refer to segments of a newly created text, or to what Kristeva (1980) considered as 'mnesic traces (memories), or Hartman's (1992) personal experience or world knowledge which cannot indicate their manifestation in the new text because they are not demonstrable.

Fairclough's (1992) view of intertextuality seems relevant to this issue. He states "Intertextuality is basically the property texts have of being full of snatches of other texts which may be explicitly demarcated or merged in, and which the text may assimilate, contradict, ironically echo, and so forth" (p.82). It seems difficult to demonstrate what has been merged in because it is integrated with the writer's stored knowledge which is outside the given text or texts for a given task.

Fairclough (1992) also distinguishes three typological 'modes' of intertextual relations such as (1) 'sequential intertextuality' which refers to segments of texts that alternate within a single text; (2) 'embedded intertextuality ' in which segments of one text are merged within the structures of another text; and (3) 'mixed intertextuality' in which segments of texts are joined in almost inseparable manner (p.118). I feel similar or more complex typological modes can emerge in the analysis of written essays. I have found these typological differences relevant to my investigation which also examines intertextual links made by the subjects when they synthesized their new texts.

Hayes and Tierney (1982) investigated the intertextual connections between the specific content of two texts and they found out that relevant topics or general knowledge play a determinant role in comprehending and learning new texts. Prior knowledge of similar texts on a given topic fosters interpretation or understanding of texts to enable the writer to write using sources because it facilitates reactivation of other texts which the writer has already read. Cairney (1990) also investigated how previous textual experiences affected the reading and writing of 6-12 year olds. He collected data through interviews on how the child wrote a

story and he found out that seven major types of responses emerged. The child's story (as reported) showed one or more features of the following types of responses. They are: 1. use of genre, 2. use of character or strong characterization, 3. use of specific ideas without copying plot, 4. copying plot with different ideas/events, 5. copying plot and ideas, 6. transferring content from expository to narrative, and 7. creating a narrative out of a number of narratives (p.481). His study seems to involve extratextual relations based on the children's experience or knowledge stored in their memories. His study does not include intratextual and intertextual relations. Neither does it indicate demonstrable links in which the children prove their ability to synthesize from given texts.

According to Summerfield (1992), intertextuality is the intersection, interconnection and interaction of texts with other texts. He also indicates how writers are immersed in reading various types of texts that can help them create new texts. It is true watching one movie reminds us of the plot, the characters, setting, theme, background music and so on of other movies as Summerfield points out. Summerfield does not specifically discuss any of the three dimensions of intertextuality. He expresses a general view that what children read shape and reshape their writing because their stored knowledge interacts with texts they read   Similarly, Short (1992) sees intertextuality as the process of making connections and interpretations of texts by referring to previous texts. In his study, he found out that first grade children synthesized texts similar to texts previously discussed by the group of children in the class. The connections were made to some unidentifiable sources because the ideas were integrated in the synthesizers'/children's minds. It is useful to encourage children to share what they have read, heard, listened or observed. Engaging in class discussion helps learners see the connections among texts and it broadens their horizon of world knowledge. Thus, teaching students to write from sources may help them to understand texts from different perspectives and to establish links among texts so that they may develop divergent views. Engagement in creating new texts from sources may ensure the importance of their contribution in creating knowledge.

Lemke(1992) recognizes patterns of intertextuality based on topical content, point of view toward audience and genre structure (p.259). He explains that the more the patterns of intertextuality are involved in a text, the greater the ease of interpretation. He also sees that intertextuality connections differ in degree and kind. The investigation related to patterns of intertextuality is crucial to the teaching/learning processes because it provides teachers and students with the opportunity to select teaching materials which are similar in most respects. These types of teaching materials facilitate the link between previously acquired knowledge and the new knowledge aimed at to be learned.

Bloome and Egan-Robertson (1993) consider the location of intertextuality primarily in the text and the reader in literary studies, in language in social semiotic perspectives, in students as readers and writers in educational studies and in social interactions in a social construction. They studied a 15 minute first-grade classroom reading and writing lesson. The lesson was a discussion of a story read in the previous lesson. They analysed the data primarily of three children. Among other findings, they found out that the students' role in establishing intertextual links was not appreciated by their teacher and that the social construction of intertextuality generates links between local events and social, cultural and political contexts. Likewise, Hartman (1995) discusses how linguists, literary theorists and theologians locate intertextuality in the Text as a material object; how literary theorists, and cognitive psychologists locate it in the reader as a material being; how literary theorists, cognitive psychologists, and semioticians locate it in the writer as a material being; how sociolinguists locate it in the context as a material milieu and how linguists and semioticians locate it in language as a material implement. He also discusses how different approaches connect cognitive, social, cultural, historical, linguistic, and semiotic production apparatuses to mechanisms or processes by which intertextual links are made. Different approaches associate these production apparatuses with, for instance, cognitive production with the mind, social production with social interactions among people, cultural production with artifacts, values and assumptions, political production with power relations, historical production with inherited norms and

conventions, linguistic production with features of spoken and written language, and semiotic production with systems of signs. These apparatuses are responsible for extracting, constructing, creating and building meanings. He also sees " disciplines, professions, institutions and individuals"(p.525) as control or regulatory systems of intertextuality. In relation to the time during which intertextuality is observed and studied, he recognizes retrospective occurrence and on-line occurrence (adapted: pp.523-526). Hartman discusses different approaches or perspectives of creating texts. This thesis seeks to investigate whether teaching how to make intertextual links can help some social science and natural science students in reading and writing lessons for academic purposes.

Leinhardt and Young(1996) also studied how two historians who read one familiar text and another unfamiliar text use their field specific and general knowledge of history. In this case, familiar texts facilitate access and reactivation of prior knowledge or world knowledge of the reader. The reader looks for organizational relations, content relation, or genre structures which can foster interconnections between texts which he/she has read. The reader of unfamiliar texts is expected to establish knowledge about the texts which may serve him as an anchor for other similar texts. Developing stored knowledge about unfamiliar texts may require more time and more concentrated efforts but it may be worth doing it because meaningful learning is believed to be associated with integrated and stored knowledge.

As to the importance of intertextuality in education, Hartman investigated the intertextual links of eight proficient readers reading multiple texts in one two and a half to three hours session for each student over three weeks. Conducting the investigation outside the classroom context and the small number of participants are some of the limitations of his study as he also points out. The participants were native language university students. The students were not expected to produce written texts and so his study does not indicate how students can organize their texts, select ideas, paraphrase words, sentences and paragraphs, integrate citations, and document sources.

As to the significance or importance of constructing intertextual connections, Lemke (1992) states " The social practices by which a community constructs intertextual ties between texts are of fundamental concern for text semantics, discourse analysis, and the study of social systems generally as well as for educational research " (p.258). Intertextuality is useful in classroom setting especially in teaching and learning reading and writing skills. In relation to the need for research , Bloome and Egan-Robertson (1993) point out that the use of intertextuality "in analysis of classroom reading and writing events has been limited" (p.307). This indicates that more research is required to understand how intertextual links are made during reading and writing lessons especially in second language classrooms.

So I want to investigate the academic writing of 112 university students who are learners of English as a second language in classroom setting and through their written performance using multiple sources. I shall investigate the intertextual links by locating intertextuality in the writer as a reader, in the cognition, and on-line reading of the three texts or passages , on-line writing the new text and on retrospective occurrence in the interviews.

2. 7. 1 Views on the role of input in second language acquisition

Ellis (1985, 1994) distinguishes three views about the role of input in second language acquisition. They are the behaviourist, mentalist and interactionist views.

Behaviourist theories assume that there is direct relationship between input and output. These theories are based on the belief that the internal processes that take place in the learner's mind are unobservable and so the internal processes cannot account for input in language acquisition. The behaviourists' belief is that learners learn a second language when they internalize the linguistic forms and patterns by imitation. Hatch (1978) states :

> One learns how to do conversation, one learns how to interact verbally, and out of this interaction syntactic structures are developed (p.404). ...We have said that the emergency of questions in one child's speech, Paul, directly reflects the frequency of questions asked him. We thought this a very important finding for it showed that input was an important factor in the order of emergency of structures (p.412).

Here, the assumption is that one internalizes syntactic structures by imitation and these internalized structures enable the learner to acquire L2. Imitation and interaction are reinforced by feedback. Their main argument is that input which consists of stimuli and feedback is crucial for L2 acquisition. I feel the proposition of a direct relationship between input and output ignores one indispensable linkage between input and output. Although external factors such as stimulus, response, feedback influence second language acquisition, they do not determine second language acquisition processes. Input passes through different and complicated stages in the learner's creative mind to become an output and I assume that the behaviourist theories do not seem to give complete account of the role of input in second language acquisition.

Mentalist theories assert that learners are equipped with innate knowledge to enable them to acquire language. Chomsky (1965:4) states 'linguistic theory is mentalist, since it is concerned with discovering a mental reality underlying actual behaviour'.This indicates that mentalist theories consider the learner's mind as the sole determining factor in language acquisition. Mentalists believe that habits, imitation and feedback cannot constitute second language acquisition. They also believe that the linguistic data provided to the learners are insufficient to enable them to discover the rules of the second language. According to this view, input does not play a determining role in L2 acquisition. White (1987) and Cook,V. (1989) argue that input serves to trigger linguistic evidence. Cook,V. (1989:170-1) states "...the crucial aspects of a language for the learner to master are the appropriate settings for the parameters; since the learner already knows the principles as they are part of his or her mind, all that is needed is sufficient evidence to set the values for the parameters". This shows mentalists' views that

the principles required for language acquisition are in the learner's mind and input plays insignificant role in L2 acquisition. I consider this mentalists' view on the learner's mind as the only determinant factor for language acquisition as extreme idealist view because it seems impractical and I have not got any evidence of application in school setting. To my understanding, L2 acquisition based on mentalist view is not fully substantiated by empirical evidence.

Interactionist theories assert that both input and the learner's internal processes play a determining role in second language acquisition. Ellis (1994) distinguishes two types of interactionist theories on the role of input in L2 acquisition. They are the cognitive interactionist theories and the social interactionist theories. Cognitive interactionist theories consider L2 acquisition as the outcome of the "...complex interaction of linguistic environment and the learner's internal mechanism, with neither view as primary" Ellis (1994:243). According to the assumptions of these theories, input plays a determining role in L2 acquisition. Social interactionist theories, as the name indicates, are more social in orientation and the main assumption of these theories is that verbal interaction is primary in second language acquisition. Studies by Selinker (1972), Chaudron (1985), Krashen (1985), Sharwood (1986), and Gass (1988) indicate that input plays a vital role in second language acquisition.

Interactionist theories, among other things, investigate the characteristics of second language learner's input as well as how input affects second language acquisition. I consider them practical to classroom settings because most of the findings are the results of empirical studies and the findings are usually supported by evidence. It is important to understand how input can be converted into output because my study involves teaching processes and strategies of synthesizing texts in order to investigate whether these specific techniques lead to improved academic writing.

2. 8. 0 Input-output relationships in academic writing

The processes in converting linguistic information or data, provided to the learner, into product have some implications in second language acquisition. The notions of input, intake and output are associated with these processes and they require description. Different researchers in second language acquisition define input in various ways. Corder (1967) states "Input is 'what goes in' not what is available for going in" (p.165). Chaudron (1985) also states "Input available to the second language learners is the raw data from which they derive both meaning and awareness of rules and structures of the target language"(p.3). Ellis (1985) defines input as L2 linguistic information. He states " It is evident that SLA can take place only when the learner has access to L2. This input may be in the form of exposure in natural setting or formal instruction. It may be spoken or written". (p.12). Gass and Selinker (1994) distinguish two kinds of input and they state 1. "... the apperceived input is that bit of language which is noticed by the learner because of some particular features" (p.298), and 2. " ...comprehended input is learner-controlled" language data (p.300). Corder's definition of input excludes linguistic information that is not received by the learner. Input to Corder is comprehended input to Gass. Corder's definition does not account for the linguistic data available for going in to learner's mind. The definitions given by Chaudron, Ellis and Gass may differ in degree but not in kind as with Corder's.

Taking the various ways of defining input into account, input in this study refers to language data , spoken and/or written, from which the learner receives his/her L2 data. Gass proposed a framework which comprises five levels through which input passes to become an output. Although it might require some modification, Gass and Selinker's framework is theoretically appropriate and practically feasible. Their framework involves a. Apperceived input, b. comprehended input, c. intake, d. integration, and e. output(p.298). It is a constructive view to advance the discussion on converting input into output along these lines. So, I want to follow this model because theoretically, it describes the indispensable stages by which language data can be acquired and be available for effective writing using multiple

sources. A writer using multiple sources is demanded to retrieve relevant information to compose new texts or passages.

Reasons for preferring to expand Gass' (1988) and Gass and Selinker's (1994) model to teaching writing using sources approach

In Eritrea English is the medium of instruction above grade six. Within the school it is limited to classroom instruction. Neither teachers nor students use it in the school compound nor outside school for personal or interpersonal communication. There are no people who use it in their everyday activities except in the teaching/learning process. This indicates that there is not favourable sociolinguistic environment for developing English as a second/foreign language in general and for academic writing in English in particular. So, I feel that creating psychological conditions for improving students' writing ability seem necessary. Models of writing which have been developed by, for instance, Hayes and Flower (1980), Beaugrande (1984), Scardamalia and Bereiter (1987) (please see 1.1.5), do not indicate how they can be implemented in actual classrooms even for native speakers. In relation to this, Silva (1993) states there is "no coherent, comprehensive theory of L2 writing" (p. 668). This implies that there are no models of L2 writing in general. So, I feel that the model of second language acquisition proposed by Gass (1988) and refined by Gass and Selinker (1994) would be a proper choice for teaching writing using sources approach because the model includes most of the variables in the approach such as how to teach/learn to understand or interpret, how to select, generate, integrate and connect ideas, how to establish relationships between knowledge stored in the learner's mind and the new knowledge from input 'texts'. I think input may refer to different sizes of information. For instance, Johnson (1983) recognizes input text as a passage for summarization; Golden, Haslett, and Gauntt (1988) see input text as a text of about a page for summarization. Gass and Selinker (1994) also recognize about 600 words oral account and its written version of about 250 words as output of a movie entitled *Littleman, Big City* (pp. 309-310). The oral account and its version was made by a non-native speaker at an intermediate level. This implies that Gass

and Selinker consider the movie as an input. Hence input can refer to texts or passages. On the basis of these examples, I would like to consider 'input' as it refers to input texts for teaching/learning writing using sources. The model also indicates how a learner can interact with input (texts) in order to acquire information or knowledge that can be manifested as oral or written output. The model is also concerned with how a learner processes information so that he may be able to store it in his or her mind. In addition to this, the problems of the students in this study appear to be rooted in their inability to understand meanings even at the sentence level.

I believe/assume that students can improve their writing ability for academic purposes through active interaction with the input texts. Woods (1996) reports about a teacher who tried and failed to learn Japanese in communicative environment in Japan for six months. Later the teacher changed his view and he/she began to learn Japanese through concentrated effort by reading books, listening to tapes. Woods' report reads "When I [the teacher] got some books, and listen to tapes an hour a night or an hour and a half a night and made an effort...I made a huge leap of progress within a couple of months. I was sitting down and having conversation with people" (p.207). I believe that learners would improve their writing ability for academic purposes if they do the writing tasks using sources as outlined in the model. Hence, I would like to follow the model to help me to teach writing and to enable me to find some explanations to the students problems with writing using three sources/texts on a topic.
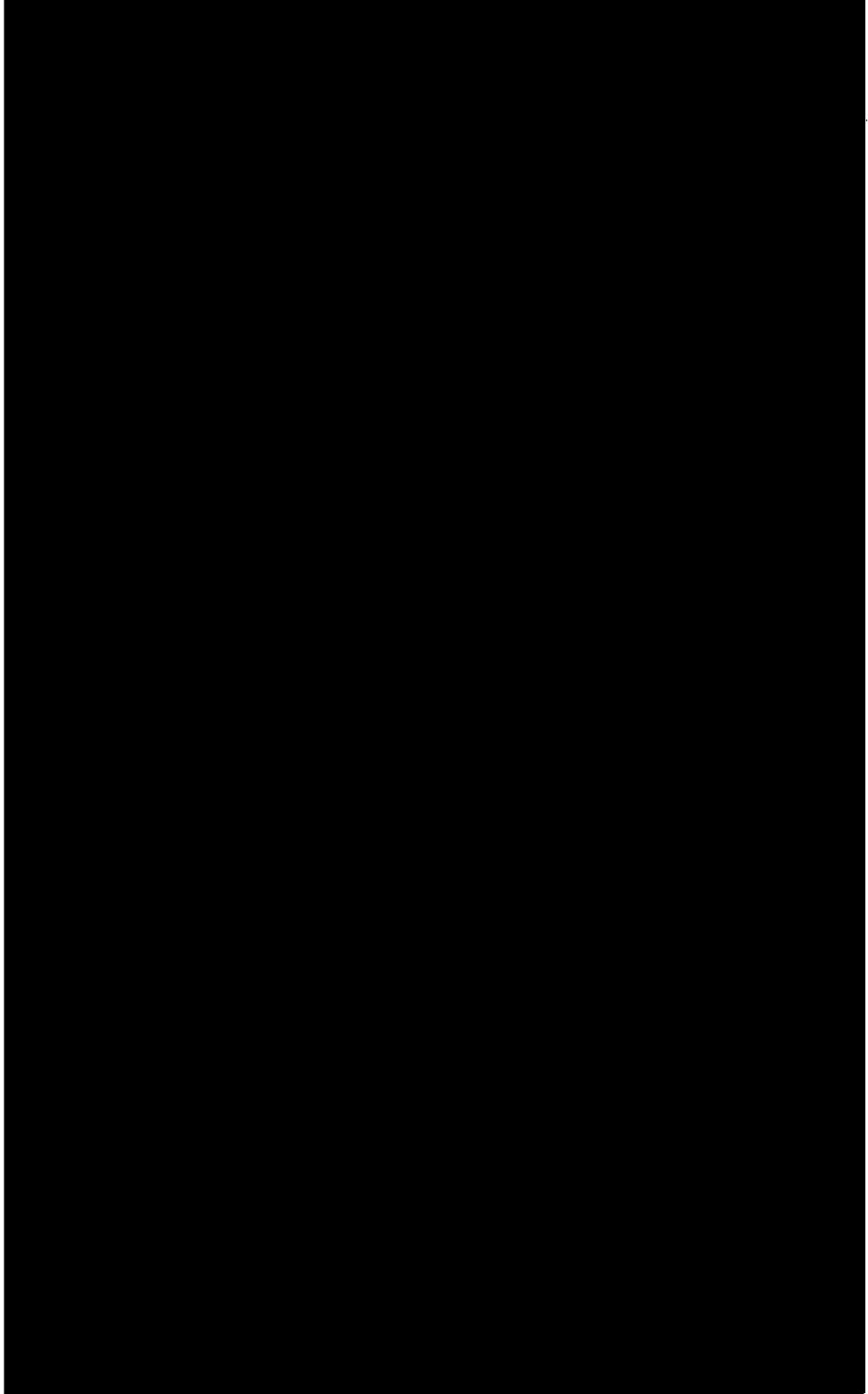
(Source: Gass and Selinker 1994, modified version of Gass 1988)

The five levels of converting input to output

Initial and apperceived input

It is true that input can have different levels in a continuum. At the initial level of input the learner is provided with language data. From what is offered to him/her, he/she begins to select and to pay attention to some units of L2 on the basis of their salient features related to knowledge of L2, as well as his/her existing knowledge of the world. Chaudron recognizes the initial levels of input as "the initial stages of perception of input"(p.2). According to Gass and Selinker (1994), apperceived input refers to the input which they associate with the conceptualization stage of input which "prepares the learner for the possibility of subsequent analysis"(p.301).. At this initial stage, there are several factors which contribute to the process of initial input to enable it to become apperceived input. It might be logical to see these factors from two perspectives. On the one hand, there are factors which directly contribute to how the learner notices the initial input such as frequency of input, knowledge of the second language, and other kinds of knowledge the learner already acquired and so on. Hatch (1978) found out in her studies that frequently used syntactic structures facilitate the evolution of new syntactic structures and she claims that this leads to acquisition of L2 syntax because she states that frequency aids noticing. Moreover, Gass and Selinker consider "knowledge of native language, knowledge of other languages, existing knowledge of the second language, world knowledge, universal grammar, etc."(p.299) as factors which determine whether input becomes meaningful so as to become apperceived input. On the other hand, there are factors which indirectly contribute to how the learner notices initial input or apperceived input such as language awareness, motivation, attitudes and so on. Rubin (1981) considers some of these factors as factors which indirectly contribute to learning.

In addition to this, Pica, Young, and Doughty (1987) point out that activities "...such as consulting a dictionary, reviewing materials such as homework, or consulting with classmates or the teacher outside of the class time ...help to make input comprehensible" (p.754). This indicates that at the initial stages, input involves selection, consultation, discussion and so on as preliminary stages that

help input become understandable to the learners. This also shows that input does not begin with apperceived input as Gass proposes.

Comprehended input

According to Gass and Selinker (1994), , comprehended input refers to the input understood by the learner. When they explain one of the distinctions between comprehensible input and comprehended input, they state :

> ...comprehensible input is controlled by the person providing input, generally (but not necessarily) a native speaker of the second language, whereas comprehended input is learner-controlled ;that is, it is the learner who is or who is not doing the work to understand"(p.300).

Here, it seems proper to say that comprehended input has passed through some acquisition processes which does not did not take place in compressible input. In connection to this, Swain (1985) considers comprehensible input as language which consists of new element in it and it is understood by the learner. Thus, what is comprehensible input in Swain's terms is similar to what is comprehended input in Gass and Selinker's ' terms. Moreover, Sharwood Smith (1986) identifies two forms of input for the learner. One form of input involves extracting meaning for comprehension and the other form of input involves the mechanisms that create grammatical competence. The form of input responsible for extracting meaning for comprehension might be similar to the input that does not become intake in Gass and Selinker's view. Regarding the problem that some input does not become intake, Sharwood Smith expresses his view as follows: "... if surface structure were just briefly registered, recorded for meaning alone and then discarded forth with, the acquisition mechanisms would have little or no access to crucial information for the further development of competence" (p.250). This is similar to many English lecturers' complaints at the University of Asmara that students seem to understand the reading passages during the discussion but they lose the surface structures soon. The distinction between input controlled by the teacher and input controlled by the learner is crucial in second language acquisition because this helps us to identify the role of the teacher, as well as, the role of the learner.

Intake

The processes involved in converting comprehended input into intake are crucial to second language acquisition. Krashen (1981) uses the terms input and intake as different in degree not in kind. He states :

> "Intake" is, simply, where language acquisition comes from, that subset of linguistic input that helps the acquirer acquire language. It appears to be the case to me now that *the major function of the second language classroom is to provide intake for acquisition.* This being very difficult task, one could also say that the major challenge facing the field of applied linguistics is to create materials and contexts that provide intake (p.101. italics in original).

Krashen seems to focus his attention on the materials that are provided to the leaner as input but he did not focus his attention on the cognitive interaction that takes place in the learners' mind when input becomes output.

Chaudron (1985) considers intake as the mediating process between input and set of rules and strategies internalized by the learner for L2 acquisition. Ellis (1985) also states " ...intake is the portion of the L2 which the learner assimilated and fed into the interlanguage system"(p.159). However, Boulouffe (1986) distinguishes two types of intake: as a process which is at the initial reception and intake as process which originates in the speaker's intention. White (1987) indicates the distinction between input as linguistic data produced to the learner and intake as the actual language data absorbed by the learner. Likewise, Gass and Selinker (1994) consider intake as a process of the learner's mental activity in converting input into grammar. Here, Krashen and Boulouffe differ from Corder, Chaudron, Ellis, White, and Gass in that they maintain the view that intake originates from the person other than the learner. This is very important theoretical issue in L2 pedagogy. If intake is controlled by a person other than the learner, what will be the role of the learner in L2 acquisition? It is logical to hold the view that intake is part of the internal cognitive processes of the learner and the learner interacts with the input to absorb it. If the view that the learner controls the intake is accepted, how teacher intervention can facilitate intake becomes the issue.

Integration

Input which has been processed and assimilated becomes intake and as intake it is stored in the learner's memory. When the new input is incorporated into the learner's existing knowledge of the second language, it can be said that integration has taken place. According to Gass and Selinker(1994), the process of intake results in integration, whereas integration is likely to match with Chaudron's final information processing stage that states " ...and (3) the series of stages by which learners fully integrate and incorporate the linguistic information in input into their developing grammar" (p.2). Gass and Selinker recognize the development of a learner's second language grammar and storage as possible outcomes of integration. They also state that there are various levels of analysis and reanalysis when integration takes place. However, learners may be able to store formulaic speech, cliches, memorized poems and so on without analysis and understanding. These types of linguistic information may be stored without analysis and they may integrate into the existing knowledge of L2 through exercises or they may be lost before they reach the stages of integration. It is also reasonable to believe that at this level the learner is in a position to construct and to create new forms and meanings by reorganizing his/her existing knowledge of L2. Here, teacher intervention in guiding and assisting the learner to use his/her knowledge of L2 in meaningful spoken, or written communication is crucial. At this stage, it is important to raise the issue of whether all the levels from initial input to output are equally required for listening and reading comprehension, and for writing ability.

Nagle and Sanders (1986:19-20) consider the "view that comprehension and learning are interrelated, interdependent, but distinctive cognitive phenomenon" as sensible. The distinction between intake for comprehension and intake for second language acquisition is extremely crucial because each form of intake requires strategies peculiar to its features.

In relation to this issue, Chaudron (1985) states:

> On the production-dimension, non-verbal responses involve a match

between input and an image in short-term memory(STM). ...Oral responses involve such a match, but additionally require further recording to a productive mode,... Similarly, written responses normally require another step in recording, through an aural representation to a graphic one. On the comprehension dimension, signal detection again involves only a match in STM, while a categorization task and further structural analysis require additional steps in analysis in LTM (pp.9-10).

This view indicates hierarchies of demands to learn oral and written language skills. This also supports the view that writing ability is a demanding task which involves constructing, reconstructing, analysing, creating, reorganizing and reactivating long-term memory. Moreover, the view held by Chaudron is supported by Nagle and Sanders (1986) who state that "When information is temporarily stored in initial memories (sensory and short-term), activities such as scanning, searching, and comparing may relate it to other information in long-term stage, resulting in comprehension" (p.15). This shows that information for comprehension is stored in short-term memory. This also implies information that is required for construction, creation, analysis and reorganization may be permanently stored in long-term memory and it may be this type of information which second language learners require to learn and develop their writing abilities using multiple sources.

Output

Ellis (1994) defines output as follows: "Output is language produced by the learner. It can be comprehensible or incomprehensible to an interlocutor" (p.697). This implies that output is learner controlled and it can either be understandable or ununderstandable to the listener, or reader i.e. the audience. However, Swain (1985) introduced the idea of comprehensible output . She argues that conversational exchanges derived from comprehensible input are not the source of grammatical acquisition. She states " Rather, they (conversational exchanges) are the source of acquisition derived from comprehensible output : output that extends the linguistic repertoire of the learner as he or she attempts to create

precisely and appropriately the meaning desired" (p.252). What she claims to be comprehensible output is the outcome of input initiated and generated by the learner that occurs when comprehensible input becomes intake as our previous discussion indicates. Swain's argument has limitation because it is based on the distinction between comprehensible input and comprehensible output. What Swain considers comprehensible output is related to what Chaudron (1985) considers as the final stages of intake that involve integrating and incorporating. It is also related to what Gass and Selinker (1994) consider the processes within intake and integration because the these processes involve constructing, reconstructing, analysing, reanalysing, incorporating, integrating, storing and developing second language grammar. These processes can produce the desired or effective output i.e. the desired outcome. Thus, Swain's comprehensible output can be accommodated under the cognitive interaction that converts comprehensible input into output.

It is important to realize that the four language skills require different kinds of output. Selinker and Douglas (1985) state that what learners produce in speaking is not what they can produce in writing, and what they can understand from an oral stimulus cannot be the same to what they can understand from a printed page. Moreover, Swain (1985) found out that learners of French as a second language performed as well as the native speakers of French on tests of listening comprehension but they were unable to acquire the language system fully though they had been receiving comprehensible input for seven years. Her finding shows that listening comprehension for meaning and acquiring grammatical or language system are different.

2. 9. 1 Working, short-term and long-term memories

Hitch (1980) uses the term ' short-term memory' to refer to the processes that are responsible for holding information over short intervals of seconds rather than minutes and long-term memory to refer to more permanent storage of

information. Hitch found that short-term memory involves restricted capacity and he extended it to working memory which involves a short-term system with many components. According to Hitch working memory includes components such as a speech output system, auditory input system, visual system, and control system. Regarding working memory, Howard (1987) states "Working memory is like a person's immediate consciousness. It holds what he is currently thinking about"(p.77). So working memory plays an indispensable role in holding information generally retrieved from long-term memory available for interpreting, selecting, organizing, generating, combining, inferencing, paraphrasing ideas and manipulating elements of language when writing using sources.

Regarding whether spelling, punctuation, capitalization and handwriting interfere with planning, coherence, and logical development, Scardamalia et al. (1982) noted that"...individual sentences would be well expressed, overall coherence and complexity of content integration may suffer" (p.185). If this is true with children of about 10 years old who, to some extent, do not have significant problems in syntactic structures, the interference may be greater with writers in a second language who do not have the command of L2 syntactic structures. They may require more planning pauses than writers in a native language would require. Moreover, their compositions or essays may lack coherence and logical development as they develop what they write in terms of sentences.

Concerning the problem when writing requires special attention to correctness, Widdowson (1984) states "...unless syntactic rules have been thoroughly automated, their mental resources will be so preoccupied with achieving linguistic correctness that there will be little spare capacity for communication" (p.67). He also indicates that this is common in second language as well as in foreign language situations. Moreover, Widdowson states :

> Effective communication commonly requires the unconscious
> manipulation of linguistic rules. The mind can then engage with
> conceptual organization and negotiation because the lower level
> syntactic plans have been automated, pushed down into long-term
> memory, below the threshold of immediate awareness (p.66).

This supports the view that syntactic structures are closely linked with organization, coherence, and logical development of texts. In this situation, the writer's efforts are split into many competing demands and it is likely that the writer produces neither well organized and coherent nor grammatically correct texts. He/She may be discouraged or frustrated by the grammatical errors identified by the teacher and he/she may develop a tendency of avoiding writing. Moreover, the writer's preoccupation with form may force him/her to neglect considering discourse organization and negotiation of meaning. All these indicate that ability to manipulate syntactic structures is a prerequisite for effective writing in second or foreign language. Unless the writer retrieves, relevant information from long-term memory automatically, he/she may require longer planning pauses in producing a written text. The working memory may not also hold the required information because the writer is generally expected to retrieve several competing factors simultaneously.

Greene (1987) states "All the information we have ever acquired, general knowledge of objects and categories and a permanent record of our personal experiences are stored in long-term memory somewhere inside our heads" (p.38). It seems true that long-term memory is crucial in producing written text which demands more retrieved information from long-term memory than listening and reading comprehension for multiple choice answers. Regarding working memory, Greene states:

> Working memory is thought of as being a working space in which new inputs can be received and information from long-term memory can be retrieved. Working memory is necessary for cognitive functions which develop on an integration between new and old information (p.39).

This clearly indicates that working memory is crucial in the writing process because it helps the writer to hold relevant information for a short period of time while writing is being carried on. When the writer plans mentally, he retrieves information from long-term memory and holds it in his mind in working memory.

Glover, Ronning, and Bruning (1990) stress the role of working memory and long-term memory in the writing process because working memory and long term memory continually interact when the writer searches for goals, ideas, and vocabulary. They also state "...long-term memory is an integral component of writing through the process" (278).

In academic writing students are expected to understand, integrate and store knowledge and to retrieve stored knowledge and integrate it with new knowledge from new texts to enable them to create texts. These processes take place in their memories.

2. 10. 1 Schematic knowledge

Bartlett (1932) and Baddeley (1976) consider schemata as highly abstract mental patterns accumulated through lots of personal experiences which can be recalled, revised, improved, and reinterpreted to serve the demands of new situations. Rumelhart (1984) uses schemata to refer to knowledge of structures in long- term memory and these structures are supposed to consist of related information that guide comprehension and interpretation of additional information. Widdowson (1983) defines the term "schemata " as

> cognitive construct or configurations of knowledge which we place over events of experience and beliefs. They are therefore serve as devices for categorizing and arranging information so that it can be interpreted and retained (p. 54). "

This indicates that information is organized in certain patterns for storage and retention in long-term memory. Schemata can help us to create interrelationships between our existing knowledge of objects and events and new information available for comprehension as well as for acquisition.

Howard (1987) considers schemata as embedded within each other. He also points out that every person knows millions of schemata and he/she has to

choose the appropriate schemata to use at a given context. Furthermore, Cook (1989) states "These (knowledge schemata) are mental representations of typical situations, and they are used in discourse processing to predict the contents of the particular situation which the discourse describes" (p.69). This suggests that schemata are important in predicting the content of what a person may comprehend and produce.

Knowledge of schemata appear to have some educational implications. According to schemata theorists such as Rumelhart (1984), Ratcliff and McKoon (1986), encoding of new information, storage of information in memory and the retrieval of information from memory are controlled by schemata, knowledge organized into complex representations. In relation to the use of schemata, Widdowson (1983) states " A schema...is a stereotypic pattern derived from instances of past experience which organizes language in preparation for use" (P.37). He also discusses the limitation of schemata by stating "stereotypic patterns limit divergent and creative thinking(p.37). Moreover, McCutchen (1986) sees much of the actual linguistic work in writing as taking place during the interaction between what the writer knows about a given task and what he/she knows how to write. In relation to writing he states:

> Schemata from the discourse component organize knowledge from the content component, specifying the general format of the text to be produced. For example, an essay schema specifies a main premise followed by supporting argument. A narrative schema, on the other hand, specifies a temporal sequence of events, generally revolving around one or more characters. As a result, the language of sentences in an essay would be very different from those sic] in a narrative, even if based on similar content (p.433).

Howard (1987) suggests that the teacher presents materials consistent with the students' schemata or teach schemata which can facilitate their understanding of the new material. This also implies that activating, selecting and applying relevant schemata are crucial to learning. Glover, Ronning, and Bruning (1990) support this view by stating"...any procedure that helps students form conceptual bridge between what they already know and what they are to learn can be considered

a form of schema activation" (p.129).This idea seems to be based on the view that schemata can be taught and they can be developed.

Taylor and Beach (1984) concluded that students in the social studies can be taught underlying principles of expository discourse. Similarly, Pincus, Geller and Stovber (1986) concluded that students in the language arts can be taught story schemata in order to understand the sequences in narration. Samuel, Tennyson, Sax, Mulcahy, Schermer and Hajovey (1988) also found out that reading the principles of construction prior to assignment of scientific papers enabled undergraduates to read, recall and understand better. Their studies may also indicate that providing with models and structured information about schematic organization may help students to construct their own schemata to accomplish a given academic task. Moreover, Glover, et al. (1990) point out that different tasks require different retrieval demands, for example, they say people make different preparations for multiple-choice test, oral examination, or an open book essay.

Yates and Chandler (1991) write " Schemata, as higher-level organizing structures, can be acquired (or substantially refined) through teaching in classroom context" (p.137). They also state that adults who, to a certain extent, possess prior knowledge of text, use text for schemata activation, whereas children use the same or similar text for schemata acquisition. Glover, Ronning and Bruning (1990) state that schemata represent knowledge of sentences, words, letters, etc. and they are used in learning. Thus, schemata seem to facilitate academic writing by reactivating prior knowledge of similar event observed, listened or read and acquired in the past.

Widdowson (1983) points out that schemata have their own limitations in that they do not account for all language use. Likewise, Greene (1987) suggests caution in applying schemata because we may link them with inappropriate representations or some stereotypical patterns may block our search for new representations but uses of schematic knowledge are by far greater than their limitations. So, it is important that students know and use it in academic writing.

2.11.1 Prior knowledge of subject-matter and academic writing

The role of prior knowledge has been emphasised in theories of learning. Ausubel et al. (1978) state "If we had to reduce all of educational psychology to just one principle, we would say this : the most important single factor influencing learning is what the learner knows. Ascertain this and teach him accordingly (p.163). Ausubel et al. indicate that prior knowledge plays a determining role in learning. In relation to prior knowledge they made a distinction between rote learning characterized by acquisition of new isolated information which is not fully incorporated or fully integrated into the existing knowledge and meaningful learning characterized by acquisition of new information which is fully incorporated and fully integrated into what the learner has already acquired. The latter type of learning enables the learner to reinterpret information and create new information according to the required task. Yates and Chandler (1991) state "Knowledge refers to mentally stored information available to the individual person, adult, or child" (p.131). Ausubel et al. ,and Yates and Chandler seem to hold different views on knowledge because Ausubel et al. emphasised the significance of meaningful learning, whereas Yates and Chandler did not make any distinction between unintegrated and integrated knowledge. According to Yates and Chandler both fully unintegrated and fully integrated knowledge may be available to the person depending on the nature of the given task and interval between acquisition and task performance. It seems true that the fully incorporated and integrated prior knowledge is the type of knowledge which is required for academic writing. It is the only type of information likely to enable the writer to produce coherent and logically connected ideas when writing using multiple sources.

Mintzes (1979) found out significant and positive relationships between prior knowledge and both mid-term examination scores and total achievement scores on biology. Mintzes also found out that prior knowledge results in significant differences between high score students and low score students. Similarly, Chiesi

et al. (1979) found out that prior knowledge played a significant role in influencing the acquisition of new subject-matter related information of high knowledge and low knowledge individuals. It is true that a student who possesses high prior knowledge may be able to manipulate syntactic structures easily, to create relationships among ideas and concepts competently, and to generate, infer, and connect ideas when he/she is expected to write using multiple sources.

Johnson (1984) states that his study provided evidence that prior knowledge influenced comprehension when the task demanded retrieval of stored information. Davey and Kapinus (1985) also found out that their subjects' recall of unfamiliar information presented before familiar information reflected the influence of the subjects' prior knowledge . When unfamiliar information was presented before familiar information subjects with high prior knowledge recalled better than subjects with low prior knowledge. They also found out that the order of unfamiliar and familiar information did not affect the recall of subjects with low prior knowledge.

McCutchen (1986) states "Content knowledge plays a definite role, and it is the case that children in the present study produced more coherent texts on topics they know well" (p.442).This indicates that the children in his study could produce meaningful and unified texts by reinterpreting and retrieving their prior knowledge and applying this to the service of accomplishing the required task. Without existing knowledge, a writer may not produce coherent and logically connected texts.

Perfetti and McCutchen (1987) defined writing competence as "...productive control over grammatical devices of language in the service of some communicative intent" (p.130). They also state that discourse schema knowledge, lexical knowledge ,and syntactic knowledge and procedures comprise knowledge of writing competence. It is the interaction of all these types of knowledge that enables the writer to produce effective texts. This implies that prior knowledge involves knowledge of some sort of discourse schema, lexis, and syntactic

structures and procedures. These types of knowledge are manipulated in various ways by different writers. Native language writers, for example, have a certain degree of command of syntactic structures and they work to expand it, whereas second language writers are generally struggling to acquire and master basic skills. Discourse schemata such as general structure and order of information, as well as the qualitative nature of information are likely to pose problems to students who are not fully exposed to materials that include these types of discourse in their native language. It seems true that students who are engaged in the struggle to acquire and master basic writing skills, possess low relatively lexical knowledge. In addition to these, McCutchen (1987) explains that all information that is expressed in a text such as main points, supporting details, coherence ties etc., is first of all drawn from a prior knowledge-"knowledge base". In his study with children's narrative and expository texts, he found out that children's narrative texts reflect more typical order of sequence of events, whereas their expository texts reflect less typical cause-effect relationships due to the prior knowledge.

So, in my study I will investigate the influence of prior knowledge of subject matter in synthesizing texts.

2. 12. 1 Product/Process writing

In the traditional product-oriented approach to writing, the focus of attention has been on the form of finished text. In this approach much effort has been exerted in writing courses of L2 reading materials which have been considered as models of successful writing. Thus, it appears to be prescriptive. The product-oriented approach considers the writing process as a series of sequential stages. Moreover, it pays little attention to the writer's cognitive processes which are involved in producing written texts. In relation to product-oriented research on writing process, Hartley and Knapper (1984) state " The product of writing can be subject to different kind of analyses- linguistic, stylistic, citation, change over time, and so on"(p.151). in this case, examination focuses on the study of written products. Emig (1967) proposed writing processes which "can be changed-shortened,

lengthened, transmogrified-by a number of variables"(p.131). Process-oriented approaches to writing have been adopted and modified and to a certain extent refined by researchers such as Hayes and Flower (1980), Bereiter and Scardamalia (1983), Scardamalia and Bereiter (1987).

Process-based approaches seem to offer a richer view of what goes on in the process of learning to write using multiple sources. Connor (1987) states "The process-oriented paradigm ... focuses on writing processes; teaches strategies for invention and discovery; considers audience, purpose, and content of writing; emphasizes recursiveness in the writing process, and distinguishes between aims and models of discourse"(p.678). This indicates that a process-oriented approach to writing considers the various variables crucial to produce a written text, guides how to invent and discover ideas and writing activities; and stresses the opportunity of unrestricted moves from one component of writing to another. This approach also encourages students to read materials to serve as source of more information and knowledge for writing in the early stages of writing using multiple sources.

1.13. 1 Cognitive processes/strategies and Writing processes /strategies

The frequent use of the term 'writing processes' may be associated with an interdisciplinary symposium on "Cognitive Processes in Writing" held in Carnegie-Mellon I May 1978. For example, Odell, (1980) presented a paper in the symposium. In relation to the process of discovery in writing, he states that writing goes "through a deliberate attempt to engage in some of the conscious cognitive processes that constitute "thinking"(p.145). In this context 'cognitive processes' are linked with mental operations operative in the writer's mind. Similarly, Bereiter (1980), suggests that Hayes and Flower were extracting the basic moves or strategic elements from protocols of writers' "thinking aloud"(p.78). This also indicates that writing processes are interconnected with the mind. In relation to processes, Schmeck (1988) states, "A process occurs at

the most specific, neurological level of analysis and is even more specific or less molar, than a behaviour. Styles, strategies, tactics and skills are all, theoretically, composed of processes"(p.7). He also adds that processes are used at particular levels whereas strategies and styles are used at more general levels. Das (1988) recognizes "simultaneous and successive coding and planning" as cognitive processes. He states "processing takes place in the brain, whose nature is to continually process information"(p.102).

The frequent use of 'writing strategies' seems to be linked with the use of cognitive strategies which may involve other than mental operations. In relation to components of learning strategies, Jones et al. (1985) define learning strategy as "the mental operations or thinking steps that are used to encode, analyse and retrieve information" (p.273). Here, strategies can be identified as mental operations which are similar to cognitive processes. So, cognitive process can substitute cognitive strategies or vice-versa. In addition to this, Dansereau (1985) defines an effective learning strategy as " a set of processes or steps that can facilitate the acquisition, storage, and/or utilization of information" (p.210). Mayer (1988) also defines learning strategies as behaviors of a learner which aims at influencing how the learner processes information. He also expresses his view that it is important to "understand the learning processes, i.e. what goes on in the learner's head during learning" (p.11).

However, Weinstein (1988) recognizes primary and support strategies. As she states, primary strategies refer to "purely cognitive strategies" as well as to " more mechanical strategies" whereas support strategies refer to helpful "psychological climate for learning" (p.310). Likewise, Bachman (1990) states :

> I consider it *(strategic competence* italics added) more as a general ability, which enables an individual to make the most effective use of available abilities in carrying out a given task, whether that task be related to communicative language use or to non-verbal tasks such as creating a musical composition, painting, or solving mathematical equations (p.106).

Furthermore, Gass and Selinker (1994) state "strategies clearly involve internal mental actions but they may involve physical actions as well"(p.265). In this context, strategies involve mental operations as well as activities other than mental operations such as underlining in the teaching material and showing favorable attitude towards learning. Here it seems necessary to identify how and when mental operations and physical actions are involved. Strategies need to involve interactions between input (teaching/learning material) and mental operations and physical actions simultaneously or concurrently. It seems necessary to set a point of reference for the implementation of strategies. They need to be directed to a certain specific task and we need to try to identify the major strategic variables for the specific task in mind.

In my study, cognitive strategies may be substituted for cognitive processes but not the other way round because cognitive strategies are generally used in wider contexts than cognitive processes. I believe proper implementation of cognitive processes/strategies can bring qualitative and quantitative changes in academic writing. The production of texts involves some planning and sets of related activities which may be distinguished as processes and/or strategies by researchers and writers on writing.

Hayes and Flower (1980) recognize planning, translating and reviewing as writing processes and generating, organizing and goal setting as subprocesses of planning. However, Englert et al. (1991) distinguish "plan, organize, write, edit/editor, and revise" as " the total set of strategies ...for the subprocess in the writing process"(p.345). Furthermore, Kennedy (1985) and Cohen (1991) recognize activities such as note-taking, reading notes, incorporating notes, quoting, rewriting, revising and so on as writing strategies.

In relation to writing, Hartley and Branthwaite (1989) identify two types of writers. Writers whom they call the 'thinkers' make extensive planning, drafting and revision, whereas writers whom they call the 'doers' make almost no planning, less writing and less revision. Similarly, Ede (1992) identifies three types of

successful writers who prefer one of the following three styles of composing. Type one consists of writers who make considerable planning, and less revision whom she calls 'heavy planners'; type two consists of writers who make less planning but they make extensive revision whom she calls 'heavy revisers ; and type three consists of writers who " devote roughly equivalent amount of time to planning, drafting, and revising"(p.33) whom she calls 'sequential composers'. In this case, the emphases are more on the mechanical operations and psychological climate while writing rather than on cognitive operations that involve mental operation during interaction with an input.

As a complement to this, Chandler(1993) identifies "four basic composing strategies" or "four common styles of composing behaviour"(p.33). In his study, Chandler identified four types of writers. They are those who plan, draft, and revise; those who usually "use single drafts with minimal revision"(p.33); those who write without much planning and organize and revise later; and those who attempt to polish each sentence before they write the next sentence. This type of writers lack the holistic approach to writing.

In the literature I reviewed on writing, some researchers and writers such as Emig(1967, 1971), Graves (1975), Pianko (1979), Hayes and Flower (1980, 1986), Scardamalia and Bereiter (1987), Johnson (1985), Hillocks (1986), Sharples et al. (1989), Ede (1992), use the term 'process', whereas Kennedy (1985), Kellog (1987), Raimes (1987), Cohen (1991), Englert (1991), Chandler (1993), Torrance, Thomas, and Robinson (1994) mostly use the term 'strategy'.

In this study, writing processes are used to refer to sets of related mental operations involved in writing using multiple sources whereas writing strategies are used to refer to mental as well as physical and psychological actions involved in writing using multiple sources. I shall investigate whether teaching or instructing writing processes or strategies lead the University students to improved writing ability.

2. 14. 1 Discourse analysis

Discourse analysis is a method or technique of analysis used mainly to describe the nature of linguistic, sociolinguistic, and psycholinguistic information to understand how language works. It helps us to understand how linguistic behaviour interacts with social and psychological behaviour to create and convey meaning. Discourse analysis involves a search for relations, patterns or categories, examination of how and why relations, patterns and categories emerge, examination of processes or strategies , for instance, in the production of a text, and identifying major variables that cause variation e.g. in writing.

Different researchers and writers define discourse analysis in various ways and they also apply it for different purposes. Larsen-Freeman (1980) considers it as "an approach which allows researchers to study the acquisition of semantic, communicative, and pragmatic functions of language, the input to the learner, and the input/product interaction"(p.vii). According to Larsen-Freeman, discourse analysis seems to do everything involving relationships among language, society, human mind, etc. Similarly, Grabe's (1984) review indicates that functional linguists, rhetoricians, formal linguists, sociolinguists, psycholinguists, applied linguists, composition researchers and educationists have applied discourse analysis to study language in relation to their specific purposes (p.101-102). Sinclair (1980) suggests that it involve the study of written texts as well as the connections between "written and oral language and between receptive and productive roles"(p.254). According to Sinclair (1980), discourse analysis involves the study of the interaction between speaker and listener as well as between writer and reader in actual language use.

Brown and Yule (1983), Stubbs (1983), Cook (1989), Schiffrin (1990, 1994), McCarthy (1991), Hatch (1992) Bhatia (1993) and Woods (1996) commonly recognize discourse analysis as the study of the structure and function of oral as well as written language units larger than a single sentence. Schiffrin (1990) considers the definition of discourse "as a unit of language that is larger than the

sentence (which) focuses attention mostly on the linguistic regularities of texts "
and the definition of discourse as language in use which "focuses attention mostly
on the social and cultural functions underlying ways of speaking" (p. 3) as some
of the reasons that make discourse analysis as " one of the least well defined
areas in linguistics" (p. 3). It is likely that different approaches to and different
views on discourse result in numerous definitions. Fairclough (1992) notes that
discourse analysis is approached by different researchers and writers in different
ways in accordance with their specific inquiry and their views of discourse.
Referring to its use, Cook (1992) states " The task of discourse analysis is to
describe both this phenomenon(the way text and context interact) in general and
particular instances of it, and to say how participants distinguish one type of
discourse from another" (P. 2). This shows that discourse analysis is useful to
describe functions of language in real situations with real speakers or writers in
interaction.

Discourse analysis may be considered as a technique or a tool to study language.
For instance, Sinclair (1980) sees it as " a body of theoretical concepts and
descriptive techniques" (p. 253). Similarly, Struever (1985) recognizes it " as a
technique of historical research, an interpretative tool employed by historians" (p.
261). In this case researchers use discourse analysis for analysing forms of
language and for understanding factual information. Fairclough (1992) also
recognizes discourse analysis as a method when he states " ...the value of
discourse analysis as a method in social research" (p. 5) would be increased when
texts and language analysis receive greater attention. In relation to its importance,
Ellis(1994) states "Discourse analysis serves as a device for systematically
describing the kinds of interactions that occur in language classrooms"(p.568). He
also states "More commonly, researchers have used the techniques of discourse
analysis to develop comprehensive account of specific areas of discourse" (P.568).
This indicates that there is no one best standard approach to the study of
discourse analysis and researchers can pursue approaches appropriate to the
nature, intention and objectives of their inquiry.

Connor (1990) suggests application of discourse analysis to composing processes
at various stages and to focus attention on " students' writing from sources in

academic and professional setting"(p.172). McCarthy (1991) also indicates how discourse analysis can be used in describing and teaching vocabulary, grammar and phonology. Celce-Murcia (1990) shows how rules of morphology and syntax can be taught to nonnative speakers of English, too. In addition to this, Riggenbach (1990) says " techniques associated with discourse analysis provide learners with tools for examining how language is structured both at the macro/discourse level and the micro/grammatical level" (p.159) in spoken second language instruction. As to its application to comprehension, Dechant (1991) states "when readers are engaged in comprehension of a paragraph, they are engaged in discourse analysis" (p. 411). He also points out that discourse analysis " requires an awareness and an understanding of inter-sentence relationships, or ability to read meaning of several sentences contained in a passage" (pp. 411-412). It is true that one does not construct meaning by adding the meaning of individual words or lexical items without establishing relations among words and sentences. Finally, regarding to the primary work of discourse analyst, Nunan (1993) states "the ultimate of this analytical work is both to show and to interpret the relationship between these regularities [in language use] and the meanings and purposes expressed through discourse" (p. 7). In this case, the discourse analyst needs to identify patterns and regularities in language use and he/she describes the regularities and also looks for possible explanations for the identified patterns and regularities in the data collected. I will use discourse analysis to investigate how the students in my study made intertextual links from given texts to enable me to explain the strategies they followed and to investigate some problems they faced in producing their texts.

2.15. 1 Conclusion

The teaching/learning process in school setting to specific grades, usually remote or delayed rewards (in terms of money), teacher/lecturer/professor as examiner or audience, attachment to power relation, and evaluation in reference to specific criteria are indicated as some of the features of academic writing. These features may help us to distinguish it from non-academic writing. Writing using sources is found useful because it is believed that it can help students to prepare to meet school requirements and teachers' expectations. As to studies of summarising, there are many elements which overlap with components of teaching writing using sources. It is indicated that prior knowledge of other texts can help to shape the new text. Establishing relationships between other people's texts and the new text is found useful in writing in classroom contexts, too. There are different views on the role of input in second language acquisition in general. The processes included in converting input to oral or written output appears to play a useful role in teaching writing using sources because the model proposed appears to entail most of the components of teaching writing using sources approach. The review on memories indicates that retrieval of information from long-term memory to working memory during writing, and storage of information in long-term memory are important to the development of writing in general and it seems reasonable to extend this to teaching writing using sources which may require retrieval and storage of information. Schematic knowledge and prior knowledge of subject-matter are believed to play a determining or influential role in writing which could be expanded to include teaching writing using sources. The review on cognitive strategies and cognitive processes indicate that they are useful in fostering the development of writing ability in general. Lastly, it is indicated that discourse analysis can be considered as an area of study as well as a method to analyse written essays as well as transcriptions of conversation. These indicate that there are different approaches to discourse analysis.

In this chapter, the review does not clearly indicate direct reference to teaching writing using sources (on a topic) approach because this approach is new to

teaching writing and the investigation is exploratory rather than a new perspective on existing approaches to academic writing. We can try to establish connections to this approach by extending the implicit references to writing using sources.

Chapter 3 : Review: Roles of some factors in improving academic writing using multiple sources

3.1.1 Introduction

Chapter three reviews some factors which primarily deal with practical aspects of writing in general. It begins with a review of the differences between spoken and written language and its impact on academic writing. It reviews the relationships between reading and writing using sources. It also discusses how different writing tasks result in different text organization, style of writing and generating new information. Some limitations of teaching grammar as a set of rules to improve writing ability are considered. The importance of knowledge of words to writing using sources is reviewed. This chapter also discusses what types of feedback could improve writing ability. How teachers as examiners or audience can shape students' perception of writing is discussed. The issue whether motivation is a cause or effect of success, the problems of specifying the variables that can affect motivation and the possibilities of encouraging students to improve their writing ability are reviewed. Finally, the importance of writing to improve learning and how writing can help students to learn are discussed.

3. 2. 1 Spoken and written language

In investigating factors affecting academic writing using multiple sources, it is important to understand the effects of the differences between spoken and written language. Regarding the impact of oral language on composing ability, Florio-Ruane (1991) states " Many scholars seeking for how beginners learn to compose or comprehend turn to research on oral language acquisition. Here, they find evidence that the conversation of care-givers and young children play an important role in language development"(p.366). Differences between spoken and written language have an enormous impact on the development of writing ability. Spoken language is usually characterized by face to face communication in which the speakers mutually create the text. Participation in the production of

the text in turn creates favourable condition for the speakers because each speaker receives immediate feedback to make any adjustment. In spoken language intonation, quality of voice, pitch, tempo, facial expression, bodily movement and gestures are some of the linguistic devices that aid communication, whereas in written language, the writer produces the text without the participation of the reader. The absence of direct listener results in the absence of immediate feedback for any adjustment. Linguistic devices that aid communication in spoken language are substituted by visual symbols such as punctuation marks, capitalization, syntactic structures, etc., in written communication. The speaker's utterances (including grammatically incomplete sentences) are substituted by the writer's complete sentences including subordination and embedding. Moreover, in speaking, participation in the creation of meaning entails negotiation of meaning and shared knowledge in real situation but the absence of a direct listener in writing results in imaginary shared knowledge and creates a gap between the writer and the reader.

In spoken language, acoustic transmission of speech, to a certain degree, relieves the speaker from strict external evaluation, whereas in writing letters on a page impose external evaluation on "qualities such as grammaticality, logic, cohesion and explicitness" Martlew (1986:118). Exposure to evaluation and criticism may prevent the student from writing as Shaughnessy (1977) puts it, " the student lacks confidence in himself in academic situation and fears that writing will not only expose but magnify his inadequacies" (p.85).

It is true that the differences between spoken and written language have an impact on academic writing using multiple sources but do these differences account for the difficulties students are confronted with in academic writing using multiple sources? To what extent do these differences explain the difficulties students face with in academic writing multiple sources? What other determinant factors account for the difficulties students face when writing using multiple sources?

As to the difficulties, importance and development of the writing ability, Martlew (1986) states as follows:

> Nevertheless, the advanced demands of writing and its increasing prominence in children's lives as they proceed through formal education inevitably means that studies of writing development draw upon a notably older subject population than other areas of language development. It is important to recognize that developments are still proceeding through adolescence and that immaturity in written language can be found at almost any age (p.119).

Writing is a demanding task in the sense that the writer is required to integrated physical, psychological and sociological processes to produce text. Writing also involves almost all language skills such as concentration on listening to acquire knowledge, concentration on reading to acquire knowledge as well as to understand what the task requires. Besides, its importance and function increase with students' levels/grades. Its development is measured by its expanding functions in the academic life of the students in specified context i.e. measurements for writing competence vary with the needs of primary and secondary schools as well as colleges and universities. It is also important to investigate why can immaturity in written language be found at almost any age. Native spoken language is acquired and produced unconsciously. The speaker does not make deliberate effort on how to speak. Speech is spontaneous and automatic (in native language), whereas writing is learned consciously and is delivered with relatively more effort. Writing tasks demand deliberate mental processing and consequently the degree of success in the consciously learned ability requires much effort. Vygotsky (1986), Yates and Chandler (1991) state that a certain degree of automaticity can be attained with much effort.

