APPROACHES TO STUDY AND ACHIEVEMENT OF THE STUDENTS OF UNIVERSITAS TERBUKA (THE INDONESIAN OPEN LEARNING UNIVERSITY)

by
Nurul Huda
B.Sc., Bogor Agricultural Institute, Indonesia, 1985

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

in the Department of Psychological Foundations in Education

[redacted]

We accept this thesis as conforming
to the required standard

[redacted]

Dr. John O. Anderson, Supervisor
(Department of Psychological Foundations in Education)

[redacted]

Dr. C. Brian Harvey, Departmental Member
(Department of Psychological Foundations in Education)

[redacted]

Dr. Laurence E. Devlin, Outside Member
(Department of Communication and Social Foundations)

[redacted]

Dr. David Moyer, External Examiner
(Department of Anthropology)

Supervisor : Dr. John O. Anderson

ABSTRACT

Student learning can be seen as the ways in which the students approach their study. The students' study approach is regarded as essential to student success because it relates to learning outcome. One widely-used instrument to measure the students approaches to study is the the Approaches to Study Inventory (ASI) developed by Ramsden (1983).

Universitas Terbuka (UT), the Indonesian Open Learning University, has unfortunately experienced unsatisfactory student achievement. As the Approaches to Study Inventory has a demonstrated relationship with learning outcome, the unsatisfactory student achievement at UT might be related to inappropriate approaches to study employed by the students. It was, therefore, considered to be worthwhile to conduct a study on Approaches to Study at Universitas Terbuka.

The main focus of this study was to investigate the approaches to study of UT students using a standardized instrument, the Approaches to Study Inventory (ASI), which was translated from English into the Indonesian language. The research questions addressed in this study were related both to student achievement and to a number of contextual variables.

From a sample of 600 students from the four faculties of Universitas Terbuka, 348 students responded to the questionnaire. The data were collected at the first semester of 1993 (93.1).

The results revealed six conclusions. Firstly, the Indonesian version of the ASI is comparable to the original version (English version). Secondly, in general, UT students, compared to other distance education students in a

different cultural setting, tended to have similar patterns in the mean scores of approaches to study. Thirdly, no significant differences were found in study approach among the four faculties of Universitas Terbuka. Fourthly, with a few exceptions, there were no significant relationships between study approach and GPA. Significant relationships ($p < .001$) were found for the total sample on Surface Approach ($r = -.19$) and Negative Attitude ($r = -.19$). Fifthly, essentially there were no significant differences between the different levels of student achievement and their approaches to study. However, significant differences were found between low achievement and high achievement students on the subscales of Negative Attitude ($p < .05$) and Surface Approach ($p < .05$). Low achievement students tended to have higher scores (mean = 5.9) on Negative Attitude than those of high achievement students (mean = 4.0). As well, low achievement students tended to have higher scores on Surface Approach (mean = 16.7) than those of high achievement students (mean = 14.8). Sixthly, essentially no significant relationships were found between the contextual variables and study approach. However, significant relationships were found on the contextual variables of age, continuity in registering courses, study status, and student satisfaction on at least one scale of the Approaches to Study Inventory.

The results found in this study are discussed in terms of the implications for increasing student achievement at Universitas Terbuka.

Examiners:

Dr. John O. Anderson, Supervisor
(Department of Psychological Foundations in Education)

Dr. C. Brian Harvey, Departmental Member
(Department of Psychological Foundations in Education)

Dr. Laurence E. Devlin, Outside Member
(Department of Communication and Social Foundations)

Dr. David Moyer, External Examiner
(Department of Anthropology)

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

Many people have contributed to the completion of my thesis. I am grateful to my supervisor, DR. John O. Anderson, who was extremely helfull for the completion of my thesis, which wouldn't have been possible without him. His assistance, guidance, and encouragement has been invaluable to me.

I would also like to express my appreciation to DR. Brian Harvey, DR. L.E. Devlin, and DR. David Moyer for their great help and support to the completion of my study.

I would like to extend my appreciation to DR. Setijadi, DR. Beni Suprapto, Mimi Harvey, Michael Bodden, and Universitas Terbuka students for their great help, participation and contribution

I also owe many thanks to De'wan, all my Indonesian friends in Victoria, my former roomates, Samsul, the Van Dallens, and the Whittals for their invaluable care , support, and kindness.