In spoken language, the aims of communication are to convey meaning and to achieve immediate results and their effects are revealed to the participants in the interaction ; however, in written language, the aims of communication are further removed from immediacy and their effects are not revealed to the writer immediately. Vygotsky (1986) found out in his studies that when the motives for

writing were removed from immediate needs the writing became abstract and intellectualized. He also states that the writer is required to create a situation to represent written language.

It is at a higher level of abstraction and information extraction and integration that teacher intervention plays a significant role. Students require guidance and encouragement at this stage. They need effective models of writing which can facilitate their development of their writing ability. At the early stages, the models teachers select or adopt for their students reflect some overlapping features between speech and writing.

It is essential to examine whether the differences between spoken and written language have similar effects on writing ability in a second language. The differences between spoken and written language do not have the same effects on learners of native language and a second language . Spoken and written second languages are more or less the same to second language learners because both the spoken and written languages are learned through deliberate efforts, consciously and more or less simultaneously. Hence, one cannot speak of the ideas of spontaneous production and unconscious acquisition in a second language context. Both speech and writing are learned through controlled mental processes which require relentless efforts and commitment. Even the dialogues designed for teaching the second language are not usually interesting because they lack the features of actual speech production such as facial expression, gestures, bodily movements, etc. However, the contribution of speaking to the development of the writing ability using multiple sources seems significant.

In learning a second language, we also need to understand other factors that affect second language acquisition in general and writing ability in particular. In a context where oral communication is dominant, teaching writing is extremely difficult because the value attached to it by the society is insignificant. Lack of rich experiences of the uses of written language results in low perception of writing. Referring to literate and non-literate societies, Goody and Watt (1972:315) states

"it [language] is learned by the individuals in face to face contact with other members. What continues to be social relevance is stored in the memory". This indicates that students in semi-literate societies perceive that human memory is the storage of all forms of knowledge and the role of written language in their social lives is insignificant. Development of writing ability requires strong and positive perception of the uses of written language. Change of perception is a prerequisite for the development of the writing process. Sulzby (1986:99) states "Young children in literate societies have begun to acquire communicative competence which includes both oral and written language prior to schooling". This shows the opportunity enjoyed by students in written societies in developing a positive perception of the writing ability.

Thus, the differences between spoken and written language and differences in cultural background seem to have some impact on academic writing using multiple sources.

3. 3. 1 Reading and Writing

In student academic writing, reading is the main source of knowledge and knowledge as an outcome of reading may determine success in writing competence. A student who has not sufficient knowledge of his/her subject matter is unlikely to identify and organize their main points properly, give adequate details of their subject, provide accurate information, show clear relationships among ideas and thus be able to produce coherent texts which consist of relevant information for the required tasks. According to Page (1974), the writer begins with knowledge and ends with graphic representation, that is, the writer transforms his/her knowledge into meaning. This transformation involves processes such as selection and reorganization. Then discoursal, pragmatic and grammatical relations are assigned to the meanings. Finally, meaning conceptualized in the writer's mind is converted into graphic representation on the page or elsewhere. However, the reader begins with written structures on the

page and ends with knowledge, i.e., the reader assigns discoursal, pragmatic, and grammatical relationships to the written structures on the page. Through these relationships, the reader tries to construct meanings. These reconstructed meanings are extended to involve inferences and interpretation which may ultimately form knowledge.

Perfetti and McCutchen (1987) explain the fast retrieval of word meanings in response to 'semantic intentions'. This clearly indicates the reverse order of beginnings and endings of reading and writing plus the additional demands of writing to create syntax and lexical items to write on the page. In relation to options and constraints, they state "... to a large extent the text dictates reader's options,.... The writer is not so much constrained "(p.132). Here the text seems to give cue and guide and it may not dictate the reader's options. Moreover, it seems true that in the genre, conventionalised inclusion of relevant information and exclusion of irrelevant information limit the writer's options as Gene and Stevens (1985) state "...the text must conform to certain prerequisites in order for its meaning to be extracted by any and all readers" (p.104). So this demand dictates the writer's options.

Rosenblatt(1989) expresses similar views when he states "... that the writer begins with a blank page and must produce a text while the reader starts with the already written or printed text and must produce meaning" (p.154). Here, we can see that the writer is given the task and produces meaningful texts according to given instructions in which the reader may reconstruct meaning from that text. By combining different syntactic structures, along with knowledge of discourse, the writer creates meaningful text whereas using syntactic structures as cue, along with prior knowledge, the reader discovers relationships of meanings which enable him/her to comprehend meaning and to establish relevant generalizations, inferences and these interpretations, generalisations and inferences lead to acquisition of knowledge.

Taylor and Beach (1984) found that students showed general writing improvement

after receiving instruction and practice in generating summaries of discoursal structures. Myers (1986) in what she calls 'the modelling approach' in writing explains that "...the student writers are surrounded by reading materials...as something to imitate" (p.150). This shows the contribution of reading materials in shaping the writer; however, whether to follow a specific model or refer to different models for modifying your writing becomes a separate issue which may be dealt elsewhere in this study.

Kameen (1986) considers reading not as reproduction but as an act of production comparable to writing. He states "...it (reading) becomes in fact a manner of writing, just as conversely, writing becomes a manner of reading" (p.183). This reflects the active role of reading in making meaning , and interpreting the text and the role of writing that involves envisaging the reader who is expected to reconstruct meaning from what the writer supplies in the form of syntactic structures.

Sharwood Smith (1986) points out that " interpretation involves (a) processing for meaning; (b) processing for competence change" (p.239). This may raise a crucial issue in relation to reading as an input whether reading refers to reconstructing interpretation for temporary service e.g., to respond to multiple-choice questions, true/false statements, matching exercises, or for relatively permanent service, e.g., to respond to questions that require assimilation , abstraction, integration and creation of new information. This issue has also been raised by Faerch and Kasper (1986) when they state "...differentiation is needed between input functioning as intake for comprehension and input functioning as intake for learning" (p.257). It is true that students' responses to multiple-choice questions after reading a passage and responses to essay type questions or summaries after reading a passage demand different aspects of writing.

Kress' (1986) analysis of two texts one written by a seven year old child and another by a seventeen year old, shows that initial and intervening stages of reading are different and reflect different types of writing. He states that initial

reading stages result in indirect interrelation between reading and writing, whereas in the intervening stages, the interrelation becomes direct and this is reflected in the direct lifting or quoting of information from texts the child reads. Kress states that the writer ultimately produces a text "...through reading, through assimilation, and absorption of formal aspect of these generic features and their integration into the child's schema " (p.212). This clearly shows that reading involves assimilation, absorption, and integration of information by the reader in preparation to become (student) writer. However, the issue is how is information assimilated, absorbed and integrated into the (student) writer's existing knowledge? Are the processes the same or different for native language writers and second language writers? It seems inadequate to state that reading influences/determines writing competence. It is good to identify what kind of reading influences or determines writing using multiple sources.

3. 4. 1 Writing tasks in academic writing

Sanders and Littlefield (1975) found that students who wrote a researched essay on topics of their own showed significant improvement in composing, whereas students who wrote impromptu essays on assigned topics did not show any significant improvement on writing/composing. Referring to studies which emphasize impromptu essay writing, they state "controlled writing in classroom, students generally have not demonstrated significant improvement in composition skills"(p.153). Sanders and Littlefield's findings inspire us to make important assumptions in composition courses and essay writing such as (1)selected topics on researched essays give students the opportunity to integrate their prior knowledge on the subject and information obtained from relevant sources, that is, from textbooks, reference books, periodicals, documents, and so on. This reflects a possible linkage between composing instruction and writing task as a process. (2) Assigned impromptu essay writings restrict students to compose only from what has been in the head as a finished product. This does not reflect the

required match between composing instruction and composing task. (3) In academic writing, students usually write from sources relevant to their subjects or courses; however, assigned impromptu essay writings do not involve much of the knowledge students obtain from composing instruction, and other sources. Thus, the examination writing tasks are not directly related to the areas covered in their respective subjects or courses.

Crowhurst and Piche (1979) noted that modes of discourse affect syntactic complexity. They found that syntactic complexity was great on expressive writing, greater on explanatory writing, and the greatest on argumentative writing. They state that assignments on argument are "appropriate in studies of syntactic development" (p.107). These findings may raise issues such as whether to design writing instructions in sequence of modes of discourse or according to needs, and whether to design similar or different writing instructions to native language writers and second language writers.

Prater and Padia (1983) also found out that expressive mode of discourse was not as challenging as explanatory and persuasive modes of discourse. They express their views that expressive writing may develop with general instruction, whereas explanatory and persuasive modes of discourse "require direct, focused instruction"(p.130). In this case, there is an assumption that native language writers may easily transfer what they listened from parents, playmates and so on to expressive writing; however, composing is different for second language writers who are generally expected to learn all modes of discourse almost simultaneously in the classroom. Although students learn modes of writing one at a time, they are demanded to attempt to write in almost all modes of discourse before they fully control one of them.

Regarding instruction and tasks, McCarthy (1987) suggests that teachers design appropriate instruction and writing tasks which enable newly joined students to adapt to the required conventions of the community. In connection to this, Seidlhofer (1991) found that summary writers included more directly copied

information from source text than account writers. She also points out that summary writers used less words than account writers. This may indicate that different writing tasks see to require different transformations of information. Greene's (1993) findings also indicate differences in interpretation of task, organization of essays, use of sources from prior knowledge and experience in generating content due to different tasks. Thus, all the above mentioned findings focus on writing tasks and instructions possibly given to students. However, implementing writing tasks and instructions which can possibly lead students to the acquisition of effective writing using multiple sources are indispensable.

3. 5. 1 Teaching grammar in student academic writing

It is very crucial to understand whether teaching grammar, as it refers to knowledge of rules at the syntactic level, has any impact on student academic writing or not. It is also useful to know whether teaching grammar has similar or different impact on first language writers and on second language writers.

There are different views on the role of teaching grammar in the writing process. Some of the differences may be due to the differences of definitions and functions assigned to the term 'grammar'. Smith (1982) distinguishes the grammar of deep structure, the grammar of surface structure and the grammar which links these two grammars. He states "the grammar of surface structure is syntactic,... But the grammar of deep structure is semantic"(p.51). However, he does not elaborate how the grammar that links these two grammars is defined or how it functions. He also states "The surface grammar is usually the only one taught in schools" (p.51). Halliday (1985) also points out that semantics, grammar, and phonology are the terms for the levels or strata of a language in the functional traditions in linguistics. He also states " In formal linguistics the term 'syntax' is used to replace 'grammar'"(p.xiv). This shows that for some reasons semantics, grammar and phonology were treated, to some extent, separately. Apart from this, Kress (1994)

suggests separate treatment for 'a child's grammar and adult grammar'.In this case, grammar refers to language rather than to syntax as a component of language. Thus, lack of uniformity in the definitions and functions of the term 'grammar' may lead to divergent strategies in the teaching of grammar for writing. Most of the researchers who disregard the importance of teaching grammar in the writing process seem to refer to the term 'grammar' as a set of rules that involve sentence construction, sentence combination, that is , knowledge of rules at the syntactic level.

Faigley (1979) found out that controlled sentence production and combining sentences could increase syntactic maturity in writers at the college level. Moreover, according to Perfetti and McCutchen (1987), knowledge of syntactic construction and procedures is one of the three components that comprise writing competence.

However, referring to the meetings of the National Council of Teachers of English, Brown (1986) expresses the views of experts on the basis of a large amount of "research going back more than fifty years that demonstrate no clear relation between knowledge of grammar and ability to write"(p.120). In this case, the point is if teaching grammar has no effect on writing process, the time devoted to teaching grammar should be allocated to teaching activities that contribute and show some impact on writing. Furthermore, Perera(1986) expresses her reservations as to the contribution of grammatical construction to teaching writing. She stresses the value of general organizational patterns in writing process. However, Elley, Barham, Lamb and Wyllie (1976) noted that their findings indicate no significant differences between students who studied grammar and students who did not study grammar although they state that students who studied grammar showed negative feelings at the end of the experiment. This may imply that if the time spent in studying grammar was devoted to other tasks linked with the writing process, their findings would be different. Similarly, Hillocks (1986) found out that instruction that stresses the study of grammar did not show significant improvement in composition writing. Hillocks states " the study of

grammar provides knowledge relevant to composing only at the syntactic level" (p.81). He also noted that the traditional study of model composition was more effective than the study of grammar.

Vygotsky (1986) supports the view that grammar seems to be of little practical value in developing writing ability. He states "The child does have a command of the grammar of his native tongue long before he enters school"(p.184). In spite of the fact that the child has a command of the grammar of his native tongue, he finds writing very hard. This view supports many of the findings that teaching grammar does not play a significant role in the writing process.

With the introduction of Halliday's (1985) functional grammar, a new perspective on the teaching of grammar for writing has emerged. According to Halliday, functional grammar involves much of semantics and grammar and they cannot any more be treated separately. Halliday states :

> The grammar is the central processing unit of a language where meanings are accepted from different metafunctional inputs and spliced together to form integrated outputs or words. Without grammar in the system, it would be impossible to mean more than one thing at a time. In order to understand how language works, therefore, we have to engage with the grammar" (pp. xxxiv-xxxv).

In this case, grammar is fused with semantics and, pragmatics and it seems to refer more or less to language.

Theoretically, Halliday's book, Introduction to Functional grammar seems a good book (to me); however, as he points out the book was written primarily for text analysis at the tertiary level. This implies that functional grammar is not for primary and high school teachers and students. Thus, it is unlikely that functional grammar could become effective in teaching writing using multiple sources. Nevertheless, Martin and Rothery (1993) point out that functional grammar that teaches how meaning is constructed in a text is useful in school but they did not indicate how it proved effective in any one of the grade levels in school setting. Similarly, Callaghan, Knapp, and Noble (1993) state "We believe it is absolutely

essential that teaching grammar must be fundamental part of an effective genre-based approach to reading and writing"(p.201).

It is surprising that almost all the proponents of functional grammar do not consider how it can be effectively implemented in second language writing particularly writing using multiple sources.

Widdowson (1990) proposed effective teaching of grammar in meaningful context.. He states

> But for language learners to learn only the intricacies of the device without knowing how to put it to use is rather like learning about the delicate mechanisms of a clock without knowing how to tell the time. What is crucial for learners to know is how grammar functions in alliance with words and contexts, for the achievement of meaning. (P. 95).

Traditional approaches to the teaching of grammar emphasize the study of rules in in reference to isolated instances which are not interesting to learners because the examples are out of context. It becomes difficult for learners to discover meaning which they can use in other contexts easily.

Batstone (1994) considers the teaching of grammar as product with its emphasis on structures or language forms, as process with its focus on "the use of language by learners" and as skill which serves as a bridge between product and process as three approaches to the teaching of grammar. He states "Teaching grammar as skill means striking the balance between product teaching (because there is still an emphasis on grammatical forms), and process teaching (because learners work with tasks which involves a measure of self-expression and focus on meaning" (p. 52). The teaching of grammar in accordance with the teaching of grammar as skill thus appears effective because it interrelates knowing and using some linguistic constructions; however, in a real situation teachers of a second language usually emphasize the teaching grammar as product - as a set of grammar rules-rather than encouraging learners to use language in real life. This may be due to lack of adequate orientation, pressure to finish the specified syllabus, or lack of

textbooks and grammar books prepared on the basis of the above mentioned approaches.

Thus, writing using multiple sources involves these approaches because it encourages learners to apply specific grammatical forms they have learned in order to compose their new texts - bridging how to know and how to use.

Teaching grammar for writing as it refers to syntax may not be effective because isolated forms of sentences and a set of rules do not involve the general plan of text, organisation of information, comprehension of texts or passages, relationships of information, selecting, generating, inferencing, and combining ideas, overall coherence of text and so on. In most second language contexts, teaching grammar dominates the language curriculum with the aim of developing language skills including the writing ability. So, it is necessary to look for an alternative approach which involves the above mentioned major mental operations useful to writing using multiple sources.

3. 6. 1 Vocabulary in academic writing

Knowledge of vocabulary plays important role in improving student writing ability. Grobe (1981) studied the effects of vocabulary on teacher ratings and his findings indicate that teachers' perception of good writing in narrative writing was closely connected to the diversity of vocabulary; however, he expressed his doubts on the idea of concentrating on improving children's vocabulary as it was not the best predictor of good writing. Duin and Graves (1986) conducted experimental research on the effect of vocabulary and writing instruction on fourth and sixth grade students. The students' scores on post-treatment show that " students who received the instruction improved their writing scores on the post-treatment task, while those who did not receive the instruction did not improve their writing scores" (p.11). Later, Duin and Graves (1987) conducted experiments which involved three groups of students. The first group of students received intensive

vocabulary and writing instruction; the second group received intensive vocabulary only (the vocabulary instruction was not connected with specific writing task); and the third group received traditional vocabulary instruction in which students made association between the words they studied , defined words, and found out synonyms. Their findings indicate that teaching students sets of words that might be included in expository essay could improve the quality of their essays.

McKeown, Beck, Omanson and Pople(1985) conducted a study on the effectiveness of types of vocabulary instruction. The first group of students received "rich instruction" in which the students explored different aspects of word meaning; the second group received "extended/rich instruction" in which rich instruction was combined with motivational activities; and the third group received traditional vocabulary instruction in which dictionary meanings, definition, and synonyms were focused (p.526). Among other things, they state "If the goal is higher order processing that involves integrating words and context, a richer instruction is called for" (p.534). Writing requires integrating words and context to communicate ideas and it is likely that richer vocabulary instruction brings improvement to writing ability. Perfetti and McCutchen (1987) support McKeown's et al. view when they consider lexical knowledge as one of the three components of writing competence which include "discourse schema knowledge and syntactic knowledge and procedures "(P.130).They state " A second source of linguistic knowledge in the writing process is lexical-the knowledge of words including their meanings, their class, and their orthographic, phonemic, and morphemic structure" (p.130). Although knowledge of vocabulary does not play a determinant role in improving writing ability, it may contribute much to the improvement of writing ability.

3. 7. 1 Feedback in student academic writing

In teaching writing, feedback, reaction or responses to the writer play a significant role in improving the writing ability. According to Hillocks (1986), comments(feedback) are a sort of instruction in the teaching of writing provided to students "after they have written something"(p.218). Several research studies have been conducted to examine the effect of various forms of feedback in improving writing ability. Beach (1979) found that students who received feedback from their teachers during writing produced better papers and made more change in their final papers than students who either evaluated their papers according to evaluation forms or no evaluation at all. similarly, Cardelle and Corno (1981) point out that specific feedback on errors helps the student to focus on skills and ideas not fully understood. Feedback simplifies the efforts of the student by excluding the work already done well and it also helps him/her to integrate the corrections into the work already done well. Hillocks (1982) also conducted experiment on four forms of feedback. He found that students who received specific comments and who revised their drafts showed the most significant improvement in their writing ability. Herrington's (1985) findings on teacher student interaction which clarify the common purposes of the teacher and the student support Beach and Hillocks' findings, too. Feedback, in addition to correcting errors and pointing out shortcomings, reflects and clarifies teacher's perception of a given writing task and it also clarifies expected performance of the student. So, on the basis of the feedback, the student may make maximum efforts to adjust to teacher's perception of writing and to the expected performance.

In the case of drafts, Spack (1988) maintains that "teacher feedback on drafts guides students toward producing a more tightly organized, well focused paper that fulfils the assignment"(p.45). In this case, feedback helps students to polish their syntactic structures, discard irrelevant ideas, add relevant ideas, reorganize sentences and paragraphs and so on. Fathman and Whalley (1990) also found that students who received teacher feedback that focused on form or content or on both form and content made significant improvement " when they rewrote their compositions"(p.187). It is likely that rewriting is one of the crucial

subsequent activities of feedback because it helps the student to learn how to correct and integrate the results of feedback into the existing ideas in his/her paper. Traxler and Gernsbacher (1992, 1993) also found in their studies that writers who received feedback show significant improvement compared to those students who did not receive feedback. They maintain that the writers who received feedback were able to assess whether their papers convey the meaning they intended or not and the evaluation of their performance served them to make the required adjustment. They also maintain that feedback (positive) increases motivation.

However, Stiff (1967) conducted research on three groups of students , that is, group one which received correction on the margins, group two which received mainly comments at the end of the paper and group three which received correction on the margins and comments at the end. Stiff reports "There appears to be no significant improvement on the part of students within the groups in the separate categories"(p.61). Similarly, Hendrickson (1978) found that students who received error corrected feedback did not show any significant improvement in their writing. This supports the view held by many researchers such as Corder (1967) that error correction does not help students to improve their writing and Corder proposed an approach whereby the writer discovers and corrects his/her own errors. This approach, he maintains, helps students to generalize and formulate guiding principles. It is likely that error corrected feedback dissuades students from focusing attention on what is to be corrected; it concentrates usually on form excluding dimensions of content.

In relation to strategies students use for handling teacher feedback, Cohen(1991) found " that students usually made only a mental note of the teacher's feedback" (p.149). He suggests that students revise their writing assignments and make efforts to incorporate teachers' comments into their papers. He also points out that unlike native language writers the EFL students were likely to agree to and accept teachers' comments due to their language difficulties.

Although unintegrated research, that is, research that does not involve several feedback variables on the effect of feedback support the view that teacher feedback plays significant role in improving writing ability, it is likely that more integrated research on feedback variables may be required to specify the nature and types of feedback. In relation to this issue, Hillocks (1986a) states, "Variables associated with feedback include the character of the feedback, its sources (teacher, peer, or combination), its appearance in the instructional sequence, and its combination with other features of instruction" (p.240). Here, it seems difficult to establish the hierarchy of significant feedback variables that lead to improvement in writing ability if several variable are not studies simultaneously. Generally traditional forms of correcting do not contribute substantially to better writing. In relation to feedback at advanced levels, Frodesen (1995) recognizes individual conferences, class discussions, midterm evaluation and journals as channels of feedback in the graduate ESL writing class.

3. 8. 1 Audience in academic writing

Knowledge of intended audience is one factor that influences writing. In academic writing, the student writer considers the audience in a school setting. In a school or university setting, it is the teacher or the professor, who gives the writing instruction, who defines the task, the purpose, the mode of discourse; who gives the necessary feedback; who judges and passes judgement on the writing, and who is the primary audience. He/She assumes roles such as a friend, classmate, parent, judge, manager, teacher, editor, doctor, counsellor, and so on to instill in the minds of his/her students various genres due to variations in purpose , audience, mode of discourses, etc.

Crowhurst and Piche's(1979) findings indicate that compositions written for teachers involved greater syntactic complexity than those written for best friends.

They relate their findings to formal writing for teachers and informal writing for friends. Moreover, their findings in their studies of grades 6 and 10 show the effects of audience as significant only in grade 10 argumentative writing. Moreover, Britton et al. (1975) and Smith and Swain (1978) note that their findings show writers' awareness of audience increases with increase in grade levels.

However, Rubin and Piche's (1979) findings indicate on the one hand "that longer clauses were directed to low intimacy targets....On the other hand, highly subordinated structures were characteristic of messages addressed to high intimacy subjects"(p.312). Nevertheless, it seems unlikely for writers to use highly subordinated structures to their high intimacy individuals because highly subordinated structures are features of formality , whereas simple, less subordinated structures are features of informality associated with low intimacy.

Smith(1982) attaches an insignificant role to audience. He maintains that a writer who has the required knowledge of an appropriate register for producing a text indirectly understands the audience. So he is in favour of giving primary concern to what is written and less concern to audience. In academic writing the role of audience is not as important as it is in non-academic writing. Knowledge of content is the determining factor in academic writing and knowledge of appropriate register is the component part of knowledge of content. Similarly, Peterson (1992) explains that teaching conventions helps teachers to change students' perceptions of the arbitrary result of the luck in being assigned to composition teachers " by shifting focus away from the individual teacher and toward the academic discipline"(p.65). In this case, the assumption is that the academic discipline or genre involves the required conventions of the academic community in which the teacher is a member. Thus, a writer who applies the conventions or genres has full knowledge of his/her teacher/professor as his/her audience. Thus, teachers, lecturers and professors need to encourage and guide their students to write using multiple sources.

3.9.1 Motivation and attitudes towards academic writing

Motivation and attitudes play an important role in second language learning. Although research studies have not succeeded in identifying motivational/attitudinal variables, the study of the role of motivation in learning second language is indispensable for academic writing.

Smithers (1973) recognizes academic motivation related to students' efforts to achieve academic objectives, and occupational motivation related to efforts and interests linked with future career opportunities. Smithers found out that these types of motivation influenced the students' achievement at university level. On the basis of his findings, he states "high academic motivation was one of the things which enabled a group of rather dull students to do reasonably well in their university examinations" (p.27). This shows that motivational variables contributed to improving the students' performance. similarly, Elton (1973) considers motivation as a means to achieve 'ultimate educational aims'. He believes that we can motivate a student to study "before he is likely to achieve really worthwhile objectives"(p.75). He suggests that we motivate students through interest in the subject, examination pressure, rewards and interest in the method of work (pp.75-76). However, he could not give adequate account of how these suggestions were implemented.

Gardner and Lambert (1972), Gardner (1985) distinguished two types of motivations : integrative motivation - related to the learner's or student's tendency towards the people and the culture of the target language, and instrumental motivation - related to the use and value connected with the target language. In relation to the relationship between motivation/attitudes and success, they believe that motivation and attitudes determine a student's success in learning a second language. However, unless motivational variables are identified avoiding any overlapping characteristics with other variables of success, they cannot conclude with certainty that motivation and attitudes determine success. Their studies on whether integrative or instrumental motivation has more difference in learning a

second language is appropriate to the setting where they conducted their studies; however, their studies (carried out in Canada) exclude settings or environment where a second language is learned primarily for its use, for example as a medium of instruction in schools and as means of extending job opportunities. So it is pedagogically appropriate to study the role of motivation and how to cultivate and develop it in the minds of our English as second language students.

Nevertheless, many researchers who were interested in the study of the relationship between motivation and success produced inconsistent and conflicting conclusions. For instance, Hermann (1980) conducted empirical research to study 'the motivational vs. resultative hypothesis'(a hypothesis which considers motivation as an effect of success). He conducted it with beginners and with those who studied English for five years. In relation to motivation and resultative hypothesis, he states "They (*the students who studied English for five years*) indicate that by then (*a time when the learner has already gone through several years of instruction in English* - italics inserted) the motivational aspect appears to have been largely replaced by the resultative one"(p.250). His view that the motivational aspect can be replaced by the resultative one is not right because the motivational aspect as a complex phenomenon cannot be substituted by success but motivational aspects may change according to the objectives one envisages. The belief that motivation is replaceable may lead us to a wrong assumption that there are times in which the motivational aspect becomes unnecessary. Similarity, Savignon (1983) on the basis of her findings states "there is some evidence that initial success in L2 learning, at least in classroom settings outside the L2 culture, leads to positive attitudes and further success" (p.112). This conclusion does not indicate how initial success could be achieved and what the role of motivation and attitudes was. The main issue is how to motivate our students to become successful in their studies.

Williams and Alden (1983) distinguishes between extrinsic motivators such " as societal pressures and norms, institutional rewards and immediate gratification of physical/psychological desires" and intrinsic motivators such "as ego, or self-

image, curiosity and hierarchy" (P.101). In their study, they found significant differences between extrinsically motivated and intrinsically motivated students. Their findings show that intrinsically motivated college freshmen expressed their views of considering taking composition course as college requirement, preferring to submit their final draft without revision, not valuing their teachers' comments and not believing that "writing can be taught" (p.101). Nelson (1990) supports this view when he states that students preferred short cuts that skip learning activities in producing their papers. This may depend on what was counted as product through observation of their teachers' past implicit criteria.

Skehan (1989) recognizes four sources of motivation and he has established four hypotheses related to motivation. They are : (1) the Intrinsic hypothesis related to learning activity such as attractive classrooms; (2) the Resultative hypothesis which considers motivation as an effect of success; (3) the Internal Cause hypothesis which suggests that the learner 'brings' 'a certain quantity of motivation as a 'given' to the learning situation; and (4) the Carrot and Stick hypothesis associated with external influences - rewards or punishment. (pp.49-50). In this case we can raise several issues such as how and why do the successful ones do well? How can the individual bring a certain quantity of motivation? If the individual has already some aspect of motivation, how can he state that internal cause hypothesis is a source of motivation?

I would argue against the hypotheses that view motivation as an effect of success because success is the product of complex components as Williams et al. (1983) puts "motivation is inextricably linked to learning and achievement"(p.101). Motivation interacts with other components of success throughout the processes of second language acquisition.

<u>3.10.1 Writing to learn</u>

Learning is defined by Rubin (1981) as " the process by which storage and retrieval of information is achieved"(p. 18). When someone writes he/she thinks of the purpose of writing, how to generate ideas, how to arrange major and minor ideas, how to organize text, how to create and manipulate syntactic structures to match his/her intention and meaning and so on. In this case, he/she acquires and develops knowledge through assimilating, incorporating, integrating, abstracting, and creating. These deliberate efforts help the writer remember what he/she does and it seems helpful to retrieve when the need arises because the writer creates his/he own original output when he/she writes.

Britton et al (1975) referring to why teachers have been interested in writing processes state that writing processes help teachers understand how their students produce written texts and how something comes to be written-not only in terms of product but also process. They also found in their study that writing reflects how students at school learn to develop thinking, how to organize and shape ideas, and how to interpret relationships between writing and a range of audience. Moreover,in his comparative study on 'note-taking, answering study questions and essay writing' Newell (1984) found that writing essays showed significant improvement in the students's learning when they understand the passages as source materials. Similarly, Herrington (1985) notes that his study of the contexts for writing indicates "how writing can be used both to create a community and to learn the intellectual and social conventions of a disciplinary forum"(p.357). Giacobbe (1986) also found in his case study of Pam, that writing served her as a vehicle for learning about writing as well as about specific topics in the subject areas. (p.147).

Langer and Applebee (1987) concluded from their 'series of studies of learning and writing' that writing plays a significant role in learning. They state " Much beyond the English classroom, writing supports more complex thinking and learning about the subjects that students are expected to learn"(p.151). Likewise,

Greene's (1993) findings on 'writing problem-based essays and writing reports' indicate that the two tasks affected the writers differently. Greeene notes that the students used different principles of organizing, different principles of generating contents from sources, and different degrees of application of their prior knowledge in completing the writing assignment . Greene states "this study underscores the important role that extended writing can play in students' acquisition of knowledge"(p.73).

As Williams (1991) referring to his model of the writing process points out, the writing process involves the coordination of the physical process-related to the ways the writer uses, for example, his hands and fingers, the behavioural elements-related to how the writer uses resources, organizes ideas, the cognitive processes-related to thought processes such as selection and retrieval of information, and the social and cultural processes-related to attitudes, motivation, a range of audiences and so on. Writing enables a writer to integrate and coordinate the above elements indispensable in writing process. So it is likely that the writer who acquired skills of integrating and coordinating the above skills possibly learns better about his/her topics on content areas.

The substitution of essay type examinations by multiple-choice examinations in Eritrean schools in the 1970s seems one of the causes for the deterioration of learning in content areas in Eritrean schools as witnessed by the complaints of teachers, students and parents. (When Eritrea was under Ethiopia up to May 1991). In almost all meetings and workshops related to the teaching-learning process, participants used to voice their view to reinstate writing to the teaching-learning process provided class size is reduced to reasonable size that insures the feasibility of correcting students' written exercises and other assignments.

3.11.1 Conclusion

Review on relationships between spoken and written language indicates that development in spoken language can improve writing ability. It is also pointed out that writing even in native language develops by far later than speaking because it is learned consciously; it requires much more practice and effort. The review on reading and writing indicates that reading is essential when students are required to write using sources. Ability to understand sources can foster writing ability for academic purposes. It is pointed out that comprehension for storage of information can help writing using sources because it helps students to interrelate ideas in their mind with ideas from other texts. The review on writing tasks show that different tasks result in different text organization, different amount of generated information and different ways of creating connections. It is also pointed out that teaching grammar as a set of rules does not help students to improve their writing ability but grammar that can establish connections among parts of a sentence as well as parts of the whole text can foster improvement of writing. It is also indicated that teacher correction doesn't improve writing ability but teaching using guidance in organizing ideas, purpose and content could improve writing ability in general.

Chapter 4 : Methodology-Data Collection

4. 1. 0 Definition of Terms

Bottom-up reading is the kind of reading in which the reader tries to construct meanings starting from graphemes to words, phrases, sentences and paragraphs

Top-down reading is the type of reading in which the reader tries to get general content of the topic he or she reads starting from predicting, expecting, guessing, inferring, and anticipating from a topic moving to paragraphs and graphemes in order to construct meaning from a text.

(A diagrammatic representation can be found in Appendix - T page 319)

4. 1. 1 Introduction

Chapter four begins with the review on relationships between quantitative and qualitative approaches to the investigation on teaching writing using sources approach. It discusses the possibility of combining quantitative and qualitative approaches to the investigation on the basis of some authorities on research methodologies. This chapter lays the background for discussion and analysis of the empirical work. It gives the rationale why this methodology is relevant to the investigation. It demonstrates how the methodology was chosen, how and why the subjects were randomly assigned to experimental and control groups, why the pre-test-posttest design was chosen, why the study consists of two phases, how the findings could be generalized, to which population or variables they represent, and how other researchers in similar contexts conducted their research. It also shows how this study is related to the research reviewed and how the distinct nature of this investigation is viewed. It also explains how instructions were given, how interview data were collected , how questionnaires were distributed and collected, how written tests were administered. It includes reports by the subjects on the strategies or ways they followed to complete the writing task using three texts. It also indicates how the data collected could be statistically analysed.

4. 2. 1 Quantitative and Qualitative Research Methods

The study involves quantitative as well as qualitative methods of research. It fulfills the requirement of quantitative research in that it involves experimental research which comprises treatment and no-treatment groups.

Fraenkel and Wallen (1993) recognize written replies to questions or items in a questionnaire and essays written by students as data or information researchers collect for their studies. Researchers collect numerical or quantitative data when the variable they want to study is measured along a scale which indicates how much of the variable a subject possesses. They collect the data in terms of scores. These data exist in some degree in which researchers can assign numbers. According to Fraenkel and Wallen (1993), higher scores indicate that the subject or the respondent has more or less or high or low of that variable, for instance, academic ability, interest in learning a language, age , and height. Researchers also collect categorical data that varies in quality, amount or degree such as occupation , gender and nationality. The data can be reported either as frequencies or as percentage.

In line with this, I will collect written texts from my subjects and written replies to questions or items in questionnaires. Thus, I will use statistics to describe and interpret the information or data that I have collected.

My study also fulfills the requirements of qualitative research such as data collection - written performance, interview transcripts, field notes and it is much more concerned with processes rather than with products. Concerning this in qualitative research Bogdan and Biklen (1992) state " the data collected are in the form of words and pictures rather than numbers " (p.30). They also state "qualitative researchers are concerned with processes rather than simply with outcomes or products. How do people negotiate meaning? What is the natural history of the activity or events under study?" (P.31).

4. 3. 1 Experimental approach

In educational research, an experimental design is defined by Weiersma (1986) as " the structure by which variables are positioned, arranged, or built into the experiment" (p.101). Concerning the main characteristics of experimental research, Cohen and Manion (1994) state "The essential features of experimental research is that investigators deliberately control and manipulate the conditions which determine the events in which they are interested" (p. 164). Similarly, Simon and Burstein (1985) state:

> The crux of the experiment is that the investigator intentionally
> manipulates one or more of the independent variables (x, x ...),
> thus exposing various groups of subjects to the different variables
> (or to different amounts of independent variables (y, y, ...).
> Members of the experimental groups are usually selected randomly,
> which further ensures that observed differences among groups
> really reflect differences in the independent variables (p.126).

In an experimental design, independent variables refer to factors, such as type of instructions, type of materials, teaching or training methods, type of therapy, whose effects are to be investigated whereas dependent variables refer to the behavior or change to be measured. Here, subjects refer to individuals who participate in an experiment and whose behavior is to be measured. In relation to sampling, Cohen and Manion (1994) state " In simple random sampling, each member of the population under study has an equal chance of being selected. The method involves selecting at random from a list of the population (a sampling frame) the required number of subjects for the sample " (p.87). This indicates that random sampling is one of the most essential features of experimental research for representative population.

In my study, I adopted the random assignment of subjects to two groups. Wiersma (1986) and Fraenkel and Wallen (1993) see random assignment, which is an essential aspect of experiments, as an assignment in which every individual who participates in the experiment is having an equal chance of being assigned to the experimental or control group. Fraenkel and Wallen (1993) consider random

assignment as a process which has to take place before the commencement of the experiment. They also state " the use of random assignment allows the researcher to form groups that, right at the beginning of the study, are equivalent-that is, they differ only by chance in any variables of interest" (pp.243-244). They also point out that " the threats of subject characteristics, maturation, and statistical regression" (p.248) can be controlled through this process. Random assignment involves randomized pretest-posttest control group design in which measurements, tests, or observations are collected at the same time for both groups. Wiersma (1986) gives an example of a psychologist who has 90 students in a sophomore-level psychology course and wants to conduct a learning experiment using three different types of materials. He states "All 90 students will participate, and 30 will be randomly assigned to each of the types of materials" (p.264). This indicates how one can conduct experimental research even with limited subjects who may not be drawn from a population.

In relation to generalizability of the results to larger populations, he points out that representativeness is argued on a logical basis and adds that generalizability is always a matter of degree. He states "random assignment is commonly used in this way in educational research. Knowledge about the variables and individuals of the study is then used to make valid generalizations" (p.265).

The experimental and control groups take one test before the treatment and a second test at the end of the experiment. In relation to this, Weirsma (1986) states, " The subjects are randomly assigned to the two or more groups and tested just prior to the experiment on a supposedly relevant antecedent variables, possibly a second form of the test that measures the dependent variable" (p.110). In my study, the aim of the pretest is to check whether the subjects in both groups are similar or not at the initial stage. Similarly, Mitchell and Jolley (1988) distinguish between experimental group in which the subjects are randomly assigned to treatment and the control group in which the subjects are randomly assigned to no treatment; they are compared with the subjects in the experimental group.

Vauras (1991) conducted an experiment with 19 high achieving, 19 average achieving and 19 low achieving third graders. After learning specific learning strategies, the subjects were asked to write a composition on the theme corresponding to the title of the text they read then. He found out that there were gradual increase in text processing skills with age and development in the use of more efficient learning strategies.

4.4.1 The case study approach

Hammersley (1992) considers the case study as a research method that combines features of experiment and survey strategies. He states the case study " involves the investigation of a *relatively small* number of *naturally occurring* (rather than researcher-created) cases"(p.185). Yin (1989) defines a case study as follows:

> A case study is an empirical inquiry that : investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used(p.23).

The idea of 'a contemporary phenomenon' seems to exclude historical case studies. This definition does not stress the depth of case study. Later Yin (1993) defines case study as "An empirical inquiry in which the number of variables exceeds the number of data points"(p.32). This definition considers numbers of variables and data points only. So, a comprehensive definition of a case study would be a definition that combines features of both definitions and deleting the term 'contemporary'. Likewise, Cohen and Manion (1994) state "the case study researcher typically observes the characteristics of an individual unit - a child, a clique, a class, a school or a community"(p.106). In this case, Yin considers the distinctive features of case study by focusing attention at the numerous variables whereas Cohen and Manion did not specify the depth and intensity of detail required in case studies.

Yin (1993) considers three basic types of case studies. The three types seem to

be identified in terms of their functions. They are: (1). Descriptive -single case study/multiple case studies (2). Exploratory - single case study/multiple case studies and (3). Explanatory - single case study/multiple case studies. Yin further recognizes two kinds of explanatory case studies. (1). Causal case studies that involve factor theories which identify some list of independent variables and find their degree of correlation and enables the researcher to infer that the most highly correlated independent variables with the dependent variables are causally related. (2).Causal case studies that involve explanatory theories in which a researcher assesses and confirms certain outcomes and then moves further to examine the explanations for the assessed and confirmed outcomes (pp.15-16).

When Hammersley (1992) compares case studies and surveys, he states " I suggest, the choice of case study involves buying greater detail and likely accuracy of information about particular cases at the cost of being less able to make effective generalizations to a larger population of cases"(p.186). This statement reflects the strength of case study data and the problem of the notion of generalization in case studies.

Considering the advantage of experiments, Hammersley states "by creating cases we need we can vary the theoretical and extraneous variables "(p.192) in order to maximize convincing conclusions. Regarding their disadvantage, he states " the exercise of control by the researcher may render the research situation artificial in that it cannot give us information about the naturally occurring situation in which we are interested" (p.192). He considers data obtained from case studies as "less likely affected by reactivity and more likely to be ecologically valid (p.192) and he also considers the difficulty of drawing "convincing conclusions about the existence of causal relationships"(p.192) as a disadvantage of case studies.

Yin (1993) gives us a clear description of when and why we can use a case study approach. He states:

> ...the context is extremely relevant in many educational situations.

> However, as soon as this is acknowledged, a major problem arises
> : The contextual variables are so numerous and rich that no
> experimental design can be applied. (In fact, experimental designs
> typically "control out" context and focus only on phenomenon;
> experiments, therefore work best when you are focusing only on a
> specific variable or two in isolation from the broad environment or
> context.) Further, the contextual variables may be so qualitatively
> different that no single survey of data collection approach can be
> used to collect the information about these variables (pp.31-32).

Thus, the case study as a distinctive research method enables researchers to accommodate a large number of contextualized variables in their studies.

Yin (1989) considers the possibility of making generalizations " to theoretical propositions and not to population or universes" (p.21). He states "the case study, like the experiment, does not represent a "sample," and the investigator's goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies(statistical generalization)"(p.21). Becker (1990) reflects a similar view when he states "You can develop generalizations by seeing how each case, potentially represents different values of some generic variables or processes" (pp.239-240). In this case, individuals who exhibit or possess the features of the variable/s under investigation are expected to become representatives for generalizing from the case study.

Hammersley (1992) considers generalization to finite population and generalization to infinite category. He states "the crucial difference is between generalizing to a finite population" and generalizing to "category that subsumes an infinite number of actual and potential instances" (p.90). Moreover, he states that empirical generalization studied in a particular setting does not have to be typical. He writes "relevance may be derived from its atypicality or particular setting (p.86). Researchers may be able to generalize from some unique categories according to the nature, purpose and intention of the investigators. They are expected to examine the relevance of the features of the categories to other people or things in the study in similar contexts.

In selecting subjects for case studies, I used purposive sampling. According to Fraenkel and Wallen (1993), purposive sampling enables the researcher to use his or her judgement to select a sample which provides him or her with the required information. They also give an example of how a teacher chose two students with the highest, two students with average and two students with the lowest grade point averages in the class.

In relation to the uses of case studies in SLA research, Johnson (1992) states:

> They can inform us about the processes and strategies that individual L2 learners use to communicate and learn, how their own personalities, attitudes and goals interact with the learning environment, and about the precise nature of linguistic growth (p.76.)

The case study may be used either alone or as one part of a larger study. Case studies are commonly used to examine the demands of the four language skills: listening, speaking, reading and writing tasks in content areas. They are also commonly used to investigate how ESL students cope with their academic tasks. For example, Zamel (1983) conducted six case studies to investigate the composing processes of advanced ESL students. She found out that the errors were caused as an incomplete control of the language they were learning. Moreover, she found out that the strategies the case studies followed in composing process reflected shared understanding of how to make meaning, and how to arrange and express meaning.

Similarly, McCarthy (1987) investigated the writing experiences of Dave, his case study. He investigated how Dave wrote for composition, Introduction to Poetry, and Cell Biology. McCarthy's findings indicate that Dave did not define his own audience, purpose, and format and he did not write to a wide range of audiences. McCarthy also points out that writing development partly depends on context.

4. 5. 1 An Interview

An interview is an approach usually of qualitative data collection in which investigators or researchers systematically collect data by asking oral questions to selected individuals. Fraenkel and Wallen (1993) consider interviewing as asking relevant questions to selected individuals. Yin (1989) considers interviews as "one of the most important sources of case study information" (p. 88). As to the purpose of interviewing Patton (1990) states:

> We interview people to find out from them those things we cannot directly observe.... We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time.... We cannot observe how people have organized the world and the meanings they attach to what goes in the world.... The purpose of interviewing, then, is to allow us to enter into the other person's perspective" (p. 278).

Fontana and Frey (1994) points out that data for academic analysis can be produced through interviewing. They recognize structured interviewing which consists of predetermined likely responses to questions and unstructured interviewing which allow the respondent to write down his or her ideas to an item the way they understand it.

Regarding the contents of an interview, Patton (1990) recognizes six types of questions. They are : 1. experience or behaviour questions that describe activities, behaviors and experience; 2. Opinion or value questions, according to Patton, are " aimed to understanding the cognitive and interpretive processes of people" (p. 291); 3. Feeling questions which attempt to understand respondents' emotional reactions to their thoughts and experience; 4. Knowledge questions refer to those questions that are asked to gather factual information of what the respondents know about the issue; 5. Sensory questions that are aimed at describing data observed or obtained through any of the five senses; and 6. background/ demographic knowledge that are concerned with identify of respondents such as age, education, and occupation (pp.290-291).

So, in my study, the interviewing involves primarily questions of knowledge or factual information about academic writing, questions of experience or behavior to find how they produce new texts from sources and questions of opinion or values to find out their perception of, attitudes toward, and value to academic writing.

4. 6. 1 The Questionnaire

The questionnaire is one of the most commonly used research tools in the social sciences (including linguistics). Apparent simplicity and low cost are some of the advantages of the questionnaire. Questionnaires can be prepared by the investigator a. With open-ended formats which enable respondents to write down their responses to a question, or an item, as they understand, and b. Closed-ended formats, in which the respondents choose responses to items prepared by the investigator or researcher. A questionnaire can either be sent by mail to respondents or be distributed and collected by the research or by his or her assistants. Regarding the questionnaire which is sent or distributed to respondents to be completed at their convenience to be collected later (known as self-administered questionnaire), Oppenheim (1992) states " The purpose of the inquiry is explained, and then the respondent is left alone to complete the questionnaire" (p. 103). He sees that this method of data collection ensures accurate sampling. As to the uses of the questionnaire, Hammond (1995) states " A large number of well used self-report questionnaires exist and most of them are designed to measure personality traits or attitudes" (p. 197).

In my study, I used closed-ended questions and two open-ended questions in each of the questionnaires prepared for lecturers and students.

Seventy (fifty-nine males and eleven females)second year undergraduates in their second semester and forty-two second year undergraduates in their first semester of the academic years 1995/96 and 1996/97 respectively served as subjects for this study. They had completed eleven/twelve years of school education. The

seventy-four students were the only second year students who were taking Sophomore English En 202 and the forty-two students were among 540 students who were taking Sophomore English En 201. All the subjects are students at the University of Asmara, Asmara, Eritrea.

4. 7. 1 Procedures for randomly assigning subjects to two groups

In assigning the subjects in my study, I adopted the randomized pretest-posttest control group design which involves experimental and control groups, because firstly, the study demands that all the subjects in the experimental group to be free at the same time. Secondly, the instructional materials and reading and writing tasks may be highly relevant and interesting to some and less relevant and uninteresting to others when subjects are drawn from about fifteen departments. Thirdly, it is extremely difficult if not impossible to find the required students who are willing to serve in the experimental or in the control group for non-credit course for a semester (usually sixteen weeks). Fourthly, I want to include subjects from the departments of Social sciences such as Anthropology and Sociology, English and Law as well as from the department of natural sciences such as Plant Science and Soil and water Conservation in my study in order to understand the nature of academic writing in both sciences.

Students from the Departments of Language Studies (thirty-four), Anthropology and Sociology (twenty-five) and Law (fifteen) served in the study as experimental and control groups. These were the only groups of students who were required to take Sophomore English En 202. At first, they were assigned in three sections; however, it was realized that the students can be regrouped into two, assigning students into experimental group and control group randomly.

The names of the students in each department were written on a piece of paper individually. Then I invited two of my colleagues to help me fold papers and draw a lottery for each student. The names of all the students were written and folded.

Then one colleague drew names from the Departments of Anthropology and Sociology alternatingly for experimental and control groups.

The same procedure was followed in assigning students from the other two departments. I marked against the names of the students either experimental or control.

Thus, the students in each department were equally divided into two. Finally there were 38 students in each group. Later some students joined the departments while some left them. Some students were omitted from the study. So I collected data or information from 70 students (35 from each group).

4. 7. 2 Test on prior knowledge of subject matter, pretest and questions on processes and strategies they followed

First, I selected three texts/passages from three different books which are relevant to the students' courses. Then I prepared a test on prior knowledge of subject-matter by selecting key words and/or phrases from the pre-test for writing using sources or other texts. I also prepared some questions which can elicit how the students completed the writing task.

First, on 1 March 1996, I invited one of my colleagues to help me in distributing papers and invigilating students when they were doing the test on prior knowledge. We distributed the test on prior knowledge of subject-matter and we instructed them to complete the test in about fifteen minutes. When they had completed the test, we collected the answer sheets immediately. Then we distributed the pre-test on writing and the question paper on how they would complete the writing task. We also distributed a plain paper, two sheets of lined paper for a rough draft, the final copy, and answer sheet to the questions on the strategies they followed to complete the pre-test. The students were requested to return the pre-test on writing and the answer sheets on the fourth day, that is, the next contact hour. On that day I could collect from 30 students in the experimental group and 19 students in the control group. The remaining papers were collected on the next contact hour.

4. 7. 3 Instruction - Phase I
Experimental group

Teaching Sophomore English En 202 through TWUMSA began by introducing the students to the ultimate goal, general content and the means to achieve the goal. The General purpose of the course was explained to the students that it was to improve their writing ability so as to prepare them for academic writing.

In designing the course contents, the subjects' knowledge, abilities, needs and motivation were considered. Information related to their actual studies was collected from their respective departments on the assumption that the subjects would be motivated if the course contents are related to their needs. The lecturer also tried as much as possible to make the subjects understand the relevance of what he was teaching to their other courses. So, the course contents were integrated into most of their subject areas. There were no previously used materials that reflect the approach. Consequently, new materials - three texts on the same topic- were selected, typed, duplicated and distributed to the subjects every time they finished the writing task on a given topic throughout the semester. Lack of previously used instructional materials allowed flexibility and responsiveness to the new texts. Instruction emphasized teaching operations or activities such as how to understand and organize texts, how to select, generate and connect ideas, how to paraphrase words, phrases, sentences and paragraphs, how to integrate citations and document sources and how to summarize. Various types of discourses, bottom-up and top-down reading were also studied or treated. Tests and writing tasks include topics such as:

post-secondary or higher education,
anthropology,
argumentation,
forgery,
themes through character,
on whether poverty causes crime or not,
organizational plan,
institutions,
roles and status,
methods of textbook note-taking (from a single source),
post-test on a topic concerned with role of higher education in national development and final exam related to culture and language.

In addition to this, the mid-semester and final exams included two reading

passages on "Social Class" and on " Bringing up children" (respectively).

TWUMSA was employed to achieve the goal of preparing the subjects for academic writing: the types of academic writing required at tertiary levels such as *interpreting or understanding, analysing, synthesizing, and creating information as well as constructing meaning from source texts.* During the first two weeks (six contact hours), the main features and activities involved in the components of TWUMSA (See 2.4.1) were discussed one by one and the subjects were advised to take notes for future reference - during the meaning construction sessions. Global overview of the five levels of conversion of input to output (Gass 1988; Gass and Selinker 1994) was given. A holistic approach to the teaching of the components of TWUMSA was adopted because all the components could be demonstrated in a single text using multiple sources. In order to simplify instruction, emphasis was given to a particular operation or activity such as understanding the texts for two or three sessions and then moved to the next operations or factors. The operations seem to have 'horizontal relationships', which do not require the mastery of one operation before moving to the next operation, rather than a 'hierarchical relationships', which may require the mastery of one operation before moving to another operation. The method focused on the processes of composing an essay and it inspired the subjects to engage in discussion of how to produce essays relevant to their field of specialization. At the beginning of a lesson for composing an essay, three texts on the same topic were distributed to each subject. The subjects were instructed to read the texts individually for ten - fifteen minutes. Then they usually formed groups of four or five and discussed on how to compose new text in reference to the components of TWUMSA. The subjects jotted down main ideas for their essays. Sometimes, the subjects were carried away by the discussion and they continued discussion when the session ended. Sometimes, before the end of the session, the subjects were instructed to start composing their essays which were usually completed at home. Composing the essay given on the previous session might be extended to the second session. When the subjects completed their essays, the lecturer collected then corrected them and he returned them with

some comments. Comments common to most of the subjects were discussed in class, whereas comments to individuals were discussed individually either in class or in tutorial sessions in the lecturer's office. The subjects were asked to rewrite the essays on the basis of the feedback given by the lecturer. Sometimes each group composed and presented a common essay and each subject was expected to compose his or her individual essay incorporating the feedback from peers and later submitted for correction. The writing tasks engaged the subjects in ranking ideas according to their importance , comparing and evaluating ideas, looking for connections among ideas, and formulating their individual interpretations. The writing tasks also served an opportunity to provide feedback on structural elements such as agreement, tense, vocabulary and cohesive devices.

Control Group

The students in the control group were learning writing in English according to the syllabus which seems to be based primarily on the current-traditional approach to writing (See 1.1.5). Main aims of the course(En 202) state:

> Following on from the En 201 course, the aims are to develop productive skills such as writing and speaking, with special reference to the preparation, writing and oral presentation of reports. We shall also continue work with reading comprehension, working from texts and note-taking.

Course components are:

Unit 1: Revising and proof-reading written work
Looking for text organization (macro-revision)
Proof-reading(looking for mistakes of spelling, punctuation and grammar).

Unit 2: Composing a report: The basic components of a report in the students' own specialist area (e.g. a lab report, and an evaluation of an article or book)

Unit 3: Practising how to take notes while listening to lectures. The structure of the lectures and ways of reporting experimental studies and other empirical investigations.

Unit 4: Seminar skills : oral presentation and taking part in discussions.

Unit 5: Carrying out a survey, gathering data and presenting the results orally and

in written form.

In addition to this, some suggestions for topics are given.

1.The speed of traffic in Asmara.   2. Vehicle pollution in Asmara
3. The diet of citizens of Asmara   4. Students' leisure
5. Gender bias at the University   5. Topics related to your specialist area

In this case, the subjects' needs and motivation have not been fully considered. The aims of the course seem too general. They may satisfy the needs of some students from some departments and almost ignore the needs of others, for example, biology, engineering, management students.

The handouts are not appropriate even for the minority of the students. And above all, the handouts do not require students to demonstrate knowledge of the handouts' content. So, writing without responsibility for the text content does not seem to correspond to writing for other academic courses. Writing tasks of this type may not engage students in composing texts in the way in which their respective departments require them to do. If students are not to benefit from what they study, the course needs to consider the students' needs and motivations and the connection of the course to other academic courses.

We can also understand from "some suggestions for topic" that they do not have a direct bearing on their field of specialization.

In addition to this, the processes of reading/writing such as text marking, note-taking, organizing, planning, writing, revising, and feedback seem to be ignored

4. 7. 4 Final Tests

Finally, the procedures that were followed in conducting the test on prior knowledge of subject-matter, pre-test and answers to the questions on the strategies the students followed to complete the writing task were repeated in the post-test including the test on prior knowledge and strategies.

Concerning the students in this study, two students from the experimental group

and one student from the control group (Dept. of Anthropology and Sociology) left school. Moreover, two students : one from the Dept. of Language Studies and one from Dept. of Anthropology and Sociology were reluctant to return the post-test and they were excluded from the study. Thus, seventy students : thirty-five from each group fulfilled the requirements of the study. A certain amount of money was given to the students who served in the study as an incentive.

4. 8. 1 Procedures for randomly assigning subjects to two groups-II

During the summer vacation, I requested the Programme Office of the registrar of the University of Asmara, Eritrea to prepare the same time table for Plant Science (twenty-two) and Soil and Water Conservation (twenty-two) students for Sophomore English En 201 class in order to combine the two sections and then randomly assign them into experimental and control groups equally. When I assured that the two sections were having Sophomore English En 201 simultaneously, I requested the Head of the Department of Language Studies to assign me to teach the two sections together and my request was accepted. Then I began to give lectures to the students on 13 September 1996. After I had given them lectures for two hours (in two separate contact hours), I explained the objectives and importance of my study and the instructions I planned to give to the experimental group. The students expressed their consent to my proposal. Soon after this, I told the students that I would like to divide the section into two: Experimental group and control group. I also added that the students in the experimental group would receive instructions on some strategies on writing using multiple sources outside the regular contact hours. This might be for two hour a week at their convenience. The students agreed to be assigned to any group randomly.

On 16 September 1996, I went to the class with list of I. D. numbers on pieces of paper. First, I read the I. D. numbers and assured that everybody's I. D. number was included. I cut the paper and two students folded the pieces and another student drew the pieces randomly and read the numbers one by one. I marked

either experimental or control against their names alternatingly. It was began with the I. D. number for experimental group from Plant Science students and when all the students from Plant Science were randomly assigned, I followed the same procedure for Soil and Water Conservation students. The students were pleased with the random assignment. Two students even requested me to allow them to join the experimental group.

4. 8. 2 Test on prior knowledge of subject-matter, pretest, questions on processes and strategies they followed

On 18 September 1996, I administered the test on prior knowledge of subject-matter and after collecting the test within twenty minutes, I distributed the pre-test and I also clarified the instructions on how to complete the writing task and the questions on the strategies they would employ to complete the writing task. On 20 September 1996, I collected forty-four (all) answer papers on writing and the strategies they followed. Then we fixed contact hours with the experimental group. First we agreed to have classes on Saturday afternoons. However, in early October, the Department of Health Science was opened for the first time. Consequently, two students who were serving in the experimental group and six students who were serving in the control group joined the new department and the two students who insisted that I allow them to join the experimental group were permitted to join the experimental group. Then I kindly requested the eight students who moved to the Dept. of Health Science to serve as control group and to take some tests and post-test. The students accepted my request and they served as control group along with the remaining students. Thus, forty-two students : twenty-one in each group continued till the end of the field work in phase II.

4. 8. 3 Instruction : Phase II
Experimental group

The students in the experimental group received instructions on writing using multiple sources (see 4.7.3 experimental and 2.4.1). Instructions focused on some strategies such as understanding or interpreting sources, organizing new texts, selecting, generating and connecting ideas and, paraphrasing, and integrating citations and documenting sources. Various types of discourses, bottom-up and top-down reading were also studied or were treated. Tests, writing tasks and group discussions on topics by three writers included process of development and change, terracing, argumentative writing, organizational plan, summarizing knowledge acquisition through reading, on whether poverty causes crime, birth control methods, seed germination, water pollution, plant genetic engineering, and a posttest on earthworms.

In addition to this, the students took one reading test on "Bringing up children". Instructions were followed by writing tasks using multiple sources taken from the books on the courses the students were studying. This was done in order to show the relevance of the instruction to their courses and to increase the interest of the students toward the instructions.

Control group

The students in the control group learned writing in English according to the syllabus which is more or less similar to the current-traditional approach to writing in that it focuses on form rather than on content (See 4.7.3 control and 1.1.5).

In this case, although it is stated in the aims that the topics will be relevant to all the groups, it is not possible to prepare one kind of handout to fulfill the expectations of students from eighteen departments. Topics on ecology, sociology, and education may not meet the needs of most students. In addition to this, the handouts do not require students to demonstrate knowledge of the handouts' contents. So, writing without responsibility for text content does not seem to correspond to writing for other academic courses.

The desire to use specialist texts, and the problems connected with the application of specialist texts were also raised. However, if students are to benefit from what they study, the course needs to consider the students' needs and motivations and the connection of the course to other academic courses.

Here, the importance of various activities such as text marking, note-taking, organizing, planning, writing, revising, and feedback need to be considered.

4. 8. 4 Final Tests

Finally, the procedures that were followed in conducting the test on prior knowledge of subject-matter, pre-test and answers to the questions on the strategies the students followed to complete the writing task were repeated in the post-test including the test on prior knowledge and strategies.

4. 9. 1 Case Studies - Selection Procedures and Interviews - I

In my study, when the students from the Department of Anthropology and Sociology, Language Studies, and Law were combined and divided into two sections/groups - experimental and control, I checked the scores in English common courses of the students in the experimental group. After checking the scores I identified three top scores (with 36, 36, and 33 credits) and three least scorers (with 18, and 18 and 15 credits) in three English common courses three credit hours each : Freshman English En 101 and En 102 , and Sophomore English En 201. The purposive selection was two (top and least) scorers from each of the three departments. I wanted to keep one student as reserve from the least scorers in case one of them withdrew. So I selected one more student (with 18 credits) from the department of Law. I selected the highest and the least scorers because I believe that I can collect relevant pieces of information on academic writing from these students. Next, I requested the seven students to come to my office to explain the purpose, objectives, importance and the advantages they could obtain by participating in the case study. Six students expressed their pleasure to participate as case studies and they also gave me permission to record

their interviews. However, the top scorer from the Department of Language Studies attempted to justify her exclusion from serving as a case study. Finally, she expressed her consent reluctantly but when the interview began, she produced so low voice that I could not record anything. Then I checked for the next best with 33 credits. When I requested her to act as a case study, she accepted my request with pleasure.

I prepared interview guide i.e questions for unstructured interview. Unstructured questions for interview are questions that allow respondents to answer items the way they understand them. As long as the responses are relevant to the issue, respondents can express their thoughts, attitudes or give facts about the issue freely. First, I gave the questions to the interviewee to read in order to assure him/her that the questions are related to academic matters. The first interviewee served as a pilot interview, too because the student gave me feedback to make necessary adjustments with the tape recorder, questions for interview, seating arrangement, note-taking, how to speak in front of the microphone and how to control volume and tone.

I prepared a time-table and I requested the students concerned to write down their names for interview at their convenience. The first interviewee read the questions and I collected the sheet of paper that contained the questions. At the beginning there was a mistake in operation ; however, I corrected the fault and everything went smoothly. Interviewing took about twenty minutes for each interviewee. I was taking notes during the interview. Then I immediately transcribed the first interview of the seven interviewees.

The aims of the interview are 1. to find out whether these students were familiar with academic writing ; 2. to discover if they had assignments on writing using sources; 3. to find out the importance they attach to it; 4. to understand its contribution to academic success; 5. its relationship to reading, 6. their strengths and weaknesses in writing, 7. the difficulties they face; 7. the strategies they follow, 8. contribution to improving writing ability in general, 9. the strategies followed by the top scorers and the least scorers; 10. to understand their

perception of the functions of writing using sources; 11. to gather suggestions from the case study students; and 12. to compare the perception of the case studies at the beginning and at the end of the course on writing using variety of sources. The students were also interviewed on almost identical questions at the end of the experimental study after they had taken the post-test.

4. 10. 1 Selection Procedures and Interviews (Phase II)

Students from the Department of Plant Science (22) and Department of Water and Soil Conservation (22) formed one section for Sophomore English En 201. The programming office at the University combined the two sections according to my request. First, I wrote the I. D. numbers of the students from the two departments. When I went to the class, I invited some of the students to help me in folding the I.D. numbers and to draw the lottery for each student. At first two students folded the I.D. numbers of the students in the Department of Plant Science and then I wrote either experimental or control against their names alternately. The same procedure was followed in selecting the students from the Department of Soil and Water Conservation. Eleven students from each department were randomly assigned to the experimental group. When the experimental group was formed, I checked the students' scores for Freshman English En 101 and 102. I identified two of the highest scorers and two of the least scorers - one top and one least scorers - from each department because I believed that I can get relevant pieces of information on writing using sources from these students. Twenty-one credits out of twenty-four credits and nine out of twenty-four were the highest and the least credits respectively.

At the beginning I invited the four students to my office. I explained the purpose, objectives, and importance of my research on academic writing. They accepted my request to serve as case study with pleasure. They also agreed that I could record their interviews. Then we set a time-table for interview. I repeated nearly all the questions I asked during the first phase of the case study. I requested each

interviewee to read the interview guide i.e. questions prepared for unstructured interview. When the first interviewee completed reading the questions, he returned the question paper. The interview took about twenty-five minutes. The second interviewee took about eighteen minutes. On the average the interview took about twenty minutes. Compared to the students in the first phase, the some of the students were slower in responding to the questions.

4. 11. 1 Questionnaires to Students and Lecturers

One kind of questionnaire was prepared and distributed to almost all (331) students who were taking Sophomore English En 201 at that academic year. These students completed and returned them soon, that is, by the end of December 1994. However most of the questions in the questionnaire were revised and substituted after I had received the necessary feedback from my supervisor and my research training tutors. The revised and piloted questionnaire was distributed to all the students (seventy-four) who were taking Sophomore English En 202 (continuation of En 201) during the first phase of the study - from February to June 1996. The questionnaire was completed and returned at the end of the semester in June.

136 copies of the same questionnaire were distributed to second year students at the interval of six on the attendance lists of eighteen sections randomly. 127 completed copies were returned during the third week of December 1996. I also prepared a questionnaire to some lecturers who were teaching at sophomore-level. Thirty-eight copies were completed and returned in January 1997.

4. 12. 1 Statistics for Analysis

I have adopted quantitative and qualitative approaches to analyse my data. I used the SPSS Programme to compare means of different samples t-test, to do linear regression, to find Pearson-Moment correlation coefficients and Spearman's correlation coefficients.

4.13.1 Conclusion

On the basis of the reviewed literature on methodologies, it was found that quantitative as well as qualitative approaches can be used together in the study. The review also indicates that students' written essays can be analysed using quantitative and qualitative approaches. It shows that purposive sampling can be used depending on the nature of the investigation and the intention of the researcher. It describes how subjects can randomly be assigned to groups and the possibilities of generalizing to variables under certain conditions. In phase one two groups of thirty-five each were formed whereas in phase two, two groups of twenty-one each were formed. The subjects in the experimental groups received instructions designed to teaching writing using sources approach whereas the subjects in the control groups received instructions in accordance with the syllabuses which are dominated by the current-traditional approach to writing. All the subjects took pre-test and posttest on writing using three source texts and tests on prior knowledge of subject-matter. The subjects (students) also answered some question on how they completed the writing task and they filled in questionnaires designed for them. Questionnaires were distributed to and collected from lecturers and students who teach and study sophomore English (respectively) at the University of Asmara. Interview data were also collected from case studies in the experiments groups. The interview data were collected at the beginning and at the end of instructions for each group.

CHAPTER 5 : Analysis and findings of students' essays

5.1.1 Introduction

Chapter five consists of two sections. The first section discusses the materials used for pretests and post tests, how the subjects' essays were rated, and the scoring rubrics developed for this study. It presents the statistical method of comparison of means of independent samples t-test to examine whether TWUMSA or the current traditional approach to teaching writing is more effective. It also considers several inter correlation coefficients among the components of TWUMSA.

The second section begins with some discussion on the origin of information in summary protocols. It discusses some procedures developed for the analysis of summary protocols which led to the adaptation of one procedure for this study. It also analyses and discusses the subjects' essays in reference to the components of TWUMSA. Discussion focuses on the types of content units (CUs) such as exact copy CUs which consist of Cus from the source text (almost) word for word usually without acknowledgement; paraphrased CUs which consists of CUs that are traceable to both discrete syntactic and semantic elements and the writers' own ideas, and generated CUs which involve CUs from the writers' existing knowledge and Cus that are usually less traceable to the source texts. The types of links made by the subjects such as:

> sequential in which the writers began composing using information from one text, then moved to the next and then moved to their last text and
>
> non-sequential in which the writers, for example started with the first source, moved to the third, then to the first or second or third without any specific arrangement are discussed.

It also explains how five kinds of writers namely,

the 'compilers',
the 'harmonizers',
the 'constructivists',
the 'dualists' and the
'paraphrasers' are categoried on the basis of the content units their essays demonstrated.

5.1.2 Material

Seventy subjects (students) in phase I were given the following writing task. Read the following texts/passages carefully. Then compose one new text/passage from the three texts/passages. The texts that you are going to produce should reflect the main and supporting points or ideas in the three texts. Please use your own words and do not quote too much. The three texts are concerned with linkage of universities with their environment. They were written in the Indian context during reconstruction of the country which reflects similar expectations and situations in the struggle for the reconstruction of Eritrea after thirty years war with Ethiopia. The students at the University of Asmara are expected to know the expectations of their university and the State of Eritrea and this was the main reason for choosing the topic - relevance to Eritrean situation.

The three texts were taken from the same title *Three Aspects of University Education* (1980). The first text is entitled "Linkage with environment :Role of higher education in the process of development and change by Apparaw, the second "linkage with environment by Joshi and the third "linkage with environment by Sudarsnam. They consist of 359 , 418 and 461 words for the first, second and third texts respectively(See Appendix E). They also contain 13, 12 and 12 sentences for the first, second and third texts respectively. In addition to this the content units included are 26, 22 and 23 for the texts by Apparaw, Joshi and Sudarsnam respectively. The purpose of the study and the use of their written essays and other relevant pieces of information were explained to the subjects during the orientation for taking the pre-test. The subjects were told that they would take pretest and post test.

5.2.1 Analysis and findings of subjects' essays

In order to investigate whether teaching writing using sources approach would lead to improved academic writing, the essays written by the subjects were rated by two raters. First each subject's essays (pretest and post test) were collected.

The essays of the control and experimental groups were mixed. One photocopy and the original essay (for reference) were given to each rater. The two raters were requested not to write any thing on the original because it would be needed by the second rater as reference and by the researcher for data analysis. The students were unfamiliar to the raters so there was no need to cover the I.D. numbers of the subjects. In addition to this only I knew the pre-tests and the post test essays.

In line with the guidelines for rating essays recommended in *English as a Foreign Language General Handbook* (1987), the raters received the necessary training for rating or scoring the essays. Moreover, the raters fulfilled almost all the requirements for rating the essays which recommend that raters are to be ESL teachers, experienced teachers of composition, similar in background, familiar with the standard of the university and unacquainted to any of the groups.

Some major factors that influence or affect rating writing task such as reader's different standard of severity, readers' reaction to some elements in the essay, readers' value judgement, value assigned to different aspects of the writing task, how and why writing using sources differs from writing composition, why a unique set of criteria for assessment has been established for writing using, why rating was based on analytic scoring rather than impressionistic scoring - though it includes both- were explained to the raters. In addition to this, one type of rating form that contains the criteria and their different values was prepared and was attached to each photocopy of the essay. Each student received four scores on four identical forms i.e. two on the pre-test and two on the post test.

In order to monitor raters' reliability i.e. the agreement of rating between or among raters, the "routine double marking" recommended by Alderson, Clapham and Wall (1995) was adopted. Referring to routine double marking, they state " every piece of writing is marked by two different examiners, each working independently. The mark that the candidate receives for a piece of writing is the mean of the marks given by the two examiners" (p.132). They also explain why

differences between raters exist. They state " especially in language testing, that differences of opinion between examiners about the quality of a candidate's performance may be quite legitimate" (P.135).

Rating essays written on the basis of writing using sources has unique features because the raters are expected to evaluate specific given variables in line with analytical scoring. Understanding or interpreting texts, organizing texts, selecting, generating and connecting ideas, paraphrasing words, phrases, sentences and paragraphs and integrating citations and documenting sources are the independent variables required to find out how they affect the final score i.e. the dependent variable.

5.2.2 Scoring Rubrics

The scoring rubric for scoring or rating the essays has been developed as shown in this section. Scoring rubric is a sort of scoring plan which consists of the variables to be evaluated, their descriptions and the value for each feature along the continuum. Referring to scoring rubric, Oosterhof (1996) states " When developing a scoring rubric, it is important to first list the variables that are established for each point along the continuum. ... the description of all variables should match what is typically seen in students' performance at a particular level" (p.161). In this case, raters evaluate each student essay whether it includes the features expected to be included in the description. Concerning the problem of generalization and consistency, Oosterhof (1996) states "When scoring rubrics are used in critical situation, consistency in scoring can be improved by averaging the scores assigned by two raters " (p.161). This justification of averaging scores to improve consistency in scoring seems to go in line with the belief that knowledge from the texts interact with knowledge of the reader (in this case the rater), his prior knowledge and expectation i.e. the knowledge the reader brings to the texts. If we believe in diversity of interpretation of texts, the inconsistencies observed between or among raters seem reasonable to accept. A subject can receive a

maximum of 9 and a minimum of 3 points on each of the seven variables.(See Appendix N).

Although I feel that TWUMSA should not stick to instruments that measure learning outcomes designed for other programmes, the two scores for each subject were averaged to improve reliability. Inter rater reliability (agreement between raters) is measured by a correlation coefficient. The (Spearman's) correlation coefficient between rater 'one' and rater 'two' is positive and mild r = 0.34 and r= 0.57 for the post tests in phase I and II respectively. So, this may indicate that the rating is reliable. In connection to problems in testing learning outcomes in communicative language learning, Celce-Murcia, Dornyei and Thurrell (1997) say " Any language teaching approach must be accompanied by language tests that adequately measure the learning outcomes promoted by the particular program" (p.211). I share this view because TWUMSA involves construction of meaning with divergent interpretation of source texts and the measuring instrument need to accommodate this divergent construction of meanings.

In addition to analytical scoring, an impressionistic scoring in which raters used an implicit quality or features as references to guide their evaluation was used. The mean of the two scorers for each student was taken as the subject's score. In phase I (n=70), the relationships between impressionistic scoring and analytic scoring are very high r = 0.92 and r = 0.95 for pretest and post test respectively. In phase II (n=42), the relationships between impressionistic scoring and analytic scoring are also very high r = 0.91 and r = 0.97 for pretest and post test respectively. This very high correlations indicate very high consistency between the (same) raters' analytical and impressionistic scoring.

Scoring Rubrics or Criteria for Assessing Writing Using Sources (Analytic scoring)
INTERPRETING SOURCES

Excellent (9): The meaning constructed by the student writer is similar to the meaning intended by the writers of the sources.

Very good (8): There may be small difference between the meaning intended by the writer of the source and that constructed by the new text writer.

Good (7): There may be big differences in making sense of the texts- sources.

Average (6): The similarities may reflect in almost all parts of the new text.

Fair (5): The similarities of assigning meaning to the writer of the new text and the writers of the sources is less than half.

Poor (4): The new text includes a lot of meanings that are not intended by the writers of the sources.

Very poor(3): Almost all the meanings constructed by the writer of the new text are different from the writers' meanings-sources.

ORGANIZATION

Excellent (9) : It is well organized text that includes introduction, body, conclusion and clear methods of development such as comparison, cause-effect, argument, ,etc. It also includes clearly organized paragraphs.

Very good (8): There is relatively appropriate organization that includes introduction, body, conclusion, suitable methods of development such as comparison, mixed methods, cause-effect and logically related paragraphs.

Good (7): The new text consists of understandable introduction, body, conclusion, and methods of development . It also reflects good paragraphing.

Average (6): The text includes all parts of organization but they may not be well developed. It consists of understandable methods of development but it may not necessarily include definite methods. It shows some kind of paragraphing.

Fair (5): The text includes either introduction or conclusion. It may not have clear methods of development. It has no clear idea of paragraphing.

Poor(4):The text contains one or two statements of introduction and conclusion. It may not consist of paragraphs or contains less than three paragraphs.

Very poor (3): The text does not contain introduction and conclusion. It has no clue of a method and it does not have paragraphs.

SELECTION

<u>Excellent (9):</u> The text shows some kind of ranking of ideas according to importance; shows main ideas included in all or most of the sources; consists of relevant and well interrelated ideas. It also reflects integration between prior knowledge and knowledge from the new texts.

<u>Very Good</u> (8): The text indicates some kind of order of importance; shows main points included in most of the sources; consists of relevant and related ideas. It also shows some kind of relationship between prior knowledge and new knowledge from the sources.

<u>Good</u> (7): The text indicates some kind of selection. It also shows the main points included in more than half of the sources. It includes ideas relevant to the sources. It shows some hint of the relationship between prior knowledge and new knowledge.

<u>Average</u> (6): The text indicates some degree of selection. It also shows main points included in almost less than half of the sources. It may include some irrelevant ideas which do not obscure meaning. There my be some degree of relationship between prior knowledge and the new knowledge.

<u>Fair</u> (5): The text consist of ideas without clear order of selection. It shows ideas included in one-third of the sources. It also contains only knowledge from the sources.

<u>Poor</u> (4): Ideas are simply put together. It includes more ideas not included in the sources.

<u>Very poor</u>(3): The text does not show clear idea of selection. It is mainly dominated by irrelevant ideas.

GENERATING NEW IDEAS AND INFERENCES

<u>Excellent</u> (9): The writer of the new text includes a lot of generated ideas and inferences.

<u>Very good</u> (8): The writer of the new text includes many generated ideas and inference.

<u>Good</u> (7): The writer of the new text includes enough generated ideas and inferences.

Average (6): The new text includes new ideas and inferences to demonstrate that the new text writer knows something about generating new ideas and drawing inferences.

Fair (5): The new text shows enough inclusion of generated ideas or inferences.

Poor (4): The new text shows little inclusion of either generated ideas or inferences.

Very poor (3): The new text does not show the inclusion of generated ideas and inferences.

PARAPHRASING

Excellent (9): The new text writer has complete mastery of paraphrasing. He/She can reflect the ideas in the sources in his/her own words. He/She has no problem of reconstructing and rephrasing sentences.

Very good (8): The new text writer has substantive skill of paraphrasing. He/She can choose appropriate substitutions and synonyms. He/She has little problem of reconstructing and paraphrasing sentences.

Good (7): The new text writer has some skill of paraphrasing. He/She has also some skill of substituting words and phrases. He/She has some skill of constructing and paraphrasing sentences.

Average(6): He/She has acceptable degree of paraphrasing, finding substitutions and synonyms. His/Her new text shows some problems of constructing and paraphrasing sentences.

Fair(5): He/She has limited skill of paraphrasing. He/She has enough problems of finding substitutions and synonyms. His/Her new text shows enough problems of constructing and paraphrasing sentences.

Poor (4): He/She has little skill of paraphrasing. He/She cannot find acceptable substitutions and synonyms. He/She has little skill of constructing and paraphrasing sentences.

Very poor (3): He/She has almost no skill of paraphrasing. He/She cannot find substitutions and synonyms. He/She has no skill of constructing and paraphrasing sentences.

CONNECTING

Excellent(9): The text shows well integrated content from the sources with the knowledge in the writer's mind. The text reflects the meanings intended by the writer. It also shows relevance and interrelationship among ideas from the sources. It makes appropriate use of transitional devices.

Very good (8): The text indicates some kind of integration of content from sources with the writer's prior knowledge. Ideas may not deviate much from the writer's (sources) intentions. It also shows relevance and interrelationship among ideas from the sources. It makes acceptable use of transitional devices.

Good (7): The text involves integrating contents mainly from the sources. Some ideas may deviate from the writer's intention. The text shows some hint of the relationship of ideas from sources. It includes some inappropriate uses of transitional devices.

Average (6) The text includes contents mainly from sources and combination of ideas focuses mainly n ideas from the sources. It may include some irrelevant ideas and some incorrect transitional devices.

Fair (5): The text shows unsatisfactory degree of combination of ideas, and relationship between ideas. It includes more than half incorrect transitional devices.

Poor (4):There is no definite way of combining ideas. There is almost no relationship between ideas and it involves insignificant number of transitional devices.

Very poor (3) : There is no relationship between ideas from the sources. There is almost no correct use of transitional devices.

INTEGRATING CITATIONS AND DOCUMENTING SOURCES

Excellent (9): The writer has full skill of quoting-(less than 5 lines and more than 5 lines), use of author-date system or footnote bibliography system: acceptable and consistent use.

Very good(8): The writer has adequate skill of quoting, consistent use of author-date system or bibliography system.

Good (7): The writer has some skill of quoting, consistent use of author-date or

footnote bibliography system.

<u>Average</u> (6): The writer has satisfactory skill of quoting, use of author-date system or footnote bibliography system.

<u>Fair</u> (5): The writer has limited skill of quoting, use of author-date system or footnote bibliography system.

<u>Poor</u> (4): The writer has very limited skill of quoting, use of author-date system or footnote bibliography system.

<u>Very poor</u>(3): The writer has almost no skill of quoting, use of author date system or footnote bibliography system.

5.2.3 Comparison of Means

The pre-test and post test method was used as a method of data collection for the study. (Please see 4.3.1).

The data obtained from the pre-test and post test are used for quantitative analysis. The statistical method of a t-Test is used to determine whether teaching writing using sources or the current-traditional approach to writing is more significant in teaching academic writing to sophomores at the University of Asmara, Eritrea.

The expected outcomes in this study were (1) if the performance of the control and experimental groups in the post-test are similar, the difference between their means being statistically non-significant, then, the Null Hypothesis (Ho), which states that there is no statistically significant difference between teaching writing using sources approach (TWUSA) or current-traditional approach (CTA), in teaching academic writing to sophomores at the University of Asmara will be accepted; and (2) if the performance of the control and experimental groups differ, i.e. the difference between their means being statistically significant, the Alternate Hypothesis (H1), which states that there is a statistically significant difference between TWUSA or CTA in teaching academic writing to sophomores at the University of Asmara will be accepted.

The statistical method used to test Ho that μo = μ1 is based on the t'distribution in which it is assumed that $S_1^2 = S_2^2 = S_3^2$... and the population is normal. The researcher selected this method because the t-Test is applied when the standard deviation has to be estimated from the data and when μo and μ1 have to be established from separate samples. To test the significance of the means of control and experimental groups, the standard deviation and the two sample variances (S_c^2 and S_ϵ^2) are estimated using Statistical Package for the Social Sciences (SPSS).

μ represents the mean of a population
S^2 = "variance ...is the mean of squared deviation scores" (Glass et al. 1996:69).
"t-test,... is designed to test the difference between two means for significance" (Kinnear et al. 1997: 128).

When the samples are collected, we compare the estimated t-value with the critical t-value at a given degree of freedom and at a given level of significance. After doing this, we either accept or reject the hypothesized value as being correct. The hypothesized value is rejected only if the expected results of the sample are clearly unlikely to occur when the hypothesis is true. The (H1) is accepted only if the (Ho) is rejected.

A significance level of 0.05 for pre-tests is decided as critical region for supporting or rejecting the Null Hypothesis and 0.01 for post-tests for accepting or rejecting the Alternate Hypothesis because they are the significance levels used by researchers in accepting or rejecting (Ho) and (H1) respectively. The researcher established that if the computed t-value is greater than the critical t-value, rejecting the Null Hypothesis, the Alternate Hypothesis is accepted and if the computed t-value is below the critical t-value, accepting the Null Hypothesis, the Alternate Hypothesis is rejected.

In this study, the samples in the control and experimental groups are thirty-five each in phase I and twenty-one each in phase II. The degree of freedom is NC+ NE - 2 i.e. 35+35- 2 = 68 in phase I and 21+21 -2 = 40 in phase II.

Table 3: means, standard deviations, and t-values pretests and posttests

Groups, phases and number	pretest		post test	
	means	Sds.	Means	Sds.
Control group phase I (n = 35	39.3	4.5	37.7	3.8
Experimental group phase I (n = 35)	40.1	5.6	44.0	4.7
pretest t = .68* df. = 68 n.s	Post test t = 6.16** df. = 68 s			
Control group phase II (n = 21)	34.4	6.1	36.7	6.3
Experimental group phase II (n = 21)	35.1	4.6	46.3	6.1
Pretest t = .45* df. = 40 n.s	Post test t = 5.0** df. = 40 s			

* p < .05,   **p < .01

The computed t-value of the pre-test in phase I is compared with the critical t-value at a 0.05 level of significance where the degree of freedom was equal to 68. The computed t-value of 0.68 is below the critical t-value of 1.67 at a 0.05 level of significance.

This means that the Null Hypothesis which states that there is no statistically significant difference between the performance of the control and experimental groups at the initial stage is accepted and the Alternate Hypothesis which states that there is statistically significant difference between the performance of the control and experimental groups at the initial stage is rejected. Following the above procedure, the means of the pre-test in phase II was compared and it was found that the computed t-value of 0.45 is below the critical t-value of 1.68 at a 0.05 level of significance and degree of freedom was equal to 40 . Hence, the Null Hypothesis was accepted and the Alternate Hypothesis is rejected.

These clearly show that the subjects in the control and experimental groups in phase I and the control and experimental groups in phase II were similar at each group's initial stage.

The computed t-value of the post-test in phase I was compared with the critical t-value at a 0.01 level of significance. On the basis of a two-tailed test at 0.01 level of significance, we would reject Ho if the computed t-value were above the critical t-value, which for (NC + NE -2 = 35 +35 -2 = 68 degree of freedom is

6.16. The critical t-value at a 0.01 level of significance is 2.381. We find that the computed t-value is above the critical t-value. So, we reject the Null Hypothesis at a 0.01 level of significance and accept the Alternate Hypothesis at a 0.01 level of significance. Thus, the computed and the critical t-values of the pretest and posttest results for the control and experimental groups are shown in Appendix K-1. This means that Ho, which states that there is no statistically significant difference between teaching writing using sources approach and the current-traditional approach to sophomores at the University of Asmara is rejected and the A1, which states that there is a statistically significant difference between teaching writing using sources approach and the current-traditional approach to sophomores at the University of Asmara is accepted.

Similarly, the computed t-value of the post-test in phase II was compared with the critical t-value at the 0.01 level of significance. On the basis of a two-tailed test at a 0.01 level of significance, we would reject Ho if the computed t-value were greater than the critical t-value which for (NC+NE - 2 = 21+21-2 = 40 degree of freedom is 5.01. The critical t-value at a 0.01 level of significance is 2.423. The computed t-value is greater than the critical t-value. Hence, we conclude that at a 0.01 level of significance there is a statistically significant difference in the performance of the subjects in the control and experimental groups. So, we reject Ho at a 0.01 level of significance and accept H1 at a 0.01 level of significance.

The results of the t-tests indicate that the performance of the subjects in the experimental groups in phases I and II are better than that of the subjects in the control groups in phases I and II (separately). The results of the experiments seem to show that in teaching academic writing to sophomores, teaching writing using sources approach is more effective than the current-traditional approach. These also suggest that subjects in the experimental groups who learned academic writing through TWUSA showed better performance in the post-tests as compared with the subjects who learned academic writing through CTA.

The importance of teaching academic writing through TWUSA is that the approach involves processes or strategies such as interpreting or understanding sources,

organizing texts, selecting, generating and connecting ideas, paraphrasing words, phrases, sentences or paragraphs, and integrating citations and documenting sources which seem to play a fundamental role in succeeding and maintaining academic undertakings.

Moreover, a more sophisticated analysis which allowed comparison of experimental groups at posttest, controlling for pretest was also carried out using linear regression. This analysis confirmed the superior performance of the experimental groups compared with the control groups (in phase I t = 6.25, p < .0001 and in phase II t = 5.0, p < .0001).

Table : 3a   Correlation Coefficients - - control group phase I posttest (n = 35)

	INTY	ORGY	SELECTY	GENY	PARY	CONY	DOCY
INTY	-	.6308	.9103	.8014	.7194	.6644	.4266
ORGY			.6034	.6527	.6006	.6124	.0598
AVSEAA				.7876	.7254	.6793	.4842
GENY					.8696	.8615	.3272
PARY						.7749	.3893
CONY							.4080
DOCY							-

Abreviations Y =posttest INT = interpreting, SELECT=selecting, GEN=generating, PAR= paraphrasing, CON = connecting, and DOC= documenting

The Pearson correlation coefficients among the seven variables for the control group in phase I are given in Table 3a. The highest relationship in Table 3a is between interpreting or understanding sources and selecting ideas r= .9103; this very high relationship shows that subjects who have high scores in interpreting sources tend to have high scores in selecting ideas and those subjects who have low scores in interpreting sources tend to have low scores in selecting ideas. However, this does not mean that there is little difference between interpreting sources and selecting ideas, but that one's relative standing on interpreting sources and selecting ideas would be similar for most subjects in the study. The second highest relationship in Table 3a is between generating ideas and paraphrasing, r= .8696. In addition, selecting ideas correlates with integrating

citations and documenting sources more highly than any other variables, r= .4842. Although the relationship between organizing texts or ideas and integrating citations and documenting sources, r= .0598 tends to be positive, it is not significant (p> 0.05). The relationship between generating ideas and integrating citations, r = .3272, is not significant (p > 0.05).

Table : 3b   Correlation Coefficients - - experimental group phase I posttest (n = 35)

	INTY	ORGY	SELECTY	GENY	PARY	CONY	DOCY
INTY	-	.6840	.8377	.8380	.8059	.7758	.6322
ORGY			.7012	.7303	.7223	.6827	.3470
SELECTY				.8816	.8417	.8351	.5269
GENY					.8421	.8761	.6607
PARY						.8756	.6053
CONY							.6559
DOCY							-

Abbreviations : Y = posttest INT = interpreting, SELECT=selecting, GEN=generating, PAR= paraphrasing, CON = connecting, and DOC= documenting

The Pearson correlation coefficients among the seven variables for the experimental group in phase I are given in Table 3b. The highest relationship in Table 3b is between selecting and generating ideas r= .8816; this very high relationship shows that subjects who have high scores in selecting ideas tend to have high scores in generating ideas and those who have low scores in selecting ideas tend to have low scores in generating ideas. However, this does not mean that there is little difference between selecting ideas and generating ideas, but that one's relative standing on selecting ideas and generating ideas would be similar for most subjects in the study. The second highest relationship in Table 3b is between generating and connecting ideas, r= .8761. Generating ideas correlates with integrating citations and documenting sources more highly than any other variables, r= .6607. The smallest relationship is between organizing texts or ideas and integrating citations and documenting sources, r= .3470 but it is significant (p < 0.05). This low relationship shows that one's relative standing on organizing texts or ideas and integrating citations would differ greatly i.e. the standard scores on organizing texts and integrating citations would be different to most subjects in the study.

Table : 4a   Correlation Coefficients - - control group phase II posttest (n = 21)

	INTY	ORGY	SELECTY	GENY	PARY	CONY	DOCY
INTY	-	.7175	.8542	.6336	.7541	.7938	.4979
ORGY			.8575	.5586	.6510	.6498	.5546
SELECTY				.7979	.8414	.8313	.6422
GENY					.6548	.7458	.6684
PARY						.7518	.6408
CONY							.4610
DOCY							-

Abreviations : Y post test INT = interpreting, SELECT=selecting, GEN=generating, PAR= paraphrasing, CON = connecting, and DOC= documenting

The Pearson correlation coefficients among the seven variables for the control group in phase II are given in Table 4a. The highest relationship in Table 4a is between organizing text or ideas and selecting ideas r= .8575; this very high relationship shows that subjects who have high scores in organizing text tend to have high scores in selecting ideas and those subjects who have low scores in organizing text tend to have low scores in selecting ideas. However, this does not mean that there is little difference between organizing text and selecting ideas, but that one's relative standing on organizing text and selecting ideas would be similar for most subjects in the study. The second highest relationship in Table 4a is between interpreting sources and selecting ideas, r= .8542. Generating ideas correlates with integrating citations and documenting sources more highly than any other variables, r= .6684. The smallest relationship is between connecting ideas and integrating citations and documenting sources, r= .4610, but it is significant (p < 0.05).

Table : 4b   Correlation Coefficients - - experimental group phase II posttest (n = 21)

	INTY	ORGY	SELECTY	GENY	PARY	CONY	DOCY
INTY	-	.7789	.9022	.7790	.8833	.8370	.8682
ORGY			.7856	.5706	.8494	.7449	.6285
SELECTY				.7708	.8891	.8170	.7718
GENY					.7774	.8279	.5757
PARY						.8717	.7538
CONY							.7170
DOCY							-

Abreviations : Y =posttest INT = interpreting, SELECT=selecting, GEN=generating, PAR= paraphrasing, CON = connecting, and DOC= documenting

The Pearson correlation coefficients among the seven variables for the experimental group in phase II are given in Table 4b. The highest relationship in Table 4b is between interpreting sources and selecting ideas r= .9022; this very high relationship shows that subjects who have high scores in interpreting sources tend to have high scores in selecting ideas and those who have low scores in interpreting sources tend have low scores in selecting ideas. However, this does not mean that there is little difference between interpreting sources and selecting ideas, but that one's relative standing on interpreting sources and selecting ideas would be similar for most subjects in the study. The second highest relationship in Table 4b is between selecting ideas and paraphrasing, r= .8891. Interpreting sources correlates with integrating citations and documenting sources more highly than any other variables, r= .8682. The smallest relationship is between generating ideas and integrating citations and documenting sources, r = .5757 but it is significant (p < 0.01). This moderate relationship shows that one's relative standing on generating ideas and integrating citations would differ moderately i.e. the standard scores on generating ideas and integrating citations would be different to many subjects in the study.

Table : 5 Correlation of individual variables with total score when the contribution of the particular variable is first removed from the total score

Variables	Control Gr.I	Experimental Gr.I	Control Gr.II	Experimental Gr.II
Inty with flmint	.8509	.8708	.8198	.9430
Orgy with flmor	.6294	.7051	.7663	.7926
Selecty with flmsec	.8612	.8720	.9552	.9186
Geny with flmgen	.8938	.9265	.7796	.7801
Pary withflmpar	.8393	.8928	.8334	.9351
Cony with flmcon	.8209	.8999	.8159	.8908
Docy with flmdoc	.4037	.6285	.6530	.7891

Correlation of individual variables with total (i.e. final) when the contribution of the particular variable is first removed from the total score

Abbreviations : Y = posttest, m = minus, int = interpreting, org = organizing, select = selecting, gen= generating, par = paraphrasing, con =, connecting, doc= documenting

The correlations of the seven variables with total score when the contribution of the particular variable is first removed from the total score in phase I and II are given in Table 5. Concerning correlating individual variables with the total, Hatch and Farhady (1982) state "If you plan to correlate any of the individual variables with the total, you must first remove the contribution of that particular variable to the total" (p.213). The correlation of generating ideas with total score , r= .9164 shows the highest relationship whereas the correlation of integrating citations and documenting sources with total score, r= .4037 though shows the lowest relationship for the control group in phase I, it is significant (p < 0.05). In general the subjects received the highest total scores in generating ideas and the lowest scores in integrating citations. Similarly, the correlation of generating ideas with total score, r = .9265 indicates the highest relationship whereas the correlation of integrating citations with total score, r= .8285 shows the lowest relationship for the experimental groups in phase I. Although both the control and the experimental groups in phase I indicate the same variables as to their highest and lowest relationships, the value of rs for the control groups are lower than that of the experimental groups. This indicates that the experimental groups received better scores on both variables. It is also observed that the higher the value of r, the better the scores in that variable.

In addition to this, the correlation of selecting ideas with total score, r = .9552 shows the highest relationship while the correlation of integrating citations with total score, r = .6530 indicates the lowest relationship for the control group in phase II. The correlation of interpreting sources with total score, r = .9430 shows the highest relationship while the correlation of generating ideas with total score, r = 7801 indicates the lowest relationship for the experimental group in phase II. In general, all the seven variables are significant when each individual variable is compared with the total score in the control and experimental groups in phases I and II.

Figure 2a: Post test analytic scoring, control group (phase I)

FLANA

Std. Dev = 3.79
Mean = 37.7
N = 35.00
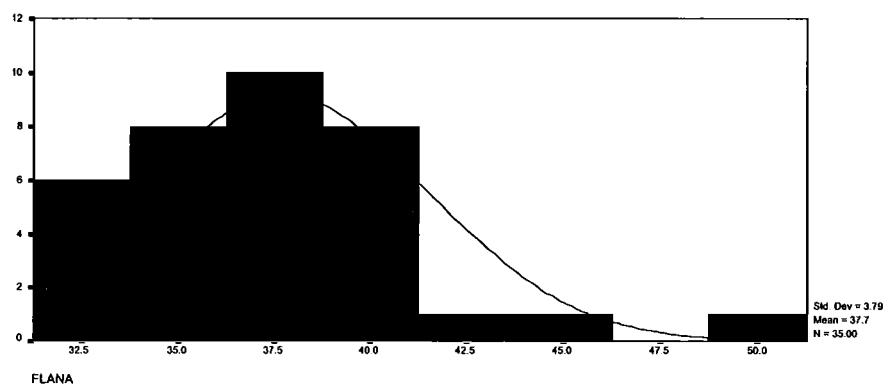
Figure 2b: post test analytic scoring, experimental group (phase I)

FLANA

Std. Dev = 4.88
Mean = 43.9
N = 35.00
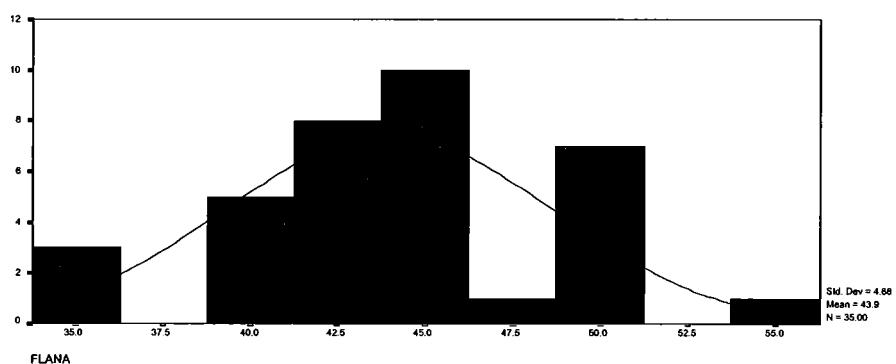
When we take the score "40" (almost the end of the scores in the control group and the beginning of scores in the experimental group), in the control group, as shown in Figure 2a, 24 subjects scored below 40 and 11 subjects scored 40 and above, whereas in the experimental group, as shown in Figure 2b, 3 subjects scored below 40 and 32 subjects scored 40 and above. In the control group, the lowest score is 32.5 (n=6) while in the experimental group the lowest score is 35 (n=3).

These figures show that most of the subjects in the experimental group scored better than those in the control group.

Figure 3a: Post test analytic scoring, control group (phase II)

FLANA

Std. Dev = 6.33
Mean = 36.7
N = 21.00
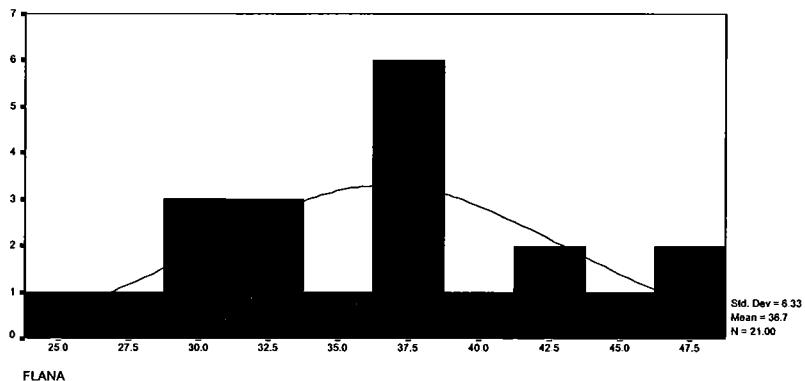
Figure 3b: post test analytic scoring, experimental group (phase II)

FLANA

Std. Dev = 6.11
Mean = 46.3
N = 21.00
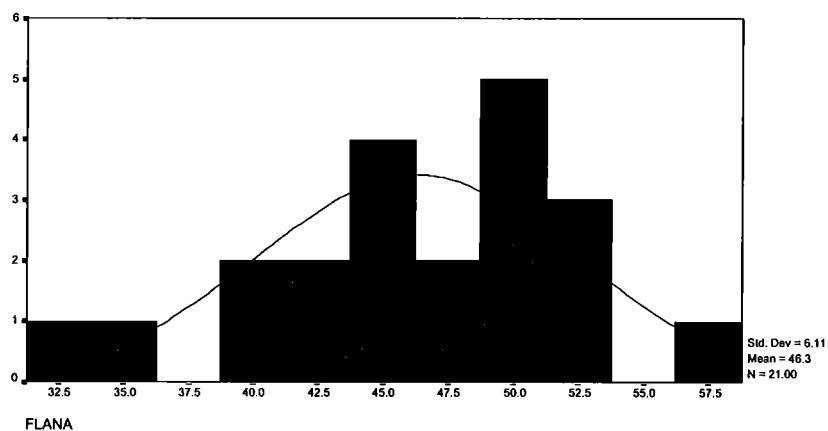
When we take the score "45" (almost the end of the scores in the control group), in the control group, as shown in Figure 3a, 18 subjects scored below 45 and 3 subjects scored 45 and above, whereas in the experimental group, as shown in Figure 3b, 6 subjects scored below 45 and 15 subjects scored 45 and above. In the control group, the lowest score is 25.5 (n=1) while in the experimental group the lowest score is 32.5 (n=1).

These figures show that most of the subjects in the experimental group scored better than those in the control group.

5.2.4 Prior knowledge of subject matter

Tests of prior knowledge of subject matter were prepared and administered before the pretests and post tests (phases I and II). As soon as the answers on test of prior knowledge were collected, the test prepared for pretest (before the beginning of the study) was distributed. The same procedures were followed during the post test (See 4.7.2, 4.7.4, 4.8.2 and 4.8.4).

The subjects were asked to produce written responses for each word and/or phrase taken from the three texts/passages according to Langer's (1984) procedures. The key words and/or phrases (ten in each test) were expected to represent the main concepts in the texts /passages. In connection to this, Newell and MacAdam (1987) state " For a prewriting activity, the teacher may select stimulus words/phrases representing concepts that students will have to integrate into their writing" (p.170).

In Langer's (1984) and Newell and MacAdam's (1987) studies, students were asked to produce written - free associations for each word/phrase taken from the passages; however, in this study, the subjects were asked to produce written responses in order to eliminate getting any right answers only by chance and to see their ability to generate even loosely related ideas. In relation to the organization of passage specific prior knowledge, Langer (1984) states:

> For some tasks, writers may need the same kinds of highly
> organized knowledge that readers do, but for other tasks they may
> also require an abundance of loosely related items of information for
> use in their writing . This distinction may arise from differences
> inherent in the two activities; writers not only need to generate and
> present intricately linked ideas, but also need a large body of loosely
> associated information that can be used to elaborate and enliven the
> presentation (p.42-43).

Scoring rubric for scoring or rating the written responses to the tests on prior knowledge of subject matter has been developed on the basis of Langer's (1984a)

Newell and MacAdam's (1987) procedures. Langer (1984), and Newell and MacAdam (1987) considered highly, partially and diffusely organized knowledge types. In this study, three, two, one, and zero points were given to organized knowledge, partially organized knowledge, diffusely organized knowledge and totally irrelevant or an unattempted question respectively. The raters were also provided with a sample of possible written responses as a frame of reference in case it is needed. The two raters who rated the tests on prior knowledge related to higher education and linkage of universities with their environment (phase I) were from the Dept. of Language Studies (a native and a non-native speaker of English); however, the two raters who rated the test on prior knowledge related to genetic engineering, and the earthworm (phase II), were the native speaker of English (who rated in phase I) and a specialist from the Dept. of Agriculture.

In this study, a subject could receive a maximum score of 30 points from each of the two independent raters. So the mean scores of the two raters for each subject were calculated. When the result of the pretest in phase I was calculated, the means were 14.40 and 14.44 (out of 30) for the control and experimental groups respectively. The same procedures were followed in calculating the results of the post test and the mean scores were 17.57 and 20.39 for the control and experimental groups. Similarly, the same procedures were followed in phase II. The mean scores of the pretest were 12.60 and 11.9 (out of 30) for the control and experimental groups respectively, whereas the mean scores of the post test were 14.02 and 16.62 for the control and experimental groups respectively.

Table 6 : Correlations between prior knowledge of subject matter (PKOSM) and pretests and post tests for phases I & II

Variables	r-value	p-value	s/ns	n	phase/s
PKOSM with pretest	0.2042	0.031	s	112	I & II
PKOSM with pretest	0.1623	0.179	ns	70	I
PKOSM with pretest	0.0391	0.806	ns	42	II
PKOSM with post test	0.2290	0.015	s	112	I & II
PKOSM with post test	0.2220	0.065	ns	70	I
PKOSM with post test	0.3246	0.036	s	42	II

$P < 0.05$ significant (s)

$P > 0.05$ not significant (ns)

Table 6 reports correlations between prior knowledge of subject matter and pretests and post tests. The relationships between PKOSM and pretest in phase I is modest. It is also statistically significant at a level of significance $p < 0.05$. The relationship between PKOSM and pretest in phase I and II (separately) are non significant. The relationship between PKOSM and post test in phases I and II is modest and the association is slightly better than in the pretest. The correlation between PKOSM and post test in phase II is modest $r = 0.3240$. It is statistically significant at a level of significance $p < 0.05$. Thus, the results in Table 6 seem to indicate that the associations tend to improve in the post tests. This may suggest that the scores in the post tests were better than the scores in the pretest because the experimental groups scored better than the control groups in the post tests. These better scores may be due to the effects of teaching writing through TWUMSA.

5.3.0 Analysis , finding and discussion of subjects' essays

5.3.1 Origin of Information

To examine whether information was taken from the first, or the second, or third text or combination of two or three or generated from the sources and the writer's stored knowledge, the researcher constructed a composite template of content units in the three source texts and the subjects' essays. The semantic content of the three source texts and each subject's essay was parsed into content units in a modification of Ackermans' (1991) and Greene's (1993) procedures for analysing clauses in essays such as summary protocols.

Several procedures have been developed for analysing summary protocols. For instance, Carrell (1985) used idea units to analyse the texts composed by her subjects. Referring to idea units she states:

> Basically, each idea unit consisted of a single clause (main or subordinate, including adverbial and relative clauses). Each infinitival construction, gerundive, nominalised verb phrase, and conjunct was also identified as a separate unit. In addition, optional and/or heavy prepositional phrases were also designated as separate idea units (p. 737).

In this case, there seems difficulties in identifying the boundaries between idea units and problems of inconsistency in identifying some phrases as idea units such as H23. to construct plants and M36. to protect themselves from the dangers of radioactive materials. H33. Also, emergency response planning, and H34. and preparedness are means (Carrell 1985 : 752 Appendix D).

In addition to this, Winograd (1985) analysed subjects summary protocols under four categories: 1. Reproduction which "refers to instances where subjects reproduced individual sentences in the original passage", 2. Combinations which refer to "transformations where subjects had combined two or more sentences in the original passage into one sentence in the summary protocol", 3. Run-on combinations that "refer to instances where elements from several sentences in the original passage had been included in the protocol but in a less organized

fashion than those transformations scored as combinations", and 4. Inventions which "refer to instances where subjects produced individual sentences which conveyed the meaning of a paragraph, several paragraphs, or even the whole passage" (p. 408).

We can understand from the above description that Winograd (1985) used "sentence" as a unit of measurement in scoring the subjects' summary protocols. As to the purpose, he states that the aim was "to identify which ideas from the original passage were included in the summary as well as to record which transformations had been performed on those ideas" (p. 408). In this case, the researcher could not adopt this system because on the one hand, it is designed to compare fluent and less fluent readers, on the other hand, the use of punctuated sentences as a scale causes inconsistencies in coding especially when the sentences contained compound complex sentences with several idea units, for instance, one sentence in his student's protocols:

> The river otter is very much like the sea otter but it is smaller, eats
>
> fish, frogs, and snakes, and travels overland (Winograd 1985 408).

Here, it is possible to construct four content units: 1. The river otter is very much like the sea otter. 2. The river otter is smaller than the sea otter. 3. The river otter eats fish, frogs, and snakes. 4. The river otter travels overland.

Johns (1985) and Johns and Mayes (1990) used a scale for summary protocols which involves correct replications with subcategories such as accurate paraphrasing, direct copying, accurate combinations within and across paragraphs, the main idea of the paragraph, and distortions with subcategories such as distorted verb phrase or subject, deleted or added information and inaccurate idea units. The scale for summary protocols was developed to analyse the summaries of ten students from a single source. The summary contained nine main idea units and the students were required to write a summary of about 100 words. Hence, I found this scale for summary protocol from a single source by ten students in Johns' (1985) study incomplete compared with my study because it focuses specifically on nine main idea units in the passage. Johns and Mayes' (1990)

study also deals with the comparison of idea units in summary protocols by 40 high proficient university ESL students. In addition, their idea unit seems unspecific and inconsistent. If we take the infinitives ` to move, to catch, to stop, to build, to improve', in the examples below, in some environments they are individual units, in other environments they are treated as part of another larger idea units for instance,

43. thereby causing them <u>to move</u> too quickly,

44. <u>to catch</u> their food.

50. What is the United States government doing <u>to stop</u> thermal pollution?

61. It is also helping <u>to build</u> better sewage treatment plants <u>to improve</u> drinking water (two infinitives in one content unit). In some cases, the idea unit is a complete sentence whereas in others it is only an infinitive or a prepositional phrase, for example, 7. In this country 18. Because of these changes, 19. Plant and fish life often change, 20. or die (consists of a coordinating conjunction and a single verb) (Johns and Mayes 1990: 268-9 Appendix 1).

Although there are some bearings on my study this type of scale is inappropriate for my study because of the inconsistencies pointed out above and it does not accommodate the coding used in this study.

In Ackerman's (1991) study, forty graduate students from the Departments of Psychology and Business (20 from each Dept.) were chosen as participants. These students were asked to write an essay that explained and showed their understanding of the nature and importance of one of the given two topics using four passages for each topic. On the basis of the origin of information, Ackerman (1991) identified four categories: new information that originates from the writer's prior knowledge; borrowed explicit information which is traceable to both discrete syntactic and semantic elements; borrowed implicit information which refers to less definite central ideas which are less traceable to source texts; and mixed information which includes either new or borrowed explicit or implicit information. Referring to borrowed explicit information he says " A unit [content] was tagged "Explicit" if the writer borrowed actual lexical elements from source text content unit or if the borrowing was a close paraphrase of an author's statement" (p.147).

Although Ackerman's (1991) categorization of origin of information has some bearing on this study, demarcation of content units appears inconsistent and unspecific. In some cases content units involve a simple sentence while in some cases, he usually added subject and verb/s (in parenthesis) that may clarify the meaning of some phrases by changing them into sentences, for instance, the following content units are taken from an example essay parsed for content units.

> Supply side economics emphasizes much more indirect manipulation of the economy
>
> [It does so] by government supplying incentives to businesses to increase the supply of goods
>
> [incentives are supplied] to individuals to increase work time and productivity
>
> [An example is] cutting taxes and removing restrictions to business growth and risk-taking   (Ackerman 1991 the end of Appendix A p.177).

Greene's (1993) study involves 15 students in two groups (7 students were assigned to writing report and 8 students were assigned to writing problem based essays). Concerning source texts, she says " Students used six source texts in composing either a report or problem based essay" (p.51).

Greene used a content unit to analyse the students' essays. She states " the size of a content unit was also based on an informativity principle, one that recognizes that both the readers and writers construct meaning" (p.55). According to Greene (1993), a content unit is a "complete factually correct, and informative sentence in a student's essay" (p.55). Greene (1993) used the procedure to categorize whether a content unit was borrowed or added on the basis of semantic content. She considers a content unit "borrowed, if the idea matched the semantic content in one of the source texts, or added, if the information did not match the source content in the template" (p.55). She also considers a direct quotation or a paraphrased content unit as borrowed content unit.

> Excerpt of Student's Essay Parsed into Content Units
>
> Original Text
>
> World War II wreaked havoc on all nations concerned, and the United States was no exception. Though the United States emerged from the war in a much better position than any other major power, the devastation of Europe and the

seemingly rapid expansion of Communism were a direct threat to its economic stability. The task of rebuilding Europe was therefore a major concern for American policy makers.

Content Units

1. World War II wreaked havoc on all nations concerned

2. [and] The United States was no exception

3. [though] The United States emerged from the war in a much better position than any other major power

4. The devastation of Europe was a direct threat to its economic stability

5. [and] The seemingly rapid expansion of Communism was a direct threat to its economic stability

6. The task of rebuilding Europe was therefore a major concern for American policy makers (Greene 1993 : 56 Table 1).

I found that the content unit constructed by Greene (1993) has some bearing on how to analyse the subjects' essays and I adapted it to fit my analysis of the essays. Thus in this study, the following are counted as separate content units:

1. A noun phrase or two noun phrases joined by 'and' as subject/s, and a verb phrase, including a direct object/s, a prepositional phrase, infinitive phrase, or adverbial phrase (when present)(See No.3 in the example below: two objects);

2. clauses joined by a coordinating conjunction such as and, but, or(See No. 2 in the example below); and

3. a participle or an infinitive in which the subject/s and verb/s are suppressed or reduced to avoid repetition (but introduce/s new information), e.g The question came to the fore in light of the report of the Education Commission(2 CU)(1964-66) which stressed the role of education as an instrument of development and change (3 CU) and recommended a new pattern of education with that role in view (4 CU) ; The object underlying the new course is to sensitize the mind of the young to social reality around them through a series of social awareness courses (9 CU) and to equip them not only with theoretical skills and tools for proper analysis and understanding of social problems(10 CU), (Joshi 1980 24 2nd text).

Example from the first source text parsed into content units

Higher education is in the process of change (1 CU) and it needs a new direction (2). The academic community should play a more leading role in the process of

development and change(3). They should exert sufficient pressure through a philosophy of service and extension in the community around(4) and show models of developments to others(5). (Apparaw 1980 : 14) (See Appendix L-1).

5.3.1 The subjects' essays and components of TWUMSA

Understanding or interpreting

Understanding or interpreting sources is an indispensable operation when a writer as a reader is expected to compose using source texts. A writer's understanding sources is usually manifested in operations or activities such as organizing text, selecting, paraphrasing, generating and connecting contents from given sources. Referring to this, Kroll (1990) states " essays based on readings must exhibit, in ways that other assignments do not require, the student's ability to understand and interpret the text" (p.106). In addition to this, Mathison (1995) considers a short summary of the main ideas of source text as evidence demonstrating an understanding of the text. When a writer summarizes a given text, he or she is expected to present the gist of the content of the text. In relation to summarizing from sources, Campbell (1990) states "Summaries represented the gist of information from the background information" (p. 216). Taking into account the above mentioned facts as frames of reference, What could be said about students' essays which included more than 70% exact copy content units?

The following example which included 84.62% exact copy CUs may reveal the situation.

> Higher education is in the process of change (A1) and the academic community should play a more leading role in this process that is through philosophy of service (A3). In all countries new skill have yet to reach millions of people (A6) who need it (A7) and who will be profited by it (A8). We have to give a good attention, in this age of highly advanced science and technology, to the rural area through appropriate technology (A10+S), which is a means to promote individual and community self-reliance, ...((A12. (I. role No. 16. Example 1).