Above all, I would like to express my very special thanks to my family for their love, spirit, and encouragement.

CHAPTER I

INTRODUCTION

Background

Educational research can be seen to be careful, systematic attempts at developing a better understanding of the educational process, with the aim of improving its effectiveness (Entwistle, 1984).

A fundamental component of the educational process is student learning. It is regarded as essential to student success. Biggs (1979) conceived of student learning as occuring in three stages : input, process, and output. The first stage, the input variables, includes curriculum, instructional design and learning environment. The second stage, the process of student learning, can be seen as the ways in which the student approaches, engages, and completes the learning tasks of the input phase. The third phase, the output, is concerned with the quality and quantity of performance, at the micro level of the individual learning task or the macro level of the course outcome.

The second stage of student learning which is seen as the ways in which the student approaches, engages, and completes the learning tasks of the input phase, is important because it relates to the learning outcome. This opinion was supported by Morgan (1984) who pointed out that the importance of approaches to study is its crucial relationship to the quality of learning outcomes.

Research has been conducted into approaches to study, such as the studies conducted by Marton and Saljo (1976) at the University of

Gothenburg, Sweden; by Ramsden and Entwistle (1983) with both British university and polytechnic; and by Watkins (1982) with an Australian university. However, most studies in this area have been based on English language conventional educational institutions. Little research has been conducted into approaches to study either in distance education or in cross cultural settings. In fact, as pointed out by Harper and Kember (1986) and Wong (1992), a learning environment such as a distance education setting can have considerable effect upon approaches to study.

Distance education differs from conventional education in that students in distance education situation have to study independently from printed materials, without the face-to-face lectures which would be common in conventional educational institutions.

However, although distance education settings differ from conventional educational settings, research and evaluation carried out with conventional campus-based students can provide a basic framework for developing research paradigms for students studying at a distance.

With students studying at a distance institution, descriptions of their approaches to study can be used to help students to become more aware of their characteristic approaches to study and to lead to more effective learning. Since there is some evidence that study approach can be taught and improved through educational interventions such as study approach training programs (Koymen, 1992), it is possible to correct inappropriate study approaches and to reinforce the appropriate ones.

As little research has been conducted into Approaches to Study in a cross cultural setting, it is reasonable to investigate approaches to study at Universitas Terbuka, the National Open University of Indonesia. Universitas

Terbuka is sufficiently different in both method of course delivery and cultural setting, to be of value in a study aimed at exploring of the association between learning environment and students' approaches to studying.

Universitas Terbuka

Universitas Terbuka (UT), the Indonesia Open Learning University, was established in September, 1984. It is the first, and only, state university in Indonesia which uses distance education methods as the sole means of course delivery.

UT was established to achieve three major objectives : to provide better access to higher education; to train increasing numbers of students in those areas demanded by the economic and cultural development of the country; and to upgrade secondary school teachers who graduated from short term programs, to enable them to obtain full teacher training degrees and to become better teachers (Universitas Terbuka, 1986).

In order to fulfill those objectives, UT offers diploma and baccalaureate degrees under four faculties : the Faculty of Social Sciences, the Faculty of Economics, the Faculty of Mathematics and Natural Sciences, and the Faculty of Education.

At its establishment in 1984, UT had 68,617 registered students (Universitas Terbuka, 1989). The number of students has continued to increase and, in 1991, there were 181,885 registered students (Universitas Terbuka, 1992).

The UT uses printed materials as the primary intructional system for learning. Printed materials (modules) constitute 96 % of all course materials provided by UT. Other media (4 %) include audio-cassettes, radio,

newspaper, and course programs on television. These other media are provided to complement the printed materials.

UT students study by using the "self intructional" learning materials which are specifically designed to enable them to study on their own. The format of self instructional material is designed in such a way that it is systematic and self instructional.

Universitas Terbuka encourages its students to study independently. However, students can utilize other study means such as attending study groups and tutorials, and using other relevant learning resources (Universitas Terbuka, 1989) such as watching UT programs on television and listening to UT programs on radio.

In order to obtain diplomas or bachelor degrees from UT, students are required to complete all course requirements and are required to show a successful academic performance. At Universitas Terbuka, the basis of student academic performance evaluation is home assignments, final examinations, and comprehensive examinations (Universitas Terbuka, 1991).