Note: Role numbers are in phase I, 1-35 control and 36-70 experimental and in phase II, 1-21 control and 22-42 experimental.

Here the content units were transferred as they were in the source texts. The writer did not demonstrate any process of dismantling and reconstructing information from sources. He or she failed to utilize the operations or strategies fundamental to writing using sources mentioned above. In addition to this, the writer did not even attempt to document the source of information he or she utilized though students are always warned against plagiarism. So, we can safely say that writers who merely copied information directly from the sources to their essays had difficulties in understanding the sources because they could not demonstrate their understanding either by summarizing and/or paraphrasing them. Referring to depending on source texts in composing, Ackerman (1991) found that 'low knowledge' writers tended to rely on sources when they wrote a synthesis.

Organizing

Organizing refers to global coherence of a given text. Global coherence or shape of the text can be achieved when the writer as a reader formulates appropriate arrangement of ideas and their interrelationships. In writing using sources, the writer as a reader creates his or her own organization which can bring together the ideas expressed under several types of organization depending on the type of source texts utilized. The writer can create a new organization appropriate to his or her purpose when he or she understands or interprets the given texts. Referring to the importance of organization Spivey (1990) states " Researchers have also been interested in how organization can influence the selection of content" (p.261).

Division of an essay into introduction, body and conclusion can also be considered as aspects of organization.

The Introduction : The introduction gives the background for the subject or topic the writer intends to write about. It introduces the subject to the reader which can help him or her to guide his or her expectations. The writer includes

introduction to help the reader to survey the main idea/s and how the writer intends to develop it/them. It seems difficult or impossible to include an introduction when the writer as a reader does not understand or interpret the given texts because the introduction involves the gist of the essay and how it is to be developed.

The conclusion : A writer may conclude his or her essay in several ways, for instance, the writer may return to the main idea with which he or she started, or he or she may sum up his or her views concisely by summarizing the contents of his or her essay. Referring to a conclusion in a paragraph, Neufeld et al. (1984) state " The decision or conclusion you make is formed after a thorough investigation of all the information given :topic, topic sentence, sentences that illustrate, expand, explain, or describe" (p.335). So we can see that a writer is expected to understand or interpret the source text/s so that he or she may be able to write a conclusion to his or her essay. The Writer is required to develop a general picture of the contents of the essay as a whole. Ending an essay without conclusion may be one possible sign for lack of adequate understanding of the content of the essay.

In this study, the subjects in the control and experimental groups exhibited comparatively different types of organization. Almost all the subjects in the control group in phase I started immediately to copy content units or phrases in composing their essays. Out of thirty-five subjects, only one subject included an introduction and other three subjects included conclusions in their essays whereas in the experimental group twenty-three out of thirty-five subjects began their essays by introducing the content of their essays. They made it clear that their essays were synthesized from the ideas taken from the three given sources. One of these subjects did not include concluding statement or paragraph. In addition to this, twenty-two subjects concluded their essays by stating the general or central idea of their essays. Three of these students did not include introduction.

Similarly, almost all the subjects in the control group in phase II began copying

content units from the source texts to their own new essays. Out of twenty-one subjects no one started with an introduction and only three subjects ended their essays with a sort of summary or concluding content units. However, in the experimental group, eighteen out of twenty-one subjects started their essays with introductory content units and fourteen subjects ended their essays with general content units. Six of those who included an introduction did not include conclusion while two of those who ended their essays with general content units did not include introductory content units. Only one subject included neither introductory content units nor concluding content units.

Paragraphing

When we consider paragraphing as one aspect of textual organization, we find in this study that the essays composed by the control group in phase I consisted of an average of 3.26 paragraphs whereas the essays of the experimental groups consisted of an average of 3.91 paragraphs. In addition, there are six subjects whose essays consisted of only one paragraph in the control group while there are only two subjects whose essays consisted of only one paragraph in the experimental group. Similarly, the essays composed by the control group in phase II consisted of an average of 3.41 paragraphs whereas the essays of the experimental groups consisted of an average of 4.14 paragraphs. Here, there are eight subjects whose essays consisted of only one paragraph in the control group but there are none in the experimental group.

In this case, it can be observed that the subjects in the experimental groups had a raised awareness of the importance of paragraphing in information organization. Referring to this, Grabe and Kaplan (1996) point out that in informational writing, the paragraph is intended to indicate a coherent set of ideas with a central idea and supporting information (p.353). They also reiterate the view that it [paragraphing] "fits psychological models of language comprehension" (p.356). This is important because mental representation of knowledge seems to have much influence on acquisition and storage of knowledge.

Selecting: In writing using sources, writers select ideas in which they can establish some kind of ranking according to importance as well as relevance. A research conducted by Brown, Day, & Jones (1983) shows that fifth graders used a copy-delete strategy when they were summarizing from a single source. These students preserved what they considered important and deleted what they considered trivial. However, in writing using sources, the subjects in my study used intertextual criteria which allowed them to construct general information on a topic using given source texts. The three source texts used in phase I consisted of 26, 22, and 23 i.e. 71 content units. The subjects in the control group included an average of 8.4 content units in verbatim or exact copy and 8.63 in a mixture of sources' and their content units i.e the ratio of 4.17:1 (sources' to subject's content units) whereas the experimental group included an average of 6.66 content units in verbatim and 7.57 content units in a mixture of sources' and their content units i.e the ratio of 4.99:1 (sources' to subjects' CU). Thus, the subjects in the control group included a little more exact copy and paraphrased content units from the three sources than the subjects in the experimental group (See Table 7-a and b).

To examine whether the control group and experimental group are similar or different in locating information for selection from source texts, the content units of each source text were divided into quartiles on the basis of their serial positions with equal numbers of content units in each quartile. Hence, the following results are obtained. As to the location of selection from the first source, the subjects in the control group selected 53.18., 16.82, 13.64 and 16.36 per cent content units from the first, second, third, and fourth quartiles respectively while those in the experimental group selected 36.75, 23.49, 17.49 and 22.29 per cent CUs from the first, second, third, and fourth quartiles respectively. This findings appear similar to Winograd's (1985) findings between poor and fluent adult readers. He states that the poor readers got (almost half) 0.44, 0.25, 0.16, and 0.13 per cent of the information from the first, second, third and fourth quartiles respectively while the fluent adult readers took (over one-third) 0.34, 0.23, 0.18 and 0.23 per cent of the ideas from the first, second, third, and fourth quartiles respectively (p.412).

The subjects in both groups indicate similar proportions of selection of ideas from the first, second, third, and fourth quartiles. However, regarding selection from the third source, the subjects in the control group got 45.65, 25.00, 12.77 and 16.58 per cent CUs while the subjects in the experimental group took 37.98, 26.44, 14.90 and 20.67 percent CUS from the first, second, third, and fourth quartiles respectively.

The control group in phase II got, on an average, 26.71, 22.68 and 23.66 per cent content units and the experimental group got 23.68, 26.32, 24.47 and 25.53 per cent content units from the first, second, third and fourth quartiles respectively from the three source texts. This findings indicate that there is neither much difference nor consistent pattern in locating the verbatim content units.

Table 7-a :Types of content units composed by each group and content units omitted (in reference to the source)

Sources of content units (CU)	Control Group		Experimental group	
	CU	percent	CU	percent
A (Apparaw's CU) Total 26 x 35 = 910 CU (intact or selective verbatim)	110	12.09	83	9.12
A+S (Apparaw's and students' CU)	135	14.84	110	12.09
A+SD (S's deviated CU related to A's CU)	11	1.21	3	0.33
Omissions + S's + SD's CU	654	71.87	714	78.46
J (Joshi's CU) Total 22 x 35 = 770 CU (intact or selective verbatim)	92	11.95	98	12.73
J+S CU	98	12.73	70	9.09
J+SD	2	0.26	1	0.13
Omissions + S's + SD's CU	578	75.06	601	78.05
Su (Sudarsnam's CU) total 23 x 35 805 CU (intact or selective verbatim)	92	11.43	52	6.46
Su +S	69	8.57	85	10.56
Su +SD	3	0.37	1	0.12
Omissions + S's + SD's CU	641	79.63	668	82.9
Total S's (Students' content units)	199	23.98	420	45.68
Total students' deviated CU	20	2.41	17	1.82

The total content units composed by student writers in the control group in phase I = 294(35.42%) + 302 (36.39%) + 199(23.97%) + 20(2.41%) + 15(1.80%)= 830(100%) i.e. Verbatim + (Sources' and S's) + S's +SD's + (sources' and SD's)content units respectively.

The total content units composed by student writers in the experimental groups in phase I = 233(24.78%) +265(28.19%)+ 420(44.68%) + 17(1.82)+ 5 (0.53%) = 940 (100%) i.e. Verbatim + (Sources' and S's) + S's +SD's + (sources' and SD's)content units respectively.

Average words are 344 and 391 for control and experimental groups respectively.

Average content units are 23.7 and 26.9 for control and experimental groups respectively.

Table 7-b :Types of content units composed by each group and content units omitted (in reference to the source)

Sources of content units (CU)	Control group		Experimental group	
	CU	percent	CU	percent
P (Prasad's content units) 21 x 21 = 441 (intact or selective verbatim)	88	19.95	84	19.05
P+S (Prasad's and students' content units)	74	16.78	86	19.50
P + SD (S's deviated CU related to P's CU)	0	0.00	0	0.00
Omissions +S's + SD's CU	279	63.27	271	61.45
B (Brandy's CU) total 21 x 11 = 231 CU (intact or selective verbatim)	43	18.61	44	19.05
B + S	43	18.61	37	16.02
B + SD	2	0.87	1	0.43
Omissions + S's + SD' CU	143	61.90	149	64.50
M (Markham's CU) Total 21 x 17=357 CU (intact or selective verbatim)	74	20.73	62	17.37
M + S	50	14.00	49	13.73
M + Sd	0	0.00	0	0.00
Omissions + S's + SD's CU	233	65.27	246	68.91
Total students' content units	105	21.88	133	26.71
Total students' deviated CU	3	0.63	3	0.60

The total content units composed by student writers in the control group in phase II = 205(42.71%) + 167(34.79%) + 105(21.88%) + 3(0.63%) = 480(100%) i.e. Verbatim + (Sources' and S's) + S's +SD's + (sources' and SD's)content units respectively.

The total content units composed by student writers in the experimental group in phase II = 190(38.15%) + 172(34.54%) + 133(26.71%) + 3(0.60) = 498(100%) i.e.Verbatim + (Sources' and S's) + S's +SD's + (sources' and SD's)content units respectively.

Average words are 239 and 277 for control and experimental groups respectively.
Average content units are 22.9 and 23.7 for control and expt. groups respectively

Paraphrasing : Paraphrasing is one of the operations which is considered as a vital activity in composing using sources. In this study, paraphrasing involves content units that are traceable to both discrete syntactic and semantic elements and the writer's own ideas. Thus, it exhibits some characteristics of direct copying. The subjects demonstrated their activities in paraphrasing in different forms such as substitution of words with synonyms, changing the structure of some phrases or content units, and collapsing two or more content units into one. Some of the content units in this category usually comprise three or more intact words as part of the content unit. The intact words have orthographic or surface structures in the original source texts. In this context, paraphrasing follows the newly created sequence of ideas in the new text rather than the sequence of ideas in the source texts. The content units composed in this category reflect the meanings in the source texts by making specific and identifiable references. It also shows direct copy of certain intact words, for instance, this subject's essay(control group) consisted of 76.47% paraphrased content units (See Appendix M-1 and 2).

> The importance of <u>higher education</u> both in towns and rural area became as a <u>process of change and development</u> (A1+S). To succeed this goal <u>the academic community should</u> have to <u>developing and planning</u> well for all necessary requirements to achieve <u>fruits of knowledge</u> (A3+S) and as other developing countries of <u>Asia, Africa and South America</u>, this country gets moral and material aid from <u>united nations and other organizations</u> for rural and urban development (A16+18+S) (I.role No.28.Example 2).
> (The underlined phrases are from the given sources).

In this connection we can observe that the subjects in the control group composed more paraphrased content units (a total of *302* out of the grand total of 830 content units) than the experimental group who composed a total of 265 paraphrased content units (out of the grand total 940 CUs). This does not show much difference between the two groups. The means are close(302/35) = 8.63 and (265/35) = 7.57 for control and experimental groups respectively. The score ranges are equal (0-18) among the subjects in both groups. The standard deviations are similar with the control group a bit lower (4.23 and 4.29) for control and experimental groups respectively. The means are not significantly different at the 0.05 level of significance.

As to the location of the selection on the average from the three sources, the control groups in phase I selected 26.65, 20.53. 27.24, and 25.58 per cent CUs whereas the experimental group selected 31.32, 23.77, 20.94 and 23.96 CUs from the first, second, third and fourth quartiles respectively. In this case, the pattern of the control group seems different from the pattern they showed in selecting verbatim or exact copy content units while the pattern of the experimental group tends to be consistent with the pattern they showed in selecting verbatim. The pattern of the subjects in the experimental group appears to correspond to previous findings by Winograd (1985) of good readers who selected .29, .22, .21 and .24 Cus from the four quartiles in summarizing eight expository texts.

The control group in phase II took 28.14, 32.34, 18.26 and 21.26 per cent Cus and the experimental group took 28.92, 34.44, 18.49 and 18.18 per cent CUs from the first, second, third and fourth quartiles respectively. Here, the control group and experimental groups are similar in locating the selection of content units.

Generating : Generating content units is one characteristic of composing in which the writer constructs or creates ideas by synthesizing ideas from the given sources and from his or her knowledge stored in his or her mind. The content units or ideas usually included three or less intact identifiable orthographic structures in the source texts and they are evolved mixed with unidentifiable

sources other than the given sources. Some of the subjects mentioned that they learned it/them in certain courses. The writer of this excerpt included 78.26% generated CUs.

> <u>Higher education</u> is the way (S) that changing and developmental process held in the <u>academic community</u> (S). In most <u>developing countries</u> the rural and city areas are gained guidance from the developed countries such as United States <u>and other international agencies</u> (A18+SD). The experience of the education to the developing and change with the societies condition is low in underdeveloped countries (S). In order to be fruitful the study of science should be base on <u>linkage with environment</u> (S). Most of the time the <u>universities</u> link their educational strategy with the immediate concern (S) (I. role No. 59. Example 3) (The underlined phrases are from the given sources).

This writer composed his or her essay generating more of his or her own content units than exact copy and/or paraphrased content units. This essay included many added contents, substitutions and contents far from source texts. This writer was an averages student who scored C, C, B, and C grades in the four English common courses. This might suggest that some average scorers fall under this category.

Table 8 : Analysis of variance in generating content units

Source of variation	df	Sum of squares	mean square
Between groups	1	697.7286	697.7286
Within groups	68	3003.5429	44.1697
Total	69	3701.2714	

$F = 697.7286/44.1697 = 15.7965$, df $(1, 68)$, $p = .0002$

To examine whether the subjects in the control group or in the experimental group performed in a similar ways or one of the groups performed better than the other, a simple one way analysis of variance (ANOVA) was performed on generating content units and the results, reported in Table 8, show that the mean on 'generating content units' for the experimental group is statistically significant larger than that of the control group. In other words, the teaching of writing using sources for the experimental group was statistically significant in increasing the

total amount of generating content units that the subjects in that group could compose from the three source texts, and their 'digested' knowledge. In connection to constructing new information, Ackerman (1991) says " ...high knowledge writers placed over twice as much new information in their essays and relied less on explicit, text-based idea." (P. 159-160).

To examine whether the control group and the experimental group are the same or different in locating their generated content units, the content units of each subject were divided into quartiles on the basis of serial positions with equal numbers of content units in each quartile and the results are as follows: the *control group generated 24.25, 29.27, 18.97 and 27.51 per cent content units* while the *experimental group generated 32.38, 20.36, 20.59 and 26.67 per cent content units from the first, second, third and fourth quartiles respectively.* The pattern of generated content units by the control group is different from their patterns in verbatim and paraphrased content units whereas the pattern of generated content units by the experimental group is similar to their patterns in verbatim and paraphrased content units, especially the inclusion of Cus from the first and fourth quartiles of the source texts.

Concerning phase II (on the average from the three sources) , the control group generated 29.52, 21.90, 19.05 and 29.52 CUs while the experimental group generated 39.47, 20.68, 8.65 and 31.20 per cent CUs from the first, second, third and fourth quartiles of their essays respectively. However, the results do not show much difference between the CUs taken or generated by the subjects in both groups. The reason for including almost similar number of content units may be that the subjects composed their essays under examination conditions (within one and a half hours, in an exam room, under supervision) and the nature of the subject - scientific exposition. Referring to scientific exposition, Beaugrande (1984) points out that " the writer's experiences play a much smaller part" (p.302). So the specific content units in the sources might not allow them to generate new content units. This appears similar to Spivey's (1990) statement which says that writers may not add much to the source material when the source

texts contain enough relevant content to meet the needs of the writing task as the writer constructs it (p.279). It may also be possible to say that the writers in this study lacked adequate ability to manipulate the language structures which might enable them to generate new content units.

Integrating citations and documenting sources : 'Integrating citation' refers to the process of incorporating other people's discourse into one's own writing. It is characterised by quotation marks, use of indentation, different line spacing, and paraphrasing preceded or followed or both by documenting the source. The writer is expected to create appropriate context for citation. He or she is also expected to understand the relationships between the citation and the preceding and the subsequent content units. In spite of the fact that all the subjects in phase I took Sophomore English En 201 which is a prerequisite for Sophomore English En 202, most of them did not make proper use of integrating citation when they composed their essays. Thirty-one of the control group produced 294 verbatim CUs (an average of 8.63 Cus). They presented as if all the verbatim content units were composed by themselves ; however, four subjects did not copy any verbatim CUs. Out of the thirty-five subjects only two subjects included the three references at the end of their essays. As it is discussed under connecting and intertextual links, the verbatim CU is the 'least integrated content unit' in the subjects' essays. The experimental group composed 233 verbatim content units (an average of 6.66 CUs). However, in this case, twenty-eight subjects acknowledged their sources in 128 verbatim CUs. Although they seem better than the control group, why they didn't acknowledge all the sources when they transferred exact copies from source texts to their new texts is a very important issue. Three of subjects did not acknowledge the source although they copied exact words. The remaining four subjects did not copy any complete content units. In addition, sixteen subjects acknowledged 25 out of 265 paraphrased (sources' and subject's) content units while the subjects in the control groups did not acknowledge any of the 302 paraphrased Cus (See Appendix L-1).

Concerning the subjects in phase II, they were taking Sophomore English En 201

while this study was being conducted. The course entails writing a research paper which involves integrating citation and documenting sources; however, the control group (21) produced 205 exact copy content units(an average of 9.76). They did not attempt to acknowledge the sources texts, only two subjects included references at the end of their essays. The experimental group produced 190 exact copy content units (an average of 9.05). Here, seventeen subjects acknowledged the sources of 90 exact copy CUs.   One of the seventeen subjects did not include any references at the end of his or her essay. Four subjects did not acknowledge sources although they included exact copies in their essays. In addition to this, ten of the seventeen subjects acknowledged 33 out of 172 paraphrased content units whereas the subjects in the control group did not acknowledge the sources of 167 paraphrased content units (See Appendix L-2). So, most of the experimental groups demonstrated their ability to integrate citations and document sources whereas none of the control groups did so because they might lack the required knowledge. In relation to this, Campbell (1990) analysed essays written by 30 undergraduate native and nonnative speakers of English. She points out that the subjects in her study made very little reference to the author or text. She says " The lack of acknowledgement may have occurred because the students were unfamiliar with the convention, they lacked experience with it, or they overlooked it" (p.222-3). This may suggest the difficulty with integrating citations and documenting sources even for native speakers of English.

Connecting: Connecting is the process of establishing relationships among ideas from the sources as well as ideas from given texts and prior knowledge of the writer as a reader. It may take place at a word, phrase, sentence, paragraph, or a whole text level. It is one of the operations in constructing meanings from sources. There are different degrees of integrating ideas or parts of content units. Connecting covers from the least integrated quotations to the most integrated explanations of ideas from given source texts. Referring to integration, Campbell (1990) states, "Quotations would be the least integrated since the exact wording of the source text is transferred to the student writing signalled (ideally) by punctuation and reference to the author of the source text" (p.217). She also

considers explanation of important concepts in given texts as the most integrated type of information from sources. In writing using sources, the writer is expected to make inferences in order to clarify the implications in source texts. The writer is also supposed to generate ideas from his or her prior knowledge reactivated by the source materials so that he or she can establish relationships among ideas. This may help him or her produce coherent text. In relation to making connections among ideas, Franke and Grouws (1997) state " The connections an individual constructs vary based on an individual's access to information, the relationships being connected, and the number of times the relationships are activated or used over time" (p. 311). In this study, the writers in the experimental groups appear better in connecting ideas from the source texts as well as from their prior knowledge.

5.3.3 Intertextual Links

Intertextual links refer to the interaction, intersection and interrelationships among contents taken from source texts and generated contents from the sources texts and from prior knowledge of the writer as a reader. In relation to links, Mintzes et al. (1997) state :

> The formation of links requires retrieving knowledge from long term memory (LTM), consciously interpreting, evaluating, comparing, and contrasting new information with prior knowledge, and ultimately reconciling and assimilating new information by subsumption [from less-inclusive to more general - unicellular to animals), and superordinate [from more general to more specific - radio waves to electro-magnetic energy) learning (p.422).

In this case, making links among ideas seems a complex process because it involves long term memory, prior knowledge and schematic knowledge (See 2.6.1, 2.9.1, and 2.11.1).

The intertextual links made by the subjects in this study were manifested in various forms. In this connection, twenty seven of the subjects in the control

group followed the sequence of the source texts in the task i.e. linear or sequential arrangement of information. The subjects began composing using information from one text, then moved to the next text and then moved to his or her last text. Most of them started with the text on the first page and moved to the texts on the following passages consecutively i.e they started with the first and ended with the third source while few started with the text in the middle and moved either to the first or to the third text. The content units in their texts consisted of exact copy, paraphrased and generated CUs. The kind of intertextual links that starts with the first and ends with the last is to what Fairclough (1992) recognized as 'sequential' intertextuality in which "different texts or discourse types alternate within a text" (p.118). In this case, the content units from the three texts alternated within each student's essay. Five subjects made non-sequential intertextual links in which the writers started, for instance, with the first source , moved to the third, then to the first or second or third without any specific order. One subject used only two sources and he or she linked them without specific order. Another subject used only one source. Still another subject included only four paraphrased content units : three from the first and only one from the third. Almost all the content units composed by the last two subjects did not have any traceable orthographic phrase or sentence in the original texts. However, the meanings of the content units they composed seem to reflect the meanings in the three texts in general.

Concerning the experimental group, twenty-one, seven, and seven subjects started with the first, second, and third source texts respectively. Nineteen subjects followed non-sequential arrangement of information from sources while fourteen subjects followed sequential configuration of information from sources. Two subjects included exact copy Cus and paraphrased Cus only from the first source. Three subjects did not include exact copy or paraphrased content units from the third source; one subject did not include content units from the first, and still one subject did not include CU from the second. When we compare the intertextual links made by the control group and the experimental group, we can see that the intertextual links made by the experimental group appear more

interwoven, interspersed and interconnected than that of the control group. These better intertextual links may lead to better integration of information from source texts as observed in this data analysis.

In phase II, twelve, four, and five subjects in the control group began with the first, second, and third sources respectively while twelve, two, and seven subjects in the experimental group started with the first, second, and third sources respectively. One subject in the control group and one subject in the experimental group composed their essays using only two source texts. The subjects in the control group began with the first sources and them moved to the second sources but he or she did not return to the first source; however, the subject in the experimental group began with the third source and moved to the first and again moved to the third, then to the first source freely.

Concerning the arrangement of information, in the control group eleven and ten subjects followed sequential and non-sequential configuration of information respectively while in the experimental group, sixteen and five subjects arranged their information non-sequential and sequential respectively. In this case, more subjects following non-sequential arrangement of information in the experimental group seems better at integrating information which might be the effect of TWUMSA.

5.3.4. Five kinds of Writers

Analysis of the subjects' essays reveals five kinds of student writers: those writers who merely transferred content units from sources text to their essays whom I recognize as "compilers" because they simply joined content units from sources; those writers who tried to maintain the balance between exact copy, paraphrased, and generated or reconstructed content units whom I recognize as "harmonizers", those writers who attempted to detach their essays from the surface structure of source texts and reconstructed essays whom I recognize as

"reconstructivists", those writers whose essays consisted of mainly either exact copy and generated, or exact copy and paraphrased, or paraphrased and generated content units whom I recognize as "dualists" and those writers whose essays consisted of primarily paraphrased content units whom I recognize as " paraphrasers".

The "compilers" (12 subjects in the control and 6 subjects in the experimental groups) showed the least contribution to the content and surface structure of their essays, for instance, the writers of the following two excerpts included 84.85% (the first) and 100% (the second) content units in their essays.

> In educational environment inter-disciplinary, need -based activities, inter-university, inter-institutional cooperation are required in identifying specific roles (SU4). As many developmental area have been identified (SU5), it would not be difficult for all the universities in a region to sit together and come to an understanding (SU6). This gives universities greater freedom and recognition of values of academic standard, merit and respect for excellence (SU10) (I. role No. 3. Example 4).

> Earthworms usually remain near the soil surface (M7) but they are known to tunnel as deep as 2 m during period of dryness or in winter (M8).Earthworms also serve as fish bait (M17); hence the name angle worm and also provide food for a large variety of birds and animals (M10) (II. role No. 7. example 5).

Here the writers presented somebody else' voices without much contribution to the content or form. These writers are similar to what Goffman (1981) recognized as 'animators' in a communication system. Referring to the submissive role of a reader Goffman (1981) states "In short, he [the speaker] is the talking machine, a body engaged in acoustic activity, or if you will, an individual active in the role of utterance production. He is functioning as an "animator" (P.144).This includes the writer who merely manifests somebody's content units without much involvement himself or herself in modifying or adapting the content. The writers in the examples above did not take any initiative to maintain logical coherence of their essays at least by using suitable cohesive devices, conjunctions, references, or substitutions. When the writers jump from content unit at one location to other

content units at other locations in the same source text or in different source texts, it is likely that the essay will consist of isolated or fragmented content units. This is what happened with most of the essays especially in the control groups. Thus, it seems right to conclude that copying directly mostly others' content units may not enable the writers to improve their writing. The main issues are : Why did the writers composed their essays in such a way and how can we help them to liberate from such manifestations in their academic writing? Although it is difficult to specifically point out the primary causes, problems of understanding texts and lack of adequate ability to manipulate language structures may be the causes. In connection to why some students plagiarize, Hull and Rose (1989) concluded that some students plagiarized their essays when they felt they were expected to produce research papers in a language they might have barely mastered. In relation to plagiarism, Bloch and Chi (1995) state "...plagiarism may be a compensatory strategy used by novices just entering a field and experts well established in their discipline" (p.238). As to the remedy, Johns (1981) and Campbell (1990) recommended the teaching of strategies or operations such as paraphrasing, summarizing, quoting to ESL students to dissuade them from copying.

The "harmonizers" (13 subjects in the control and 20 subjects in the experimental groups) showed substantial contribution to the content and surface structure of their essays by restructuring and orchestrating the content from various sources and making use of some paraphrasing activities. For example, the writer of the following excerpt included 37.93, 34.48, 27.59 per cent exact copy, paraphrased, and generated content units respectively.

> In this essay, I will try to deal with the role of higher education in the process of national development.(S), according to Apparaw, Joshi and Surdarsnam.
>
> Higher education is a forward movement to change (S) and it needs new direction to meet its goals (A2+S). For example, the academic community is expected to play a leading role in these process of development and planning (A3). They should help in the extension of knowledge distribution in the community (S). In all developing countries the chance of getting knowledge, research and new skills

have yet to reach to those people (A6) who are in need to it (A7).
Of course, some parts of our contemporary world has reached a
stage of highly advanced science and technology (S). So, there is a
need of helping to develop for those societies (S) who do not reach
these stage yet (S), by introducing appropriate technology; which
is a means to promote individual and community self-reliance (A12)
(Apparaw, 1980 : 14) (I. role No. 65. Example 6)

As can be seen from the above example, the writer sometimes included exact copy content units, and joined to other content units by adding some words at the beginning and/or at the end of the content units. Sometimes, he or she reconstructed almost half of the words of some content units. Here, the writer seems to make some sort of selection, addition of some cohesive devices, conjunctions and references to create harmony among the content units from sources and knowledge stored in his or her mind. He or she showed some transformations in the essays. Although the essay included exactly copied phrases in parts of the content units, the proportion of copied phrases and reconstructed phrases to form different content units appear almost balanced because included exact copy, paraphrased, and generated content units are in almost balanced proportion. As to the background of the writer at the University, he or she scored C, B, A, and B grades in the four English common courses. This may suggest that some above average or high scorers fall under this group.

The "constructivists" (4 subjects in the control and 7 subjects in the experimental groups) seem to show many integrated content units, if exact copy, paraphrased and generated content units represented integration of information along a continuum from the least integrated to the most integrated content units. Especially, coding content units as paraphrased or generated or reconstructed CUs is based on the features exhibited in the content units. So, there are some overlapping features at their boundaries. Here, the writers attempted to reflect the content of their source texts usually in their own words. They included added content units, cohesive devices, conjunctions, and substitutions but they did not engage in selecting content units from the sources that may serve them as frame of references. For example, the writer of the following excerpt included 80.95%

generated content units.

> As far as we know the world is to static(S). It is moving (S) and the problems are changing from time to time (S). So, the education system also has to move and change the ways of its approach for different movements and problems (S). Today the world is full of tremendous changing in technologies and social lives (S). It is moving fast, especially the developed countries such as America, China, Japan. To reach them, we underdeveloped/developing countries have to run (S) when they walk (S). Otherwise we will be always behind them(S). Here, self-reliance is a good system for underdeveloped/developing countries (A12+S) (I. role No. 62. Example 7).

In this case, the writer tried to reflect the content of source texts. The shortcoming with "reconstructivists'" as shown above is that there was observable detachment from the sources and the writer did not indicate whether he or she understood the sources by selecting and including exemplary content units, paraphrasing, integrating citations and documenting source of information they used in creating their essays. In this category, some extremists composed all the content units on their own words and content units. Some of them misinterpreted some content units in the source. Referring to arguing from sources, Kaufer and Geisler (1989) viewed "sources as enabling vehicle" (p.297) for establishing one's position. So, one weakness of the writers in this category is that the writers did not make adequate use of sources to enable them to compose their essays.

In relation to one reader, Hartman (1994) states:

> She [Dana] generated the highest proportion of *exogenous* intertextual links among the eight students. Nearly three-fourths of the textual resources she referenced were outside the task environment (71.4 per cent). In contrast, the group only referenced *exogenous* resources - two-fifths of the time (39.4 per cent). This strong tendency of hers not to transact with the passages in constructing a "textual world" suggests a *resisting* way of reading (p.632).

The above quotation indicates the criteria for grouping the readers in the study and some of the behaviours they exhibited when they read the sources texts. Although it is very difficult to show the relationship between the writer and his or

her essay, in example 7, the writer scored four "C" grades in the four English common courses. This may indicate that some average scorers tend to generate content units considerably departed from the source texts in content and form.

The "**dualists**" (25 subjects in the control and 22 subjects in the experimental groups) produced at most below 64% and at least above 16% content units from any two of the three categories (Exact copy, paraphrased and generated CUs). Their essays consisted of either exact copy and generated, or exact copy and paraphrased or paraphrased and generated content units. The content units composed by these writers are exact copy and generated 2 and 6, exact copy and paraphrased 13 and 4 and paraphrased and generated content units for the control and experimental groups respectively. In most cases, the writers did not include enough content units from any of the third category. Their essays lacked either exact copy, or paraphrased or generated content units.

The "**paraphrasers**" (2 subjects in the control groups and 1 subject in the experimental groups) produced 93.33%, 70.83% and 68.18% paraphrased content units. Here, the writers could not demonstrate how to integrate citations and document sources. They could not also indicate whether they were able to generate content units from source texts and from knowledge stored in their minds. It is also difficult to observe their ability to interrelate content units. (See Appendix M1 and M2).

Chapter 6: Analysis, Findings and Discussion of Responses to the Questionnaire, questions related to the final essays and Interview data

6.1.0 Introduction

Chapter six comprises two sections. The first section analyses and discusses responses to students' and lecturers' questionnaires, and strategies used by the subjects in composing their essays. The questionnaire to students involves students' attitudes toward writing from other texts, knowledge of subject matter, familiarity with, confidence of doing well, functions and importance related to writing from other materials. It also considers the students' perceived beliefs of their capabilities to write using sources, satisfaction, achievement, and meeting lecturers' expectations. It also discusses the types of drafts, feedback, importance of revision, time allotment, and strategies followed and strategies suggested by the subjects. The questionnaire to the lecturers involves almost the above mentioned variables from the lecturers' perspectives. Section one also analyzises and discusses the strategies or activities the subjects followed to compose their essays. It also explains some problems the subjects faced in composing using multiple sources. In addition to this it lists the major problems according to the subjects' reports and their test papers and their rough drafts.

The second section begins with the discussion on the relevance of interview data to this study. It analyzises and explains the data obtained from eleven interviewees. It involves writing assignments using other sources, materials for writing tasks, and effects of writing from other materials on academic achievement. It also entails reading, text marking, and reading-writing relationships, difficulties faced and strategies followed when the subjects were expected to write using sources. It also analyzises and discusses processes of writing using sources, perceived beliefs of highest and lowest scorers of high and low scorers, benefits of learning writing through TWUMSA, and general ideas on TWUMSA.

6.1.1 Questionnaires to students and lecturers

A set of statements about particular items in the questionnaire accompanied by rating scales in verbal form (which was converted into numeric 4-1 i.e. a-d during calculations) such as a. very high, b. high, c. moderate and d. little opinions about the item were prepared. Respondents were requested to write the letter of their choice on the blank spaces provided for the responses. The total scores are taken to indicate the respondents' positions in respect to the particular item. Here, the assumption is that there is strong relationship between the strength of respondents' , for instance, attitudes, perceived beliefs of their capabilities, etc. and task performances, efforts and outcomes. Thus, the aim of the questionnaires (two types - for lecturers and students) was to measure the strength of the students' attitudes, perceived beliefs, efforts, strategies related to academic writing using sources based on their and their lecturers' responses. In relation to motivation Silva and Nichollis (1993) state " A number of studies of academic motivation have revealed rational relations between students' academic goals and their beliefs about the causes of academic success" (p.281). In addition to this, referring to attitudes, Foddy, (1993) states " Researchers are often tempted to design and use questions that will allow them to measure the strength of respondent attributes instead of just noting their presence or absence" (p. 153). Dembo and Eaton (1997) also pointed out that students' cultural and classroom experiences influence their beliefs. Thus, to gather relevant pieces of information, 200 and 38 completed copies of the questionnaires prepared for students and lecturers respectively were collected.(See 4.6.1 and 4.11.1).

6.1.2 Attitudes

Learners' attitudes toward a course they attend may have an impact on the efforts they make and the scores they obtain. When learners have a favourable attitude towards a given course of study, they seem to devote much more time and energy to attain their goals. Favourable attitude may also have an inexplicable interrelationship with the importance of the course to their overall achievement and with the intensity (the strength of quality of feeling) of concentrated effort they indicate to fulfil their expectations.(See 3.9.1).

The students rated their attitudes toward learning to write using sources. The ratings were to a *certain amount 47 per cent, not much 26 per cent, a lot 24 per cent , not at all one per cent and no response two per cent.* This indicates that the majority of the students believe that they could improve their academic writing by looking at techniques helping them to use multiple sources; however a large number rated not much which may be due to lack of adequate knowledge of 'academic writing'. The students also rated their desire to learn important strategies of writing using sources as follows: *very strongly agree 46 per cent, strongly agree 23.5 per cent, agree 26 per cent, disagree 3 per cent and no response 1.5 per cent.* Findings in this study demonstrate that the experimental group performed better than the control group. In this case, strong desire to learn techniques of using sources might have an impact on their task performances.

6.1.3 Knowledge of subject matter, belief of doing well, familiarity, functions and importance

Table 9: Students' knowledge of subject matter, belief of doing well, and familiarity with writing from other texts

Variables	v.strongly a.	strongly a.	agree	disagree	no resp.
knowledge	40	33	22.5	4.5	-
belief	14	33.5	47.5	4.5	0.5
	Very high	high	mod.	little	no resp.
familiarity	17.5	16.5	51	14	1

The students were asked to rate their belief of the importance of knowledge of subject matter when they write using sources. As reported in Table 9, the students' beliefs on the importance of knowledge of subject matter was likely to inspire them to engage in relating prior knowledge to writing using sources (See 2.11.1). The students were asked to rate their belief in their ability to write from other texts. As shown in Table 9, the results indicate that the intensity of their perceived belief in their ability to write is moderate which in turn seems to indicate that the students were not satisfied with their writing ability. This may be the reason why almost half of them expressed their desire to learn writing using sources. In addition to this, the students rated their familiarity with writing using sources as show in Table 9. Here, the majority of the students did not indicate strong familiarity with writing using sources to meet the expectations of their university courses. Concerning the main functions of writing using sources, the students rated that they needed it to write: lab. reports twenty-seven, research paper eighty-four, essay writing fifty-eight, essay type examinations twenty-five and no response six. In this case, the majority of the students indicated that they used it to write research paper and essays. Moreover, the students' ratings to what extent they thought that reading and writing assignments could help them to improve their writing using sources were *very great 34 per cent, a great 41.5 per cent, moderate 16 per cent, little 7 per cent and no response 1.5. per cent.* Most of the students considered reading and writing as important factors in creating enabling conditions to improve academic writing (See 3.3.1). In relation

to value attached to a task, Pokay and Blumenfeld (1990) pointed out that students' value for a task inspires them to cognitively involve in it and to persist at it willingly.

6.1.4 Students perceived beliefs of their capabilities (in percentage), Mean, Standard Deviations, and Total

Table   10 : The students' perceived beliefs of their capacities

Variables	V.high	High	Moderate	Little	N.Resp	Mean	SD	Tot
Organizing	11.5	40	41.5	6	1	2.58	.78	510
Selecting	18	43	35.5	3	.5	2.76	.78	550
Combining connecting	11	46.5	37	4	1.5	2.65	.73	523
Integrating	5	44	42.5	5.5	3	2.50	.68	485
Academic writing	12.5	38.5	44.5	3	1.5	2.61	.74	515
Writing using sources	10	30.5	43	14	2.5	2.37	.85	463
Sentence variety	7.5	35.5	44	11	1.5	2.40	.79	473
Range of vocabulary	8.5	21.5	53.5	15.5	1	2.23	.82	442
Expressing	9	37	46	5.5	2.5	2.51	.74	489
Structures	18	48	25.5	7.5	1	2.77	.83	549
Punctuating	16.5	38	32.5	12	1	2.60	.91	514
Sp. and Capitalization	32.5	42.5	20	3	2	3.07	.81	601
Providing details	9.5	42	44	3	1.5	2.59	.71	510

Table 10 reports the students' perceived beliefs of their capabilities to perform tasks related to the variables included in Table 10. The students' perceived beliefs of their capabilities are mainly distributed to the abilities of high and moderate intensity. The students indicated that they possess the least ability in using range of vocabulary when they write. The next area where the students indicated to have low performance capability is writing using sources. The results in general seem to correspond to the findings of the subjects' essays in which the subjects included exact copy content units without any attempt to integrate to their texts and without any acknowledgement to the sources. In addition to this, the total scores on the twenty-four variables in the questionnaire, (excluding item numbers 5, 24, 27, 28, 30 and 31), is 12657. When we divide the total scores by the

number of variables, we get the average score of each variable (527.375). When we further divide the average scores by the number of subjects (197 or 196.71 - excluding no responses or the missing values of the twenty-four variables), we get an average of 2.68 out of 4 points. This result is similar to the majority of the students' GPAs at the University of Asmara which is usually between 2 and 3 points on the 4-point scale. When we convert this average scores into hundred, we get 67.02 which is still similar to the average scores of the subjects in this study (65.19). (Almost half of the students who completed this questionnaire are the subjects who served in this study). These results indicate that the students' perceived capabilities are strongly related to their previous achievements. In addition to this, the results of 27 variables completed by 326 students in the pilot study is similar to this findings. The students, on the average, scored 2.60 out of 4 or 65 out of 100 (i.e. the total scores (22868) divided by the number of variables to get the average score of each variable. Then when we divide the average score by the number of students we get 2.598). The findings also indicate consistency in evaluating the items of the questionnaire in the main and pilot studies. Referring to students' perceived beliefs of their capabilities, Schunk and Swartz (1993) pointed out that individuals acquire information about their perceptions from their performances, experiences, and information given about them by other people. Thus the students' perceptions in this study seem to support Schunk and Swartz's views.

6.1.5 Satisfaction, achievement, and fulfilling expectations

Table 11 : Students' satisfaction, achievement, and fulfilling expectations

Variables	v. High	high	moderate	little	no resp.
satisfaction	10	35.5	48	5.5	1
achievement	7	44	39.5	8	1.5
fulfilling exps.	8.5	43.5	39	6	3

The students were asked to rate their satisfaction with writing ability using sources. As shown in Table 11, the students' moderate satisfaction may indicate that they understood their inadequacy to meet the requirement of university

courses in reference to writing using sources. They were also asked to rate what they thought of their achievement. The responses in Table 11 suggest that the majority of the students were happy with their achievement as measured up by their scores.

The students also rated to what extent they fulfilled their lecturers' true expectations in writing from other materials. Table 11 shows that majority of the students were satisfied to meet their lecturers' expectations. Regarding satisfaction with their writing ability, achievement, and fulfilment of their lecturers' expectations, what were the frames of references for their evaluation? According to the University regulation, most of these students met the university requirement for sophomores in that most of them had a GPA between 2 and 3 points in the 4-point scale. Their perceptions also appear to correspond to the scores given by the raters to the subjects in this study. However, the analysis of the subjects' essays indicates that exact copy content units without acknowledgement are believed to be least integrated with the knowledge in their minds. This type of learning is considered as poor and undesirable form of learning especially at the university level.

Table 12 : inter correlations

	ACAWR	COMB	FAMIL	INCOR	KNOW	ORG	SELECT	USE TEXT
ACAWR	-	.4236	.3156	.2737	.1358	.3115	.2776	.3561
COMB		-	.3018	.4757	.2563	.4019	.3366	.2101
FAMIL			-	.1817	-.0049	.2938	.1918	.2287
INCOR				-	.2226	.3440	.2634	.2772
KNOW					-	.1773	.1506	.1124
ORG						-	.3867	.1998
SELECT							-	.1647
USE TEXT								-

Abbreviations: ACAWR= academic writing, COMB = combining, FAMIL = familiarity, INCOR = incorporating, KNOW = knowledge, ORG = organizing, and SELECT = selecting.

Note : The underlined correlations are not significant.

The variables in Table 12 show positive relationships except familiarity of academic writing with knowledge of subject matter. All the correlations except the

underlined ones are significant, p < .05. Variables such as (1) combining (connecting), (2) incorporating (integrating), (3) organizing and (4) selecting are included in the analysis of the subjects' essays. Correlation between combining and incorporating shows the highest relationship, r = 0.48. Comparatively, the relationships among the four variables are higher than the relationships of these four variables with the other variables shown in Table 12. These variables indicate higher positive relationships in the analysis of the subjects' essays, too. Thus, the inter-correlations among the variables in the students' essays and the same variables in the analysis of the responses to the questionnaire seem to show some sort of similarities in that the variables show comparatively higher inter correlations in many cases (see Table 3a).

6.1.6 Types of drafts, feedback, importance of revision and time allotment

When the students were asked what type of drafts they submit to their lecturers, they indicated submitting *without draft 1 (per cent), one draft 37. 5 , two draft 38, three drafts 22 and no response 1.5.* These results indicate that the majority of the students prepared either one or two drafts. Referring to the kind of feedback they needed, the students rated on how to: *organize their writing 26 (per cent), select the content of their writing 19, connect ideas from sources 27.5, integrate ideas stored in their minds with ideas from texts or sources 25 and no response 2.5.* The results seem to demonstrate that the students needed feedback especially on how to connect, integrate and organize ideas with a bit lower need for selecting ideas. Moreover, they were asked what they did with the corrected writing assignments, the ratings were 5 per cent rewrote it, 42.5 per cent made corrections on it, 43.5 per cent kept it for reference, 8 per cent did not refer to it later and no response one per cent. The majority of the students stated that they made corrections on it which seems an ineffective way of incorporating the feedback into their texts and it is unlikely that they receive the expected support from such handling of feedback. Referring to this, Schunk and Swartz (1993) state "The process goal [learning to use the strategy] plus progress feedback condition

demonstrated higher performance than the progress goal without feedback condition in both experiments" (p.352). This may show the influence of feedback on teaching writing in general. (See 3.7.1).

Referring to the importance of revision, the students rated *important 55.5 per cent, quite important 37 per cent , not really important 2 percent, not at all 1.5 per cent and no response 4 percent* when they were asked to rate to what extent their lecturers helped them to realize the importance of revision in learning to write. These results show that most of the students believed that their lecturers considered revision as a useful activity in learning to write. The problem with revision is the lack of the required ability to use revision strategies. In connection to this, Fitzgerald (1992) states " Good thinking in revision in the final-stage-editing view requires knowledge of good text features in order to make needed changes on the paper to improve the quality of the draft " (p.343). Ability to organize texts and paraphrase may play an important role in revision.

The students were asked to write down how they divided their time when they completed a writing assignment between reading, note taking, planning, writing the first draft, and revising. 188 students gave complete responses from one per cent to fifty percent. Their responses were, on the average, *reading 25.65, note taking 20.55, planning 13.28, writing the first draft 22.98 and revising 14.08 per cent.* These results show that the students spent most of their time on reading, writing the first draft and note taking but less time was given to revising and planning. In relation to planning in writing from sources, Kennedy (1985) found that the less fluent readers in her study engaged in less planning than the truly fluent readers. According to Kennedy's finding, the subjects in this study exhibited the behaviour of less fluent readers in planning.

6.1.7 Strategies followed and strategies recommended (different)

The students were asked to rate to what extent they thought they followed the informal methods of discovering and exploring ideas in writing such as prewriting, freewriting, brainstorming, looping, and outlining. The responses were *very great*

10.5 per cent, a great 32 per cent, moderate 43 per cent, little 11.5 per cent and no response 3 per cent. These results indicate that the majority of the students did not fully apply the above mentioned strategies when they were writing. Their textbooks did not involve these strategies when they were expected to write composition. This can be observed from the strategies they mentioned when they were asked to write the strategies or steps they followed when they read texts for writing. Some students included more than three strategies. Hence, the strategies mentioned were *note taking 128, drafting 85, revising 82, organizing 52, planning 28, rewriting 28, connecting 25, summarizing 19, final drafting 17, selecting 16, rereading 14, outlining 11, and paraphrasing 5 times.* The students mentioned about thirty-three strategies such as memorizing, jotting, underlining from one to four times. However, prewriting, freewriting, looping, and brainstorming were included twice each. This might indicate that the students did not receive adequate basic writing strategies in the early stages of writing.

In addition to this, the students were requested to write down any strategies or steps that they thought might be helpful to improve writing using other texts or sources to create new texts. They suggested the following strategies or steps in descending order of frequency: *organizing 63, reading skill 42, writing skill 38, selecting 30, summarizing 24, connecting 19, understanding 14, interpreting 12, writing from sources 10, paraphrasing 9, vocabulary, grammar usage, and punctuation 7 times each, spelling 6, and revising 5.* They also suggested about sixteen strategies from one to four times each. The total tally for this question is 377. This means that some students suggested one, others two or more, but some students did not suggest any strategy. This low tally might suggest low familiarity of the students with basic writing strategies.

6.2.0 Analysis, findings and discussion of Lecturers's data

Sixty-six copies of the questionnaire prepared for lecturers who were teaching sophomores were distributed but thirty-eight copies were completed and returned (see 4.6.1 and 4.11.1). The lecturers were from seventeen departments at the University of Asmara.

6.2.1 Attitudes, ability to do well, functions and evaluation

The lecturers were asked to rate the attitudes of their sophomore students toward writing using sources. The lecturers indicated *very favourable 5.3 per cent, favourable 44.7 per cent, indifferent 36.5 per cent, and unfavourable 13.2 per cent.* Although the majority of the students were believed to have favourable attitudes, a large number of them were believed to be indifferent to it. This might be the result of unfamiliarity with the approach which corresponds to the students responses to the question on familiarity in which 51 per cent rated moderate familiarity with writing from sources in general.

The lecturers were also requested to rate their belief of whether the students could do well in academic writing using sources. The responses were *very strongly agree 5.3 per cent, strongly agree 13.2 per cent, agree 60.5 per cent, disagree 18.4 per cent and no response 2.6 per cent.* Although the lecturers perceived belief of the ability of the students was positive, the intensity was moderate. The lecturers did not indicate strong belief of the ability of the students. This seems to contradict with the students' perceived belief of their ability to writing using sources in which 47.7 per cent rated strongly agree that they could do well in writing from sources.

Concerning the primary use of writing using sources, the lecturers indicated that their students needed it to write lab. reports two, research paper nine, essay writing one, essay type examinations eighteen, note taking two and no response six. Although students' academic needs are decided by the departments, the majority of the lecturers indicated that their students need writing using sources to write essay type examinations.

The lecturers were requested to rate their evaluation of the students' writing ability using sources. Their responses were *excellent none, very good 7.9 per cent, good 57.9 per cent, and unsatisfactory 34.2 per cent.* The results indicate that, on the one hand, the intensity of evaluation of the majority of the students

fall under moderate , on the other hand, a large number of the students fall under low intensity of evaluation of the student ability. This lecturers' judgement of their students' writing ability differs greatly from the students' judgement of their own ability to writing using sources. Here, the analysis of the subjects essays seem to support the lecturers' perceived belief of the students' ability to write using sources. (See 5.3.1).

6.2.2 Lecturers' perceptions of students capabilities

Table 13: The students' perceived belief of their ability factors (in percentage), Mean, Sd. and Total

Variables	V.high	High	Moderate	Little	N.Resp	Mean	SD	Tot
Organizing	-	10.5	68.4	21.1	-	1.89	.56	72
Selecting	-	15.8	57.9	26.3	-	1.89	.65	72
Combining connecting	-	10.5	55.3	34.2	-	1.76	.63	67
Integrating	-	13.2	39.5	39.5	7.8	1.71	.71	60
Academic writing	-	13.2	63.2	21.1	2.6	1.92	.60	71
Writing using sources	-	13.2	31.6	52.6	2.6	1.59	.72	59
Sentence variety	-	10.5	44.7	39.5	5.3	1.69	.67	61
Range of vocabulary	-	7.9	47.4	39.5	-	1.67	.63	60
Expressing	-	10.5	57.9	28.9	2.6	1.81	.62	67
Structures/grammar	-	21.1	44.7	34.2	-	1.87	.74	71
Punctuating	-	21.1	34.2	42.1	2.6	1.78	.79	66
Sp. and Capitalization	2.6	15.8	50	28.9	2.6	1.92	.76	71
Providing details	-	13.2	63.2	21.1	2.6	1.92	.60	71

Table 13 reports lecturers' beliefs of their students capabilities to accomplish writing task related to the above mentioned variables. The ratings of the lecturers' perceptions are mainly distributed to moderate and little. It is also interesting that the lecturers did not indicate 'very high' ratings except in one case of 2.6 per cent. The lecturers indicated that their students possess the least capability of writing using sources. Range of vocabulary comes after writing using sources. In addition to this comparison of rank order of lecturers' perceptions of their students' capabilities and the students' perceived beliefs of their capabilities indicate

similarities im most of the cases. When we put the variables in Table 13 in a rank order according to the ratings made by the students and the lecturers, we can see some closeness in ranking, for instance, writing using sources received the least score from the lecturers and the second from the last from the students(see the means in Tables 10 & 13) . Writing using sources is a demanding task (See 2.4.1); range of vocabulary is second from the last according to the lecturers and the least according to the students. Knowledge of vocabulary is very essential in writing (See 3.6.1.). Although the lecturers and the students differ in scoring, they are similar in ranking the variables and this indicates that the lecturers and the students reflected similar perceptions of capabilities to writing using sources.

In addition to this, 45 lecturers completed a questionnaire for a pilot study and other 38 lecturers completed the revised questionnaire for the main study and comparison of the results of these two studies appear similar because the average scores out of 4 are 1.70 and 1.86 for the pilot study and the main study respectively. This may indicate some consistency in rating the statements in the questionnaires by the lecturers for pilot and main studies

6.2.3 Satisfaction, achievement, and fulfilment of expectations

Table 14: lecturers' report on satisfaction, achievement, and fulfilling expectations

Variables	v. great	great	moderate	little	no resp.
satisfaction	0	15.8	52.6	26.3	5.3
achievement	0	10.5	65.8	18.4	5.3
fulfilment exps.	0	15.8	47.4	28.9	7.9

The lecturers were asked to rate to what extent they thought they were satisfied with their students' writing ability using sources. As reported in Table 14, the majority of the students possessed writing ability of moderate intensity. 26.3 per cent of the students were believed to possess almost no writing ability using sources. These results seem to correspond to the results of the analysis of the

subjects' essays; however, the students also rated themselves as possessing a writing ability of moderate intensity of 47.7 per cent which differs from the lecturers' evaluation.

The lecturers rated to what extent they thought their students achieved the required degree of performance in writing using sources. The results shown in Table 14 demonstrate that about 18 per cent totally lack the requirement whereas about 66 per cent possessed the required degree of moderate intensity. In addition to this, the lecturers were asked to rate to what extent they thought their students fulfilled their true expectations in writing using sources. As indicated in Table 14, the majority of the lecturers seem to believe that their students meet their expectations satisfactorily; however, about 29 per cent perceived them as those who failed to meet the expected requirement. This is contrary to the students' perceived belief of their writing ability in which they rated a great 43.5 per cent and little only 6 per cent. This also indicates that the lecturers and the students had very different perceived beliefs of writing ability using sources.

6.2.4 Kind of drafts, feedback, Revision and Suggested strategies

The lecturers were asked what kind of drafts the students submit when they give them writing assignment. Their responses were submitting *without preparing a rough draft 13.2 per cent, after revising the draft once 42.1 per cent, twice 5.3 per cent, more than twice 10.5 per cent and no response 28.9 per cent.* The majority of the lecturers reported that the students submitted their writing assignments after revising the rough draft once; however, revising the rough draft only once might not enable the students to make necessary changes in writing in a second language.

The lecturers indicated what kind of feedback the students needed. Their ratings were how to: *organize their writing 5.3 per cent, select the content of their writing 5.3 per cent, connect ideas from sources 7.9 per cent, integrate ideas stored in their minds with ideas from texts or sources 5.3 per cent, all the above 68.42 per*

cent and no response 7.9 per cent. Most of the lecturers believed that the students wanted feedback in all of the above mentioned strategies.

The lecturers were requested to rate what their students do with the corrected texts. The ratings were rewrite it 2.6 per cent, make correction on the same paper 13.2 per cent, keep it as it is for reference 31.6 per cent, do not refer to it later 26.3 per cent and no response 26.3 per cent. According to the lecturers, the tendency of the students was to keep the corrected text as it is but not to refer to it later. The high percentage of no responses to the question which deals with preparing drafts 28.9 per cent (6.2.4) and handling the corrected paper 26.3 per cent might suggest that most of these lecturers might not give writing assignments. Referring to the guidance on writing only one student requested for help at the back of the last page of the copy of his or her questionnaire which says:

> We are now taking Sophomore English for the last time. We don't meet with any English lecturer formally. So, this questionnaire is not important for us but we evaluated our skill. Finally, I am eager to know how to write essays and to do research from books. Thus I would politely request you to advise us on this major problem of us. I tried many times to read books and then to write about what I read and I got difficulties. Now I need your help for advice. I will not doubt on this interesting skill which is a big tip for us.

The writer of this request might have observed that his or her department has not offered any course which might enable students to socialize according to the needs of the academic community of that department.

When the lecturers were requested to write down any strategies or steps that they thought might be helpful to improve writing ability using other texts or sources to create new texts, they suggested the teaching of strategies or steps such as how to: consult periodicals, paraphrase, select, connect, summarize, take (lecture) notes, integrate, write drafts, research paper, term paper, report, essays, and composition, locate ideas, revise, read more, and develop vocabulary.

6.3.1 Strategies or steps the subjects followed to create their texts During the posttest

The subjects were asked to answer seven questions on the strategies or steps they followed when they composed they texts. The prompt given was 'when you have finished creating the new text, answer the following questions on the strategies or steps you have followed in composing your text(see Appendix B).

First the students were asked how many times they read the passages. The responses of the subjects in the control groups were *reading once six, twice twenty-five, three times seventeen, four times three, five times one and no response four* whereas the responses of the subjects in the experimental groups were *reading once five, twice twenty-two, three times twenty-three, four times five and no response one.* The results indicate that more subjects in the experimental groups read three and four times than the subjects in the control groups. This might have contributed to better scores of the subjects in the experimental groups.

The second and third questions requested the student to write about activities related to text marking. The answers of the control groups were *note taking forty-five, underlining twenty-two, underlining plus note taking five, jotting two, summarizing two, highlighting one and no response three* whereas the answers of the experimental groups were *note taking thirty-four, underlining twenty-two, underlining plus note taking fifteen, writing comments two, writing meanings two, writing on the margins two and no response two.* The experimental groups appear to use more underlining plus note taking than the control groups but the control groups used more note taking. As a whole, the groups do not show much difference in activities related to note taking. In connection to this kind of strategy use, Kennedy (1985) found out that the truly fluent and the less fluent readers used the same strategies but the fluent readers used the strategies more frequently.

An examination of the three texts collected from the subjects after they completed the writing task reveals the following activities.

Table 15 : Activities during reading and writing

Activities	control group i	Experimental group i
underline words	90	193
Underlined phrases (2-5 words)	198	194
underlined lines (when added)	18	195.9
Underlined pages	1	1.5
Meanings on margins	12	50
comments on margins	7	60
encircled words	25	-

The subjects in both groups did not show much engagement in activities related to reading to write. The experimental group seem to show higher involvement in underlining words and phrases, in writing meanings of words and phrases on margins and writing comments on the margins than the control group. Although they did not encircle words, they engaged in many texts more marking (activities such as asterisk, brackets, stars, question mark, numbers, quotation marks) than the control group did. In connection to encircling words, Taylor (1984) pointed out that the inexperienced readers in his study encircled primarily individual words. In addition to this, the control group in phase II *underlined 259 words, two-third of a page, and 13.5 lines* while the experimental group *underlined 200 words, two pages and 22. 5 lines;* however both groups did not engage in other text marking activities. In relation to activities in writing from sources, Kennedy (1985) states:

> The truly fluent group read the text with pencil-in-hand, overtly employing many spontaneous learning activities like underlining and providing comments that revealed they were interacting with the authors in a deliberate way. Conversely, the not-so-fluent group were passive processors who read the texts with hands tied behind their backs, rarely using study-type strategies or acting upon the

texts in an assertive way (p. 451).

The subjects were also asked how many times they rewrote their drafts to produce the new texts. The responses of the control groups were:

> once eighteen subjects, twice twenty-nine, three times six and no response three. The responses of the experimental groups were once thirteen, twice thirty-seven, three times four and no response three. These results indicate that more subjects in the experimental groups rewrote their drafts twice than the subjects in the control groups whereas in the control groups more subjects rewrote their essays once. Writing more drafts might have contributed to better scores of the subjects in the experimental groups because more drafts imply more revision and better opportunity of using alternatives which might lead to improved writing.

Table 16: The level of difficulty of the writing task

Groups	Easy	okay	n easy	mod	nmdif.	not dif.	dif.f	V. dif.	too dif.	no resp
Control	10	1	-	11	-	2	27	1	1	2
Expt.	15	-	1	8	6	-	22	4	-	-

Abbreviations: n= not, mod= moderate, nmdif= not much difficult, and v=very

The subjects were requested to tell whether the writing task was easy or difficult and to substantiate their statements. As reported in Table 16, there is not much difference between the control and experimental groups as to whether it was easy or difficult. As to the reasons why they stated it was easy or difficult, there appear some differences, for example, the control groups mentioned more problems such as long sentences, no experience, to write in one's own words, to organize, to identify main ideas, difficult words, linking the passages, "We haven't dealt much about note taking from sources", to combine ideas, unfamiliar concepts while the control group included only a few problems such as needs deep understanding, selecting ideas and paraphrasing them, needs a lot of time and effort. Although the ratings for 'difficult' by both the groups do not show big difference , the experimental groups included more favourable comments than the control groups. Comments such as : I have experienced in writing from sources, I get accustomed with the work, the lectures given on En 202 helped me how to write from sources refer to why they said it was easy.

Regarding the portions of the passages which caused problems, the answers of the control group in phase I were the third passage fifteen, the second passage two, all the passages four, unspecified paragraphs three, no difficulty two and no response eight whereas the responses of the experimental group were the first passage one, the second passage four, the third passage eight, first paragraph of each passage two, unspecified four, no difficult nine and no response seven. The control and the experimental groups seem to agree in the sense that the third passage caused problems to many of them although more subjects in the experimental group indicated that they had no problems. In addition to this, their answers correspond to the least inclusion of content units from the third passage in their essays. Taylor (1984) considered "reading processes, note taking, abstracting, monitoring, analysing, and writing processes" (p.698) as main reasons that caused differences between the inexperienced and experienced summarizers in his study.

The subjects were requested to give detailed information of the problems they faced in writing using sources and they considered the following points as their major problems:(Almost all the words, phrases, and sentences are directly taken from their answers to question number seven).

Difficulties of the control group in phase I
length of the sentences,
to take notes,
to select,
to organize,
how to take important things and use my own words,
the work is tiresome,
to differentiate important points,
to use my own words and organize the ideas,
long passages and forget the main ideas,
don't have prior knowledge,
takes much time,
how to organize and to take notes,
I cannot extract (exploit) the message of a part from the passage unless I take
some of the sentences as they are from the passage,
linking the passages,
to understand and to organize,
to interpret/ to compose/ to organize,

to use your own words-to find words,
vocabulary or word choice-I doubt whether I could give my own comment or not-criticism,
how to organize and to shorten,
which part to take which part to leave,
to write coherently and to connect different ideas,
to express the sentence in terms of other words,
in choosing the kind of source to use for my research,
long sentences-hard words that need deep understanding,
to pick out relevant idea - words,
reporting 'I' or 'we',
to squeeze the whole passage into a small and brief passage,
in arranging sentences,
to compose them in one,
words were repeated many times,
how to transfer in your own words-change its meaning,
combining is troublesome.

Difficulties of the experimental group in phase I
relating ideas and using my words,
the three passages have similar content,
how to interrelate the sources,
shortage of language and organizing problem,
to get the ideas, lack of synonyms,
to find similarity and difference,
vocabulary-understanding the whole context,
recognizing similarities and differences,
difficulty of organizing/ selecting/ connecting ideas with my prior knowledge,
what is the topic sentence-where are the main ideas,
to change the original words into your own words and organizing the texts,
words or paraphrasing,
understanding the sources,
in producing precise ideas,
I did not know how to quote and how to organize the passages,
lack of prior knowledge,
difficulty in quoting/ my new passage fills with quoting even though I don't have to quote much,
how far or how close to the original texts should I write the new text?,
unfamiliarity with ceratin words,
selecting,
to select/ to integrate ideas with your prior knowledge-lack of prior knowledge,
in selecting, organizing,
to condense the ideas and to put them together,
integrating the sources with prior knowledge,
abstract ideas and expressions,
sentences length,
integration,
how to select/ organize and interrelate,

organizing and selecting,
what to include and what to exclude and in connecting the texts,
in fleshing out what should be taken out,
selecting and organizing.

As indicated above in the subjects words and phrases, the subjects had problems

mainly on how to: understand and organize their texts, differentiate and select

main points, integrate ideas, use their own words, summarize, combine, connect,

integrate quotations, and paraphrase. The students (of whom 112 served in this

study) who completed the questionnaire also indicated that they liked learning

writing using sources because they expected that it can help them to overcome

their problems. Referring to what made summarizing difficult to the professionals

(writers, editors, and mangers) and amateurs (inexperienced student writers) in

his study, Taylor (1984) states " When asked what made their work difficult, most

of the professionals said finding the main ideas, while most of the amateurs said

finding appropriate words to substitute for the author's" (p. 698). However, the

subjects in this study pointed out almost similar problems.

6.4.1 Overview

The data collected through interview falls under ethnography of writing. These data were collected at the beginning and at the end of the teaching writing using sources approach (i.e. the first after taking the pretest and the second after taking the post test). The purpose of the interview section in this study is to understand and to highlight the experiences of the eleven interviewees (subjects) as to their perceived beliefs of writing using sources, sources for writing using sources, writing tasks, effects of learning writing using sources on their academic achievement, reading and text marking, reading/writing relationships, difficulties the interviewees faced and strategies they followed, processes of writing using sources, perceived beliefs of highest scorers and least scorers, advantages of learning writing using sources, and general ideas on writing using sources. Data relevant to these points seem to be in line with phenomenological data, which LeCompte and Preissle (1993) recognize as data which "represent the world view of the participants being investigated and [that] participants constructs are used to structure the research" (p.3). In relation to the purpose of educational ethnography, they also state "It [educational ethnography] has provided rich, descriptive data about the context, activities and beliefs of participants in educational settings. Such data represent educational processes and their results as they naturally occur and in context" (P.8). In this case, the interviewees would reflect their goals, enthusiasm, and their beliefs of the importance of learning writing using sources. Brandt (1992) also considers ethnography as a "method or technique of inquiry by which observers use the native methods and view points of their subjects in order to understand a society or group from the inside" (p.318). Here, there is a hope that ethnography as a method of research would create conditions by which we can understand sophomores' problems and processes of academic writing. Referring to ethnographic interviews, Johnson (1992) points out that the emic goal (the goal considered within the conceptual framework of the participants) make the interview ethnographic. (See 4.4.1, 4.5.1, 4.9.1 and 4.10.1 for procedures for selecting and interview data collecting).

In this case, the main research questions are: How do these highest scorers and the least scorers perceive teaching writing using sources? Do findings of the interview data show some relationships with the findings of the essays?

6.4.2 Writing assignment from other materials, materials for writing task, and the effects of writing from other materials on academic achievements

The interviewees in these case studies were asked to tell whether they took writing exercises or assignments from other materials (See Appendix - R) and they produced varied responses. For instance, two of the highest scorers reported that it was their first time to write from other materials on the same specific topic. One of the highest scorers linked writing from other materials to his/her history classes in his/her secondary school. One of the lowest scorers linked it to his/her anthropology classes. Three of the subjects in phase I, reported that they received exercises or assignments on writing from other materials when they were required to write a research paper for sophomore English class in the previous semester. Another one of the highest scorers linked it to a topic in which he was required to express in his/her own words what he/she had read in a book and another one of the least scorers related it to taking notes from lab. manuals. The remaining two in this group connected it to the pretest.

Referring to the sources for writing from other materials, the interviewees included books, dictionaries, encyclopaedias, journals, articles, reference books, textbooks and lecture notes. In addition to this, one of the highest scorers considered the following as sources:

> I think these are to refer to books and observations that you observe by seeing films or other adventures and by listening to the fables, and chats of the older people and others (after pretest). I think the sources of academic writing are first the books, second what you see in the television or the radio in your society and what is your prior knowledge of the subject(after post test). (I- 56).

Note. Roman numerals refer to phases I and II and Arabic numerals to role numbers of the interviewees (subjects).

Although there was an interval of more than three months, the responses seem consistent. The interviewee also made a link between writing using sources and prior knowledge which in turn involves intertextual links (See 2.6.1). In general the interviewees included a wide range of materials which could serve them as sources for writing tasks. So they did not show any lack of awareness of materials which could be used as resources for academic writing.

At the beginning of the course, the interviewees were asked to what extent they thought they applied academic writing from other materials. Most of them expressed that it was rather new to them. Some of them also explained that they were not required to write from other materials. The following excerpts from taped interviews illustrate their unfamiliarity with the procedural knowledge of writing using sources. According to Phye (1997) procedural knowledge, "involves the incorporating of information into organized plans, strategies, ideas, schemata and the like" (p.54). The interviewees raised many important ideas. What exactly did the interviewees say?

> I honestly, I haven't tried to do so until very recently but when I joined the Law Programme I had to refer books although I was not intentional I did synthesize things (I -55)

> I did not meet it. I met it first in this university and it is difficult for the first time to write from sources because you don't know which are the main points, to get it from the material (I - 56)

> It is not too much but it is your background is essential to make decision in the type of academic writing because you don't have any background in writing from sources. You are only able to take [lecture] notes but not from sources(II -30)

> It is difficult. I don't know (II - 22).

> I can say, it is not this much in relation to the occasions I have come across with assignments concerning writing from sources(I - 69).

> It is not too much. I never used when I was in the high school but I used to write when I joined Asmara University, this programme, it is not a lot (I - 66).

> Well, I can't say we apply it, I mean we are only starting it, this

semester. So, we apply it in a few in a little way. That is it. (I -44).

> In my school life, I was a social science student but since I I did not
> have to do writing. I don't remember what I was doing but here
> now in academic study, it is very useful act. Many of the studies of
> law are related to academic writing from sources (I - 57).

> Ya, it is very little I think. I am now starting it because I haven't
> such practice in writing from sources but from now onwards I can
> manage it (I 49).

> This is my first time to use. Before what I was using was just a
> given composition to be written. It was given by the teacher but it
> was something different from this (II - 27).

> Of course, it is not this much and practically I try it from high school
> and until now to organize the notes from sources (II - 25).

It is very interesting to receive such similar responses from the interviewees who came, I believe, from different secondary schools in Eritrea. These responses can help us to understand these interviewees' experiences in a wider context of the educational system in Eritrea. Their educational system might have focused on theory and factual information which do not usually create links between new knowledge from sources and relevant aspects of prior knowledge.

In relation to the functions or uses of academic writing from other materials, the interviewees made too general statements such as " ... I guess writing from sources has a positive value in expanding the areas of knowledge," "... It is helpful because as I told you first it helps to know the subject in detail". In addition to this, most of their views may be subsumed under the following excerpt.

> First you can develop your language, knowledge and speaking and
> writing habits, for example, and secondly, it may help you to attain
> a good knowledge about what you are writing - some thing that
> cannot be cancelled or adapted (I - 57)

The interviewees did not mention specific strategies or skills associated with writing from other materials such as paraphrasing, summarizing, organizing. This may indicate that the interviewees had not adequate knowledge as to how writing

using sources might lead to improved academic writing ability.

The interviewees were also requested to explain whether knowledge of academic writing from other materials affected their academic achievement and how it affected, if it did so. All of them thought that it affected their academic achievement. When they explained how it affected them , they indicated more or less similar views, for , example:

> I think it affects because in one way it helps me to write effectively. It also helps me know different view points of a subject. Generally since I am a language student it helps me develop writing skills so it does affect because other subjects are involved in writing (I - 44).

> Yes, it affects because once you start writing using academic writing, it helps you to improve your writing, your ability of taking notes, of recognizing main ideas what to do. So in my opinion, it helps me in achieving my goal in writing (I - 27).

The two excerpts indicate that the interviewees made strong connection between writing using sources and other subject areas. The need to acquire adequate working strategies or steps of writing using sources motivated the participants to play an active role during the experimentation. They were enthusiastic to do their assignments, discussed in groups, revised their work, held conferences with the lecturers and they showed willingness to devote more time and energy to finish their writing tasks.

When the interviewees were asked what their idea of writing from sources was, they explained that they considered it as a form of academic writing which involves activities on how to study, or understand a subject in detail, and how to widen one's experience and knowledge. However, they did not include any specific strategies or procedures on how they could acquire it. They were able to link its role to academic writing in general without the means to its acquisition. When the same question was asked at the end of the course, most of them linked it to specific skills such as vocabulary development, information gathering and transforming, combining ideas, note taking, and organizing texts. The following excerpt demonstrates the views of most of the interviewees.

> It is so much important to use writing from sources since when you read many books your mind is completely getting many sources but you cannot integrate in your mind all of the sources but if you learn writing using sources you jot the main ideas; what are the main/important ideas in the books; what are the different ideas that writers disagree or agree and it is helpful. It seems you get the results of what you are reading in learning writing from sources(I - 56)

This interviewee seems to have put it rightly, when he says " you cannot integrate in your mind all of the sources". One can demonstrate one's ability to integrate information usually in writing. He also relates learning writing using sources to jotting down main ideas which entails the ranking of ideas into important and trivial information.

6.4.3 Reading, Text marking, and reading-writing relationships

In connection to what activities they performed when they read to write, almost all of them expressed that they took notes, underlined, encircled important ideas, and wrote down meanings on the margins. In addition to this, one of them expressed his opinion that he went to the library to search books on the given topic, before he started writing. Another interviewee also stated:

> In writing, first I organize those ideas that are in the books, then I integrate those with my prior knowledge that I have. Then, I first prepare my first draft, by organizing the ideas - the introduction, second, the body and the conclusion (I - 56)

The interviewee expressed the importance of organizational structures, the connection between new knowledge from sources and knowledge stored in his mind. He also indicates the need of first draft which implies the preparation of a final copy. Preparing two or more drafts also imply revision and improvement.

When they were requested to explain the importance they attached to reading when they write from sources, they mentioned several important points such as:

Well, when you read, you understand things, and unless you understand things you cannot write from sources (I - 55)

Reading is important because it is the main factor in writing from sources because when you are writing first, you have to understand the source and you have to be able to express it in your own words or in the writer of the source (II - 30)

Ya, the relation between reading and writing, if you read very much you can write correctly and then more perfectly. It needs a lot of reading (I - 66).

It is important because unless you understand the texts - the sources, you cannot organize them. You cannot produce a new text. So you read it many times and then you can understand it and then it will become easier for you to organize and write a new text (I - 44).

I think if a student has a prior knowledge, it helps the student in bringing his schematic knowledge so that if he reads the material he can easily remember what he has done previously and therefore it helps the student (I - 57).

These excerpts indicate that the interviewees made strong links between reading to write and writing from reading. They are aware of the interplay between reading and writing. They considered writing plays an important role in consolidating knowledge from reading. They also expressed their beliefs that the main points they constructed during reading had to be written in their own words. Most of them emphasized the need to understand the text/s so that they could produce the new text. It is interesting that they did not attempt to justify the inclusion of transferring exact copy content units from source texts to their own texts although exact copy content units were the dominant content units in the subjects' essays (including these interviewees). In this case, we can understand that there was a gap between what the interviewees wanted to produce and what they actually produced as evidenced from their essays.

The interviewees expressed the difficulties or impossibility of writing from sources without much reading through phrases or sentences such as : it is so difficult without reading - you cannot understand the full content if you don't have prior

knowledge ; I don't think so; very impossible; No, it needs a lot of reading; Well, I don't think so because writing is almost related with reading; In fact, it is impossible because we have to base our ideas; and I think it is very difficult. In addition to this, the following excerpt reflects most of their views:

> No, I don't think so. If one is to undertake such work [writing from sources] one has to have a background - some kind of background and this background is hard to imagine unless one has first undertake a serious extensive reading (I - 55).

The phrases, sentences and the excerpt clearly indicate that the interviewees have developed an awareness of strong relationship between reading and writing. They also expressed their views that a lot of reading plays an important role in constructing and developing background or prior knowledge which they considered as an indispensable aspect of writing using sources. Some of them considered that prior knowledge is the cumulative effect of much reading. In this case, although the highest scorers seem to be more specific and articulate than the least scorers in the strategies they used, they appear similar in most respects.

6.4.4 Difficulties faced and strategies followed during writing using sources

Most of the interviewees evaluated writing from sources as a difficult task. The following excerpts can reflect the main reasons for considering it as a difficult task.

> The problems are since we did not read so much and we are not accustomed to such writing from sources in the earlier time because when we face this problem we quote what is written in that handout that were given in the sources. So our product will be the same like that. It is not so much different since there is lack of reading and prior knowledge (I - 56).

> Ya, there are problems as I have said it in paraphrasing but mostly in integrating the sources with our prior knowledge. We may not have enough knowledge of the source. So, what we all do is just write the source as it is making little changes since we don't have prior knowledge and this problem may exist (I - 44).

> Yes, there are problems in organizing the ideas, in selecting the material which one is the main point and which one is less important in the passage (I - 57).

The problems included in these excerpts are also included in the detailed sort of list of problems pointed out by the subjects in the study (See the end of 6.3.1). The excerpts may also indicate that the interviewees are not well prepared for writing using sources for academic purposes. In this case, the main issue is what can be done to help the students overcome these problems? If the English common courses that have been offered could not prepare them to meet the demands of the University courses, there seems a need to have a new look at the courses: It seems important to design English common courses which can establish links with other subject areas.

Referring to teaching writing in post secondary institutions, Grabe and Kaplan (1996) state " ... advanced academic contexts require information from other sources, and a main goal of advanced complex writing activities is the analysis, synthesis and interpretation of information from a variety of sources" (p. 344). In addition to this, almost all the interviewees explained that paraphrasing was the most difficult of all (quoting and giving references). Only one of them stated that quoting was the most difficult but when he/she was asked at the end of the course he/she stated that paraphrasing was the most difficult. Two other interviewees also stated that quoting was the most difficult (at the end of the course). The following excepts can indicate the difficulties faced in paraphrasing.

> The difficulty is in paraphrasing since if you didn't have the prior knowledge and if you didn't understand the whole content of those sources, it is difficult to paraphrase. If it is from your field of specialization, I think it is not difficult since you know something about that but if you didn't know anything about that subject it is difficult (I - 56).

> This has to do with the problem you know, general student error. We don't try to. We are unable to express ourselves in English in as much as possible as in relation to the level we have in the University. This is, I think, has to do with our failure to master the English language as much as we are expected to (I - 69).

According to their explanation, the interviewees who produced these excerpts knew much about paraphrasing: The activities it involves and the need to understand the sources in order to paraphrase. They seem to be familiar with the

declarative knowledge (factual information) about paraphrasing ; however, they lack the procedural knowledge, which requires the application of the relevant activities, as it has been evidenced from the findings of their essays that refer to paraphrased content units. The second excerpt also indicates that the interviewee believes that the standard of English at the University is low. He also attempted to establish relationships between low proficiency in English and his problems in paraphrasing. He also expressed the existence of a gap between the expected level of English proficiency at the University and the actual low level of the students' English proficiency.

The interviewees were asked how much of their own ideas they added to the finished (pretest and post test) essays. The results are reported in Table 16.

Table 17: One's own ideas (reported) and exact copy, paraphrased, generated and deviated content units (from their essays)

Role No.	One's own idea		E.C.	Para.	Gener.	Dev.	TCUs
I 55 HS	unspecified	30%	9.09%	22.72	68.18	-	22
I 56 LS	not many	25	55.56	16.67	27.78	-	18
II 30 HS	about 20	30-15	47.06	26.47	26.47	-	34
II 22 LS	20-25	1/3	8.70	47.82	43.48	-	23
I 69 HS	as much as po	about half	0.00	37.84	62.16	-	37
I 66 LS	not much	50	6.67	16.67	70.00	6.67	30
I 44 HS	3-4	25	19.23	61.54	19.23	-	26
I 57 LS	about half	1/2 - 2/3	48.39	29.03	22.58	-	18
I 49 LS	1/3	1/5-1/4	0.00	33.33	66.67	-	24
II 27 HS	Less than 40	may be 10	9.09	68.18	22.73	-	22
II 25 LS	40-50	30 - 40	75.00	5.00	20.00	-	20

Abbreviations: I and II = phases, HS = highest scorers, LS = least scorers, E.C. = exact copy, para = paraphrased, gener = generated, Dev = deviated, TCUS = total content units. In addition to this, numbers except TCUs are in per percentage.

Table 17 reports that self reported information on adding their own ideas to the finished writing and the results of their essays show more differences than similarities. The self reported added or generated ideas seem a bit exaggerated. Even the content units under 'generated' are not completely the interviewees'

content units: They are sources' plus interviewees' content units usually in the interviewees's own words. It is true that it is very difficult to estimate how much they could add as some of them stated during the interview. As shown in Table 16, most of the highest scorers' content units are mainly distributed between paraphrased and generated content units whereas most of the least scorers' content units are mainly distributed either between exact copy and generated or generated and paraphrased. The tendency of the least scorers seem to swing to exact copy or generated content units.

In addition to these specific amount or quantity, they attempted to justify their statements. The following two excerpts can depict the amount or quantity of their own added ideas.

> Well, this depends on the subject about which I am to write. If it is, for example, of relevance to my field of specialization, I usually employ my ideas and thoughts, but if the title is alien to my field of specialization, I don't usually add my ideas(I - 55).

> As I have come to know the importance of prior knowledge in writing from sources. I have started to try to put my prior knowledge as much as possible- twenty five per cent (I - 44).

As these excerpts show, the interviewees seem to realize that writing task plays an important role in determining the extent of new ideas to be added. In other words, generating new information depends on the writing task and the writer's prior knowledge. Almost all the interviewees also expressed that the more familiar they were with the subject matter, the more they included their own ideas into the new texts. Their views on adding new information when they write using sources correspond to many research findings, for example, Greene (1993) pointed that those who wrote on problem based essays generated more new ideas than those who were writing report . (See 3.4.1). In this case, the problem appears not on what to do but rather on how to perform the writing task. The interviewees could identify which kind of writing tasks could allow them to include more generated ideas from knowledge stored in their minds. It is true that some writing tasks contain more gaps to be filled in than other writing tasks.

The interviewees explained that they asked their lecturers, worked harder to solve

their problems, consult the dictionaries to find the meaning of difficult words, ask their classmates or their seniors, or read the materials two to three times to understand them when they faced difficulties in writing from sources. In relation to the strategies or steps they followed, each of then included various strategies. Their responses demonstrate that there are more commonly used strategies than individually used strategies. The interviewees received different scorers when they composed their essays in the post test. The differences do not ascribe to knowledge about the strategies but rather to the way they applied the strategies in the real context and the frequency of strategy use, for instance, one writer might underline important ideas; took notes in the writers' words; lifted them and joined them without any concentrated effort to achieve coherence, whereas another one writer might underline, took notes in his/her own word and transform them into coherent text. Thus, merely mentioning strategies does not guarantee effective writing from sources. These excerpts may clarify this.

> My strategies are first I read all of the sources. Then I underline those which are similar in both the texts that were given, then what are the differences in the three texts in what circumstances do the writers disagree. Then I put an introduction about the whole content the whole spirit of the texts. Then the body, then my conclusion based on the body of the produced text (I- 56 : scored 44 out of 63 on the post test).

> I firstly understand the sources very much. I understand what it is all about and then try to select which ideas or points are very important and then by organizing and integrating with my prior knowledge I produce a new text (I - 44 :scored 56 out of 63).

These two excerpts indicate some differences in their knowledge about the strategies which might also be revealed in the competence of their use i.e. the ability to execute these strategies. The interactions and frequency of use of the strategies could result in remarkable differences. Knowledge about strategies and competence in their use need to progress hand in hand so that the expected effective writing ability can be achieved.

6.4.5 Processes of writing using sources

The interviewees were requested to tell the last written assignment they did in order to reactivate their schematic knowledge about writing using sources. Although most of them mentioned the last assignment they received in the course - writing using sources, some of them mentioned other subject area of their specialization.

Concerning how they went about their last written assignment, they explained that they followed different strategies or steps similar to what has been discussed under 6.3.1. This can be observed from the following excerpts.

> Well, the last assignment I did was about some anthropological or sociological terms :Role and status. Literally, I tried to consult the dictionary, I mean with respect to their meanings but I was not satisfied, therefore, I had to resort to some other books and, therefore, I went to the library. I got some books and I referred to the topic concerning role and status and then again I read my texts, the texts which were provided by the teacher and then I read it twice, made an outline and then I prepared the first draft and proceeded to the second (I - 55).

> Yes, I chose the topic which is human evolution and then I referred to a lot of books in the human evolution. I take notes from that then I compose that myself (I - 66).

> First, I read the texts two times. Then I jotted down the main ideas in a rough draft and then I transferred it to the new text with the addition of my ideas since I have good knowledge of the earthworms (II - 30).

Although these interviewees revealed different sets of strategies to accomplish their writing tasks, they indicate that the writing tasks required them to refer to more materials which would involve selecting and generating ideas, paraphrasing phrases and sentences, organizing texts, integrating and connecting contents.

According to the responses to how many drafts they prepared, the least scorers prepared more drafts than the highest scorers. The following excerpt can reflect their responses.

> At first, I was preparing about three drafts but with experience, at present, I prepare only one draft (II - 30).

This may indicate that with more practice in writing using sources, the interviewee shifted his effort to more planning than preparing drafts. Thus, preparing two or more drafts may not necessarily lead to improved writing. With experiences, writers may shift from concentration and emphasis on revision to focusing on mental configuration and planning. The experience of the writer of the above excerpt corresponds to Taylor's (1984) finding that the inexperienced writers made more changes in their drafts than the experienced writers who devoted more time to planning their writing task.

6.4. 6. Perceived beliefs of highest and least scorers on high and low scorers

The interviewees were asked to explain what they thought were some of the differences between high and low scorers. Basically, they gave similar explanations. According to these interviewees, background/prior knowledge, consistency in doing relevant assignments, ability to understand, study skills, ability of using English and instructors' value system were some of the major reasons they thought resulted in differences. Referring to background knowledge one of them said:

> Well, most of the students work hard. I cannot say that it is because they [the least scorers] do not work hard that they get less marks, but as I have tried to mention earlier, it has to do with their background, their stored knowledge and if one does not have stored knowledge he fails or she fails to integrate the content of the different writers (I - 55).

The view of this interviewee seems to have evolved from the philosophy of education which distinguishes between surface and deep approaches. According to Ramsden, Martin, and Bowden (1989), surface approach to learning refers to the type of learning which focuses on memorizing and ineffective learning procedures with minimal learner engagement, whereas deep learning approach refers to the type of learning which focuses on establishing connections among

various parts of subject matter with the aim of understanding the contents. They also associate surface approach, among other things, with too much workload without freedom in learning. In addition, the interviewees' views, and the findings of the subjects' essays seem to be the product of the surface approach to learning because the subjects' essays are dominated by exact copy/verbatim content units without any acknowledgement to the sources used. Most of the subjects could demonstrate if they understood the source texts and their connections.

In relation to the impact of understanding on scoring one interviewee states:

> As I have seen it, the problem is not in studying since we saw the least scorers studying and investing more effort than the highest scorers but the problem is in understanding the topic because there is no use if you spend twelve hours without perceiving much knowledge.

The interviewee also described that one low scorer told him that it was difficult for him [the low scorer] to understand anything so he had to study for six hours a day to perceive little knowledge, whereas the high scorer told him that he [the high scorer] had good understanding of the subject and he did not memorize anything but he only understood the concepts and during the examination he expressed in his own words (II - 30).

The interviewee might refer to the time spent on reading the specific handouts or poorly prepared lecture notes. Students who read the same materials in order to memorize them are generally unsuccessful because on the one hand, they cannot memorize all the handouts given by their lecturers, on the other hand, memorized information may not be integrated to the prior knowledge and it becomes difficult if not impossible to reactivate and retrieve any relevant information. When students read and discuss given material on the same topic, they are likely to understand the topic from different perspectives. The interviewee raised an important point of 'writing in one's own words'. When a student is able to write in his/her own words, one may observe that the student has developed indispensable strategies such as the ability to rank ideas according to their importance so that he/she can select the salient points; the ability to: organize texts, generate and connect ideas, paraphrase sentences and paragraphs;

summarize texts; and the ability to prepare notes. These are essential strategies for effective writing at advanced levels.

One of the interviewees also expresses her views as follows:

> I think the problem is with our past life, I mean, we don't have that much basic knowledge of the language - English and when we come here we face many problems. It is not because we are ignorant or some students are ignorant and some are very much educated or it is the enthusiasm. There are students who can really accomplish good things but who are not enthusiastic to do so and it differs in the preferences of the students in the way they study, and also their instructors. There is a problem also with instructors. What the instructors require from us is only memorizing. So the students try to memorize and get good grades then after the exam, the knowledge is evaporated but if the instructors try some how to develop a sense of doing things because we are interested in them may be the students may perform well (I - 44).

This interviewee raised four important points: prolonged deficiency of English language, enthusiasm to pursue their studies, preferences to some courses, and instructors' value system. All the interviewees also frankly expressed their difficulty in expressing themselves in English and their problems in note taking and summarizing in their own words. One interviewee, for example, pointed out that most of the students at the University did not make much effort to study English. He says " ...most of the activities that you observe in students here is to work for survival kind to give more and more effort to other subjects and relatively small to the language [English] so I think that is so" (I - 69). Why did the students become less enthusiastic to study English common courses and why did they prefer to make more efforts to other subject areas than to English common courses? The facts that students did not make the expected improvement after taking the courses and that most students paid less attention to English common courses had been repeatedly raised and discussed in the Department of Language Studies; however, the lecturers did not agree on specific course of action to be taken to help the students engage in the courses. The problem might be the gap between what the students expected to study and what they actually studied. There might not also be strong links between the English classes and the demands in other subject areas. The lecturers' value system might also have much impact on the strategies the students employed to succeed in their studies. In relation to

this, Doyle (1983) states " The answer a teacher actually accepts and rewards define the real tasks in classrooms " (p. 182). Bloome, Puro and Theodrou (1989) also pointed out that wide gaps exist between stated goals, values and practices and in use goals, values and practices. Thus, these in use (in actual condition) goals, values and practices might encourage students to memorize factual information. The findings of the subjects' essays support the interviewee's comments.

6.4.7 Advantages of learning writing using sources

Questions whether learning writing using sources brought them any changes and what changes it brought, if it brought any changes, were raised at the end of the course. All the interviewees expressed their satisfaction of learning writing using sources They pointed out that it brought them many changes that determined their improved writing ability. In addition to this, some of their statements imply that they developed self confidence in what the course enabled them to accomplish. Let us see what exactly some of them said:

> At first I was not expecting much change but as I have seen it now, it brought many changes because as a student of Soil and Water Conservation, I have many courses with many sources and since time is limited you have to be selective and to be selective also you have to be able to write from sources and jot down the main ideas. So, it helps me much especially in the courses of Soil Science and Zoology. ... I became familiar with integrating ideas and...(II - 30)

The interviewee frankly expressed his little expectation from the course when it began. He might have assumed that this course was the continuation of the two courses which he thought did not prepare him to write effectively. However, at the end of the course, he totally changed his perception of learning writing using sources. He linked its benefits to developing abilities to select, and to write down main ideas and to familiarity with incorporating information from different sources. Another interviewee also stated as follows:

> I can say it has brought a tremendous change, you know before I had not any experience and I was just when we were given just

> assignment that has to do with writing from sources we were just
> doing them without following any principle on how to credit or how
> to paraphrase, how to quote, ... and how to incorporate your
> existing or prior knowledge with what you have got from sources.
> So such problems, I think, have been minimized in this last
> semester as we have taken the English course (I - 69).

This interviewee explained that he had no experience of writing and he added that he used to write in the absence of specific procedures for writing from other materials when he was given a writing task. He pointed out that he has acquired ability to paraphrase phrases and sentences, to integrate citation and document sources used, to quote i.e. he understood conditions for quoting. The ability to incorporate existing knowledge with new knowledge from sources may herald a transition from what Mintzes et al. (1997) recognize as rote learning, in which new information is stored in a verbatim manner, to meaningful learning , which creates connection between relevant existing knowledge and new knowledge from sources (See 2.11.1). The interviewee also expressed that some of the problems in writing using sources are reduced and this implies that he expected to learn more from courses similar to teaching writing using sources.

Let us also see how the following excerpt differs from the two excerpts.

> Yes, it did because if/when I compare with the first assignment
> which you gave us and this last assignment, in writing it the time it
> took also differs, I mean I can work any kind of work, any writing
> from sources with a little time and also in organizing and selecting,
> in integrating my prior knowledge with it. I have come to know
> something and I have come to apply it (I - 44).

In this case, her ability to write from sources easier and faster than at the beginning of the course implies the transfer of strategies from one context to other similar contexts. Her view is similar to Leki and Carson's (1997) findings which state " Many undergraduates mentioned that being able to use the ideas from articles and text made writing easier" (p 57). Unless she thought she transferred the required strategies which facilitated her writing, she would not say, at the end of the course, that she needed a little time to finish a given writing task. She also related the benefits of learning using sources to her improved

ability to organize texts, select main ideas and to incorporate new knowledge from source texts into stored knowledge in her mind. According to what she has expressed, integration of information involves storage of information in long term memory. This may support the view that writing facilitates learning (See 3.10.1). The following interviewee said:

> Ya, it is very noticeable, I can say. It enabled me to write or organize and to understand any passage or from any book, for example, we have done a lot of exercises in this writing from sources. They are almost the same. Then when we put into practice, we will be able to understand the book or the writer. So, this writing from sources helped me to understand any lecture or any subject (I - 49).

This interviewee indicated that the course helped him to understand sources for writing. His view also implies that he had a positive attitude to the numerous writing assignments given during the course. His view seems to correspond to Light's (1992) findings which state that there was a strong relationship between writer's level of engagement and the amount of writing for a course. The interviewee also expressed the need to practise the procedures or activities entailed in learning using sources. He emphasized the links between understanding sources and writing using sources.

The excerpts below are, in one way or another, similar to the excepts discussed above.

> Ya, first I can say that my vocabulary began to be very good and secondly my sentence construction is now becoming good, I can say. I have tried to get accustomed to paraphrasing, as I have said and referring to dictionary so that I can know good about vocabulary and then the ways of writing (I - 57)

> It is about forty per cent. Before this time I didn't have about this extent to organize, select, paraphrase the materials from different sources but at this stage, I improved my ability to paraphrase, to select, to organize ideas from different sources (II - 25).

In general, the interviewees expressed that they learned much from the course. Their satisfaction may also imply that they were fully engaged in practising various operation or activities in the writing tasks. It seems also that the course has captured their interests. Better results of the subjects in the experimental groups

might indicate their active engagement in the course. In relation to engaging students in language learning through their subject areas, Widdowson (1983) states " if we cannot engage their interest, we will not engage their learning" (p.91). So engaging learners' interest plays an important role in learning. When students are interested in their studies, they can take their own initiative, and they can also show persistence and consistency in their effort.

Some of the interviewees were asked what they thought about some of the subjects in the experimental groups who were not including the introduction and the conclusion when they were writing using sources. One of them said:

> The problem is that many students complicate this writing from sources with the summary and since you have to jot down the main ideas, and when you are writing summary, they do not include the introduction and the conclusion because the introduction and the conclusion have to be from their prior knowledge and secondly the problem is that if they have no knowledge of subject matter, they cannot write the introduction as well as the conclusion because they have nothing in their mind about the subject matter and it is also difficult to write from sources if you don't have any prior knowledge about the subjects matter (II - 30).

The interviewee pointed out that the students could not distinguish the distinction between writing using sources and summarizing. It is true assignments on summarization do not require some of the strategies or operations needed in writing using sources, for instance, Hidi and Anderson (1986) state "The major concern of a summary writer, therefore, are not how to plan and generate new content, but what to include and eliminate from the original text, what combinations or transformation of ideas make sense and whether the original structure needs to be reorganized" (p.474). The fact that a conclusion requires knowledge of subject matter has also been pointed out by Neufeld et al. (1984). (See 5.3.2). In addition to this, a student who is unable to understand source texts is unlikely to include an introduction. As the interviewee correctly indicated, introduction and conclusion require ability to extract or summarize the gist or general ideas of given texts. This ability is usually difficult for beginners and

inexperienced writers.

Another interviewee explained his views as follows:

> It is true that some students consciously or unconsciously do exclude the introductory part and/or concluding remarks. According to my observation, this is , interalia, a result of plagiarism. If a student takes and uses some body else's ideas and words as if they were his own, he might fear that the inclusion of the parts dealing with introduction and conclusion, which have to be in his words, might prove inconsistent with the body. A second reason is one of ignorance. If a student is asked to write using sources when, in fact, he is not well acquainted with the procedures, there of he might omit the parts in question. A third reason could be lack of clarity on the part of the instructor providing the relevant instruction ...(I 55).

This interviewee also raised two important reasons which were not mentioned by interviewee II - 30. Plagiarism is an important issue in this study because all the subjects in the control groups and some subjects in the experimental groups did not attempt to integrate any citation to their texts. They did not also acknowledge the sources they used although their essays are dominated by exact copy content units (See Appendix M 1 and 2). Not only fear but also the subjects' inability to write an introduction and a conclusion in their own words might be the reasons for avoiding the introduction and the conclusion . The third reason appears weak because many of the subjects had been repeatedly told to include an introduction and a conclusion when they were taking the course.

6.4.8 General ideas on teaching writing using sources

The interviewees were requested if they had a general idea they wanted to say on learning writing using sources . They expressed different views as when it can be introduced, in which grades it seems necessary to introduce and what benefits it has. Most of them suggested that it is good if it starts in secondary school, first with learning it from a single source, and move slowly to two sources and to extend it to more than two sources when the students acquire basic procedures for writing from a single source.

Referring to benefits a student could receive from this course, some of the interviewees explained that they thought the course was important for all the

students for various reasons. What exactly did some of them say?

> Well, I think I have one idea that I should make. Well, I believe that the course is indispensable especially for students who learn in English as a second language. Therefore, the general comment that I would like to make is that it should be given as a separate course in this University (I - 55).

> Academic writing using sources is essential in studying any course and especially with the courses with many textbooks and many sources. So, it has to be continuous through any studies and it has to be given to many second year students as it was given to us and since it brought much change, it also solves the problems of students (II - 30).

> Ya, I have an idea to say that writing from sources is very important in any course not only in sophomore or in English or Law. I think it is better if we started it in the high school or especially also in University in freshman and any department because writing from sources will help the learner to develop his understanding (I - 49).

> I can say, writing using sources is very important and very helpful for the person not only to improve his writing skills but also to improve the knowledge he has on the language and I wish I had learned this last year (II - 27).

These excerpts reveal the interviewees' consistency in their responses to other questions related to its benefits and in what ways it helps students. In addition to this, they depict the interviewees' satisfaction with and very strong positive attitude to the course. Some of them suggested that it is good if it is considered as a required course because they felt that it helps students to learn their subject areas effectively. In addition to this, some of them explained that writing facilities understanding and it also leads to improved language skills. The interviewees' responses might suggest that they were motivated by the advantages of the course and were also confident in what they have learned from the course. In relation to motivation and self-confidence, Schumann (1994) states " When motivation and self-confidence are high and anxiety is low, the filter will be down and the relevant input will be acquired" (p.233). This indicates that motivation and self confidence play a vital role in second language acquisition.

Chapter 7 : Conclusions and Recommendations

7.1.1 Overview

This study investigates whether teaching writing using multiple sources approach is more effective than the current traditional approach to teaching writing to sophomores at the University of Asmara, Eritrea. 112 subjects (70 in their second semester and 42 in their first semester) served in a randomly assigned control and experimental groups. They studied English as a medium of instruction for seven years (grades seven to sophomore level). The statistical method of comparison of means of different samples T-test and Linear Regression in chapter five show statistically significant differences. Thus, the experimental groups who received instruction through teaching writing using multiple sources approach performed better than the control groups who received instruction through the current traditional approach. The intercorrelations indicate strong correlations among the variables considered to measure the subjects' written essays. In chapter six the responses to the statements in the questionnaires completed by students and lecturers seem to correspond in ranking some of the variables considered in the questionnaires. The analysis of interview data reveals characteristics of the nature of teaching/learning writing using sources approach, interviewees' perceived beliefs of their capabilities in writing using sources, and their attitudinal changes.

7.1.2 Has teaching writing using multiple sources approach (TWUMSA) lead the subjects to improved writing?

The subjects' essays were rated on the basis of "routine double marking" by two independent raters. The analytic rating procedures were applied to seven independent variables which constituted TWUMSA. The statistical method of comparison of means of independent samples T-Test and Linear Regression were used to determine whether teaching writing using sources approach or the current traditional approach to teaching writing is more significant in teaching writing to sophomores at the University of Asmara, Eritrea. The results of the pretest for phases I and II revealed that there were no statistically significant differences

between the performances of the control and experimental groups. Thus, at the initial stage the control groups and the experimental groups were similar. The results of the post tests (Phases I and II) show that there are significant differences between the performances of the control groups and the experimental groups. Thus, the Null Hypothesis which states that there is no statistically significant difference between teaching writing using sources approach and the current traditional approach to sophomores at the University of Asmara is rejected (in both phases), and the Alternate Hypothesis which states that there is a statistically significant difference between teaching writing using sources approach and the current traditional approach to sophomores at the University of Asmara (in both phases) is accepted (See 5.2.3). Thus, the teaching of writing using multiple sources approach has lead the subjects to improved writing for academic purposes.

In addition to this, the inter-correlations among interpreting or understanding sources, organizing text, selecting, generating, integrating and connecting ideas, paraphrasing words, phrases and texts, and integrating citations and documenting sources indicate (components of TWUMSA) mostly strong positive relationships. The correlation of individual variables with the total score when the contribution of the particular variable is first removed from the total score also shows strong positive correlation. However, the relationship between prior knowledge of subject matter and post test is modest.

7.1.3 Subjects' essays

The origin of information whether it was drawn from the first, or the second, or the third, or combination of two or three or generated from the sources and the writer's existing knowledge was categorized. Each subjects' essay was parsed into content units in a modification of Ackerman's (1991) and Greene's (1993) procedures for analysing clauses in essays such as summary protocols.

In relation to understanding the texts, the subjects, especially in the control

groups appear to copy exact more content units from the given source texts than the subjects in the experimental groups. This may suggest that the subjects had difficulties in understanding the contents of the texts to be able to write mostly in their own words. In connection to organizing which involves the introduction, the conclusion and paragraphing, the performance of the subjects in the experimental groups are better than the subjects in the control groups. Most of the subjects in the experimental groups included the introduction, and the conclusion, and they also showed better textual organization in paragraphing. As to selecting content units, the subjects in the control groups included a little more exact copying (verbatim) and paraphrased content units from the three texts than the subjects in the experimental groups. The subjects in the control group (phase I) included more (302) paraphrased content units (out of the grand total of 830 content units) than the experimental groups who included 265 paraphrased content units out of 940 grand total content units. In relation to generating new content units, the mean on generating content units of the experimental group (phase I) is significantly larger than that of the control group. This significant difference may be due the instruction given to the experimental group on the basis of teaching writing using sources. Concerning integrating citations and documenting sources, thirty-one of the control group (phase I) produced 294 exact copy content units without any acknowledgement to the sources used, whereas the experimental group produced 233 content units and twenty-eight subjects acknowledged their sources in 128 exact copy content units. Regarding connecting ideas from source texts as well as ideas from the texts and the subjects' existing or digested knowledge, the analysis of the subjects' essays reveals that the subjects in the experimental group are better than the subjects in the control. The experimental group's better results in connecting ideas we suggest are due to the effects of receiving instructions through TWUMSA.

In phase II, the control group produced 205 exact copy content units without any acknowledgement to the sources, whereas the experimental group produced 190 exact copy content units and seventeen subjects acknowledged the sources of 90 exact copy content units.

7.1.4 Intertextual Links and five kinds of writers

Intertextual links refer to the interactions, intersections and interrelationships among content units drawn from source texts and generated content units from the source texts as well as from the writer's prior knowledge. Thirty-five and fifteen subjects in the experimental and in the control groups respectively exhibited non-sequential arrangement of information from sources. In addition to this, nineteen and thirty-eight subjects in the experimental and in the control groups respectively exhibited sequential configuration of information from sources. Thus, the intertextual links made by the experimental groups appear more interconnected, interspersed, and interwoven than that of the control groups. These better intertextual links may lead to better integration of information as revealed in the analysis of the subjects' essays.

On the basis of the intertextual links the subjects manifested in their essays, they were categorized into five kinds of writers.

The **"compilers"** (12 subjects in the control and 6 subjects in the experimental groups) produced above 65 per cent exact copy content units from the sources texts and less than 10 per cent generated content units. They made the least contribution to the content and surface structure of their essays. Here, the writers moved from content units at one location to other content units at other locations in the same source text or in different source texts. Their essays seem to exhibit incoherently joined content units. Campbell (1990) considers exact copy content units in texts as the least incorporated content units.

The **"harmonizers"** (13 subjects in the control and 20 subjects in the experimental groups) included at least 20 per cent content units from each of the three categories. They made substantial contribution to the content and surface structure of their essays by restructuring and orchestrating contents from various sources and making use of some paraphrasing activities. These writers attempted to compose exact copy, paraphrased and generated content units in closer

proportions. These writers seem better in understanding the sources, in using prior knowledge and in connecting ideas.

The "**constructivists**"(4 subjects in the control and 7 subjects in the experimental groups) produced above 65 per cent generated content units and less than 10 per cent exact copy content units from the source texts. There was observable detachment from the source texts and the writers did not indicate whether they understood the sources by selecting and including exemplary content units, enough paraphrased content units, integrating citations and documenting source of information they used in composing their essays.

The "**dualists**" (25 subjects in the control and 22 subjects in the experimental groups) produced at most below 64% and at least above 16% content units from any two of the three categories (Exact copy, paraphrased and generated CUs). Their essays consisted of either exact copy and generated, or exact copy and paraphrased or paraphrased and generated content units. The writers in the control groups composed 2, 13, and 10 exact copy and generated, exact copy and paraphrased, and paraphrased and generated content units respectively, whereas the writers in the experimental groups composed 6, 4, and 12 exact copy and generated, exact copy and paraphrased, and paraphrased and generated content units respectively. In most cases, the writers did not include enough content units from any of the third category. Their essays lacked either exact copy, or paraphrased or generated content units.

The "**paraphrasers**" (2 subjects in the control groups and 1 subject in the experimental groups) produced 93.33%, 70.83% and 68.18% paraphrased content units. Here, the writers could not demonstrate how to integrate citations and document sources. They could not also indicate wether they were able to generate content units from source texts and from knowledge stored in their minds. It is also difficult to observe their ability to interrelate content units. (See Appendix M1 and M2).

7.1.5 Students' and lecturers' responses to the questionnaires

200 students' copies and 38 lecturers' copies of the questionnaires were collected. The aim of the questionnaires was to understand the strength of the students' attitudes, perceived beliefs, efforts, strategies related to academic writing using sources and lecturers' perception of their students' attitudes, perceived beliefs, efforts, strategies related to academic writing using sources. In general, the students reported favourable attitude toward writing using sources. Seventy-three per cent of the students indicated 'very strong' and 'strong' beliefs as to the importance of prior knowledge of subject matter to writing using sources. The students reported their perceived beliefs of their capabilities to perform tasks related to organizing, selecting, connecting, integrating, academic writing and writing using sources primarily as high and moderate (in tensity). They also ranked lack of necessary range of vocabulary and unfamiliarity with writing using sources as the most difficult areas. In connection to satisfaction with their writing ability, achievement, and fulfilment of their lecturers' expectations (in writing using sources) most of the students rated 'moderate' and 'great. Regarding to types of drafts, feedback, importance of revision and time allotment to writing, the students indicated that they mainly prepared one draft and a final copy; however, they seem to be reluctant to incorporate the feedback they received from the lecturers into the revised essays, though most of them rated revision as important. In connection to applying strategies related to informal methods of discovering and exploring ideas in writing such as prewriting, freewriting, brainstorming, looping, and outlining, they mentioned more than fifty-one strategies such as, for instance, *note taking, drafting, revising, organizing, planning, rewriting, connecting, summarizing, final drafting, selecting, rereading, outlining, and paraphrasing.* When they were asked to write down any strategies or activities that they though might be helpful to improve writing using other texts, among other things, they suggested *connecting, understanding, interpreting, paraphrasing, vocabulary learning,* etc. ; however, prewriting, freewriting, looping, and brainstorming were mentioned only twice each. This may indicate that the students were unfamiliar with these activities.

44.7 per cent of the lecturers indicated sophomores' favourable attitudes toward writing from other texts. When they were asked to rate their beliefs of whether their students could do well in their academic writing from other texts, 60.5 per cent rated 'agree'. In addition to this, 57.9 per cent of the lecturers evaluated their students' writing from other texts as 'good'. Most of the lecturers' beliefs of their students capabilities to accomplish writing task related to *organizing, selecting, connecting, integrating, academic writing in general, using other sources, range of vocabulary*, indicated 'moderate' rating but no one indicated 'very high' rating, though many of the students indicated 'very high' rating. In relation to satisfaction, achievement, and fulfilment of lecturers' expectations, most of the lecturers indicated 'moderate', that is, 52.6%, 65.8%, and 47.4% for satisfaction in writing using other texts, achievement, and fulfilment of lecturers' expectations respectively. 42.1 per cent of the lecturers indicated that their students submitted their writing assignments after revising their drafts only once. 68.42 per cent also indicted that their students needed feedback on how to: organize, select, connect and integrate ideas as a whole. The lecturers also suggested teaching strategies or activities such as how to: *consult periodicals, paraphrase, select, connect, summarize, take (lecture) notes, write drafts, research paper, reports, essays, locate main ideas, revise, read more and develop vocabulary.*

7.1.6 Strategies used by subjects during post tests in composing their essays

Almost all the subjects (101 out of 112) reported that they read their texts twice or more. In connection to text marking, most of the subjects reported that they included mostly note taking, underlining and underlining plus note taking. The control groups appear to use more note taking than the experimental groups while the experimental groups used more underlining plus note taking than the control groups. The subjects in the experimental group (phase I) indicated more engagement in underlining words and phrases, in writing meanings of difficult

words/phrases on margins and writing comments on margins than the control group; however, there were 25 encircled words in the reading passages of the control groups while there was none in the experimental group. In general as evidenced from the reports on preparing drafts, the experimental groups wrote more drafts than the control groups. In addition to this, almost half of the subjects stated that the writing tasks (post tests) were difficult. Most of the subjects (in both groups) reported that the third passage was the most difficult . Referring to the problems the subjects faced in writing using multiple sources in general and the post tests in particular, they included many activities or operations such as sentence length, how to : *organize, select, interpret main idea; paraphrase words and/or phrases, how to take notes, connect the passages, integrate ideas from the sources with their prior knowledge, to write in their own words, interrelate the sources, use appropriate words, and prior knowledge.* (See the end of 6.3.1). Eleven subjects from the experimental groups were interviewed both at the beginning and at the end of the experiment. The purpose of the interview was to obtain deeper insights into the interviewees' experiences as to:

* their perceived beliefs of writing using sources,
*sources for writing using sources,
*writing tasks,
*effects of using this approach on their academic achievement,
*reading and text marking,
* reading/writing relationships
* difficulties they faced and strategies they followed,
* processes of writing using sources,
*perceived beliefs of highest scorers and least scorers,
* benefits of writing using sources,
*and general ideas on writing using sources.

It is very difficult to generalize from interview data; however the interviewees felt that TWUMSA was unfamiliar before they received the course. They also pointed out that the low standard of their English had hindered them from acquiring the required ability to write using other materials, especially lack of adequate vocabulary. Most of them linked the benefits of TWUMSA to other courses and they indicated positive attitudinal changes toward the approach. Most of them expressed that learning writing using sources was time consuming task but they

considered it rewarding because they reported that they connected it to their academic achievement or success. Among other things, they emphasized the prerequisite of prior knowledge to effective writing using sources. In addition to this, most of them expressed the existence of a gap between the expected level of English language proficiency at the University and the actual low level of the students' (sophomores) English language proficiency. Some of them also expressed their learning focused on memorizing which could not prepare them for analysing, synthesising, interpreting, transforming and constructing information.

7.2.1 Recommendations to: Curriculum designers, Teachers/Lecturers and Students

In teaching/learning writing for academic purposes, interactions among the curriculum, the teacher, the student and the teaching materials such as textbooks, handouts, and other reference books seem to play determinant roles.

According to Woods (1996), the curriculum entails course objectives, contents and the means to achieve the goals. In this connection, curriculum designers are expected to design a curriculum which may consider the students' needs, motivation, and capabilities. It needs to establish links between students' immediate and long range goals. It needs to leave some slots which may allow teachers and students to work on their own initiative outside the contents included in the curriculum. The goals must be specific and achievable. It seems necessary that curriculum designers outline approaches that encourage students to transfer from approaches that emphasize only knowledge transmission to approaches that lead from knowledge transmission to knowledge construction. It appears useful to involve some teachers/lecturers in designing the writing course so that difficulties that could emerge later can be reduced and teachers' participation in designing the curriculum may encourage teachers to create necessary classroom conditions for achieving the goals of the course. When approaches that are expected to lead toward achieving the goals of the course do not correspond to teachers' experiences and practices, problems may force teachers to deviate much from the approaches implicitly involved in the curriculum. A prescriptive tight

curriculum appears to be limited to transmission of factual information. In addition to this, deviation from what is included in the curriculum may result in incomplete coverage of course contents. This creates problems especially when questions are set from uncovered portions of the course outlined in the curriculum.

Teachers

Teachers/lecturers play a determinant role in the teaching/learning process especially in selecting teaching materials, planning how to present the materials, observing their students' progress, and constructing tests that can effectively measure teaching/learning outcomes. In selecting teaching materials for improving academic writing, teachers need to select materials available to the students, suitable to their levels, and useful to make links with other relevant courses. The materials need to invite and encourage students to engage fully in generating ideas, making connections, composing their essays, and participating in group discussions. Planning what to teach and presenting what is to be taught seem to be fundamental responsibilities of teachers/lecturers (mainly in the context where this study has been conducted). Teachers may be able to observe their students' progress from their students' active participation in asking and responding, in class discussions, in their enthusiasm to take more assignments, in their willingness to submit assignments on time, in the desire to revise writing assignments incorporating peers' and teachers' feedback and in taking initiatives to cover more contents. So, it seems useful for teachers to accommodate these types of signals.

Types of questions that are included in test papers may have much impact on the way students approach their learning, the strategies they follow to study their lessons, because the types of questions and expected answers reflect what their teachers value most. In connection to this, some of the interviewees pointed out that they were expected to reproduce factual information from memory so that they could not develop the ability to construct meaning from sources. So, teachers as examiners or audience (See 3.8.1) may shape students' approaches to learning.

In relation to this, Mayer (1992) recognizes the importance of rote learning for demonstrating a specific behaviour and meaningful learning for using information to solve problems relevant to what has been taught. Referring to rote and meaningful learning, he states " ...it is important for teachers to choose methods that best suit their goals" (p.475). In this case, developing meaningful learning seems the goals of teachers at tertiary levels. Thus, it appears desirable for teachers to recognize and encourage students' efforts to transform rote learning into meaningful learning.

Students

In cognitive interactionist and cognitive constructivist approaches, the student is considered as the determinant factor for his or her own progress. In connection to this, Tobin (1997) states "Constructivism recognizes the central role of the learner in all parts of the process of constructing, reconstructing, and enacting knowledge" (p. 379). In this case, the students need favourable conditions to exercise their potential to construct meaning. They are expected to develop operations or strategies that can be effective in improving their ability to make meaning, to explore connections among pieces of information, and to create new texts. In relation to academic learning Mayer (1992) recognizes consideration of acquiring information and establishing connections among students' existing knowledge and new knowledge from other sources. Students are expected to work harder to apply activities or strategies which can lead them to the transition in Ausubel's (1978) and Mintzes' et al. (1997) terms from rote learning to meaningful learning (See 2.11.1 and 6.4.7) and in Ramsden's et al. (1989) terms from surface approach to deep approach (See 6.4.6) i.e. from storing unintegrated directly copied information to establishing links among ideas which may enable the students to build new information. The analysis of the subjects' essays indicate that the essays were primarily composed of directly copied information. This might suggest that the subjects learned through approaches that emphasized factual information or rote learning as some interviewees also pointed out. Although the emphasis may be on interactions of various activities within individual students,

the students may also be expected to participate actively in group discussions, to accommodate peers' and teachers' comments and feedback. In addition to this, students need guidance and instruction which may facilitate their engagement in making sense from given materials.

Figure 4: **Components of teaching writing using multiple sources approach (TWUMSA)**
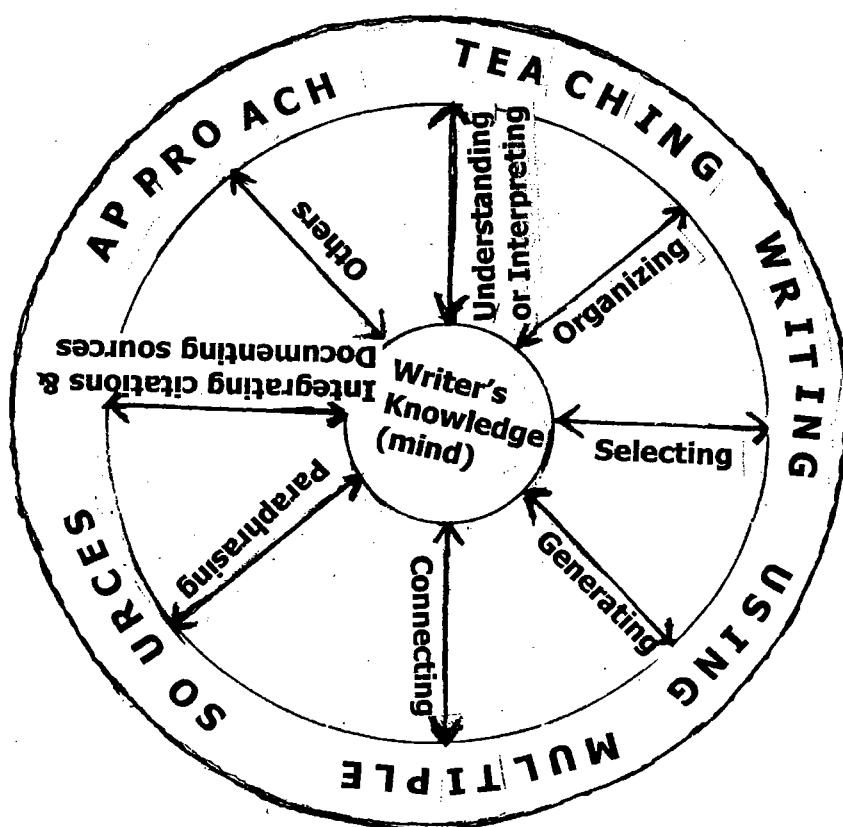
I would like to suggest the components of TWUMSA for consideration when one is expected to teach or produce a new text using other materials. Figure 4 consists of seven components of TWUMSA and others as spokes of a wheel with the writer's knowledge or mind at the centre and the products of TWUMSA at the circumference. The components of TWUMSA restructure and modify the writer's knowledge and Writer's knowledge in turn restructures and modifies the components of TWUMSA. In a sense, they seem interdependent and interactive,

for instance, the activities and events that develop understanding texts may also develop the writer's knowledge. Organizing texts may enrich the mental representation of writer's knowledge which would be available for future use. Activities involved in selecting ideas such as ranking of information according to importance and/or repetition in different source texts may have some impact on writer's knowledge. Selecting may also involve comparing, anticipating, expecting, evaluating, inferring and contextualizing ideas. Generating new ideas from source texts and writer's existing knowledge may also add an enabling condition to constructing meaning. Connecting ideas drawn from various sources may provide the writer with improved ability to establish relationships on the basis of certain features or criteria. Practice in connecting ideas may foster the accessibility to and retrieval of relevant knowledge stored in the writer's mind. Paraphrasing words, phrases, sentences, and paragraphs would help the writer to look for synonyms, substitutions, new structures, and it may also encourage the writer to use his or her own words without deviation or distortion from the author's intentions. In this case, the writer is guided by the author's intentions as a frame of reference which may accommodate ability to elaborate and demonstrate his or her understanding of the source texts. Integrating citation and documenting sources may help the writer to search for relationships between ideas, clarify purposes of citations and documenting, and direct a smooth flow of ideas to achieve the writer's goal(s). (See 2.4.1.).

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Zamel,V. 1983. The composing processes of advanced ESL students : Six case
studies. *TESOL Quarterly,* 17, 165-187

APPENDIXES

Appendix : A Test of prior knowledge of subject matter : On Institutions of Higher Education

I.D. No._____-

Test of prior knowledge of subject matter : On Institutions of Higher Education

Write down a short note on what you know about the following words or phrases.

1. Higher Education_____
_____
_____

2. Colleges and Universities_____
_____
_____

3. Sustains civilized living_____
_____
_____

4. Concentrated effort_____
_____
_____

5. Higher education entrance requirement_____
_____
_____

6. Influential countries_____
_____
_____

7. Undergraduate _____
_____
_____

8. Liberal Arts_____
_____

9. Vocational training_____
_____
_____

10. Autonomy of higher educational institutions_____
_____

<u>Appendix : B</u> Instruction for synthesizing a new text

I. D. No._____

<u>Instructions:</u>

Read the following texts/passages carefully. Then compose one new text/passage from the three texts/passages. The passage that you are going to produce should reflect the main and supporting points/ideas in the three texts. Please use your own words and do not quote too much.

When you have finished creating the new text, answer the following questions on the strategies or steps you have followed in composing your text/passage. Use a separate sheet of paper.

1. How many times did you read the texts/passages?
2. How did you take notes?
3. Did you underline or write comments on the original texts or did you take notes on a separate sheet of paper?
4. How many times did you re-write to produce the new text?
5. How did you find this task, easy or difficult? Why?
6. Mention any parts of the passages which caused you problems?
7. What were the problems that you faced in writing using sources? Please give detailed information.

<u>NOTE</u>: Please complete and submit the assignments in the next contact hour.
<u>Please submit:</u>
1. the new composed text/passage
2. any rough draft or drafts
3. Your answers to the questions given in the sheet of paper.
4. the three texts/passages
<u>NOTE:</u> Please write your I.D. No. in each paper.

<u>Appendix : C</u> Three texts on institutions of higher education

1. Post-Secondary Education

Post-Secondary Education includes a variety of programs beyond the level of the secondary school. UNESCO reports on world education combine data on colleges, universities, higher technical schools, teacher training schools, theological schools, and many other specialized institutions under the heading. Education at the Third Level various forms of adult education may be included in programs at this level. A more restricted term, <u>higher education,</u> is used to mean regular enrolment in colleges and universities. Education at the higher level is available to only a small minority of the people of the world. For example, College and University enrolment is about 32 per thousand of the total population in the United States, 9 per thousand in Japan, 8 in France, 6 in Britain, 5 in West Germany, and 3 in Latin America.

In the simplest societies, there is no higher education; everyone learns all that is known is the trouble heritage of skill and lore. In more developed cultures, knowledge outruns the memory and skill of any individual, specialists arise-patterns, weavers, canoe builders, navigators, traders, priests, sages, artists, story tellers. The systematic mastering of such specialities foreshadows the higher education that sustains civilized living. Even tribes and nations ignorant of writing have developed forms of higher education. The Incas of Peru required sons and daughters of the nobility to reside in the capital in order to learn, not only the more exacting handicrafts and special skills such as weaving and warfare but the art of government and the keeping of accounts by means of knotted cords. In New Zealand the maori imposed upon young nobles a long training in memorizing on extensive body of tradition, genealogy, theology and philosophy, poetry, ritual, strategy, and-whether successful or not-telepathy.

Thus higher education begins wherever a select minority is instructed in special branches of knowledge that are acquired only by concentrated effort. The ancient Egyptian theocracy, the palace sages and wandering teachers of ancient, the scribes of Sumeria-all devoted themselves to the increase and transmission of learning. Without higher education civilized living is impossible, whether knowledge be imparted under the open sky, in temples, among guilds of architects or navigators, in secret societies, or in publicly maintained schools. (366 words)

Kneller,G. 1988. "Post-Secondary Education," <u>Encyclopaedia Americana</u>.
    Danbury : Glalier Incorporated. Vol.9, 684.

2. <u>Higher Education</u>, any of various types of education given in post-secondary institutions of learning and usually affording, at the end of a course of study, a

named degree, diploma, or certificate of higher studies. Higher educational institutions include not only universities and colleges but also various professional schools that provide preparation in such fields as low, theology, medicine, business, music, and art. higher education also includes, teacher-training schools, junior colleges, and institutes of technology. The basic entrance requirement for most higher-educational institutions is the completion of secondary education, and the usual entrance age is about 18 years. (See also colleges; universities)

Higher education had its origin in Europe of the Middle Ages, when the first universities were established. In modern times the nature of higher education around the world has been largely determined by the models established in influential countries such as France, Germany, Great Britain, the United States, and the Soviet Union.

Both France and Germany have systems of higher education that are basically administered by state agencies. Entrance requirements for students are also similar in both countries. In France an examination called the baccalaureate is given at the end of secondary education. Higher education in France is free and open to all students who have passed this examination.

In Germany, a country made up of what were once strong principalities, the regional universities have autonomy in determining their curriculum under the direction of sectors elected from within. Students in Germany change universities according to their interests and the strength of each university.

The autonomy of higher-educational institutions is strikingly pronounced in Great Britain. Its universities enjoy almost complete autonomy from national or local government in their administration and in the determining of their curricula despite the fact that the schools receive nearly all of their funding from the state. Entry requirements for British universities are rather complicated. A student must secure a General Certificate of Education (corresponding to the French baccalaureate) by taking examinations in various subjects and receiving passing marks in them.

In the United states, there is a nation wide assumption that students who have completed secondary school should have at least two years of university education. Hence a great number of "Junior colleges" and "community colleges" have spring up to provide two years of undergraduate study.

Higher education in the Soviet Union is characterized by direct state administration, differing from the French in that a single Political party controls the governing body.

Modern trends in higher education indicate a willingness world wide to learn from the strengths of the varies systems. (427 words)

Higher Education. 1991. The New Encyclopaedia Britannica, Vol.5, 918.

3. Universities and Colleges, Institutions of higher education for students who have finished 12 years of elementary and secondary school. Some of these institutions train in high-school graduate for a vocation, such as business or journalism. Some prepare him to enter a more advanced school for training in profession, such as law or medicine. Some try to give a general, well-rounded liberal education instead of specialized or vocational training. A liberal arts (history, literature, philosophy, science, etc.), is intended to provide the kind of broad cultural background considered necessary for all informed citizens.

In the United States and Canada, the word College has at least two meanings: 1)an independent school that offers four-years courses in liberal arts leading to the bachelor's degree (B.A. or B.S); and (2) a division or unit of a larger institution called a University.

A true University is a group of colleges under the same administration. It has at least two divisions-(1) a four year liberal arts college for undergraduates; and (2) a college, called a graduate schoo Analysis of Results l, for students with bachelor's degrees who are seeking advanced (master's and doctor's) degrees. Large universities also have specialized undergraduate colleges, concentrating on such fields as education, commerce, or journalism; and various professional schools to training physicians, engineers, lawyers, etc. A land-grant College or University, which receives federal as well as state aid, offers instruction in agriculture and engineering, in addition to other subjects.

Institutions whose names include such words as Polytechnic, technology, or institute (Virginia Polytechnic institute for example) emphasize training in science and engineering, but may also offer programs in other fields. Military Colleges are often called academies, and theological schools seminaries, but both terms are sometimes applied to other kinds of institutions. Teachers colleges prepare students for elementary and secondary school teaching, but may also offer liberal arts programs. A junior college offers the first two years of a liberal arts course. It may also offer such vocational courses as dental technology.

The official name of an institution does not necessarily indicate the type of studies it offers. Some "Universities" are really liberal arts colleges. Some "colleges" have graduate departments and are really universities. A good guide to an institution's program of studies, or curriculum is its catalogue or bulletin. 'Accredited colleges and universities are those schools that are certified as meeting certain standards with regard to such matters as curriculum, staff, libraries, and equipment. Agencies that do the accrediting include regional associations of schools, state officials, and professional societies.(415 words)

Universities and Colleges. 1965. New Standard Encyclopaedia TUV, U-127-
    U-128.

Appendix : D

post test -Test of prior knowledge of subject-matter :On the Role of Higher Education in the process of Development and change

I.D.No._____

Test of prior knowledge of subject-matter :On the Role of Higher Education in the process of Development and change

Write down a short note on what you know about the following words or phrase.

1. academic community_____

_____

_____

2. self-reliance_____

_____

_____

3. rural development _____

_____

_____

4. the younger generation_____

_____

_____

5. a new pattern of education requirement_____

_____

6. national development_____

_____ _____

7. learning through participation in community action

_____

8. inter-institutional co-operation_____

_____

_____

9. mutual benefiting linkage _____

_____

_____

10. reflecting on the worth of everything _____

_____

_____

Appendix : E
The three texts on plant growth and development

<div align="right">I.D. No._____</div>

LINKAGE WITH ENVIRONMENT
ROLE OF HIGHER EDUCATION IN THE PROCESS OF DEVELOPMENT AND CHANGE

Higher Education is in the process of change and it needs a new direction. The academic community should play a more leading role in the process of development and planning. They should exert sufficient pressure through a philosophy of service and extension in the community around and show models of developments to others.

In all developing countries the fruits of knowledge, research and new skills have yet to reach millions of people who need it, who will be profited by it and whose contribution to the productive apparatus is immense. In this age of highly advanced science and technology, we are talking of appropriate technology for the rural areas, so that they are not deprived of the where-with all of their existence by the mighty currents of sophisticated production techniques. Appropriate technology is a means to promote individual and community self-reliance through a swadeshi movement.

Not only in this county but in all other developing countries the cities and the urban areas have gained prominence all these days and derived the advantages of the two decades of development initiated by the United Nations and other International agencies. Now we have changed our outlook and we are seriously thinking of rural development which will arrest the culture of too much urbanisation and its attendant evils. So all national governments in Asia, Africa and South America are concerned with the welfare of the common man through various (p.14) means including changes in the tradition also. We should create innovative learning systems, within the goals of rural development system, which can extend the benefits of knowledge and modern skills to the nook and corner of rural areas in various parts of the country.

The younger generation is to be put on the new path and the illiterate villagers in the rural areas should be liberated from their age old customs and habits. The age group 15-35 is best for reconstruction phase as they are the target groups which face the difficulties for a variety of reasons. The reasons as we know are socio-political and economic in nature (p.15). (359 words)

Apparaw,M.R. 1980. "Linkage with Environment : Role of Higher Education in the Process of Development and Change," Three Aspects of University Education. New Delhi : Association of Indian Universities.

Linkage with Environment
The role of universities in relation to problems of national development has been a subject of discussion among educational planners in this country for at least a decade now. The question came to the fore in light of the report of the Education

Commission (1964-66) which stressed the role of education as an instrument of development and change and recommended a new pattern of education with that role in view. The phased introduction of the 10+2+3 pattern meant that the universities had to be ready with their new three year degree courses before the commencement of the academic year 1977-78. This, in turn, required them to undertake an examination of the traditional role of the university and the educational philosophy underlying its current courses with a view to determine their usefulness in the light of the changing goals and priorities of education.

The opportunity was utilised by the University of Bombay to move decisively in the direction of socially relevant course offerings first at undergraduate and later at postgraduate levels. The object underlying the new courses is to sensitize the minds of the young to social reality around them through a series of social awareness courses and to equip them not only with theoretical skills and tools for a proper analysis and understanding of social problems, but also with value and attitudes which would enable them to participate in the national endeavour to solve these problems and thus make their full and willing contribution to national development. After all, education is not mere acquisition of theoretical knowledge; it also involves the training of the mind and an inculcation(p.24) of certain values and attitudes for the building up of a better society. Universities have to provide an intellectual leadership to the society and not remain content with mere teaching and academic research. The new course structure has been designed with that object in view and seeks to bridge the gap between academic pursuits and social concerns by bringing the concept of social relevance into teaching and research programmes and by adding the important dimension of applied or practical training to the teaching of theory. The university has decided that it can no longer remain in ivory tower isolation but must adopt new ways of teaching and learning through participation in community action, making such action itself the vehicle of learning. The new courses including those like Foundation Courses and Rural Development course need to be viewed from this point of view (p.25). (418)

Joshi, Ram. 1980. "Linkage with Environment," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Linkage with Environment
The general or conventional universities can certainly or should necessarily develop similar ways and means of linking themselves with their immediate environment functionally and the national development ultimately. But then, the general universities in a given region do not have any identified roles like those for agricultural universities.
...What is required is not only inter-disciplinary, need-based activities but inter-university, inter-institutional cooperation in identifying specific roles for one another in a given region and cooperation with one another in discharging these roles without any overlap, duplication or competition. As a number of developmental areas have already been identified by the governments at the state and national levels, it would not be difficult for all the universities in a region to sit together and come to an understanding. This will incidentally develop a positive

linkage between the universities and the State and the Central Government leading to a recognition of the utility of the universities and a refusal to use financial controls for eroding the autonomy of the university. A fruitful inter-dependence between the universities and the government may emerge out of this, paving way for greater freedom for the universities from political interference, and for recognition of the value of academic standards, merit (p.80) and respect for excellence. Until the roles are identified, and suitable curricular and research programmes are initiated, the public apathy in respect of university education and management, for values for higher excellence and merit for the students' false notions as to the employment value for their degrees will continue.

I do not advocate that all is well with the agricultural universities; I mentioned this only as a starting point to deal with the problems of developing a meaningful and mutually benefiting linkage between the universities and the immediate environment. In the case of agricultural universities, it consists of the resources, opportunities and the needs of its clientele, the farmers. But one of the things that is overlooked in agricultural universities and general universities alike relates to (a) the need and problems of the students as learners (classroom climate, large classes/small classes etc) in terms of their socio-economic backgrounds and (b) their needs to inculcate new value-systems essential for creating, sustaining and developing an awareness for and a means of national development. This, I consider, is very important as otherwise what will stay with us will be enlightened regionalism, baseless prejudices ani-secular conservatism and societies of acritical adaptive sub-human persons. So what is required is not a prescriptive or descriptive forms of teaching but one of generative-transformation giving the learners not only the skills of `self-learning' but also the means and methods of critically reflecting on the worth of everything available and acting upon the institutions of the society for its better (p.81). (461 words)

Sudarsnam,R. 1980. "Linkage with Environment," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Appendix : F

pretest - <u>test of prior knowledge of subject-matter : on Plant Growth and Development.</u>

I.D. No._____

<u>Test of prior knowledge of subject-matter : on Plant Growth and Development.</u>

Write down a short note on what you know about the following words or
   phrases.

1.genetic information_____

_____

2.growth (in plants)_____

_____

3.development (in plants) _____

_____

4.damage (in plants) _____

_____

_____

5. agents <u>(at least four)</u> that reduce plant growth rate are:_____

_____

6.adaptive responses in plant growth _____

_____

7. irreversible damage resistance_ _____ _____

_____

8. isodiametric enlargement _____

_____

9.elongation_____

_____

10. axillary bud_____

_____

<u>Appendix : G</u>
The three texts on plant growth and development

<u>PLANT GROWTH AND DEVELOPMENT</u>

All the genetic information required to build and operate a plant is carried in each individual cell encoded in the DNA of the nucleus, mitochondria and plastids.... During the life of a plant, this genetic information is used to direct increases in size (<u>growth)</u> and changes in form (<u>development</u>). As we have seen in looking at the architecture of cells, tissues, and organs in previous chapters, this growth and development requires a division of labour among cells, tissues, and organs. The formation of these differences is called <u>differentiation.</u>

The challenge of plant growth and development is to understand how particular bits of that genetic information ate selected to chart a cell's growth and differentiation into a mature form that may differ in many ways from the undifferentiated meristematic cell from whence it ultimately derived (p. 371). (141 words)
Weier, T.Elliot, Stocking, C. Ralph and Barbour, Michael G. 1974. <u>Botany :</u>
<u>Introduction to Plant Biology</u> (5th Ed.).New York :John Wiley & Sons.

<u>The Influence of Environment</u>
The effects of environment on plant growth may be divided into enforced damage effects, controlled by environment, and adaptive responses, controlled by the plant. Damage, which may be manifested as actual injury (death of all or part of the plant) or merely as reduced growth rate due to physiological malfunction, is a common phenomenon and the agents are :wind, ions, temperature, grazing and many others. Clearly, however, the occurrence of damage implies a lack of resistance to damage. Resistance may be conferred by molecular anatomical or component of a plant's physiology and ecology, being(p. 15) responsible for all major differences in plant distribution. The critical feature is that such resistance is constitutive: a particular enzyme will be capable of operating over a certain temperature range and beyond that range damage will occur.

Adaptive responses, however, are the fine control on this constitutive damage resistance. They involve a shift of the range over which resistance occurs, which may be reversible (and usually, therefore, physiological) or irreversible (usually morphological). Levitt (1972) has used the terminology of physics to distinguish elastic strains, which are reversible, from irreversible plastic strains, in response to environmental stress. Thus the same stress, for example shade, may induce a reversible physiological response in photosynthetic activity in a woodland herb, but an irreversible morphological response in a weed or crop plant (p. 16). (230 words)

Fitter, A.H. and Hay, R.K. 1981. <u>Environmental Physiology of Plants</u>. London
  Academic Press

<u>Growth and Development and Their Control</u>
The characteristic pattern of growth of plant cells is that they first divide, the nucleus undergoing mitosis; then each daughter cell increases in size. In massive tissues like fruits and tubers this enlargement takes places more or less equally in all directions-isodiametric enlargement-while in cylindrical structures like stems and roots the enlargement is mainly in one dimension-elongation. In either case it is the increase in size that is the basis of growth, and because cells can also enlarge or shrink reversibly by osmosis..., growth can be defined as irreversible increase in volume.

1. <u>GENERAL SCHEME OF THE GROWTH PROCESS</u>

Cell division takes place in the meristem (mainly) and the cell enlargement (especially elongation) that follows pushes the apex continually upwards. As it moves forward and the young leaves are successively left behind, each leaf-base carries with it a small fragment of meristem. This fragment becomes an <u>axillary bud</u>, which usually forms a few tiny leaf primordia and then remains more or less undeveloped, in the axil of each leaf (p. 160). (179 words)

Langenhelm, Jean H. and Thimann, Kenneth V. 1982. <u>Botany : Plant Biology and Its Relation to Human Affairs</u>. New York : John Wiley & Sons.

Appendix : H

post test -<u>test of prior knowledge of subject-matter : on earthworms</u>

I.D. No._____
<u>Test of prior knowledge of subject-matter : on earthworms .</u>

Write down a short note on what you know about the following words or phrases.

1. earthworms_____

_____

2. Aerate the soil_____

_____

3. " worm castings"_____

_____

4. Earthworms ingest organic matter._____

_____

5. digestive enzymes_____

_____

6. cultivated soils_____

_____

7. soil productivity_____

_____

8. decaying organisms_____

_____

9. The soil surface_____

_____

10. Earthworms ... promote drainage._____

_____

Appendix : I

The three texts on earthworms

Earthworms in Relation to Agriculture

Earthworms have a strong claim to be ranked as beneficial animals being better cultivators than the most efficient machine devised by man. In the long past they have made a great portion of our soil most valuable and fertile, and even now they are ceaselessly renewing and improving it. Their continual burrowing in search of food results in the loosening of the earth particles and the formation of innumerable channels that open the way alike for air, rain drops and plant roots. They thus make the soil soft by bruising the soil particles in the gizzard-mills. The activities of the worms drain and aerate the soil. But more than this the earthworms are continuously bringing fresh soil to the surface. This takes the form of the familiar "worm castings" which consist of the finest soil particles as they have passed through the gut and got mixed up with organic matter and nitrogenous materials. As the wet worm casts dry up the wind scatters the fine powder over the surface of the soil and a new layer of tilled earth is in the process of formation. The importance of their humble labour is actually sublime. Darwin showed that there are, on an average, over 53,000 worms in an acre of garden soil, that ten tons of soil per acre pass annually through the bodies of the inhabitants (earthworms) and that they bring up mound from below at the rate of 7.5 cm of thickness in 15 years (Prasad 1980 : 452). (255 words)

Prasad, S.N. 1980. _Life of Invertebrates._ New York : Vikas Publishing House
   PVT LTD.

Influence of Soil Fertility and Productivity

Earthworms are important in many ways, especially in the upper 15-35 cm of soil. They ingest organic matter as well as soil. As these materials pass through the earthworm's body, they are subjected to digestive enzymes as well as to a grinding action within the animal. The weight of the material passing through their bodies (casts) each day may equal the weight of the earthworm. In the tropics, as much as 250 Mg/ha (110 tons/acre) of casts may be produced annually. Although figures only one tenth of those values are more common in the cultivated soils of temperate regions, the casts are evidence of extensive earthworm activities.

Compared to the soil itself, the casts are definitely higher in bacteria, organic matter, and available plant nutrients.... The rank growth of grass around earthworm casts is evidence of the favourable effect of earthworms on soil productivity (Brady 1990 :258). (154 words)

Brady, Nycle C. 1990. The Nature and Properties of Soils (10th Ed.). New
   York: Macmillan Publishing Company.

Earthworms

Their food consists of decaying organisms; as they eat, however, earthworms also ingest large amount of soil, sand and tiny pebbles. It has been estimated that an earthworm ingests and discards its own weight in food and soil everyday.

Earthworms usually remain near the soil surface, but they are known to tunnel as deep as 2 m during periods of dryness or in winter. One Asian species is known to climb tree to escape drowning after heavy rainfall.

Earthworms provide food for a large variety of birds and animals. Indirectly they provide food for man by their beneficial effects on plant growth : they aerate the soil, promote drainage, and draw organic material into their burrows where it decomposes faster, thus producing more nutritive material for growing plants. Earthworms also serve as fish bait; hence the name angleworm (Markham 1991 : 324). (142 words)

Markham, John.1991.'Earthworm,' The New Encyclopaedia Britannica. 15th
  Ed., vol. V, 324.

Appendix : J A sample of a text synthesized by one subject   No. 42

Since Higher Education is in the process of development and change the academic communities like universities are expected to play their role in the process of development and planning. The fruits of knowledge and research must reach millions of people in the developing countries and especially to those who are living in the rural community. This so because, the contribution of rural areas in development is very great. Thus many governments are giving much emphasis to rural development through various means like introducing new changes in the traditional system of formal education which includes higher education. The illiterate villagers should be liberated from their old custom and habits and the age group 15-35 is best for reconstruction phases as they face many difficulties which arise because of socio-political and economic reasons.

In the light of the report of education commission (1964-66) which stressed the roles of education as an instrument of development and change the university of Bombay started to offer socially relevant courses like Foundation and rural development courses. The aim of this was to make the young people realize the social reality around them and to equip them not only with theoretical skills but also with values and attitudes which would help them in the rational development.

This method of the Bombay university can be adapted by many general or conventional universities- like the agricultural universities the general universities in a given region do not have any identified roles, thus, they are expected to sit together and to come to an understanding and this interdependence between them will create a good linkage between the universities, state and the central government. And this in turn will pave the way for the freedom and autonomy of the universities. In the case of agricultural universities it is not submitted that everything is well with them "but they consist of the resources opportunities and the needs of their clientele, the farmer" (Sudarsnam, p.81,1980). One of the problems which faces the agricultural and conventional universities relates the students problem as learners, that is in terms of their social economic background and the outcome is creating regionalistic and conservative society and to avoid this "learner should not only be given the skills of self learning but also the means and method of critically reflecting on the worth of everything available and acting up on the institutions of the society for its better" (Sundram. p.81 1980). (405 words)

(Apparaw,M.R. 1980. Three Aspects of University Education NewDelhi
(Joshi, Ram. 1980. "Linkage with Environment" Three Aspects of University Education. New Delhi:).
(Sudarsnam R. 1980. "Linkage with Environment" Three Aspects of University education : NewDelhi.

Appendix K-1 : Comparison of means for phase I

t-tests for independent samples of EXPGR experimental groups, phases I and I

| | Number | | | |
Variable	of Cases	Mean	SD	SE of Mean
PTANA				
control phase I	35	39.3000	4.546	.768
experimental phase	35	40.1286	5.560	.940

Mean Difference = -.8286
Levene's Test for Equality of Variances: F= 1.160 P= .285
t-test for Equality of Means   95%

Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-.68	68	.497	1.214	(-3.252, 1.594)
Unequal	-.68	65.42	.497	1.214	(-3.254, 1.596)

The critical t-value at a 0.05 level of significance = 1.67

t-tests for independent samples of EXPGRexperimental groups, phases I and I

| | Number | | | |
Variable	of Cases	Mean	SD	SE of Mean
FLANA				
control phase I	35	37.7000	3.791	.641
experimental phase	35	43.9486	4.658	.787

Mean Difference = -6.2486
Levene's Test for Equality of Variances: F= .872   P= .354
t-test for Equality of Means   95%

Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-6.16	68	.000	1.015	(-8.275, -4.222)
Unequal	-6.16	65.30	.000	1.015	(-8.277, -4.221)

The critical t-value at a 0.01 level of significance = 2.381

Appendix K-2 : Comparison of means for phase II

t-tests for independent samples of Cont. & experimental groups, phases I and I

Variable	Number of Cases	Mean	SD	SE of Mean
PTANA				
control phase II	21	34.3571	6.144	1.341
experimental phase	21	35.1190	4.618	1.008

Mean Difference = -.7619
Levene's Test for Equality of Variances: F= .568 P= .455
t-test for Equality of Means   95%

Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-.45	40	.652	1.677	(-4.153, 2.629)
Unequal	-.45	37.13	.652	1.677	(-4.161, 2.637)

The critical t-value at a 0.05 level of significance = 1.68

t-tests for independent samples of Cont. & experimental groups, phases I and I

Variable	Number of Cases	Mean	SD	SE of Mean
FLANA				
control phase II	21	36.6667	6.329	1.381
experimental phase	21	46.2857	6.106	1.333

Mean Difference = -9.6190
Levene's Test for Equality of Variances: F= .239 P= .627
t-test for Equality of Means   95%

Variances	t-value	df	2-Tail Sig	SE of Diff	CI for Diff
Equal	-5.01	40	.000	1.919	(-13.499, -5.739)
Unequal	-5.01	39.95	.000	1.919	(-13.499, -5.739)

The critical t-value at a 0.01 level of significance = 2.423

Appendix L 1:Types of content units composed by each subject in Phase I

<u>Key to Abbreviations</u>

Last names of the authors of the texts are written (in Abbreviation)
A = Apparaw's content units (CU) (intact or selective verbatim)
A +S = Apparaw's and student's Cu (mixed = source's and student's)
A+SD = Apparaw's CU as student's deviated CU   (Mixed)
_J = Johi's CU (intact or selective verbatim)
J+s = Joshi's and students's Cu
J+SD = Joshi's CU as student's deviated CU
Su = Sudarsnams CU (intact or selective verbatim)
Su+S = Sudarsnam's and student's CU
Su+SD = Sudarsnam's CU as student's deviated CU
S = student's content units
SD= Student's content unit deviated from the content unit of the author
Numbers refer to the consecutive numbers of content units in each text.
There may be other combinations within the above abbreviations.
Underlining indicates acknowledgement or citation

<u>Control Group 1- 35   Phase I</u>
1. A3, A6, A10, S, SD, S, S, J1+ S, S, J14, S, S, J16, S, J22, Su2, Su3, S, Su5, Su8, Su21, Su22, = 22
2. A1, A2, A3, A4, A, Su1, A6, J1+S, J3, A13+S, A16+S, A17, A19, A20, J16, J22+S, Su4, Su9, Su22, S, = 20
3. S, A3, A4, A, A6, A7, A18+S, A21, S, A26, J15, J16, J3, J4, J5, J8, J9, J10, J13, J14, J21, J22, S, Su3, Su4, Su5, Su6, Su10, Su11, S, Su15, Su21, Su22, = 33
4. A1, A2, A3, A10, A10+S, A11+S. A13+S, A14+S, A19, A20+S, A21+S, A22+S, S, A26+S, J1, S, S, J8, J9, J11, J12, J15+S, J16+S, J18+S, S, Su4, Su7, Su10+S, S, Su17+S, SU18, S, = 32
5. A1+S, S, A3+S, S, S, A21-22+S, A23+S, S, A19+S, A21+S, A22+S, J2+S, J3+S, S, S, J17+S, J19+S, S, S, Su1, Su7, Su9+S, Su16, = 23
6. J1, A1, A2, A3, S, J21+S, Su1, Su4, Su3, Su5, Su6, Su7, Su8+S, Su11, Su12, J13, J14, J15, S, S, S, S, S, S, A18, A19, A20+S, A21, S,   = 29
7. A1, A2, A3, A5, J13+S, J14, J15-19, S, J21+S, Su3, Su4, Su5, Su6, Su7+S, Su10+S, Su16+S, Su18+S, S, A12, S, S, A18+S, A16+S, A21+S,A22+S,=25
8. A1+S, A3-5+S, S, S, A10+S, A19+S, A21+S, S, S, J1+S, J6, J8, Su1+!5, Su21+S, Su22, Su23, = 16
9. S, S, A3+S, J8+S, J9+S, J14, A6, S, A10+S, A13+S, A16+S, S, S, A21+S, A26, J15+S, J18, S, J21+S, S, = 20
10. A1+S, S, S, S, S, SD, SD, A26, S, S, S, A24+S, SD, SD, J1+S, J2, J4+S, S, S, J8+S, J9+S, J13+A21+S, SD, Su1+S, S, S, S, S, S, J8+S, S, S, S, = 33
11. A3+S, J5+S, Su5+7, J8+S, A21+23, A26+J10-11, S,S,SD,A18+S, J9+S, J13, J14+S, Su4, Su3, = 15   Included references but no citation
12. A3, A6+S, A12+S, A16+S, S, A22+S, A21+S, J1+S, S, J13+S, J14+S, J14, J16, S, J21, Su2, Su3, Su4, Su5, Su9, Su21, Su22,   = 22

13. S, S, A3+S, A6+10, S, S, A18, S, S, Su7+S, Su8+S, A21+S, A22+S, J3+S, J5+13+S, S, J13, J18-19+S, J18, S, = 20 Included references bu no citation

14. A1, A2, S, S, J1+S, J15+S, J19+S, J21, A3, A4, A5, A6, A7, A8, A9, J3, J4, Su14, A10, A12, A21, A22+S, Su22, = 23

15. A1+S, A3, A4, A5, A6, S, A10+S, S, S, A16, A17, A18+S, S, A21+SD, A22, J1, J2, J5, J8+S, J9, J10, J11, J12+S, J16+S, J15, J18+S, J19, Su1+S, Su2, Su3, Su4, Su4+S, Su6, Su8, Su9, Su10, Su15, Su16, S, Su18, S, = 41

16. A1, A3, A6, A7, A8, A10+S, A12, A19, A20, A21, A22, A23+S, A23, J1+S, J1+S, J2, J8, J9, S, J10, J11, J12, J13+S, J14, J16, J5, J21, J22, Su2, Su3, Su4, Su5, Su9, Su13, Su11, Su12, Su15, Su21, Su23, = 39

17. J1+S, A3, A2, A1+S, SD, A17+S, A20+S, A26, S, A21+S, A25+S, A22+S, A18+S, A19+Su1+S, J8, J9, J10, J11, J12, S, Su4-6+S, Su9, Su10, Su16, S, Su18+S, Su20, S, Su22+S, Su22, = 30

18. S, S, S, S, S, S, A5, Su1+S, SU1+S, S, Su7+S, S, Su10+SD, A11-12+S, S, A3+S, J13+S, J19+S, J14+S, S, Su17+S, Su18+S, Su20+S, S, = 24

19. A3, A6, A7, A12, A13-14+S, A16, A18+S, A21+SD, A21-22+S, J1, J8, J9-12+S, SD, Su1, Su9, Su16, Su17, Su18, = 18

20. A3-4+S, A5+S, A21+22+25+26+S, J3, J4, J13+S, J10+S, J11+S, Su1, Su4, Su4, Su22, = 12

21. S, S, A10+S, A11+S, S, A12, A18+S, A19+S, S, A21+S, S, S, S, S, S, S, S, S, S, S, S, J13+S, J19+21+S, S, S, S, Su15+S, S, Su8+S, Su10+S, = 30

22. A1, A2, A3, S, S, A4+S, A6, A7, A8, A9, S, S, A10+S, A22+S, S, A21+S, S, J9-10+S, J11+S, J19+21+S, J13+SD, Su1+S, = 22

23. A1+S, A2+S, A3, S, Su4+S, Su10+S, S, A12+S, A18+SD, A19-20+S, A15+S, SD, J17+S, J18, J19, A23+S, A23, A26+S, = 18

24. A1, A2, A3, A5+S, A6+S, A7, A12, A18, A21+S, A23-26, J1, S, J9-10+S, J18, J19, J21, Su1, Su4, Su5, Su7, Su8+S, Su9, Su18+S, 23

25. A1+S, A3+S, J1+S, A6, A7+S, A13+S, A10+S, A12+SD, SD, A26+SD, A21+SD, S, J3, J12+14, J14+S, J15, J17-21+S, J1+S, J20+S, Su9+SD, Su11+12, S, S, = 23

26. S, A10+S, S, A14+S, A16+S, SD, A19+S, SD, A21+S, A23+S, SD, J8+S, J9+SD, J12, S, J14+S, J16+S, J19+S, S, SD, Su1+S, Su4+S, SD, Su5+S, S, SD, Su8+S, Su14+SD, Su15+S, Su17+S, Su18+S, S, SD, S, Su22+S,=35

27. A1+S, A2+S, S, J8, S, J10+S, J12+S, S, A16+S, SD, A25+S, J16+S, J15+S, Su1+S, SD, Su15+S, Su18+S, S, S, = 19

28. A1+S, A3+S, A16+18+S, A21-22+SD, A26+S, J2+S, S, J9-11+S, J19+S, Su1+S, Su4+S, Su1+S, Su10+12+S, Su7+S, S, S, Su1+S, = 17

29. A1-2+S, A3, A6+S, A10+S, A12+S, A14+S, S, A15+S, A18, A19, A21-22+S, A23+S, J2+S, J8, J16+S, J15, S, Su4+S, Su7+S, = 19

30. A1-2+S, A3, A12+S, A18+S, A21-22+S, A26, J1, J9+S, J11, J16+S, J15+S, Su1+S, Su2+4+S, Su7, Su16, Su22-23+S, 16

31. S, S, S, S, S, S, S, S, S, S, S, S, Su15+S, S, S, S, S, S, S, S, S, S, = 22

32. A1-2+S, A4+S, A6, A7, A10+SD, A12+S, A13+S, A14, S, A17+S, A18+S, A19+SD, S, A21+S, S, A23+S, A25+SD, A26+SD, J1, S, J2, J3, J4+S, J8, J9, J9+S, J10+S, J11+S, J14+S, J14, Su7+S, Su10+S, Su15+S, = 33

33. A3+S, A12+S, A18+S, A22+S, A23+S, S, S, S, J9+12+S, S, J11, J14+S, J15+S, J16, Su1, Su5+S, Su11, Su7+S, S, Su22+S, = 20

34. S, A1+3+S, S, S, S, S, S, S, S, S, S, Su13+S, S, S, S, S, S, A21+S, S, A20+S, S=21

35. A1+3+S, J3+S, Su1+S, A6+8+S, J5+S, J9-10+S, J12+S, S, Su5+S, A16+S, A21+S, A22+S, J21+S, Su21+S, Su22+S, = 15

Experimental Group 36-70

36. A1-2+S, A3+S, J3, J13, J14, Su15, Su7, J15, J16, J21, A12, S, A13+S, A10+S, A19, A21+S, A22, A23, A24, A25-26, S, = 21

37. S, S, Su1, A6+SD, S, J2, J3, S, S, A17, A19, A20, J15, J16, J17, J22+S, Su4, Su9+15+S, Su21+S, Su22-23+S, J12, = 21

38. J1+S, A3, J3, J4, S, J13, J14, S, S, S, S, S, S, Su9, Su10, S, J17+S, J18, J19, = 19

39. S, A2+S, A3+S, S, A12+S, A21+S, A23+SD, J1+S, J4+S, J5, J8+S, J9, S, J15+S, J21+S, S, S, S, Su4+S, S, Su17+S, S, = 22

40. J13+S, J14, S, S, S, A23+S, Su5+S, S, J15+16+12+S, Su1, Su4+S, S, S, A22+S, S, A26+S, = 16

41. S, S, Su1, A6, A7, A8, J1+S, J2, J3, S, S, A10+S, A17+S, A19, A20, J15, J16, J17+S, J22+S, Su4, Su9+15+S, Su21+S, Su22, J12, = 24

42. A1, A3, A6+S, A10+S, S, S, A18+S, S, A22+S, A23+S, A25+S, A26+S, J3, J22+S, S, J13+S, S, S, Su2+S, Su6+S, Su7+S, Su10+S, S, Su16, Su17+SD, Su17+S, Su20+S, Su22-23, = 28

43. S, S, Su1, S, A6, A7, S, A17+S, A12, S, J2, J4, J8+S, J11+S, Su4, Su4+S, J15-16, J20+S, J21+S, J22, Su7+S, Su6, S, Su18, Su21, Su22-23, S, S, S, S, =30

44. S, S, J3, S, S, A3+S, A5+S, A12+S, A18+S, A19+S, A21-25, J8+S, J9+S, J10+S, S, J14+S, J21+S, Su4+S, Su7+S, Su8-9+S, Su2, Su15, Su17+S, Su17-18+S, SU21+S, Su23, = 26

45. S, S, A2+S, S, A4, A5, J1, J3, J4, J15, J16, J21, S, J9, J10, J11-12+S, J14, S, A11, S, = 20

46. S, S, S, J13+S, S, A12, J15+S, Su2, Su3, Su1+S, S, S, Su5, Su7, Su8, Su9, Su10, A21, A22, A23, A24, A25, A26, = 23

47. A1+S, A3+S, A6+S, A7+S, A10+S, SD, A19, A19+S, A21, A22+S, J1+S, S, J11+S, J15+SD, Su1+S, Su4, Su9+S, S, Su16, Su17+S, Su18+S, Su19, Su20, = 23 No Ref.

48. S, S, S, J1+S, J2, J3, J4, A3, A4, A5, A19, A20, S, S, S, S, S, J9, J10, J11, J12, J13, J14, S, S, S, J21+S, = 27   No Refernce

49. S, S, S, S, A1+S, A2+S, A3+S, S, S, Su2+S, Su4+S, S, J2+S, S, S, S, S, S, S, S, S, Su4+S, J14+S, S, = 24

50. S, S, S, S, Su1, Su4, S, S, Su8+S, Su15-16+S, Su4+S, S, S, Su17-18+S,S, Su22+S, Su22, J11+S, J12, J13, J14, S, S, A3+S, A4+S, S, S, S, A10+S, A12, S, S, S, S, =   34

51. S, S, S, S, S, S, S, A6, A7, A8, A9, S, A10+S, A12+S, A18+S, Su4+S, Su7, Su8+S, S, J9-10+S, J11+S, J12+S, = 22

52. S, S, S, S, S, A6+S, A13+S, A14+S, S, S, SD, A15+S, A20+S, A22+26+S, S, S, S, S, S, S, S, S, S, S, S, S, S, J19+S, S, S, S, S, S, S, S, = 35

53. S, S, S, S, S, S, A16+S, A1, A2, A3, S, J13, J14, J15, J16, A16+S, S, S, S, S, Su9+S, S, S, Su7, Su8, S, S, S, = 28

54. S, S, S, Su4+S, S, S, S, J9+S, J10+S, <u>J11</u>, S, Su17+S, S, A13+S, <u>A18+S</u>, S, A21+S, Su10+S, S, S, SD, S,<u> Su17+S</u>, <u>Su13+S</u>, Su18+S, S,   = 26

55. S, S, S, S, S, <u>Su1</u>, S, S, J3+S, J4+S, J9+12+S, J9+S, S, S, Su9, S, S, Su10+S, S, S, S, S,   = 22

56. S, S, A6+S, <u>A19</u>, <u>A20</u>, <u>A21+S</u>, <u>A22</u>, <u>J3</u>, <u>J8</u>, J9, J10, J11, J12, <u>J17-18+S</u>, <u>Su15</u>, S, S, S,   = 18

57. S, S, S, A1+S, A2, A3-4+S, A5, <u>Su1+S</u>, A10+S, <u>A11</u>, <u>A12</u>, S, <u>A17</u>, <u>A19</u>, <u>A20</u>, A21+23+S, A23+S, J1-2+S, S, J8,<u> J9</u>, <u>J10</u>, <u>J11</u>, <u>J12</u>, Su4, Su1+S, <u>Su15</u>, S, S, J14+S, J14, = 31

58. A3+S, S, S, S, A3+S, S, S, <u>A12</u>, A12+S, S, S, S, S, S, S, S, S, S, S, S, S, <u>A23+S</u>, <u>A25</u>, S, J9+S, <u>J20</u>, SD, S, S, S, A16+S, S, S, S, Su4+S, Su10+S, =36

59. S, S, A18+SD, S, S, S, S, S, Su3+S, S, S, SD, SD, S, S, S, S, S, S, A12+S, S, S, S, = 23   No Reference

60. A3+S, S, S, A3+S, A3+S, A4, A5, A18+S, SD, SD, SD, SD, SD, SD, S, A12+S, A10+S, S, S, S, = 20   No Reference

61. S, A3+S, S, S, S,<u> A12</u>, A14, A14+18+S, S, S, A21+26+S, S, J10+S, J12+S, Su1+S, <u>Su4+S</u>, <u>Su2+S</u>, <u>Su4+S</u>, S, Su8+S, J19+S, S, A10+S, S, A11+S, S,· S, J22+S, Su4+S, Su17+S, Su18+S, Su18+S,   = 32

62. S, S, S, S, <u>Su1</u>, S, S, Su3+S, S, S, SD, SD, J17+S,<u> J18</u>, <u>J19</u>, S, S, S, S, S, S, S, S, S, S, S, A12+S, S, S, S, S, S, S, S, S, S, S, S, S, S, S, S, = 42

 63. A3+S, S, S, S, S, S, S, A7+S, S, S,<u> A3</u>, <u>A4</u>, <u>A5</u>, <u>A6</u>, <u>A7</u>, <u>A8</u>, <u>A9</u>, A12, A13, A14, S, <u>A18</u>, S, S, <u>J9</u>, <u>J10</u>, <u>J11</u>, <u>J12</u>, J14, J8+S, <u>J18</u>, <u>J19</u>, J21, S, A3+S, S, S, S, J19+S, S, Su1, = 41   No References at the end

64. J1+S, J2+S, J3, S, S, S, A3+S, <u>J13+S</u>, <u>J14</u>, S, J19+S, J22+S, S, <u>J20</u>, <u>J21</u>, Su4+S, Su7+S, Su22+S, S,   =   19

65. S, S, A2+S, A3, S, A6, A7, S, S, S, <u>A12</u>, A14+S, A16+S, S, A17+S, A18+S, A21+S, A24+S, J1+S, J3, J5, J8+S, J8, J9,<u> J13</u>, <u>J14</u>, Su4+S, S, Su7, = 29

66. A3+S, S, A3+S, S, S, S, <u>A12</u>, A10+S, S, SD, S, S, S, S, S, A21+S, SD,<u> A21-25+S</u>, S, S, S, S, S, S, S, <u>J20</u>, S, S, S, S,   =   30

67. S, S, S, S, S, S, S, S,<u> A3</u>, <u>A4</u>, <u>A5</u>, A6+S, S, J3+S, <u>J4</u>, S, S, <u>Su1</u>, <u>Su7+S</u>, S, S, S, A13+S, S, A16+S, Su7+S, S, S, S, A21+S, A23+S, A22+S, S, S, S,=35

68. S, S, S, S, S, J14+S, S, J8+S, S, SD, S, S, A3+S, Su7+S, Su4+S, S, S, Su7+S, A21+S, J10+S, J9+S, A23+S, A25+S, S, S, A6+S, S, S, J13+S, S, S, <u>Su21</u>, <u>Su22</u>, <u>Su23</u>,=34

69. A1+S, S, A3+S, S, S, S, S, A11+S, S, S, S, S, S, A21+S, S, S, A21-22+S, S, S, J13+S, S, Su4+S, S, S, S, Su4+S, S, S, S, Su17+S, Su17+S, S, S, Su20+S, Su21+S, Su22+S, Su23+S, =   37   No References

70. S, A3, A19+S, A19-20+S, S, A21-22+S, S, J1+S,<u> J8</u>, <u>J9</u>, <u>J10</u>, <u>J12</u>, Su1,<u>Su5</u>, <u>Su6</u>, Su9-10+S, Su16, Su17+S, S, S, S, S, = 22 No Refernce at the end

Appendix L2: Types of content units composed by each subject in Phase II

Key to Abbreviations
Last names of the authors of the texts are written (in abbreviation)
P = Prasad's content unit (CU) (intact or selective verbatim)
P+S = Prasad's and student's CU (mixed = source's and student's)
P+SD = Prasad's CU as student's deviated CU (mixed)
B = Brandy's CU (intact or selective verbatim)
B+S = Brandy's and student's CU
B+SD = Brandy's CU as student's deviated CU
M = Markham's CU (intact or selective verbatim)
M+S = Markham's and student's CU
M+SD = Markham's CU as student's deviated CU
S = student's content unit
SD = student's content unit deviated from the content unit of the author
The numbers refer to the consecutive numbers od content units in each text
There may be other combinations within the above abbreviations
Underlining indicates acknowledgement or citation

Control Group 1-21   Phase II

1. S, M1+S, M8+S, S, S, M12+S, P3+S, M12, M13, P10+S, P14+S, S, M11+S, B2+S, S, B6+S, B5, = 17
2. S, M5+S, S, M8+S, S, P19+S, P3+S, M3, B3, B4, S, B5, P18+S, P12+S, P16+S, B6+S, B8+S, M10, S, B11+S, S, = 21
3. P2+S, P2+S, P3, S, S, P6+S, P3+S, P10+S, P14+S, P15, S, P16+S, SD, SD, B1+S, B2+S, B4+S, B5+S, B11+S, M1+S, M7+S, S, M8, M8+S, M11+S, M10, M17, = 27
4. S, B1+SD, P2+S, S, S, P5+S, P5+S, P6+S, S, P5+S,P5+S, S, S, S, S, S, B11, B2+S, B4+S, S, S, M10-11, S, M17, = 24
5. P1, P2, M7, M8, P5, P6, M12, M13, P10, B2, B3, B4, B4+P7, B5, P19, M10, M17=17
6. B1+M7+S, S, S, P3+S, P5+S, P5, S, M3, S, P7+B4+S, S, S, P12, S, S, S, M10, M11+S, M11+S, M17, S, = 21
7. M7, M8, M17, M10, M11, M12, M13, M14, M15, M2, M3, P1, P2, P2, P7, P8, P9, P10, P11, P12, P13, P14, P18, P19, P20, P21, B1, B2, B3, B4, B5, B9, B10, B11, = 34
8. P1, P2, P5, M1+S, M7+S, S, M8+S, M8+S, S, B4+S, S, B5+S, S, P7, P3+S, S, P10, B9, B11, S, = 20
9. P3, P7, P19, P20, P21, B1, B2, S, P8, P9, M4, M7, M8, M8, M11, M12, M13, M15+S, M16+S, = 19
10. P2+S, P5, P5, P6, P10+S, P15, P16, P17+S, P19, P20, P21, B1+S, B2, B3, B4, B8+S, B9, B10, B11, M1+3+S, M6, M8+S, M9, S, = 24
11. S, P3+S, P6+S, M1+S, M15+S, S, P19, B5+S, B1+S, P10+S, S, M10, M11+S, M12, M13, S, = 16
12. S, M7+S, M8+S, S, M17, S, M10, S, S, S, P2+S, S, S, B5+S, S, P14+S, P11+S, P15, P16+S, S, P17+S, S, S, S, S, S, S, S, S, = 29

13. S, S, P1+S, P2, P5, P6, P8, P9, P10, P17+S, P15, P16, B1, B2, B4, B10+S, B11+S, M7, M8+S, M10-11, M17, = 21

14. P1, P2, P5, P6, M1, M2, M3, P8, P9, P10, P13, P14, M7, M8, B1, P19, M10, M11, B9, =19

15. S, M11-13+S, M1+3+S, B5+S, P5+S, P5+S, S, S, P10+S, P19, P20, P21, M8+S, M9, = 14

16. P1, P2+S, P2, P3+S, P5+S, M1+S, M3, M7+B1, M8, P1+S, P7, M12, M13, P10, S, M15+S, M16, M17, S, S, B2, B4, P15, P16+S, P17+S, B11, P19, P21, S, = 29

17. S, S, S, B11+S, S, P19+S, B1+S, M1, M3+S, P7+S, P14+S, P10+S, P11+S, B10+S, B5+S, B6, S, P16+S, P17+S, M8+S, S, S, M8+S, M14+S, P6+S, M12-13+S, M15+S, S, M10, M17, S, M9, P1+S, S, S, S, = 36   Refernces

18. S, P5+S, P5+S, P9+S, M13, S, M7+S, M8+S, B2+S, B5, B8+S, S, B11+S, M10, = 14 References

19. S, P2, S, P5, P5+S, S, M1, M2, M3, P7, B4, P13+S, P14, SD, M5, M6, B1, P16+S, P15, P17+S, B10, S, B11+S, B11+S, P19, P20, P21+S, B6, B8+S, M10, S, M8+S, M15+S, M9, =34

20. S, B11+S, P5+S, P5+S, P14+S, P19+S, P20, P21, B1+S, B2, B4+S, B5+S, B10-11+S, M1+S, M5+S, M6+S, M8+S,M9+S, S, M10, M11+S, M13, M15+S, M12+S=24

21. P1, S, S, S, P3+S, P6+S, S, P17+S, P14+S, P19, P20+S, P21+S, B1+S, B2, B4+S, S, S, S, B5+S, B6, = 20

Expermental Group 22-42

22. S, S, S, S, S, S, P6+S, S, P9+S, P9+S, P19, B2+S, B5+S, B6+S, B8+S, B10+S, M10+S, M15+S, M16+S, M17, S, S, S, = 23

23. S, P1, P2+S, P2, P3+S, B2, M3, B4+S, P11+S, P12, P17+S, B5+S, P20, P21, P5+S, P6+S, M10+S, P1, S, P1, = 20

24. S, S, P2+S, P2, P7, P8, P9, P10, P11, P11, P14, P19, B1, B4, B8+S, M1, M7, M10, M11, M14, = 20

25. S, P1, P3, S, P5+7+S, P19, P20, P21, B2, S, B4, B5, B8, B9, M7, M8, M9, M10, M17, S, = 20

26. S, S, S, S, P1+M10+S, S, S, S, M1+3+S, S, S, S, P1, P2, M8, M12+13+S, P10+S, P11, P19, P20, B4, S, = 22   No Refernces

27. S, B2+S, B4+S, P14+S, P13+S, P11+S, S, S, B1+S, B6, B8+S, B5+S, M8+13, M9+S, S, P5+S, S, P3+S, P10+S, P19, P20+S, P21+S, = 22

28. S, P1+S, P2, P3+S, P5+S, P5+S, P5+S, P6+S, P9+S, P8+S, P10+14+S, B1, B3, B4, M1+3+S, M7, M8+S, M9+S, S, M10, M11, M12-13+S, M15+S, P10,=24

29. S, S, S, P2, S, S, S, S, P7+S, P8+S, S, S, P11, S, P13+S, P14, P19+S, S, P21+S, S, B3+S, S, B5+S, M8, M7+S, M8+S, M9+S, M10+S, S, =29

30. S, P3+S, M10, M1+S, B2, M3+S, M12-14+S, M15, M16, B7+S, B2+S, S, P7+S, P10+S, P11, P12, P13, P14, P15, P16, P17, P18, B5+S, B6, B7, B8, B9, S, S, S, S, S, S, S, = 34

31. S, S, M7, M1+S, P1, P8, P9, P6+S, P14+S, P13, P15, P16+S, P10, M10, M11, M12, M13, M14, M15, M16, M17, = 21

32. S, S, S, M15, S, S, S, S, M7+S, M8+S, S, P1+S, P2, P4+S, P5+S, M12-13+S, B2, B4+S, <u>P19+S</u>, <u>P21+S</u>, <u>B5</u>, <u>B6</u>, S, S, S, M11+S, S, S, S, = 29

33. S, S, S, S, P2+S, S, S, S, P6+S, S, S, <u>P19-21+S</u>, B11+S, S, B1+S, M8+S, S, M9, M9, S, S, = 21

34. M7, M8+S, B1+S, M3, P1+S, P3+S, P5+S, P7, P8, P9, P10, P13+S, P14+S, B4, P19, P20, P21, B6, B8, B10, M11, M12, M13, M14+S, B9, M10, = 26

35. S, M15+S, S, P11+S, P1, P3, P4, P5+S, P6+S, S, P14, P10+S, P19, P20, P21, B0+B1, B2, <u>B4</u>, <u>B5+SD</u>, <u>B10+S</u>, <u>B11+S</u>, M8+S, M9+S, M16, M17, S, S,= 27

36. S, S, P3, P5+S, P7, P6, P10+S, P12, P14, S, <u>P1</u>, <u>P2</u>, M1, M2, M5, M6, B4+SD, B2, <u>M7</u>, <u>M8</u>, <u>M9</u>, S, S, M10-11, = 24

37. S, S, S, M9+S, M7+8+SD, <u>P19</u>, P1, M10, M11+S, S, P2+S, P5+S, P5+S, P6+S, M1+3, M5+S, M6, <u>P21</u>, S, P10, P14+S, B6, S, B9+S,=24 No Refrence

38. S, S, M10, M11+S, P5+S, S, P7+S, S, P9+S, S, S, P14+S, B2+3+S, B10+S, B11+S, P19+S, M7+S, M8+S, M9, S, = 20

39. B0+S, M1, M3+S, M7+S, S, P1, <u>B1</u>, <u>B2</u>, <u>B3</u>, <u>B4</u>, P11+S, S, B10, S, B10+S, S, P9+S, P5+S, S, P9+S, <u>B11</u>, S, = 22

40. S, S, S, M7+S, M3+S, P2+S, P5+S, P6+S, P14+S, S, <u>P19</u>, <u>P20</u>, <u>P21</u>, B5+S, <u>B10</u>, <u>M7+S</u>, <u>M8+S</u>, M10-11, S, S, = 20

41. S, S, P9+S, P5+S, P5+B0+4, S, M7+S, <u>P2+S</u>, M7, M8, <u>P5</u>, <u>P6</u>, P10+S, <u>P12</u>, S, <u>B2</u>, <u>B3</u>, <u>B4</u>, <u>M10</u>, <u>M11</u>, <u>M12</u>, <u>M13</u>, <u>M14</u>, <u>M15</u>, <u>M16</u>, <u>M17</u>, <u>P19+S</u>, <u>P20+S</u>, <u>B5</u>, S, S, S, S, S,=34

42. P0+B0+S, P3+S, B1+S, M8+S, B2+3+S, B4+S, B10+S, <u>B6</u>, B10+S, P8+S, P10, <u>P19</u>, <u>P20</u>, <u>P21</u>, M10+11+S, S, = 16

Appendix M-1 : Number and percentage of verbatim or exact copy, sources' +subject's = Md
i.e paraphrased, and subect's =S's i.e generated content units respectively.

| Control Group Phase I | | | | | | Experimental Group | | | | | |
Ver	%	Md	%	S's	%	Ver	%	Md	%	S's	%
12	54.55	1	4.55	8	36.36	14	66.67	5	23.81	2	9.52
15	75.00	4	20.00	1	5.00	11	52.88	4	19.05	5	23.81
29	84.85	1	3.30	4	12.12	9	47.37	2	10.53	8	42.11
13	40.63	13	40.63	6	18.75	2	9.09	11	50.00	8	36.36
3	13.04	12	43.78	8	34.78	2	12.50	7	43.75	7	43.75
18	62.07	3	10.34	8	27.59	13	54.17	7	29.17	4	16.67
11	44.00	10	40.00	4	16.00	5	17.86	15	53.57	7	25.00
4	25.00	8	50.00	4	25.00	13	43.33	7	23.33	10	33.33
4	20.00	9	45.00	7	35.00	5	19.23	16	61.54	5	19.23
2	6.06	9	27.27	17	51.52	12	60.00	2	10.00	6	30.00
3	20.00	9	60.00	2	13.33	14	60.87	3	13.04	6	26.09
11	50.00	8	36.36	3	13.64	6	26.09	13	56.52	2	8.70
3	15.00	9	45.00	8	40.00	14	51.85	2	7.41	11	40.74
17	73.91	4	17.39	2	8.70	0	0.00	8	33.33	16	66.67
25	60.98	10	24.39	6	14.63	7	20.59	9	26.47	18	52.94
33	84.62	5	12.82	1	2.56	5	22.73	8	36.36	9	40.91
13	43.35	12	40.00	4	13.33	0	0.00	7	20.00	27	77.74
1	4.17	11	45.83	11	45.83	9	32.14	3	10.71	16	57.14
12	66.67	4	22.22	0	0.00	1	3.85	11	43.31	13	50.00
6	50.00	6	50.00	0	0.00	2	9.09	5	22.72	15	68.18
1	3.33	10	33.33	19	63.33	10	55.56	3	16.67	5	27.78
7	31.19	9	40.91	6	27.27	15	48.39	9	29.03	7	22.58
4	22.22	10	55.56	2	11.11	3	8.33	8	22.22	24	66.67
16	69.56	6	26.09	1	4.38	0	0.00	2	8.70	18	78.26
5	21.74	10	43.48	3	13.04	2	10.00	6	30.00	6	30.00
1	2.86	18	51.43	6	17.14	2	6.25	18	56.25	12	37.50
1	5.26	11	57.89	5	26.32	3	7.14	3	7.14	34	80.95
0	0.00	13	76.47	3	17.65	20	48.78	5	12.20	16	39.02
5	26.32	12	63.15	2	10.53	4	21.05	9	47.37	6	31.58

6	37.50	10	62.50	0	0.00	11	37.93	10	34.48	8	27.59
0	0.00	1	4.55	21	95.45	2	6.67	5	16.67	21	70.00
9	27.27	16	48.48	4	12.12	5	14.29	9	25.71	21	60.00
4	20.00	11	55.00	5	25.00	3	8.82	13	38.23	17	50.00
0	0.00	4	19.05	17	80.95	0	0.00	14	37.84	23	62.16
0	0.00	14	93.33	1	6.67	9	40.91	6	27.27	7	31.82
294	35.42	302	36.38	199	23.96	233	24.79	265	28.19	420	44.68

Ver = Verbatim content unit, Md = sources's and subject's content unit and S's = Subject's content unit

NB. Very small number of S's deviated and sources' distorted content units by some subjects are omitted due to lack of space in this Appendix.

Note

Grand Total

Control group 830 content units

Experimental group 940 content units

Appendix M-2 : Number and percentage of verbatim or exact copy, sources' +subject's = Md
i.e paraphrased, and subect's =S's i.e generated content units respectively.

	Control Group Phase II					Experimental Group				
Ver	%	Md	%	S's	%	Ver	%	Md	%	S's	%
3	17.65	9	52.94	5	29.41	2	8.70	11	47.82	10	43.48
5	23.81	10	47.62	6	28.57	9	45.00	9	45.00	2	10.00
5	18.52	16	59.26	4	14.81	16	80.00	2	10.00	2	10.00
3	12.50	9	37.50	12	50.00	15	75.00	1	5.00	4	20.00
16	94.12	1	5.88	0	0.00	7	31.82	4	18.18	11	50.00
5	23.81	6	28.57	10	47.62	2	9.09	15	68.18	5	22.73
34	100.0	0	0.00	0	0.00	8	33.33	14	58.33	2	8.33
7	35.00	7	35.00	6	30.00	4	13.79	11	37.93	14	48.28
16	84.21	2	10.53	1	5.26	16	47.06	9	26.47	9	26.47
16	66.67	7	19.17	1	4.16	15	71.43	4	19.05	2	9.52
4	25.00	8	50.00	4	25.00	5	17.24	10	34.48	14	48.28
3	10.34	8	27.58	18	62.08	2	9.52	6	28.57	13	61.90
14	66.67	5	23.81	2	9.52	18	69.23	8	30.77	0	0.00
19	100.0	0	0.00	0	0.00	11	40.74	10	37.04	5	18.52
4	28.57	7	50.00	3	21.43	16	66.67	2	8.33	5	20.83
16	55.17	9	31.03	4	13.79	7	29.17	10	41.67	6	25.00
5	13.89	19	52.78	12	33.33	2	10.00	11	55.00	7	35.00
3	21.43	8	57.14	3	21.43	8	36.36	8	36.36	6	27.27
18	52.94	10	29.41	5	14.71	5	25.00	9	45.00	6	30.00
5	20.83	17	70.83	2	8.33	17	50.00	8	23.53	9	26.47
4	20.00	9	45.00	7	35.00	5	31.25	10	62.50	1	6.25
205	42.71	167	34.79	105	21.88	190	38.15	172	34.54	133	26.71

Ver = Verbatim content unit, Md = sources's and subject's content unit and S's = Subject's
content unit

NB. Very small number of S's deviated and sources' distorted content units by some subjects
are omitted due to lack of space in this Appendix.

Grand total
Control group group 480 content units
Experimental group 498 content units

Appendix N : mark sheet for analytic scoring for assessing writing using multiple sources

Criteria	excel. 9	v.g 8	good 7	aver. 6	fair 5	poor 4	v.poor 3	Total
1. Interpreting or understanding sources								
2. Organizing text								
3. Selecting ideas								
4. generating ideas								
5. Connecting ideas								
6. Paraphrasing								
7. integrating citations and documenting sources								
Total								

Impressionistic Scoring out of 100 =

Appendix : O

A covering letter to respondents attached to the questionnaires

To   : all respondents
From   : Tecle Ghebremuse
Subject : Questionnaire

Please complete the attached questionnaire regarding academic writing using other texts or sources for Sophomore English EN 201 and EN 202. The questionnaire is designed for research purposes. Therefore, the researcher kindly requests you to give your frank responses.

It is clear that teaching academic writing using sources is a very complex process. Consequently, sophomores at the University of Asmara face difficulties of various kinds when they are required to write using sources. So the research feels that the situation calls for a thorough investigation into the major factors that affect academic writing using sources.

Your co-operation in completing the questionnaire with frank responses will be a significant contribution to the success of the research study and subsequently, to the progress of teaching effective strategies or steps which can facilitate academic writing using sources at the University of Asmara.

Thank you.

Appendix : P

Questionnaire - A - to students

Please express your opinions by writing the letters of your choices beside the number on the right side.

Dept._____

Sex _____

Age _____

1. My familiarity or acquaintance with writing from other   1._____
   texts or using source materials to create new text is___.
   a) very good   c) moderate
   b) high   d) little

2. I like academic writing i.e. writing relate to   2._____
   schooling in general and using sources in particular.
   a) a lot   c) not much
   b) a certain amount   d) not at all

3. I believe that I can do well in writing from other texts   3.____
   i.e. written messages or sources.
   a) very strongly agree   c) agree
   b) strongly agree   d) disagree

4. I believe that knowledge of subject-matter stored in my   4.____
   mind plays a vital or indispensable role when I write
   using sources.
   a) very strongly agree   c) agree
   b) strongly agree   d) disagree

5. I mainly use writing using sources in the following   5.____
   areas in ascending order of priority.
   a) Lab. reports   c) essay writing
   b) research paper   d) essay type exams.

6. I have a strong desire to learn and apply the strategies   6.____
   or skills indispensable to academic writing using sources.
   a) very strongly agree   c) agree
   b) strongly agree   d) disagree

7. The degree of my competence in organizing my writing   7.____
   assignments using sources is _____.
   a) very high   c) moderate
   b) high   d) little

8. The degree of my competence in selecting main and   8.____
   supporting ideas and details when I write using sources is____
   a) very high   c) moderate
   b) high   d) little

9. The degree of my competence in combining or connecting   9.____
   ideas when I write using sources is _____.
   a) very high   c) moderate
   b) high   d) little

10. My degree of competence in incorporating or integrating   10.____
    ideas when I write using sources is_____.
    a) very high   c) moderate
    b) high   d) little

11. The degree of my competence in academic writing is___.   11.___
    a) very high   c) moderate
    b) high   d) little

12. The degree of my competence in making use of texts or   12.___
    sources to create new text is _____.
    a) very high   c) moderate
    b) high   d) little

13. The degree of my competence in using variety of   13.___
    sentence structures is_____.
    a) very high   c) moderate
    b) high   d) little

14. The degree of my competence in using appropriate and   14.___
    varied range of vocabulary is ____.
    a) very high   c) moderate
    b) high   d) little

15. The degree of my competence in expressing what teachers   15.___
    expect me to write clearly is _____.
    a) very high   c) moderate
    b) high   d) little

16. The degree of my competence in avoiding serious errors   16.___
    of grammatical structures is ____.
    a) very high   c) moderate
    b) high   d) little

17. The degree of my competence in avoiding serious errors   17.___
    of punctuation is _____.
    a) very high   c) moderate
    b) high   d) little

18. The degree of my competence in avoiding serious errors   18.___
    of spelling and capitalization is ____.
    a) very high   c) moderate
    b) high   d) little

19. The degree of my competence in providing adequate   19.___
    details when I write any type of composition is____.
    a) very high   c) moderate
    b) high   d) little

20. I think I am satisfied with my writing ability using   20.___
    sources to _____extent.
    a) very high   c) moderate
    b) high   d) little

21. I think I have achieved the required degree of   21.___
    performance using sources to ____extent.
    a) very high   c) moderate
    b) high   d) little

22. I think I fulfil my lecturers' true expectations in   22.___
    writing using sources to _____extent.
    a) very great   c) moderate
    b) great   d) little

23. I think that I follow the informal methods of   23.___

discovering and exploring ideas in writing such a prewriting, freewriting, brainstorming, looping and outlining to _____extent.

a) very great   c) moderate

b) a great   d) little

NOTE : <u>prewriting</u> (preparing oneself to compose by determining what to include)

<u>freewriting</u> (writing freely without stopping to organize or judge your ideas)

<u>brainstorming</u> (listing points that come to your mind without stopping to refine your ideas)

<u>looping</u> (analysing and considering what you write during freewriting)

<u>outlining</u> (showing the breakdown of your composition/ essay i.e. your main ideas, supporting ideas, major details, minor details etc.)

24. When I complete a writing assignment, I divide my time between:

       a) reading _____%   .   d) writing first draft _____%

           b) note taking   ____%   e) revising   _____%

                c) planning _____%

                <u>Total 100% </u>

25. In learning to write, my lecturers help me to realize   25.___

that revising my assignments is a/an ___part of my assignment.

a) important   c)not really important

b) quite important   d) not at all

26. When I am given a writing assignment, I submit it ___.   26.___

a) without preparing a rough draft

b) after revising the rough draft once.

c) after revising the rough draft twice.

d) after revising the rough draft more than twice.

27. I need feedback primarily on how to ____.   27.___

a) organize my writing   c) connect ideas from sources

b) select the content of my writing   d) integrate ideas stored in my mind with ideas from texts or sources.

28. When my lecturers return the corrected writing assign-   28.___

ment, I _____.

a) rewrite it.   c) keep it for reference

b) make corrections on it   d) do not refer to it later

29. I think the reading/writing assignments have helped me   29.___

to improve my writing using sources to _____extent.

a) very great   c) moderate

b) a great   d) little

30. The strategies or steps I follow when I read texts/ printed sources for writing using sources are:

e.g. rereading. _____, _____, _____,

_____, _____, _____, _____,

31. Please write down any strategies or steps that you think may be helpful to improve writing using other texts or sources to create new text.

e.g. We need more practice on note-taking.

1._____

2._____

3._____"The End"

Appendix : Q Questionnaire - B - to lecturers

Please express your opinions by writing the letters of your choices beside the numbers on the right side.

Dept._____
Qual._____
Serv._____
Sex_____
Age_____

1. I evaluate the students who take Sophomore English-En 201/202 on writing using sources as follows: 1._____
   a)Excellent _____   c) Good _____
   b)Very good _____   d) Unsatisfactory _____

2. These students mainly use writing using sources.   2. _____
   Please write in order of priority.
   a) Lab. report _____   d) Essay type exams._
   b) Research paper _____   e) Note taking _____
   c) Essay writing _____

3. These students' attitudes to writing using sources are: 3. _____
   a) Very favourable _____   c) Indifferent _____
   b) Favourable _____   d) Unfavourable _____

4. I believe that they can do well in academic writing using sources.   4. _____
   a) Very strongly agree _____   c) Agree _____
   b) Strongly agree _____   d) Disagree _____

5. The degree of their competence or ability in organizing their writing using sources is_____.   5._____
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

6. The degree of their competence in selecting main and supporting ideas and details when they write using sources is_____.   6. _____
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

7. The degree of their competence in combining or connecting ideas when they write using sources is _____.   7._____
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

8. The degree of their competence in integrating or incorporating when they write using sources is _____.   8._____
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

9. The degree of their competence in academic writing is __.   9._____
   a) Very high_____   c) Moderate_____
   b) High_____   d) Little_____

10. The degree of their competence in making use of texts   10._____

or sources to create new text is _____.
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

11. The degree of their competence in using variety of   11._____
   sentence structures is _____.
   a) Very high _____   C) Moderate _____
   b) High _____   d) Little _____

12. The degree of their competence in using appropriate   12.____
   and varied range of vocabulary is _____
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

13. The degree of their competence in expressing what teachers 13._____
   expect them to write clearly is____.__
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

14. The degree of their competence in avoiding serious errors 14._____
   of grammatical structures is _____.
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

15. The degree of their competence in avoiding serious errors 15.___
   of punctuation is _____.
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

16. The degree of their competence in avoiding serious errors 16. _____
   of spelling and capitalization is _____.
   a) Very high _____   c) Moderate _____
   b) High _____   d) Little _____

17. The degree of competence in providing adequate details 17. ____

   they write any type of writing assignment is _____.
   a) Very high_____   c) Moderate _____
   b) High_____   d) Little _____

18. I think I am satisfied with their writing ability using 18.____
   sources to _____ extent.
   a) Very great _____   c) Moderate _____
   b) A great _____   d) Little _____

19. I think they achieve the required degree of (writing) 19.____
   performance using sources to _____extent.
   a) Very great _____   c) Moderate _____
   b) A great _____   d) Little _____

20. I think they fulfil my true expectations in writing 20.____
   using sources to _____ extent .
   a) Very great _____   c) Moderate _____
   b) A great _____   d) Little _____

21. When I give them a writing assignment using sources, 21. ____

they submit their written assignment _____.
a) Without preparing a rough draft ____
b) After revising the rough draft once ___
c) After revising the rough draft twice _____
d) After revising the rough draft more than twice_____

22. These students need feedback primarily on how to ___   22. ___
    a) Organize their writing_____
    b) select the content of their writing _____
    c) connect ideas from sources _____
    d) integrate ideas stored in their mind with ideas from texts
       or sources _____
    e) All the above _____

23. When I return the corrected writing assignment,   23.____
    they often
    a) Rewrite it ____
    b) Make corrections on the same paper _____
    c) Keep it as it is for reference _____
    d) do not refer to it later _____

24. Please write down any strategies or steps that you think may be
helpful to improve writing using other texts or sources to create
new text/s.
e.g. the students need more practice on note-taking.

1._____

_____

2._____

_____

3._____

_____

4._____

_____

5._____

_____

6._____

_____

_____

Appendix R: Interview Guide or questions for interview

1. Have you ever received exercises or assignments on writing from sources?
2. What type of writing from sources do you receive?
3. What is your idea of writing from sources? As to its importance, relevance etc.?
4. To what extent do you think you apply academic writing from sources in your academic writing or school life?
5. Can you briefly explain some of the functions or uses of academic writing from sources?
6. What do you think are the sources of academic writing ?
7. When you read, do you take notes, or underline or encircle important ideas or write down meanings on the margins?
8. Do you think writing from sources is possible without much reading?
9. What importance do you attach to reading in writing from sources?
10. What do you do (in relation to reading) when you write from sources?
11. When you write from sources, do you use textbooks, reference books, dictionaries, articles, lecture notes or combination of all?
12. In general, how do you evaluate writing from sources? easy, moderate, difficult, challenging, etc.?Why do you think so?
13. Do you find it difficult to quote, paraphrase, give reference ?. What is the problem in paraphrasing?
14. Do you think there are problems in academic writing from sources? Why do you think so ?
15. What do you think are some of the problems?
16. What do you do when you face with some difficulties in writing from sources?
17. What strategies or steps do you follow when you write from sources?
18. How much of your own ideas do you put into the finished writing?
19. Do you think knowledge of academic writing from sources affect your academic or scholastic achievement or performance? Will you explain briefly how it affects or how it does not affect your achievement?
20. What was the last written assignment which you did?
21. How did you go about it?
22. When you write from sources, do you like to prepare rough drafts?
23. What do you think are some of the differences between the highest scorers and the least scorers?
24. Did the course on writing using sources bring any change to your writing ability and what changes did it bring if it brought any change?
25. To what extent do you think writing using sources help you organize, select, connect, and integrate ideas?
26. Some students were not including introduction and conclusion when they were writing using sources. What do you think are the main reasons?
27. Do you have any general idea that you want to say on academic writing using sources?

Appendix S: A sample interview data
Number 55 - Second interview - phase I

1. Ya now that we that I have taken the course.. The course that you..given us it's I think I've about twelve assignments which I have to write from sources. Besides I have used we have been I mean as a law student we have been given some exercises this semester.

2. Well, for example, if I base myself on the assignments which were given which were given by my law instructors it was some kind of case study and we had to consult some precedents some cases and I used them as sources.

3. It's indispensable but I think that is the only word I can use because since what ever information that we have to give should should be based on those who who on those authors who who are professors of law, therefore, the role of the academic writing is vital role

4. Well, frankly ____ I was not I mean if if you're talking about efficient use of this academic writing, I was not that good on that now that I have taken the course of the course academic writing I can use to a great deal.

5. Well, after all it helps one to to make some kind of comparative analysis for, example, since different writers have different backgrounds, different ideologies and then what they write ____ must have some bearing on their ideologies. Therefore, we form some discrepancies when we have to refer these sources but if one is ____ well with respect to academic writing and writing from sources we can figure out what the discrepancies are. We on help a nutshell. We can help to make a fruitful analysis.

6. Well, the source of academic writing are the way I see it are the sources which different writers in different countries write about different things. -They can be journals, for example; they can be textbooks. They can be magazines and articles.

7. I am not used to taking notes although I usually ____ make some kind of outline but I am I am used to underlining things, and circling and ____ writing meanings dictionary meanings of words.

8. No, I don't think so. If one is to undertake such a work one has to have background is is hard to imagine unless one has first undertake a serious ____ extensive reading.

9. Well, when you read, you understand things and unless you understand things, you cannot write from sources____ .

10. The relation, I mean, if I do not understand what the contents of a certain ...texts are then, I ____ I cannot integrate what the contents of the texts into one I cannot compose them and therefore I have to make readings.

10. Well, first, I ___ I take recognition of the ..title of the texts which I am supposed to compose and I go to the library and see if I can get in the catalogue I mean if I can get some relevant books and them I locate the books and I will locate the title and I proceed with my readings. (Modified repeated)

11. Well, it's the combination of the two..of all but sometimes lecture notes may not be necessary. I mean the circumstance of the cas. It depends on the circumstance of the case, for instance, if it is ___ of ___ I am giving a certain text about which I have to write some reflective writing, then usually no lectures are given on those and I have to consult books only, dictionaries.

12. Well, it's challenging because it demands a lot of task and ___although it demands a lot of task, but it's important, equally important if no more so.

13. I used to, but now I have taken the course of my academic writing I think I am enabled to quote and paraphrase the way I should .

14. -15. Well, there are problems from the very beginning because if you are to make some wants to make some ___ .writing from sources he has to get enough books first, relevant books but sometimes one may be short of the books which he needs there if it is then the problem comes in but ___ when you ___one gets the books which on which he has to rely for his work then I mean at this stage at this stage now that I have taken ___this course I think there are no big problems

16. Usually, to attempt those applies, for instance I was given exercise some some exercise on which I have to compose___three texts on role and status for instance, well, this subject was unfamiliar to me, therefore, I had to go check the terms in another books before I had to refer to the texts which were provided. So, what I usually do is when I am confronted with ___ such problems I resort to books and then when I undertake a preliminary reading there and I turn back to my texts and I study .

17. Well, first I read it once and then, I read it twice, when I read it when I read it twice twice, second time,___ I underline things, I put some asterisk and then I mean together with that I try to make some kind of outline. This being first step then when I finish this I proceed with preparing some kind of the rough based on the outline I try to make some the first draft and then ___ I ___ I edit. I make some corrections, spelling corrections and other corrections and then I proceed with my second draft.

18. Well, this depends on on on the subject about which I am to write ___ if it is, for examples, of relevance to my field of specialization and I usuallyemploy my ideas and thoughts but if the title is alien to my my field of specialization I don't usually, I don't usually put my ideas.
Ya. As I have tried to say, it depends on the texts, for example, if I happen to figure out the discrepancies withing that text I have to employ my ideas but if it is plain, clear then I have just put what the writers say ___ and compose

them.
In percentage? May be thirty percent.

19. Well, my achievement is fine to see it with respect to my field of specialization and ___ it it affects me a great deal but usually___when exercises are given, for example, what what ...what you want you get a bunch of books and you have you have what you have to say but the problem is with how to put the ideas of different writers within the same paper and if one's good in academic writing, he can he can easily integrate his ideas with the ideas of different writers with the Same work.

20.- 22. Well, the last assignment I did was about some anthological or sociological terms: role and status. Literally, I tried to consult the dictionary. I mean their meaning with respect their meanings but I was not satisfied therefore I had to resort to see other books and I referred the topic concerning role and status which then again read my texts the texts which were provided by the teacher and then I read it twice, made on outline and then prepared the first draft and proceeded to the second.

23. I think it has to do with background usually specially when we talk about academic writing then, one has to be first good with respect to the English itself the grammar, mechanism, and all these because if one cannot understand what the English is then he cannot proceed with the contents and the arguments. Therefore, academic writing in different students have different ranks with respect to this and that affects them.

- Well, most of the students work much. I cannot say that it is because they do not work hard that they get less marks but as I have tried to mention earlier, it has to do with their background, their stored knowledge he fails or she fails to integrate the contents of the different writers.
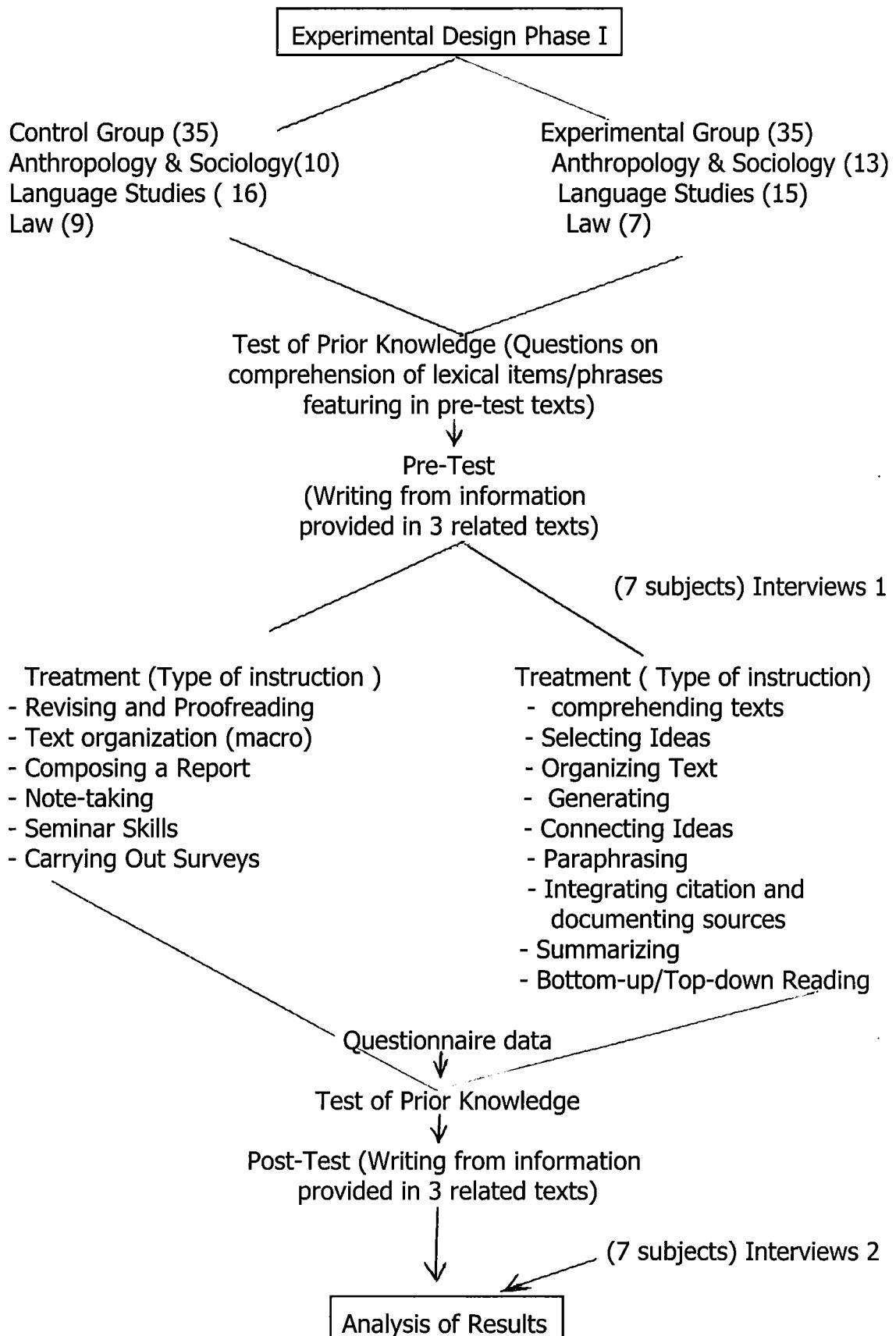
24. Well, for example, I well first what changes to answer it, to the question directly, I have made a lot of changes, in fact,   well, before I took this course, I was not good in paraphrasing I was not good in quoting especially, but now I can quote and I can paraphrase and that has helped me.
Well, the structural elements, can be improved when students work when students undertake a lot of work and   the course that I have taken has helped me a lot because especially in in the grammar parts, for example, in connection, in organization in all these aspects of the academic writing I have been enabled to use what was given in the lectures in my assignments. (New question)

25. Well,___I think ___ I have one idea that I should make well. Well, I believe that the course is indispensable especially for students who who learn in the English as a second language therefore the general comment that I would like to make is that it should be given as a separate course in this University.
_____ = indistinctive sound;   ... = Hesitations and or repetitions.

Appendix- T: A diagrammatic representation: TWUMSA vs. CTA to the
Teaching of Academic Writing

Experimental Design Phase I

Control Group (35)
Anthropology & Sociology(10)
Language Studies (16)
Law (9)

Experimental Group (35)
Anthropology & Sociology (13)
Language Studies (15)
Law (7)

Test of Prior Knowledge (Questions on
comprehension of lexical items/phrases
featuring in pre-test texts)

Pre-Test
(Writing from information
provided in 3 related texts)

(7 subjects) Interviews 1

Treatment (Type of instruction)
- Revising and Proofreading
- Text organization (macro)
- Composing a Report
- Note-taking
- Seminar Skills
- Carrying Out Surveys

Treatment (Type of instruction)
- comprehending texts
- Selecting Ideas
- Organizing Text
- Generating
- Connecting Ideas
- Paraphrasing
- Integrating citation and
documenting sources
- Summarizing
- Bottom-up/Top-down Reading

Questionnaire data

Test of Prior Knowledge

Post-Test (Writing from information
provided in 3 related texts)

(7 subjects) Interviews 2

Analysis of Results

Experimental Design Phase II

Control Group (21)
Plant Science (12) and, Soil and
Water Conservation (9)

Experimental Group (21)
Plant Science (10) and,
Soil and Water Conservation (11)

Test of Prior Knowledge (Questions on
comprehension of lexical items/phrases
featuring in pre-test texts)

Pre-Test
(Writing from information
provided in 3 related texts)

(4 subjects) Interviews 1

Treatment (Type of instruction)

- Reading and Note-taking
- Summarizing
- Writing Reporting
- Quoting Someone Else's Words
- Letter Writing
- Carrying Out Surveys
- Taking Part in Discussions
- Making Presentations

Treatment (Type of instruction)

- comprehending texts
- Selecting Ideas
- Organizing Text
- Generating
- Connecting Ideas
- Paraphrasing
- Integrating citation and
  documenting sources
- Summarizing
- Bottom-up/Top-down Reading

Questionnaire data

Test of Prior Knowledge

Post-Test (Writing from information
provided in 3 related texts)

(4 subjects) Interviews 2

Analysis of Results

TEACHING MATERIALS

PREPARED FOR THE EXPERIMENTAL GROUPS

PHASE I FEBRUARY - JUNE 1996

PHASE II SEPTEMBER - DECEMBER 1996

Read the following texts carefully; then compose one text from the three texts. The text you are going to produce should reflect the main and supporting points in the three texts. Please use your own words and do not quote too much.

1. Post-Secondary Education

Post-Secondary Education includes a variety of programs beyond the level of the secondary school. UNESCO reports on world education combine data on colleges, universities, higher technical schools, teacher training schools, theological schools, and many other specialized institutions under the heading. Education at the Third Level various forms of adult education may be included in programs at this level. A more restricted term, higher education, is used to mean regular enrolment in colleges and universities. Education at the higher level is available to only a small minority of the people of the world. For example, College and University enrolment is about 32 per thousand of the total population in the United States, 9 per thousand in Japan, 8 in France, 6 in Britain, 5 in West Germany, and 3 in Latin America.

In the simplest societies, there is no higher education; everyone learns all that is known is the trouble heritage of skill and lore. In more developed cultures, knowledge outruns the memory and skill of any individual, specialists arise-patterns, weavers, canoe builders, navigators, traders, priests, sages, artists, story tellers. The systematic mastering of such specialities foreshadows the higher education that sustains civilized living. Even tribes and nations ignorant of writing have developed forms of higher education. The Incas of Peru required sons and daughters of the nobility to reside in the capital in order to learn, not only the more exacting handicrafts and special skills such as weaving and warfare but the art of government and the keeping of accounts by means of knotted cords. In New Zealand the maori imposed upon young nobles a long training in memorizing on extensive body of tradition, genealogy, theology and philosophy, poetry, ritual, strategy, and-whether successful or not-telepathy.

Thus higher education begins wherever a select minority is instructed in special

branches of knowledge that are acquired only by concentrated effort. The ancient Egyptian theocracy, the palace sages and wandering teachers of ancient, the scribes of Sumeria-all devoted themselves to the increase and transmission of learning. Without higher education civilized living is impossible, whether knowledge be imparted under the open sky, in temples, among guilds of architects or navigators, in secret societies, or in publicly maintained schools.(366)

Kneller,G. 1988. "Post-Secondary Education," <u>Encyclopaedia</u> <u>Americana</u>. Danbury: Glolier Incorporated. Vol.9, 684.

2. Higher Education, any of various types of education given in post-secondary institutions of learning and usually affording, at the end of a course of study, a named degree, diploma, or certificate of higher studies. Higher educational institutions include not only universities and colleges but also various professional schools that provide preparation in such fields as low, theology, medicine, business, music, and art. higher education also includes, teacher-training schools, junior colleges, and institutes of technology. The basic entrance requirement for most higher-educational institutions is the completion of secondary education, and the usual entrance age is about 18 years. (<u>See also colleges; universities</u>)

Higher education had its origin in Europe of the Middle Ages, when the first universities were established. In modern times the nature of higher education around the world has been largely determined by the models established in influential countries such as France, Germany, Great Britain, the United States, and the Soviet Union.

Both France and Germany have systems of higher education that are basically administered by state agencies. Entrance requirements for students are also similar in both countries. In France an examination called the <u>baccalaureate</u> is given at the end of secondary education. Higher education in France is free and open to all students who have passed this examination.

In Germany, a country made up of what were once strong principalities, the regional universities have autonomy in determining their curriculum under the direction of sectors elected from within. Students in Germany change universities

according to their interests and the strength of each university.

The autonomy of higher-educational institutions is strikingly pronounced in Great Britain. Its universities enjoy almost complete autonomy from national or local government in their administration and in the determining of their curricula despite the fact that the schools receive nearly all of their funding from the state. Entry requirements for British universities are rather complicated. A student must secure a General Certificate of Education (corresponding to the French baccalaureate) by taking examinations in various subjects and receiving passing marks in them.

In the United states, there is a nation wide assumption that students who have completed secondary school should have at least two years of university education. Hence a great number of "Junior colleges" and "community colleges" have spring up to provide two years of undergraduate study.

Higher education in the Soviet Union is characterized by direct state administration, differing from the French in that a single Political party controls the governing body.

Modern trends in higher education indicate a willingness world wide to learn from the strengths of the varies systems. (427 words)

Higher Education. 1991. The New Encyclopaedia Britannica, Vol.5, 918.

3. Universities and Colleges, Institutions of higher education for

students who have finished 12 years of elementary and secondary school. Some of these institutions train in high-school graduate for a vocation, such as business or journalism. Some prepare him to enter a more advanced school for training in profession, such as law or medicine. Some try to give a general, well-rounded liberal education instead of specialized or vocational training. A liberal arts (history, literature, philosophy, science, etc.), is intended to provide the kind of broad cultural background considered necessary for all informed citizens.

In the United States and Canada, the word College has at least two meanings: 1)an independent school that offers four-years courses in liberal arts leading to

the bachelor's degree (B.A. or B.S); and (2) a division or unit of a larger institution called a University.

A true University is a group of colleges under the same administration. It has at least two divisions-(1) a four year liberal arts college for undergraduates; and (2) a college, called a graduate school, for students with bachelor's degrees who are seeking advanced (master's and doctor's) degrees. Large universities also have specialized undergraduate colleges, concentrating on such fields as education, commerce, or journalism; and various professional schools to training physicians, engineers, lawyers, etc. A land-grant College or University, which receives federal as well as state aid, offers instruction in agriculture and engineering, in addition to other subjects.

Institutions whose names include such words as Poly<u>tech</u>nic, technology, or in<u>stit</u>ute (Virginia Polytechnic institute for example) emphasize training in science and engineering, but may also offer programs in other fields. Military Colleges are often called ac<u>ade</u>mies, and theological schools seminaries, but both terms are sometimes applied to other kinds of institutions. Teachers colleges prepare students for elementary and secondary school teaching, but may also offer liberal arts programs. A <u>Junior</u> college offers the first two years of a liberal arts course. It may also offer such vocational courses as dental technology.

The official name of an institution does not necessarily indicate the type of studies it offers. Some "Universities" are really liberal arts colleges. Some "colleges" have graduate departments and are really universities. A good guide to an institution's program of studies, or cur<u>riculum</u> is its catalogue or bulletin. 'Accredited colleges and universities are those schools that are certified as meeting certain standards with regard to such matters as curriculum, staff, libraries, and equipment. Agencies that do the accrediting include regional associations of schools, state officials, and professional societies.(415 words)

"Universities and Colleges". 1965. <u>New Standard Encyclopaedia TUV</u>, U-127- U-128.

Bottom-up and Top-down Reading Processes

Generally, cognitivists conceive of the reading process as involving a series of operations on a written message, called simply "the text." These operations in turn involve creating and successively altering a cognitive code. You might assume that the creation of this cognitive code begins with the perception of individual letters or words and progresses from there to successively larger units of meaning. Such an analysis implies that the process of reading is largely "bottom-up" or data driven. Yet, as we'll see, readers seldom initiate the reading process in so neutral a fashion. Rather, all reading is done in some context, a context shaped by the reader's skill, purpose, expectations, and by the complexity of the written material. At this point in your reading of this book, words like "purpose" and "expectations" probably are signals telling you to be on the lookout for the phrase "top-down processing"- and so there it is. Top-down processing in reading means that moderately skilled readers are not simply passive spectators but are actively engaged in extracting the desired information from the text.

Top-Down Cognitive Operations in Skilled Reading

COMPREHENSION MONITORING The goal of the reader is to comprehend the text. This sounds like a simple objective, but the term "comprehension" may have various meanings depending upon the reader's purpose, the complexity of the material, the reader's familiarity with the topic, and so on. Consequently, as a reader, I may "tune" my level of comprehension to be consistent with these other variables. In reading the Sunday paper, I may be satisfied with a fairly low level of comprehension; reading a journal article in which I'm interested will require a much higher level of comprehension. What can I do to tune my comprehension level? As we've seen, one thing we can do when we want to increase our comprehension is increase our "sampling" of the textual material. How do readers determine when they need to increase their sampling frequency? Are there other ways that comprehension level may be tuned? Generally, skilled readers are able to recruit a number of cognitive processes in an effort to make sure that the appropriate level of comprehension is being attained. Specifically, some of these processes are goal setting, strategy selection, goal checking, and remediation

(Gagne, 1985).

GOAL SETTING At the beginning of any reading episode, skilled readers establish a goal. For example, our goal might be to find a particular bit of information that we are pretty sure is embedded in a particular text. Or our goal might consist of getting a general overview of some textural material before studying it. Perfetti and Curtis (1986) have argued that the overall goal of reading is the development of a text model, by which they mean the reader's mental representation of a text at any point during reading. We should understand the text model as a set of higher-level propositions that are related to one another. Thus, the finding of a particular bit of information in a text may activate previously stored factual knowledge. This subsequent activation may in turn suggest that the appearance of certain other facts should be forthcoming.

STRATEGY SELECTION Obviously, our goals have some implications for our skimming strategies. For example, if I'm looking for a particular bit of information, I may in fact skim for a particular word or name. In that case, I may concentrate on the body of the text and ignore the headings. On the other hand, if I'm trying to get an overview of a chapter, I may look for the chapter headings of subheadings and ignore the body of the text. Referring back to the concept of the text model, we see that the adoption of one or another text model has some strategic implications too. That is, my internal representation of the text is what I think the text is about, and what I think the text is about in turn tells me which facts could or should be stated and which facts could or should be inferred. In other words, my text model tells me what to look for. If, at this point, you're thinking that the construction of a text model is aided by the existence of schemas in our permanent memory, you're absolutely correct. As we saw in Chapter 6, schemas can be used to aid in the recall of presented material. As we'll see here, schemas can be "called up" to help construct a text model.

For example, when subjects read vaguely worded or metaphorical passages, their comprehension (and their recall) of such passages is likely to be poor. We saw

this effect in the Dooling and Lachman (1971) study described in Chapter 5. As you'll recall, their subjects were given a highly metaphorical depiction of Columbus's voyage to America. Comprehension and recall were poor until the subjects were given a title that enabled them to call up their "Columbus knowledge" and construct the text model more efficiently.

In addition to organizing the incoming material as we read, a schema helps us seek the important information in a text. This effect is seen in some research done by Voss and colleagues (Spilich, Vesonder, Chiesi, & Voss, 1979; Chiesi, Spilich, & Voss, 1979). Subjects who had a great deal of knowledge about baseball recalled more information from an account of a fictitious, although plausible, game than did subjects with less baseball knowledge. In addition, the knowledgeable fans recalled more detailed information about the game's pivotal events compared to the less knowledgeable fans who tended to recall more incidental information.

In addition, some evidence suggests that the goal we choose will lead to the deployment of different cognitive processes. Guthrie and Kirsch (1987) had their subjects, who were electronics engineers and technicians, engage in four comprehension tasks that are common in that profession: comprehending a technical article, locating information in a schematic drawing, locating information in an article, and locating information in a schematic drawing, locating information in an article, and locating information in a manual. They found that their subjects used different engagement strategies for each of these tasks. Moreover they found that the specific cognitive skills and processes required for each engagement strategy were more or less independent of one another. This suggests that skilled readers assemble a reading engagement strategy for each reading task that they perceive to be different from other reading tasks.

GOAL CHECKING One of the implications of the foregoing material is that skilled readers frequently check their text model to see if important material is indeed being picked up and encoded. If this implication is true, we should expect that readers take more time to read information that is critical to their goals. Such an

interpretation is supported by Cirilo and Foss (1980) who found that subjects did take longer to read sentences that had important information, even when these sentences were not necessarily more ambiguous or longer than surrounding sentences. It's important to realize that skilled readers are particularly likely to slow their reading rates when they perceive information that is not likely to be repeated elsewhere in the text.

REMEDIATION Finally, some evidence (Perfetti & Curtis, 1986) suggests that one of the first things skilled readers do in a reading episode is establish the text's difficulty. When a difficult text is encountered, or when an "easy" text suddenly gets more difficult, it would seem reasonable that a skilful reader would begin to take some steps to make sure that the information is still being encoded correctly. However, the evidence on this issue is mixed. Wilkinson, Epstein, Glenberg, & Morse (1980) found that their adult subjects did not always become aware that the text they were reading contained some logical contradictions. Obviously, readers who don't become aware of the contradiction can hardly hope to correct the inconsistencies in the text model they are presently forming.

But other researchers have reached somewhat different conclusions. Lorch and Lorch (1986) reasoned that good readers are sensitive to markers or cues in the text that may be used to enhance the development of an existing text model or to check to make sure that the current text model is accurate. Their university-level subjects read a text that included various "markers" such as summary sections or "importance indicators." Their findings showed that readers had better recall for sections marked "important" than they did for other material. This finding suggests that the subjects did indeed pay more attention to such sections than they did other sections. Moreover, Lorch and Lorch demonstrated that readers slowed down when they got to summary sections, but, surprisingly, good readers slowed down less than did poorer readers on these sections. How might we account for this counterintuitive finding? Remember Cirilo and Foss (1980) demonstrated that readers are particularly likely to slow their reading rate when they encounter information that is not likely to be repeated elsewhere in the text. Generally this isn't true of summaries, which tend to be simple rephrasings of material that can be found elsewhere in the text. Seen in this light, the Lorch and

Lorch findings make sense. Subjects tend to use summary sections and "important" markers to check on the accuracy of their developing text model. However, it seems reasonable to suppose that good readers are less reliant on such devices than are less able readers, because good readers are presumably aware that the information can be picked up elsewhere. Consequently, it's to be expected that the less able readers are more likely than the good readers to use the summaries as a "pit stop" where they can do a fairly complete check on the accuracy of their text models.

Read the following texts carefully; then compose one text from the three texts. The text you are going to produce should reflect the main and supporting points in the three texts. Please use your own words and do not quote too much.

Anthropology can be defined as the study of human nature, human society, and human history (cf. Greenwood and Stini 1977). It is a scholarly discipline that aims to describe, in the broadest possible sense, what it means to be human. Anything having to do with human beings is of concern to anthropologists.

Anthropologists are not alone in focusing their attention on human beings and their creations. Human biology, literature, art, history, language, society, politics, economics - all these scholarly disciplines have chosen one or another aspect of human life, or the products of human life, on which to concentrate. Anthropology draws upon the findings of these other disciplines and attempts to fit hem together with its own data. The subject matter of anthropology is certainly compelling. What makes anthropology unique, however, is that it tries to integrate all that is known about human beings and their activities at the highest and most inclusive level. That is anthropology is *holistic,* and holism is a central feature of the anthropological perspective.

Anthropology tries to generalize about human nature, human society, and human history. To do this requires evidence from the widest possible range of human societies and periods of human history. It would not do, for example, to observe

only our own social groups, discover that we do not eat insects, and conclude that human beings as a species do not eat insects. Thus, in addition to being holistic anthropology is a *comparative* discipline. Anthropologists want to come up with generalizations about what it means to be human that are valid across space and through time. This means that the field for comparison is vast. It includes any and all human societies, anywhere in the world. It also takes in any and all periods of human history, including periods dating from the emergence of human like primates some 5 million years ago.

For this reason, anthropology is interested in the evolution of human species over time.

Schultz, E., and Lavenda, R.1990. Cultural Anthropology: A perspective on the Human Condition(Second ed.). St. Paul: West Publishing Co,pany :4-5.

Anthropology is the study of humankind. In employing a scientific approach, anthropologists seek to produce useful generalizations about humans and their behaviour and to arrive at an unbiased understanding of human diversity. The two major fields of anthropology are physical anthropology and cultural anthropology. Physical anthropology focuses on humans as biological organisms. Particular emphasis is given by physical anthropologists to tracing the evolutionary development of the human animal and studying biological variation within the species. Cultural anthropologists study human in terms of their cultures. Culture is the rules of standards by which societies operate, and it has to do with all the learned behaviour passed on from one generation to the next.

Three areas of cultural anthropology are archeology, linguistics, and ethnology. Archeologists study material objects from past cultures in order to explain human behaviour. Linguists, who study human language, may deal with the description of a language or with the, history of languages. Ethnologists concentrate on cultures of the present or recent past; in doing comparative studies of cultures, they may also focus on a particular aspect of culture, such as religious or economic practices, or as ethnographers, they may go into the field to observe and describe human behaviour as it can be seen, experienced, and discussed with

persons whose culture is to be understood.

Anthropology is unique among the social and natural sciences in that it is concerned with formulating explanations of human diversity based on a study of all aspects of human biology and behaviour in all known societies, rather than in European and North American societies alone. Thus anthropologists have devoted much attention to the study of non-Western peoples.

Haviland, W. 1983. Cultural Anthropology(4th ed.). New York: Holt, Rinehart and Wisnton. 25.

Anthropology deals with a grater variety of phenomena than almost any other behavioural science. In fact, the anthropologist is willing to probe any area that shows promise of contributing to the solution of his problems. He may be interested, for example, in how blood types are inherited, in techniques of disciplining children, the position of the opening in the base of the skull, or the sociopsychological function of witchcraft.

Such diversity creates difficulties. For one thing, there is the danger that specialists in the various branches of anthropology will lose touch with one another and the field will disintegrate. An anthropologist whose main interest is evolutionary change in tooth cusp patterns, for example, may experience some difficulty in maintaining professional modes of interaction with another anthropologist primarily concerned with developing a theory of poverty. Another difficulty suffered by every anthropologist is becoming and remaining familiar with a wide variety of concepts, methods, and findings.

In spite of these stresses, and occasional predictions of disintegration, anthropology remains a single discipline embracing a rather impressive variety of specialties. These specialities are kept under one tent because so many anthropologists believe the most adequate understanding results from maintaining both a biocultural and a comparative orientation. Biocultural orientation requires exploration of the relationships between the genetically inherited features of man's nature and features that are socially learned, and the comparative

<u>orientation</u> involves the comparison of the greatest possible variety of human groups. <u>Anthropology, then , may be defined as the biocultural and comparative study of human nature</u>.

The many who favour continuation of anthropology's biocultural and comparative orientation exert no little effort to maintain unity. One way this is done particularly in the United States, is to require each anthropologist to develop basic competence in all major subdivisions of the field, whether he is preparing to be a cultural anthropologist, a linguist anthropologist, a prehistoric archaeologist, or a biological anthropologist. Second, several of the major journals, ..., publish articles from all major areas of anthropology. And finally the fact that anthropologists regularly discuss the difficulty of maintaining the field's unity against the disintegrative pull of its diversity helps to keep the discipline intact. Taylor, R. 1973. <u>Introduction to Cultural Anthropology</u>. Boston: Allyn and Bacon, Inc.

Read the following texts carefully and then compose a new text.

Forgery

Forgery's subject matter is false writing. Documents subject to forgery make up a long list, since the law defines fraudulent or false writing broadly.

Many forgeries, such as forged cheques, clearly and directly misappropriate property. These forgeries are obviously property offenses. Other forgeries are not so obviously harms to property. For example, a university might lose more reputation than property from forged diploma. Injury to reputation and impairment of normal transactions make forgery more than a mere property offense.

Model Penal Code drafters aimed the Code's forgery provision against three harms when they wrote a sweeping forgery definition: the harms of direct property loss, damage to reputation, and impaired business and commercial confidence; Except in grading forgery, the Code abandons a significant traditional requirement: must have leal or evidentiary significance. Hence, it includes doctors' prescriptions,

identification cards, diaries, and letters, not just deeds, wills, contracts, stocks, and bonds. Furthermore, documents are not forgery's only subject matter. Coins, tokens, paintings, and antiques also fall within its scope. In fact, says the commentary to this provision, "Anything which could be falsified in respect of 'authenticity' can be the subject of forgery."

Samaha, J. 1990. Criminal Law (3rd Ed.). St. Paul: West Publishing Company 441-443.

Forgery

The forgery of a writing, with intent to defraud, is an offence at common law, but in fact forgery should be charged under some statutory provision, and almost always under some section of the Forgery Act 1913. For the purposes of that Act "forgery is the making of a false document in order that it may be used as genuine, and in the case of the seals and dies mentioned in this Act the counterfeiting of a seal or die" (section 1).The seals mentioned include various State seals and the seal of any court or record, the forgery of which is punishable with a maximum of life imprisonment, and ceratin other seals, where the maximum punishment is less severe. The dies mentioned include those used by the Commissioners of Inland Revenue and the Commissioners of Customs and Excise; the forgery of these is punishable with imprisonment for not more than fourteen years. ...and the forger, with intent to defraud or deceive, of certain public documents, such as registers of births, marriages and deaths and certified copies of entries therein, court records, and marriage licences, is an offence punishable as provided by section 3 of the Act (the prescribed maximum punishments varying from life imprisonment to seven years' imprisonment

Carvell, I., and Green, E. 1972. Criminal Law and Procedure. London: Sweat & Maxwell.

ART. 93. - Forgery

Forgery is the making of a false document in order that it may be used as genuine, or the counterfeiting of a seal or die. If committed with intent to deceive or defraud in the case of a public document, or in the case of a private document, to defraud, it is a felony or misdemeanour according to the nature of the

document which is forged and punishable with various terms of imprisonment.

Explanation

The Forgery Act, 1913

A common law forgery was a misdemeanour, but the crime no longer depends on the common law and is now based on the Forgery Act, 1913 (i). S.4 of that Act provides that the punishment for the forgery of documents which is not made a felony shall be imprisonment for two years, If the document is private, there must be an intent to defraud, while an intent to deceive suffices in the case of public documents. We shall see that an intent to defraud includes an intent to deceive. The term "public document" is not defined but when dealing with a branch of the law of evidence in which a distinction is drawn between public and private documents, Lord BLACKBURN said a public document is one that "is made by a public officer for the purpose of the public making use of it and being able to refer to it" ... the forging of wills, deeds, bonds and bank-notes is a felony punishable with imprisonment for life, while forgery of valuable securities, documents of title to land and goods, powers of attorney over public funds, registers of public funds, insurance policies and charter parties is a felony punishable with imprisonment for fourteen years.

Cross, R., and Jones, P. 1964. An Introduction to Criminal Law (5th ed.). London: Butter worths. 307-8.

Read the following texts carefully and then compose a new text.

Themes Through Character

If it were possible to isolate the ingredients of the short story, it is reasonable to assume that the element of "character" would emerge as the most essential for a successful story. Once we agree that the concern of the good short story is man, his values and conditions, the, it becomes academic to say that the human beings who populate the stories must be plausible, must be reasonably motivated, must be consistent.

Except on the most elementary and unsophisticated fictional level, the "good guy" and the "bad guy" do not exist. Anyone with any experience at all knows better than to believe that one man is all good and another all bad. Such characters have no life of their own, no individuality, no universality-in fact, no relevance. They are merely stick figures or puppets manipulated at will by the author.

The good writer knows his character as well as he knows himself, or better; after all he creates them. He knows their tastes, their habits, their whims, how they will react in almost any situation. Nothing is left to chance by the effective artist.

In order for the reader to find interest in the characters of the story and thus interest in what they are doing or thinking or feeling, he must be introduced to them dramatically. This simply means that the characters are revealed primarily by indirection. It is true that we are sometimes told directly that so-and-so is a tall, swarthy man who walks with a limp and speaks with a slight lisp. But this is hardly enough on which to build a flesh -and-blood personality. The reader must have mor: he must be able to hear the man speak, to see what he does, to understand the reactions of others toward him. In other words, the reader must be able to observe the character, not merely read about him.

Here the objection might be raised that in the case of minor or secondary characters, development is frequently minimized, and in an extent this is true. But one must remember that if the character is to be successful, he must be germane to the story; he must fit; within the context he must above all be probable.

Johnson, W., and Hamlin, W. C. 1966. The Short Story. New York: American Book Company.

What is character?

Character in literature is a reasonable facsimile of a human being. The term is frequently applied in two sense: (a) as a reference to a personage in a work, and (b) as a reference to that personage's habits and characteristics- his total pattern of behaviour. In real life we perceive a person's qualities from our contact with him. We learn about his strengths and weaknesses by observing how he speaks and acts, and, if we are on intimate terms with him, by listening to his thoughts as he communicates them to us. If we want to learn more about a particular quality, we ask him for more information about it. But in a literary work we can understand the qualities of a personage only by interpreting what the author has written about him. All the actions performed by this personage, together with what he says and what is said about him, provide us with all the material from which we can make inferences about his qualities, and can expect no more than the author has chosen to disclose. We may expect, however, that the picture presented should seem reasonably true to life (that is, the actions, the statement, and thought of a particular personage must all be what a human being is likely to do, say, and think under given circumstances.

As you will immediately see, an avenue of evaluation is opened up here, for if a character does not behave as you think a true human being would behave, you have grounds for criticizing the literary work. However, your judgement on this score requires a strong imaginative boost; you must not judge simply from your own point of view, but must imagine what very different kinds of persons would do under exactly similar circumstances and with the same mental and philosophical outlooks. You can see also this imaginative effort requires you to read the literary work sympathetically - an essential mark of a good, disciplined reader.

In studying character, then, you must look carefully at the early parts of the work in order to see what tendencies the characters have exhibited. With these characteristics in mind, you must then ask yourself "Is the subsequent action a logical consequence of this man's qualities?" In the early scenes of Macbeth, for

example, Shakespeare demonstrates that Macbeth is a loyal, strong, valiant, and almost foolhardy warrior, that he is ambitious, but that he is also kind and gentle. In view of Macbeth's later responsibility for a series of deaths and for a brutally oppressive regime as king, the question is to square his characteristics with the subsequent action.

Roberts, E. 1964. Writing themes about literature. London: Prentice-Hall International, Inc.41-42.

Methods of Textbook Note taking
First Method: Jot Recall Words in the Textbook Margin

After you have read and marked off the most important material in a selection, reread the material carefully. Then, using the margin space of the text, write down words that will help you recall the important information.

Once key or recall words have been jotted in the margin, they can be used to study the material on each page. Simply convert each key word into a question and review the material until you can recite the answer without looking at the page. For example, the recall words in the selection could be turned into such questions as: "What is a reflex?" "What are two kinds of reflexes?"

Reflexes in Infants

A second significant collection of behaviors we see in the newborn are reflexes. A reflex is a response that is automatic and is triggered involuntarily bu some specific stimulus. As adults we have quite a collection of such reflexes, including the expansion and contraction of the pupil to dark and light, blinking when a puff of air hits the eye, the knee jerk, and so on. In the newborn there are dozens of reflexes, but psychologist are interested in only a few. Of these, the most important have to do with eating.

Feeding Reflexes

First, the infant comes equipped with a <u>rooting reflex</u>. If you touch him on the cheek, anywhere near the mouth, he will turn his head and root around to put his mouth on the object that touched him. ... This reflex is extremely sensible, if you think of the position in which a baby is held to be fed, particularly for breast feeding.

Next in the sequence is the <u>sucking</u> reflex. The baby will automatically make sucking movements if touched on the lips or if something is inserted in his mouth. Finally, there is the <u>swallowing reflex</u>. At this early stage the baby hasn't learned to stop breathing in order to swallow, to avoid taking in a lot of air, so the baby doesn't alternate these well. He swallow air and then has to burp it up again. But swallowing does occur reflexively from the very earliest days of life.

2. Primitive Reflexes

A second group of reflexes, although not as essential to the infant's survival as the various feeding reflexes, seems to be controlled by the midbrain, which is the part of the brain that develops earliest. As the more advanced parts of the brain such as the cortex develop and come to dominate during the first year or so of life, these primitive reflexes drop out. ....

<u>The Motor reflex</u> is one of these primitive reflexes. If a loud sound is made near the baby, if the baby's position is changed suddenly, or if there is some similar major change, the baby will throw both arms outward and them (sic) bring them back. .... This response disappears at about three months of age, except in babies who have certain kinds of brain damage. Another of the primitive reflexes is the <u>babinski reflex</u>. If you stroke a baby on the bottom of her foot, she'll first spread her toes, and then curl them in. In an adult or an older baby, only the curling occurs. This response is all the more interesting because, when it occurs in an adult, it's a sign of abnormality in the neurological system.

A further and perhaps more interesting primitive reaction is the <u>grasp reflex</u>. If you touch a baby across the palm of his hand, his fingers will close tightly around the object touching him. His grip is so strong, in fact, that a baby grasping a rod

with both hands can often be lifted completely off the ground. Some psychologists have suggested that this reflex is a remnant of our evolutionary past, when we needed to be able to hang onto tree branches or onto part or the mother while she was moving. The reflex disappears by about six months of age, when the more mature parts of the brain have developed more fully.

Second Method: Prepare Separate Sheets of Study Notes

The second method of taking textbook notes is to prepare separate sheets of study notes on the important information in a chapter.

Following are sample study notes on the "Reflexes in Infants" selection. Fill in the notes that are missing.

Bee and Mitchell, Chapter 4: "The New born Infant" _____ __

_____

Reflex - a response that is automatic and is triggered involuntarily some specif stimulus.

_____

Kinds of reflexes in infants: _____

1. Feeding

   a. Rooting - If touched on cheek, will move mouth in that direction.

   b._____

   c. Swallowing - Hasn't yet learned to stop breathing in order to swallow.

2. Primitive (Source is midbrain, the part that develops earliest).

   a. _____

   b. Babinski - Will spread out and then curl in toes if stroked on bottom of foot.

   c. _____

Langan, J. 1984. Reading and Study Skills (2nd Ed.). New York: McGraw-hall Book Company. 141-145.

Read the following selection; then complete the outline that comes after the selection.

One reason why self-disclosure promotes intimacy is that it increases trust. By revealing to another person something that could embarrass you, you are saying, in effect, " I trust you." By responding to your disclosure without ridicule or scorn, the other person is saying, "You can trust me." And by reciprocating with a disclosure of her own, she is saying, "I will trust you in return. Now we have a pact."

At the same time, self-disclosure of course increases familiarity. Gradually, as more and more information is revealed, each person can piece together the logic of the other persons' thoughts and emotions. Each comes to know the other's inner self. Consequently, each can be more certain of understanding the other and of being understood.

Finally, self-disclosure deepens the attachment between two people simply by virtue of being rewarding. It is rewarding both to the receiver and in various ways to the giver. To the receiver, the disclosure is a gift of trust; he is hearing privileged information. It is also a gift of affection; he is special. To the giver, self-disclosure is rewarding in several ways. First, it relieves emotional loneliness; the private self, revealed and accepted, no longer shivers in isolation. Also, self-disclosure relieves guilt and fear. As long as we conceal our mental bogeymen, they will continue to howl and cackle in the dark corridors of the mind. Once we reveal them, they look (and feel) much less threatening. Third, human beings seem to have a need to tell. This need probably accounts, in part, for the popularity of psychotherapy. It certainly accounts for the so-called stranger - on-the train phenomenon, whereby a person lays bare his soul to a total stranger, particularly, a stranger whom he is fairly certain of never seeing again. Self-disclosure to a friend satisfies the same need, and it has the added advantage of creating a bond of trust with a person who (unlike the stranger or the psychotherapist) may still be part of your life ten years from now (283-4).

Outline

Reasons why self-Disclosure Promotes Intimacy

I._____

II._____

III._____

      A. Receiver_____

          1. _____

          2. _____

     B. _____

          1._____

          2._____

          3._____

Langan, J. 1984. Reading and Study Skills (2nd Ed.). New York: McGraw-hall Book

     Company. 141-145.

Read the following texts carefully and then compose a new text.

Institutions

Every society must meet certain basic social needs if it is to survive and provide a satisfying life for its members. For example, children must be raised and cared for; the cultural knowledge of one generation must be passed on to the next; important social values must be shared and upheld; social order must be maintained; goods and services must be produced., Over time, the members of each society create patterns of thought and action that provide an appropriate solution for these recurrent challenges. These patterns of behaviour are what sociologists call institutions.

An institution is a stable cluster of values, norms, statuses, roles, and groups that develops around a basic social need.... Thus, the family institutions provides for the care of children. The educational institution transits cultural knowledge to the young. The religious institution provides a set of shared values and the rituals that reaffirm them. The political institution allocates power and maintains order. The

economic institution provides goods services.

One important characteristic of institutions is that they are inherently conservative. Patterns of social behavior become institutionalized, or securely established, only when they have been reinforced by custom and tradition to the point where they are accepted almost without question. People tent to resent and resist any attack on the institutions they know. (imagine, for example, the likely response in North America to a serious attempt to abolish the family, to end compulsory schooling, to replace existing churches with new cults, or to apply communist principles to the economy.)

A second characteristic of institution is that they tend to be closely linked with the social structure. As we noted in Chapter 3 ("Culture"), the various aspects of a culture tend on the whole to fit together; if they d not, cultural strain and even cultural disintegration result. In the same way, the components of social structure must be fairly well integrated if too much structural strain is to be avoided and the threat of social disintegration averted. For this reason, a society's major institutions tend to uphold similar values and norms, to reflect compatible goals and priorities, and to benefit or penalize the same groups and interests, Because all the institutions share common features, and one of them can yield insights into the others and can serve to some extent as a microcosm of the larger society.

A third characteristic of institution is that when they do change, they rarely do so in isolation: significant modifications in any major institution are likely to be accompanied or followed by changes in others p.338).

Langan, John. 1984. <u>Reading and Study Skills</u> (2nd Ed.), New York: McGraw-Hill Book Company).

Institutions

Changes in individual behaviors may originate from without, as new opportunities or pressures favor reorientation of individual goals. But pressures from within for maintenance of existing patterns may also be strong. These pressures often come from established social institutions - practices based on similar principles that display some degree of regularity. While there are many principles around which institutions may be organized, anthropologists identify four primary ones (Beattie 1964). Some institutions are based on principles of kinship, relations created by descent and marriage, such as the family. There are institutions concerned with social control, with politics and law. Government, courts, and the police fall within the category. Other institutions deal with economic and property relations, with the ways people produce and distribute things. Among these institutions are the farm, banks, and markets. A fourth category is institutions concerned with the supernatural - magic and religion. These include the church, monasteries, and religious brotherhoods.

Any institution is likely to be concerned to some degree with more than one of these primary organizing principles. Thus, the family is also concerned with social control, economic and property relations, and, in many societies, with the supernatural. The precise nature of these secondary concerns reflects conditions in specific environments and the suitability of particular institutions for assuming roles.

The process by which regularized patterns are created is sometimes referred to as institutionalization, or the standardization of modes of joint activity (M.Smith 1974: 208). When a religious prophet succeeds in regularizing people's beliefs and practices according to his or her preaching, this brand of religious belief and the social groups that form can be said to have undergone institutionalization. To understand such a process, we must look at the setting within which it took place, with special reference to the factors that allowed or encourages regularization, and at the strategies of the prophet and his or her followers)pp. 170-10.

Howard, M.C. 1989. Contemporary Anthropology (Third Ed.), Glenview: Scott, Foreman and Company.

INSTITUTIONS, social, one of the fundamental categories of modern sociological science. Full agreement on the definition does not, however, exist among specialists. One conception is that an institution should be defined as a complex of norms regulating the actions of persons in the process of social interaction. A typical example is the institution of property, regulating behavior where the acquisition, use, control, and disposal of objects of possession are concerned.

An institution, it has been indicated, regulates action. Detailed prescription is only one aspect of that regulation. In general, besides prescriptions, an institutional complex will incorporate prohibitions - that is, it will define the limits of acceptable behaviour; and between these two there will be a range of permitted behavior that is neither prescribed nor prohibited.

Institutions are aspects of the structure of social systems. A cognate concept or process, institutionalization, is also common. This refers to the process by which a norm or a pattern of behaviour has come to be expected of those occupying given statuses in a society - the extent to which the type of behavior in question comes to be "done," in the normative sense, in the particular society.

So far as this is the case, the tendency will be (1) for behavior in conformity with the norm to be rewarded by others with whom the individual interacts, and for deviation from the norm to be punished; and (2) for the institutional "role expectation to become internalized - the individual, as part of his psychological structure, will want to do what he is expected to do. Thus in a society that values achievement in occupational roles "ambition to succeed" is the internalized counter-part of the institutionalized expectation of high occupational performance. In this sense institutionalization is a matter of degree' for example, both external sanctions on achievement and internalized commitment to it vary greatly in different population groups (pp.2270

Parson, T. 1988. "Institutions, Social," <u>Encyclopaedia Americana</u>. Danbury: Glolier Incorporate. Vol. 15 , 227.

Role and Status

Although ethnocentrism and relativism are basic concepts related to the practice of anthropology, concepts such as role and status are shared with other social sciences. A role is a set of behavioral expectations that goes along with a particular position in a society. The position is usually referred to as a status. Comprehension of the ideas or role and status is the first step in understanding the reality of human behavior. Each field account in Chapter I involves the concept of role. There are a variety of roles played by the anthropologist and by the people themselves. In the course of daily social life everyone plays a multitude of social roles.

Let us begin with a set of simple positions or statuses. Being female, or an uncle, working as a bartender, or being seventeen years old are positions or statuses in American society, and each is associated with a set of expected behaviors or roles. When we play these roles we are expected to act in particular ways. To a great extent, growing up in any society consists in learning the roles and their appropriate behaviors.

Being an anthropologist in the field is like growing up. In this situation growing up in another society is learning and understanding the roles of another culture, which is not always an easy task. The problem is that the same status or position may be found in many societies, although the roles or behavioral expectations may be very different. This is evident in the account by Jean Briggs. She found that the behavioral expectations (roles) of a daughter, a status found in both Eskimo and American cultures, were not the same (p.59).

By using the concept of role, an anthropologist can go beyond the unique and idiosyncratic behavior of individuals in a society. Role and status are organizing

concepts that emphasize shared patterns of behavior.

Another dimension of status is the degree to which it is achieved or ascribed. An achieved status is earned through individual effort. An ascribed status is acquired through birth or through a natural process, such as aging. In Gluchjman's analysis, the two key statuses - Zulu and European - are ascribed statuses. The Chief Native Commissioner, for example, knew both Zulu customs and language, but no Zulu would mistake him for another Zulu.(P.60) (Source 1. Cohen: 1982).

Roles

Every status in society carries with it a set of expected behavior pattern, obligations, and privileges - in other words, a role. The sociological concept or role is taken directly from the theater; it refers to the part or parts you play in society. The distinction between status and roles is simple one: you occupy a status, but you play a role (Linton, 1936). Status and role are thus two sides of the same coin.

The fact that people may have several different statuses, each with several different roles attached, can obviously cause problems when role expectations conflict. Sometimes contradictory expectations are built into a single role. A factory supervisor, for example is expected to maintain good relations with the workers but is also expected to enforce regulations that the workers may resent. The result may be role strain, a situation in which a person for some reason cannot meet role expectations. Another problem arises when a person plays two or more roles whose requirements are difficult to reconcile. For example, police officers sometimes find themselves in a situation in which they ought to arrest their own children: in such circumstances, the role expectations of a parent and of policy officer can be at odds with one another. When two or more of a person's roles clash in this way, a situation of role conflict exists. But although role expectations may sometimes cause strains and conflicts in role performances, they do for the most part ensure the smooth and predictable course of social interaction. Roles enable us to structure our own behavior along socially expected

lines. We can anticipate the behavior of others in most situations, and we can fashion our own actions accordingly (p. 337) (Source 2. Langan: 1984)

Status and Role. Two primary questions need to be asked about social relationships: Who are they between? What are they about? (Beattie 1964:36). Answers to these questions are often expressed in terms of status and role.

Status concerns social position - what people are in relation to one another. Status may be hierarchical in nature, as with rulers and subjects or prison guards and inmates, or it may be more egalitarian. Thus, the term "status" is itself neutral in respect of hierarchy, but particular statuses may be differentiated hierarchically. Another distinction is often made between an ascribed status and one that is achieved (Linton 1936). An ascribed status is assigned, usually on the basis of birth: A girl born in Scotland automatically becomes a Scot as well as female. An achieved status is attained through the efforts of the individual: One becomes a teacher, carpenter, or lawyer as a result of schooling or vocational training. In some cases, status is both ascribed and achieved. To be born the heir to a throne does not automatically mean that a prince will become king, or that once he has the crown he will be able to retain it. On the other hand, a student has an easier time becoming a lawyer if his or her father is wealthy, a graduate of a (p.171) prestigious law school, and influential in the legal profession.

Role is the part our society expects one to play in a given relationship a set of activities that are thought to have some purpose and function in a particular context. A king is expected to govern; a subject is expected to submit to the king's authority. Such expectations cannot be understood in isolation, however. Precisely how a king or a subject is expected to behave will be defined by historical tradition and environmental conditions and will be related to the status of the king or kingship in the society. A king may be expected not only to govern but also to intercede with the deities on behalf of his subjects or to give his blessing to certain products (cookies, tea, and so on). Such expectations are not static. Both the status and the role of Queen Elizabeth II are a far cry from those of Henry

VIII; the differences reflect alternations in the English economy, the emergence of new forms of social stratification, and the transformation of the nature of the English state.

Although roles can only be understood in relationship to each other- mother to daughter, king to subject- roles cannot be viewed as taking place only in pairs. Kings have relationships with foreign ambassadors and the like who are not their subjects, and these relationships may influence how the roles of king and subject interrelate. Furthermore, individuals usually occupy a number of different statuses and perform a range of roles, and one of which (p.172) may influence the other. The king may also be a father, a member of a cricket team, a husband, and an airplane pilot. Subjects who have royal or noble status themselves will be expected to have different kinds of relationships with a king than those who do not.(p.173) (Source 3. Howard: 1989)

Sources:

Cohen, E., and Eames, E. 1982. Cultural Anthropology. Boston: Little, Brown and Company

Howard, N. 1989. Contemporary Cultural Anthropology (3rd Ed.). Glenview: Scott, Foresman and Company pp. 71-73.

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LINKAGE WITH ENVIRONMENT

ROLE OF HIGHER EDUCATION IN THE PROCESS OF DEVELOPMENT AND CHANGE

Higher Education is in the process of change and it needs a new direction. The academic community should play a more leading role in the process of development and planning. They should exert sufficient pressure through a philosophy of service and extension in the community around and show models of developments to others.

In all developing countries the fruits of knowledge, research and new skills have yet to reach millions of people who need it, who will be profited by it and whose

contribution to the productive apparatus is immense. In this age of highly advanced science and technology, we are talking of appropriate technology for the rural areas, so that they are not deprived of the where-with all of their existence by the mighty currents of sophisticated production techniques. Appropriate technology is a means to promote individual and community self-reliance through a swadeshi movement.

Not only in this county but in all other developing countries the cities and the urban areas have gained prominence all these days and derived the advantages of the two decades of development initiated by the United Nations and other International agencies. Now we have changed our outlook and we are seriously thinking of rural development which will arrest the culture of too much urbanisation and its attendant evils. So all national governments in Asia, Africa and South America are concerned with the welfare of the common man through various (p.14) means including changes in the tradition also. We should create innovative learning systems, within the goals of rural development system, which can extend the benefits of knowledge and modern skills to the nook and corner of rural areas in various parts of the country.

The younger generation is to be put on the new path and the illiterate villagers in the rural areas should be liberated from their age old customs and habits. The age group 15-35 is best for reconstruction phase as they are the target groups which face the difficulties for a variety of reasons. The reasons as we know are socio-political and economic in nature (p.15). (359 words)

Apparaw,M.R. 1980. "Linkage with Environment : Role of Higher Education in the Process of Development and Change," Three Aspects of University Education. New Delhi : Association of Indian Universities.

Linkage with Environment

The role of universities in relation to problems of national development has been a subject of discussion among educational planners in this country for at least a

decade now. The question came to the fore in light of the report of the Education Commission (1964-66) which stressed the role of education as an instrument of development and change and recommended a new pattern of education with that role in view. The phased introduction of the 10+2+3 pattern meant that the universities had to be ready with their new three year degree courses before the commencement of the academic year 1977-78. This, in turn, required them to undertake an examination of the traditional role of the university and the educational philosophy underlying its current courses with a view to determine their usefulness in the light of the changing goals and priorities of education.

The opportunity was utilised by the University of Bombay to move decisively in the direction of socially relevant course offerings first at undergraduate and later at postgraduate levels. The object underlying the new courses is to sensitize the minds of the young to social reality around them through a series of social awareness courses and to equip them not only with theoretical skills and tools for a proper analysis and understanding of social problems, but also with value and attitudes which would enable them to participate in the national endeavour to solve these problems and thus make their full and willing contribution to national development. After all, education is not mere acquisition of theoretical knowledge; it also involves the training of the mind and an inculcation(p.24) of certain values and attitudes for the building up of a better society. Universities have to provide an intellectual leadership to the society and not remain content with mere teaching and academic research. The new course structure has been designed with that object in view and seeks to bridge the gap between academic pursuits and social concerns by bringing the concept of social relevance into teaching and research programmes and by adding the important dimension of applied or practical training to the teaching of theory. The university has decided that it can no longer remain in ivory tower isolation but must adopt new ways of teaching and learning through participation in community action, making such action itself the vehicle of learning. The new courses including those like Foundation Courses and Rural Development course need to be viewed from this point of view (p.25) (418)

Joshi, Ram. 1980. "Linkage with Environment," <u>Three Aspects of University Education.</u> New Delhi: Association of Indian Universities.

Linkage with Environment

The general or conventional universities can certainly or should necessarily develop similar ways and means of linking themselves with their immediate environment functionally and the national development ultimately. But then, the general universities in a given region do not have any identified roles like those for agricultural universities.

...What is required is not only inter-disciplinary, need-based activities but inter-university, inter-institutional cooperation in identifying specific roles for one another in a given region and cooperation with one another in discharging these roles without any overlap, duplication or competition. As a number of developmental areas have already been identified by the governments at the state and national levels, it would not be difficult for all the universities in a region to sit together and come to an understanding. This will incidentally develop a positive linkage between the universities and the State and the Central Government leading to a recognition of the utility of the universities and a refusal to use financial controls for eroding the autonomy of the university. A fruitful inter-dependence between the universities and the government may emerge out of this, paving way for greater freedom for the universities from political interference, and for recognition of the value of academic standards, merit (p.80) and respect for excellence. Until the roles are identified, and suitable curricular and research programmes are initiated, the public apathy in respect of university education and management, for values for higher excellence and merit for the students' false notions as to the employment value for their degrees will continue.

I do not advocate that all is well with the agricultural universities; I mentioned this only as a starting point to deal with the problems of developing a meaningful and mutually benefiting linkage between the universities and the immediate environment. In the case of agricultural universities, it consists of the resources, opportunities and the needs of its clientele, the farmers. But one of the things that is overlooked in agricultural universities and general universities alike relates to

(a) the need and problems of the students as learners (classroom climate, large classes/small classes etc) in terms of their socio-economic backgrounds and (b) their needs to inculcate new value-systems essential for creating, sustaining and developing an awareness for and a means of national development. This, I consider, is very important as otherwise what will stay with us will be enlightened regionalism, baseless prejudices ani-secular conservatism and societies of acritical adaptive sub-human persons. So what is required is not a prescriptive or descriptive forms of teaching but one of generative-transformation giving the learners not only the skills of `self-learning' but also the means and methods of critically reflecting on the worth of everything available and acting upon the institutions of the society for its better (p.81). (461 words)

Sudarsnam, R. 1980. "Linkage with Environment," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Read the following three texts/passages carefully. Then compose one text from the three texts. The new text should reflect the main and supporting points in the three texts. Please use your own words.

The Cultural System and Language

The cultural system of a society affects the ways in which the other basic operative systems function among men- that is, the natural environment (physical and biological), the demographic structure and the concrete societal structural - functional forms (groups, ecological organization, the stratified arrangements of human populations). It also provides the distinctively man-made media whereby all the social systems function as they do. Unlike any other species, man has always been distinguished by the fact that he is the culture- producing, culture maintaining, culture-transmitting, and culture-perpetuating creature. Culture is man's peculia handiwork.

Culture rests upon the special abilities of men. They have the powers of

discovery and invention, contrivance and constructiveness, appropriation and manipulation, imagination and interpretation. By culture we mean what man has himself created, unconsciously and consciously, in making himself at home in the world: the modifications of nature that he has brought about in the way of the manipulation and utilization of nature's processes, and of contrived material objects (artifacts); the modifiers of nature that he has devised in the form of all sorts of tools, prescriptions, appliances, machines, and other instruments; the behavior patterns (habits, skills, techniques, arts, essential social (p.100) routines, usages and ceremonies) systems; the distinctive non-material elements of his life- his knowledge, ideas, beliefs, rules, values, expectations, the vehicles and systems of his meanings, purposes and ends. These elements embody the long experiences of man-his successes in living in his physical, mental, social, and spiritual world. In toto, as the cultural system, they furnish the design and the ways and means of life of the people and the era. Culture thus is the store of shared social experience(p.101)

(Hertzler, J. 1965. A Sociology of Language. New York: Random House.

The concept of Culture

A consequence of human evolution that had the most profound impact on human nature, human society, and human history was the emergence of culture. Culture can be defined as sets of learned behavior and ideas that human beings use both to pursue their interests and to identify the interests they ought to pursue. People produce and reproduce cultural forms in their efforts to adapt to and transform the wider world in which they live.

Culture makes us unique among living creatures. Human beings are more dependent on learning for survival than is any other species. We have no instincts that automatically protect us and find us food and shelter, for example. Instead, we have come to use our large and complex brains to learn from other members of society what we need to know to survive. This teaching and learning process is a primary focus of childhood, which is longer for the human species than for any other. In the anthropological perspective, the

concept of culture is central to explanation of why human beings are what they are, why they do what they do.

The anthropological perspective is also rooted in experiencing other peoples' ways of life. Anthropologists live with a group of people for a year or more in order to learn directly from them about their lives. This experience of being "in the field" is central to modern anthropology and contributes profoundly to the anthropological perspective. All anthropology begins with a group of real people, in a real place, leading lives very different from the anthropologist's own. All anthropology comes back to this intellectual, emotional, and physical experience of a different world (p. 5).

Schultz, E., and Lavenda, R. 1990. Cultural Anthropology: A Perspective on the Human Condition (2nd Ed.). St. Paul: West Publishing Company

Culture, the integrated pattern of human knowledge, belief, and behaviour. Culture thus defined consists of language, ideas, beliefs, customs, taboos, codes, institutions, tools, and other related components; and the development of culture depends upon man's capacity to learn and to transmit knowledge to succeeding generations.

Social scientist and anthropologists have offered a number of definitions of human culture, reflecting various schools of thought. Edward Burnett Tylor, in his Primitive Culture(1871), provided what has been termed the classic definition, according to which culture includes all capabilities and habits acquired by man as a member of society.

Every human society has its own particular culture, or sociocultural system. Which overlaps to some extent with other systems. Variation among sociocultural systems is attributable to physical habitats and resources, to the range of possibilities inherent in various areas of activity, such as language, rituals and customs, and the manufacture and use of tools; and to the degree of social development. The attitudes, values, ideals, and beliefs of the

individual are greatly influenced by the culture in which he lives, and an individual may, of course, live in or travel among several different cultures.

Culture may be viewed in terms of component patterns (cultural traits, cultural areas and cultural types) and in terms of institutional structure and functions (social organization, economic systems, education, religion and beliefs, and custom and law). Human culture may also be subdivided for study into nonurban culture as compared with modern urban culture, and into feudal, peasant, or tribal societies as distinct from modern industrial society, also called mass society.

"Cultures" Encyclopaedia Britannica. 1991. P. 784.

Possible text - Writing using sources

This text deals with the significance of characters as one ingredient of the short story. It discusses the role of characters in short stories according to Johnson and Hamilton (1966) and Roberts (1964)

Character is the indispensable ingredient for successful story. A good character is concerned with "man. His values and conditions" (Johnson and Hamilton (1966:42). Roberts (1964) considers character in literature as a sensible exact copy of human being. In short stories, human beings "must be plausible, must be reasonably motivated, must be consistent" Johnson and Hamilton (1966:42). According to Roberts (1964:41), character involves reference to a personage in a work and human being's behavioral patten. A person's behavioral patterns are different in real life- where we can interact with the individual and in literary work - where we can interpret the author's writing his or her character. An author knows the qualities of his or her created characters. According to Johnson and Hamilton (1966:42) characters must be introduced when they actually speak, do, feel and react. Observation is preferred to sole reading about a character. The reader infers from what the character says, and what is said about him or her, When a reader wants to

criticize a character, he or she must develop imagination, and imagine how other individuals would react to similar situation. Judgement involves sympathy of the reader toward the character; moreover, a reader is required to examine whether subsequent actions are the logical result of the character's qualities.

Thus character as a fundamental component of the short story involves human beings, their values and other conditions. A character is expected to reflect real life, sensible motivation, and consistency of subsequent actions.

Johnson, W., and Hamilton, W. C. 1966. The Short Story. New York: American
    Book Company.
Roberts, E. 1964. Writing Themes about Literature. London: Prentice-Hall
    International, Inc.

POST-SECONDARY OR HIGHER EDUCATION

This text or essay deals with educational institutions beyond or above higher secondary education. It covers the definition, scope background, entrance requirements, administration, and degrees offered of institutions in some industrially developed countries such as the U.S.A., Japan, France, Britain, West Germany and the Soviet Union. The text is composed according to Kneller (1988), the New Encyclopedia Britannica (1991) and the New Standard Encyclopedia TUV (1965).

Education beyond secondary level is usually known as post-secondary or higher education or college and university education. This type of education involves vocational, technical and teacher training, business schools, navigation, law, medical, commercial and graduate schools. They train teachers, lawyers, managers, medical doctors, engineers, journalists, philosophers, poets and writers.

Higher educational institutions have developed from the demand for civilized culture. The need for higher education has evolved from specialization in fields such as pedagogy, medicine, law, commerce, theology, weaving, artistry, story telling, handcrafts, warfare, genealogy, philosophy, poetry, ritual, strategy, etc. Higher education has been offerable to only a small segment of the population

such as 3.2%, 0.9%, 0.8%, 0.64%. 0.5%, 0.3% in the USA, Japan, France, Britain, West Germany and Latin America respectively. Kneller (1988:684). Entrance requirements are different in different countries; however, students must generally be able to pass examinations prepared for entrance to higher education institutions. Different countries follow different academic practices although higher education runs from one year or two years college diploma to doctorate degrees.

In some countries, it is administered and funded by the government such as in the Soviet Union, but in some countries, there are many autonomous institutions which determine their curriculum and administer without government interference, for example, in France, West Germany, the USA, and Britain.

Educational institutions emphasize the demands of their countries because of this, some institutions emphasize Liberal Arts education while others concentrate on science and technology. According to New Standard Encyclopedia TUV (1965:128) "Curriculum, staff, libraries and equipment" are the requirements for institutions' accredit.

Higher institutions have produced educated people for national development in various fields. They have been evolved to extend specializations and to maintain developed living. They are attended by a very small percentage of the population in a given country. Different countries have developed various entrance requirements and the institutions offer diplomas and degrees in different fields; moreover, they experience various forms of administration and funding.

Sources

"Higher Education". 1991. The New Encyclopedia Britannica, vol.5, p.918.
Kneller, G. 1988. "Post-Secondary Education," Encyclopedia Americana. vol. 9 p.684.
"Universities and colleges" 1965. New Standard Encyclopedia TUV,U-127-8.

ROLE OF HIGHER EDUCATION IN NATIONAL DEVELOPMENT

This text deals with linkage of higher education institutions with environment: society and higher education institutions. It covers definitions of the process of development and change, the importance of linkage between higher education institutions and their environment, the roles of academic community, things overlooked in agricultural universities, the significance of identifying the roles of universities and recommended type of teaching.

The process of development and change refers to the progress and transformation of society to better living conditions. It also entails the application of intellectual pursuit to bring social change in agriculture and industry. Joshi (1980) state " After all, education is not mere acquisition of theoretical knowledge; it also involves the training of the mind and an inculcation of certain values and attitudes for the building of a better society." (pp.24-25). He also stressed the significance "of education as an instrument of development and change" (p.24). It is true that education plays a pivotal role in bringing social development. National development heavily depends upon the contributions of academic community: professors and their students in interrelating theoretical knowledge to real life. Higher education institutions should play their active roles in changing the traditional practices of education, agriculture, attitudes, values and outlook of their society. They are expected to narrow the gap between urban and rural life.

On the basis of the report of Education Commission (1964-66), some higher education institutions such as the University of Bombay adopted the 10+2+3 pattern of education. Consequently, the University of Bombay designed new courses in which the young can develop social awareness, understand social problems and social values and attitudes. The courses were also designed to encourage the participation of the young in national development by implementing theoretical knowledge to uplift cultural values and attitudes.

Concerning cooperation among institutions, Sudarsnam (1980) suggests universities to identify their specific roles and to discharge their proper role that can avoid overlap and duplication. He also adds that when the government identifies development areas and their priorities, the concerned universities can discharge their responsibilities. Proper identification of roles of universities is the key to the development of progressive curricular and research projects and it helps to avoid financial wastage and political interference in university activities.

Consideration of students' needs, and their problems, and the need to instil in their minds advanced value system indispensable for social transformation is fundamental to national development.

Sudarsnam recommends the introduction of teaching which can fight against "enlightened regionalism, baseless prejudices, anti-secular conservatism and societies of acritical adaptive sub-human persons" (p.81). When education succeeds in its fight against the above mentioned obstacles of development, better living conditions become attainable.

Higher education plays indispensable roles in bringing social transformation and development. Any society wages war against backwardness and unprogressive traditional practices through education. Identifying development areas and their priorities, identifying the roles of universities, and introducing constructive teaching are essential for national development.

Sources

Apparaw, M.R. 1980. "Linkage with Environment: Role of Higher Education in the Process of Development and Change," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Joshi, Ram. 1980. "Linkage with Environment," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Sudarsnam, R. 1980. "Linkage with Environment," Three Aspects of University Education. New Delhi: Association of Indian Universities.

Read the following texts/passages carefully; then compose one new text/passage from the three texts. The text that you are going to produce should reflect the main points/ideas in the three texts. Please use your words.

Terracing practices

Terracing has been widely used to reduce runoff and soil loss in eastern Africa. The textbook approach, complete with diversion ditches, graded channel terraces, and natural or artificial waterways, is rarely found on small farms, though it has been common and is still found on some large farms. What is more common on small farms is an assorted mix of diversion ditches (cutoffs), various types of terraces, and waterways that are often gullied and rarely designed or constructed to take all of the runoff that comes from farm land, roads, and building areas.

Traditional terrace systems are found in parts of Ethiopia and Tanzania. Two types in Ethiopia exemplify these systems. First, in the low rainfall area of Konso in southwestern Ethiopia, there are stonewalled terraces of ancient origin. Second, in parts of the northern Shoa region and Wollo region there are terraces that may have arisen over centuries from uncultivated strips of land and the combined effects of sediment deposition on the upper side and excavation by plowing on the lower side. Many of these terraces, especially in northern Shoa, are in poor condition. In certain areas, conventional channel terraces have been superimposed in recent years, giving a dissected appearance to the landscape his situation is further complicated by the traditional practice in some more humid areas of constructing small drainage ditches diagonally down the slope in order to remove excess water during periods of temporary waterlogging.

Arledge, Jerome E. 1988. Demonstration and extension of Soil and Water Conservation Principles in Latin America. In W.C. Moldenhauer and N.W. Hudson (Eds.). Conservation Farming on Steep Lands. Ankeny: Soil and Water conservation Society.

Level bench terraces

Farmers realize they must construct terraces above contour rows broken during heavy rains. This approach provides flexibility and allows a farmer to plan bench terraces only where they are needed (2). An adequate terrace is exactly level along the front edge and the base of the slope. The cultivated bench must be inclined into the mountain (15 percent or more) enough to store all of the rain that falls on each terrace. The counter slope of the flatter area depends upon the soil type and the amount and intensity of rainfall.

The entire back slope must be protected by a rock wall or by planting perennials. Many grasses and other perennial plants can provide slope protection.

Before terracing, farmers would not sacrifice any of their land to plant grass for cattle feed. Now, as a result of terracing, crop yields are greater, less fertilizer and seed are used, less land is cultivated, and cattle feed or other economical crops, such as cut flowers, herbs, and spices, are produced on the terrace back slopes.

Farmers have increased the land area in crops by means of terracing. On slopes of 30 percent, bench terracing increases the productive land surface by 25 percent. In other words, for every 4 hectares of bench terraces, a farmer gains a fifth hectare. Flatter slopes produce less than a 25 percent increase; terracing on steeper lands produces more than a 25 percent increase. Bench terraces require considerable labor, but once constructed, maintenance is minimal (2).

Thomas, Donald B. 1988. Conservation of Cropland on Steep Slopes in Eastern Africa. In W.C. Moldenhauer and N.W. Hudson (Eds.). Conservation Farming on Steep Lands. Ankeny : Soil and Water conservation Society.

Terrace construction methods

Terrace construction was accomplished by controlling the natural process of erosion. Substantial rock retaining walls were constructed along the contours of a slope at intervals of 10 to 40 meters. Thereafter, erosion and downslope plowing provided the fill behind the retaining walls.

Selection of the controlled-erosion method appears to have resulted from the diffusion of ideas from the U.S. Department of Agriculture's Soil Conservation Service and from Inca terraces or other native techniques of rock wall construction. A translated version of an SCS manual apparently was used as a model for the construction of rock barriers along the contours of the hillsides (9). From the manual, it appears that the rock barriers were originally envisioned as little more than stacks of rock that would break the downslope flow of water. However, when combined with expert rockwall building techniques, these barriers became strong walls with a firm foundation in the subsoil that could retain soil that eroded or was deliberately plowed downshlope. The result was the evolution of terraces over a period of a decade or two. It seems probable that many of the ancient Inca terraces were constructed with the controlled-erosion method (13).

Williams, Lynden S. Walter Bob J. 1988. Controlled-erosion terraces in Venezuela. In W.C. Moldenhauer and N.W. Hudson (Editors). Conservation Farming on Steep Lands. Ankeny: Soil and Water Conservation Society .

Read the following three texts carefully; then compose one text from the three texts. The text that you are going to produce should reflect the main points or ideas in the three texts. Please use your own words.

What are roundworms?

Roundworms, or nematodes, make up the phylum Nematod("thread") and may well be the most numerous of all metazoans, both as individuals and as

species. Over 10,000 species have been described, but since it is suspected that many parasitic nematodes are host-specific (i.e., limited to a single species of host) and since about every kind of animal and plant has its roundworm parasites, the actual number of nematode species may go into the millions! Morphologically, nematodes are fairly homogeneous except for size. They range from microscopic to over a meter long, yet nearly all are whitish, slender, cylindrical, smoothly tapering worms that move by a characteristic whiplike lashing, since they possess only muscle fibers and have a cuticle that allows bending but prevents shortening of the body. The cuticle may be annulated (ringed), but the body is actually unsegmented (Jessop,1988:144).

Jessop, Nancy M. 1988. Schaum's outline of Theory and Problems of Zoology. New York:McGraw-Hill Book Company.

Phylum Nematoda (Roundworms)

The roundworms or nematodes are all much alike in general form, having slender cylindrical or tapered bodies(Gr. nematos, thread), resistant cuticle, a complete digestive tract, and no segmentation. Among multicellular animals they may be second only to insects in numbers. Many are free-living in soil or ate hosts, usually arthropods and/or vertebrates. Common examples, with the intermediate and final hosts, are those of cattle and humans; rabbit and dog or cat; dog louse or fleas and dog. The hydatid worm reverses the usual size sequence, the small adult in the dog or wolf and the dangerously large larva cysts in man and many domesticated mammals (Storer et al.,1981:291).

Storer, Tracy I., Usinger, Robert L., Nybakken, James W. & Stebbins, Robert C. 1981. Elements of Zoology (4th Ed.), Auckland:McGraw-Hill International Book Company.

Nematoda, ..., a group of roundworms, characterized by an elongated, unsegmented body, lacking cilia. They are slender and usually white. This group includes an estimated 500,000 different species, living in marine, fresh-

water, and terrestrial environments, as well as being parasites of animals and plants. About 50 species are known as parasites of man, although of these only 12 are considered dangerous, and all vertebrate animals are believed to harbor at least one species of parasitic nematode. Despite the abundance of parasitic forms, L.H. Hyman concludes that the free-living nematodes constitute a majority.

In anatomical structure, nematodes are more alike than their diverse habitats might lead one to expect. The body is not divided into distinct regions, but is covered with a cuticle resistant to solvents or digestive juices. Just inside the body wall there is a layer of longitudinal muscles. Fibrous tissue lies between the body wall and the digestive organs. The mouth is located at the anterior end, and leads to the straight tubular gut which passes into the anus on the posterior ventral surface(Hodgson, 1988:90).

Hodgson, Edward, 1988. "Nematoda," Encyclopedia Americana, (International edition). vol. 20.

Read the following three texts carefully. Then compose one new text from the three texts. The text that you are going to produce should reflect the main points or ideas in the three texts. Please use your own words.

Genetic engineering

A narrower and more precise definition stems from molecular genetics, particularly from the discovery that deoxyribonucleic acid (DNA) is the fundamental hereditary material in almost all organisms (p.395).

Plants. Among higher organisms the best candidates for genetic engineering seem to be plants, because of their greater developmental plasticity compared with most animals. Owing to this plasticity, the somatic cells of many plants-unlike those of all but the simplest animals-retain the capacity of dividing and reproducing the entire parent organism. In addition, such plasticity enables

many plants to reproduce asexually in nature, giving rise to new plants from runners or even from fragments of the original plant.

The most likely candidates for vectors to introduce recombinant DNA into plant cells are some viruses known to infect both whole plants and cultured cells and to alter their genetic properties. Once a desirable genetic modification has been introduced into an asexually reproducing plant, it could be propagated by cutting or by other familiar methods.

Since genetic control by hybridization has already proved of great value in improving many crops, it seems likely that the more direct control and the greater genetic variation made possible by genetic engineering will be highly productive. Among the more important traits that have been discussed for improvement are nitrogen fixation, to reduce fertilizer costs by enabling crop plants to obtain from the atmosphere much of the nitrogen that they need; photosynthetic efficiency which determines how effectively plants use sunlight to make fruits and vegetation; and nutritional quality (Grobstein, 1988:396).

Grobstein, Clifford. 1988. " Genetic engineering- Plants," Encyclopedia
     Americana. vol 12.

Genetic Engineering of Plants. Plant genetic engineering holds promise for increasing global food production. A sense of urgency surrounds research in this areas, for millions die each year from starvation. In the long run, simply increasing global food production to keep pace with the burgeoning human population is not a solution to the problem, but it is one of the few short-term options available to us.

Consider the research interest in developing salt-tolerant crop plants alone. Halophytes are plants, including some species of barley and sugar beets, that are adapted to moderately salty environments. Although they do not produce the high yields of conventional crop plants, they can grow in soils far saltier than glycophytes ("sweet-water" plants) can tolerate. Almost all conventional

crops are salt sensitive. Can the genes of halophytes and glycophytes be recombined to produce salt-resistant, high-yield strains? The question is not trivial. Much of the world's agricultural regions must be irrigated to be productive. Enormous amounts of salt are brought in with the irrigation water, and typically they cannot be flushed from the soil because of the scarcity of rain in those regions. All over the world, croplands are becoming "salted out" which means the number of acres able to support existing crop species is declining rapidly. Thus in India alone, 250 acres a day are being removed from agriculture (Starr and Taggart, 1987:236).

Starr, Cecie and Taggart, Ralph. 1987. Biology: The Unity and Diversity of Life.(4th Ed.) Belmont: Wadsworth Publishing Company.

Cloning in Plant Cells

Future prospects

.... Much of the uncertainty will be removed with the rapid advance of plant molecular biology. In the short term the applications may consist of expressing enzymes of bacterial origin in plants. Soil bacteria contain genes which are responsible for detoxifying various herbicides. It may prove possible to include such genes in crop plants so as to create varieties specifically protected from certain herbicides. Other applications may include the improvement of the quality of seed storage proteins which are used for animal or human consumption. This would entail altering the amino acid composition of these proteins which are often deficient in methionine or lysine.... Further applications may depend upon the fact that agriculture produces biomass cheaply and conventionally. Ultimately the production of commercially valuable and/or therapeutic proteins may be undertaken not in expensive fermenters with microorganisms such as yeast or bacteria as the host, but in fields of genetically engineered plants (p.229).

..., genetic engineering of cereals may be approached using transposable elements such as the Ac-Ds family of elements described in maize by McClintock (1951). (For an excellent review of maize transposable elements see Federoff 1985.) Both elements can transpose around the maize nuclear genome. The Ds (`Dissociation') element cannot transpose unless the trans-acting Ac(`Activator') element is present anywhere in the nuclear DNA. In the absence of Ac, the Ds element is stable. Ds elements have been cloned in bacteria (Doring et al. 1984) and their possible exploitation as vectors is being actively investigated. Analogous elements may be found in other cereals (Old and Primrose, 1985: pp. 229-230).

Old, RW and Primrose, SB. 1985. Principles of Genetic Manipulation: An
    Introduction to Genetic Engineering (3rd Ed.). Oxford: Blackwell Scientific
    Publications.

Read the following three texts carefully. Then compose one new text from the three texts. The text that you are going to create should reflect the main points or ideas in the three texts. Please use your own words.

Case Study: Water Pollution

There is tremendous amount of water in the world, yet three of every four humans do not have enough water or, if they do, it is contaminated. Most water is saline (too salty) and cannot be used for human consumption or agriculture. In fact, for every 1 million liters of water, only about 6 liters are in a readily usable form.

Yet we have tapped into the hydrologic cycle and are using it, directly or indirectly, as a dumping ground for the by-products of human existence. Water becomes unfit to drink (even to swim in) once it contains human sewage and animal wastes. Agricultural runoff becomes polluted with sediments, insecticides, herbicides, and plant nutrient. Often the nutrients cause explosive

growth of cyanobacteria in lakes and slow-moving rivers. When those bacteria die, the water can become putrid. Industrial activity and power-generating plants pollute water with chemicals, radioactive materials, and excess heat (thermal pollution) (Starr and Taggart, 1987:740).

Starr, Cecie and Taggart, Ralph. 1987. Biology:The Unity and Diversity of Life. Belmont: Wadsworth Publishing Company.

Water Pollution Most cities throughout the world use the nearest bay, lake, or river as the civic outlet, and many still release raw sewage. Such sewage carries the threat of disease. In some cases the same waters may be used as the water supply. Where untreated urine and faeces contaminate waters, internal parasites and disease spread readily.

Early American factories were built beside streams for power from waterwheels. Production wastes were(p.472) dumped into the water from sawmills, paper mills, metal industries, and others. Conservationists have since forced cleanup of some pollutants, but others persist.

pesticides are leached from the land and carried into streams; these go to the oceans, where they are now widespread , affecting various kinds of animals. They also absorb to airborne particles during spraying and fall out from the atmosphere. Plastic objects discarded inland or elsewhere accumulate on the bottom in coastal waters and do not disintegrate. Petroleum is spilled in ever-increasing amounts by damaged or sinking tanker ships and from oil wells on the continental shelf. Crude oil ruins many beaches, fouls small craft, and coats and kills innumerable sea birds and mammals (Storer et al. 1981:472-473).

Storer, Tracy I., Usinger, Robert L., Nybakken, James W. & Stebbins, Robert C. 1981. Elements of Zoology. Auckland: McGrw-Hill International Book Company.

Water Pollution. Water, one of man's most precious resources, is generally

taken for granted until its use is threatened by reduced availability or quality. Water pollution is produced primarily by the activities of man, specifically his mismanagement of water resources. The pollutants are any chemical, physical, or biological substances that affect the natural condition of water or its intended use. Because water pollution threatens the availability, quality, and usefulness of water, it is worldwide critical concern.

In the late 1960's and early 1970's the seriousness of the water pollution problem was brought to public attention by several events. These included the spill in 1967 of 30 million gallons of oil into the ocean off the southern coast of England from the tanker Torreny Canyon and the spill of 8 million gallons of oil from offshore drilling on the California coast near Santa Barbara, the death of millions of fish in the polluted Rhine River in Germany and drastic changes in the ecological balance of such lakes as Lake Erie in the northeastern United States, Lake Tahoe in California, Lake Constance on the border of Switzerland, Austria, and Germany, and Lake Zurich in Switzerland.

..., there are constraints reflecting public health requirements, aesthetics, economics, and short- and long-term ecological impacts. Consequently, there is no rigid or specific definition of water pollution, since the intended use or uses of the water must be taken into consideration in any definition of what constitutes polluted water (Scott, 1988: 441a).

Scott, Verne H. 1988. " Water pollution," <u>Encyclopedia</u> <u>Americana</u>. International Ed. vol. 28, 441a.

Read the following texts carefully. Then compose one text from the three texts. The text you are expected to create should reflect the main points in the texts. Please use your own words.

Seed Germination

Water, oxygen, temperature, and usually light are major environmental factors that influence seed germination. Most mature seeds do not contain enough water for cell expansion or metabolism. In many parts of the world, water availability is seasonal and germination coincides with the return of spring rains. In a process called imbibition, water molecules move into the seed, being especially attracted to hydrophilic groups of the stored proteins. The seed swells as more and more water molecules move inside and the coat finally ruptures.

Once the seed coat splits, oxygen moves in more easily from the surrounding air. Cells of the embryo switch to aerobic pathways and metabolism moves into high gear. The embryo increases in volume, giving rise to the seedling (Starr and Taggart, 1987:284).

Starr, Cecie and Taggart, Ralph. 1987. Biology: The Unity and Diversity of Life
    (4th Ed.). Belmont : Wadsworth Publishing Company.

The process occurring from the time the embryo resumes its growth until the seedling is established are called, collectively, germination. The first noticeable evidence of the germination of a seed is the bursting of seed coat and the protrusion of the root tip.... As a result of the absorption of water, the embryo and seed coat swell to rupture the seed coat. No matter how the seed is oriented in the soil, the root always grows downward into the soil (positive geotropism) and rapidly develops root hairs. The initial or primary root readily produces branch or secondary roots, thus anchoring the young plant firmly in the ground. In the bean the cotyledons emerge from the seed, turn green, and serve as the first leaves of the seedling plant...(Arnett and Ross, 1977:216).

Arnett,Jr., Ross H. and Bazinet,Jr., George F. 1977. Plant Biology :A Concise
    Introduction (4th Ed.). Saint Louis: The C.V. Mosby Company.

Seed Germination

The seeds of the cereals, of which barley is an example, consist of starch-rich endosperm tissue, largely dead cells, with a thin outer layer of living aleurone cells, and bearing at one end the scutellum, to which is attached the embryo.... When the seed is soaked and germination begins, the starch and protein in the endosperm are slowly hydrolyzed and the resulting sugars and amino acids travel to the embryo to provide nutrients for its growth. But if the embryo is removed, then even prolonged soaking will not cause the endosperm materials to hydrolyze. The embryo must therefore secrete something that causes the hydrolysis. Indeed, an extract from germinating barley embryo does cause starch hydrolysis in "de-hydronated" seed. ...

and within a few hours following soaking, a four-step chain of events is put in motion: (1) the swelling embryo secretes gibberellic acid, which diffuses to the aleurone, (2) the aleurone cells become activated to produce the enzymes, (3) the enzymes diffuse into the underlying endosperm, hydrolyzing the starch and proteins there, and (4) the hydrolytic products travel back to the embryo, which uses them at once for cell material and thus for growth (Langenheim and Thimann, 1982:163).

Langenheim, Jean H. and Thimann, Kenneth V. 1982. Biology : Plant Biology and its Relation to Human Affairs. New York: John Willey & Sons.

Read the following texts carefully. Then compose one text from the three texts. The text you are expected to create should reflect the main points in the texts. Please use your own words.

Earthworms in Relation to Agriculture

Earthworms have a strong claim to be ranked as beneficial animals being better cultivators than the most efficient machine devised by man. In the long past they have made a great portion of our soil most valuable and fertile, and even now they are ceaselessly renewing and improving it. Their continual burrowing

in search of food results in the loosening of the earth particles and the formation of innumerable channels that open the way alike for air, rain drops and plant roots. They thus make the soil soft by bruising the soil particles in the gizzard-mills. The activities of the worms drain and aerate the soil. But more than this the earthworms are continuously bringing fresh soil to the surface. This takes the form of the familiar "worm castings" which consist of the finest soil particles as they have passed through the gut and got mixed up with organic matter and nitrogenous materials. As the wet worm casts dry up the wind scatters the fine powder over the surface of the soil and a new layer of tilled earth is in the process of formation. The importance of their humble labour is actually sublime. Darwin showed that there are, on an average, over 53,000 worms in an acre of garden soil, that ten tons of soil per acre pass annually through the bodies of the inhabitants (earthworms) and that they bring up mound from below at the rate of 7.5 cm of thickness in 15 years (Prasad 1980 : 452).

Prasad, S.N. 1980. Life of Invertebrates. New York : Vikas Publishing House
    PVT LTD.

Influence of Soil Fertility and Productivity

Earthworms are important in many ways, especially in the upper 15-35 cm of soil. They ingest organic matter as well as soil. As these materials pass through the earthworm's body, they are subjected to digestive enzymes as well as to a grinding action within the animal. The weight of the material passing through their bodies (casts) each day may equal the weight of the earthworm. In the tropics, as much as 250 Mg/ha (110 tons/acre) of casts may be produced annually. Although figures only one tenth of those values are more common in the cultivated soils of temperate regions, the casts are evidence of extensive earthworm activities.

Compared to the soil itself, the casts are definitely higher in bacteria, organic matter, and available plant nutrients.... The rank growth of grass around

earthworm casts is evidence of the favorable effect of earthworms on soil productivity (Brady 1990 :250).

Brady, Nycle C. 1990. The Nature and Properties of Soils (10th Ed.). New York: Macmillan Publishing Company.

Earthworms

Their food consists of decaying organisms; as they eat, however, earthworms also ingest large amount of soil, sand and tiny pebbles. It has been estimated that an earthworm ingests and discards its own weight in food and soil everyday.

Earthworms usually remain near the soil surface, but they are known to tunnel as deep as 2 m during periods of dryness or in winter. One Asian species is known to climb tree to escape drowning after heavy rainfall.

Earthworms provide food for a large variety of birds and animals. Indirectly they provide food for man by their beneficial effects on plant growth : they aerate the soil, promote drainage, and draw organic material into their burrows where it decomposes faster, thus producing more nutritive material for growing plants. Earthworms also serve as fish bait; hence the name angleworm (Markham,1991:324).

Markham, John. 1991. "Earthworm," The New Encyclopaedia Britannica. 15th Ed., vol. V, 324.

PLANT GROWTH AND THE EFFECTS OF ENVIRONMENT

This text or essay is concerned with plant growth and development. It deals with definition of plant growth and development, requirements for plant growth and development, influence of environment on plant growth and development, damage to plant growth, and processes of plant growth according to Fitter & Hay (1981), Langenhelm et al. (1982), and Weier et al. (1974).

According to Weier et al. (1974:371), plant growth refers to increase in size while development refers to change in form; moreover, Langenhelm et al,

(1982) defined plant growth "as irreversible increase in volume" (p.160). They also recognize isodiametric enlargement in massive tissues, and elongation in cylindrical structures. Plant growth and development also involves differentiation which refers to the specific activities played by cells, tissues and organs, and meristematic cell which does not need specialized activities. Langenhelm et al. (1982) state "Cell takes place in the meristem (mainly) and the cell enlargement (especially elongation) that follows pushes the apex continually upwards" (p. 160).

According to Fitter and Hay (1981) plant growth is affected by damage which is caused by agents such as "wind, ions, temperature, grazing and many others" (p.15). Moreover, plants develop some sort of adaptive responses to resist damage. The adaptive responses may manifest in reversible physiological responses as well as in irreversible morphological responses.

Plant growth and development is the result of isodiametric enlargement or cell division, cell elongation and cell differentiation. Environment influences plant growth in two ways: On the one hand damage effects reduce or stop plant growth and on the other hand, adaptive resistance resists damage and helps increase plant growth. Adaptive responses consist of reversible physiological responses and irreversible morphological responses.

Fitter, A.H. and Hay, R.K. 1981. Environmental Physiology of Plants. London: Academic Press.

Langenhelm,Jean H. and Thimann, Kenneth V. 1982. Botany: Plant Biology and Its relations to Human Affairs. New York: John Wiley & Sons.

Weier, T. Elliot, Stocking, C. Ralph and Barbour, Michael G.1974. Botany: Introduction to Plant Biology (5th Ed.). New York: John Wiley & Sons.

This text deals with earthworms, their habitat, their castings, their activities and contribution to soil fertility and productivity according to Prasad (1980), Brady (1990) and Markham (1991).

Earthworms are kinds of long, think worms which are distinguished from other worms by their segmented body and absence of a head. They live in the upper

15-35 cms. of soil. They eat decaying organisms, and ingest soil, sand, organic material and so on. They ingest almost as much castings as their body weight each day.

Earthworms are useful animals especially to farmlands. They loosen the soil and form channels by burrowing the soil to get food. They also aerated and drain the surface soil and they bring fresh soil to the surface and this fine soil spreads over the surface by wind. Darwin estimates that "ten tons of soil per acre pass annually through the body of the inhabitants(earthworms) Prasad, 1980:452). This fresh and finest soil is mixed up with organic and nitrogenous materials to improve soil fertility. Markham (1991) explains the useful effects of earthworms on plant growth as follows: "they (earthworms) aerate the soil, promote drainage and draw organic material into their burrows where it decomposes faster, thus producing more nutritive material for growing plants" (p.324).

Earthworms are useful animals to man because they help him to improve his farmland fertility and productivity. Their castings contribute much to boost plant growth so as to increase harvest.

Prasad, S.N. 1980. Life of Invertebrates. New York:Vikas Publishing House PRV LTD.
Brady, Nyle C. 1990. The Nature and Properties of Soil. (10th Ed.). New York: Macmillan Publishing Company.
Markham, John. 1991. "Earthworms," The New Encyclopedia Britannica, 15th Ed., vol. V, 324.