Final examinations are conducted twice a year at the end of each semester. At the end of the program, that is, after completing all courses that have been specified, students take a comprehensive examination.

The student's final grade for a course is derived from the home assignments (20 %) and from the final examinations (80 %). The grading system employed at Universitas Terbuka is : A = 4 (very good); B = 3 (good); C = 2 (average); D = 1 (below average); and E = 0 (failure). GPAs are gained from the grade in each course divided by the credit units of that course. The standard passing GPA for UT students is 2.00.

In relation to student academic achievement, generally, the results have proved to be unsatisfactory for Universitas Terbuka. The term "academic achievement" as used here refers to grade point average (GPA). The unsatisfactory nature of student academic achievement is clearly demonstrated by the fact that most registered UT students have GPAs in the range of 1.60 to 1.75 (Sinar, 1993) on a scale of 0.00 - 4.00. In fact, a GPA of 1.60 is below the standard passing GPA (2.00 is the standard passing GPA). Unfortunately approximately 80 % of UT students (dormant, non-active, and active students) have GPAs below 2.00 (Indrawati, 1993).

These low GPAs pose a basic problem for UT because students who have GPAs below 2.00 can not complete their study program at UT. In the broader sense, this can create problems in student persistence, completion, and drop out.

One factor accounting for low GPAs at UT might be the open admission policy. However, although admission to UT is open to all students regardless of past academic performance, this does not necessarily mean that the unsatisfactory GPAs mentioned above are solely due to lack of selection in the enrollment process. There are likely other factors affecting student performance.

Universitas Terbuka has conducted considerable research in attempts to understand these problems without finding a solution to the problem of low GPA. It is not clear why the problem of unsatisfactory GPA remains. Uncertainty on this issue might be the result of the approach used in most recent research. Most of these studies dealt with the external factors influencing students such as administrative and institutional problems; for example, the study of learning material quality, item analysis of exam items, job satisfaction, and socio-demographic factors affecting student success and

dropout. These researches did not consider the internal factors influencing students, such as the approaches to study of UT students.

Approaches to study can be defined as the ways by which students tackle their studies (Ramsden, 1983). Some students like to learn the theory before putting it into practice while others like to learn by application. Other students like to learn by concentrating on understanding meanings. Students who have these approaches to study can be regarded as 'depth' processors who seek out or create meaning (Wilson, 1981). Their approach to study is active and brings about qualitative change in their understanding of the subject matters. Other students like to learn by memorizing details. Students who prefer this method can be regarded as 'surface' processors who pay attention to the more superficial features of the text (Wilson, 1981). They read to remember facts, details and main arguments; their approach is passive in that they rarely examine the bases of conclusions, nor do they question the assumptions and logic of the argument. Studying for them could be viewed as simply the addition of items of information to the memory store on a quantitative basis.

Several studies, as reported by Morgan, Gibbs, and Taylor (1982), have indicated that approaches to study relate to academic performance (some approaches relate positively such as the deep approach. Others relate negatively such as the surface approach). Therefore, it can be said that external factors contribute only partly to the student's academic performance. Another part comes from the internal factors which influence students. This notion is supported by Biggs (1987b) and by Marland, Patching, Putt, and Store (1984).

A study conducted at UT (Priadnyana, 1993) considered one internal factor which affects student learning. The study concerns student learning

style. Entwistle, Hanley, and Hounsell (1979) defined "learning style" as a broad characterization of a student's preferred way in learning generally. In another definition, Laurillard (1979) stated that learning style refers to the more general procedures a student adopts. Entwistle (1991) noted that learning style is related to general preferences in studying which is more akin to the psychological term "cognitive style" with its implications of relatively stable behaviour patterns.

In fact, there is an important distinction between learning style and approaches to study. The concept of approaches to study stresses relationships between intention, process, and outcome. The way students interpret their study creates an intention to learn in a particular way. This intention leads to a distinctive process of learning which in turn affects the level of understanding or outcomes in learning. Approaches to study are therefore used in referring to both the intention and the process of learning (Enwistle, 1979;1991). The learning which then results seems to vary depending upon the various approaches to study (Biggs, 1989; Wittrock, 1986).

It can, thus, be said that learning style is different from approaches to study in that learning style is relatively habitual, consistent and general while study approach is more specific (depends crucially on both the context and the content) and may change. This is important since study approach should be more accessible to modification than learning style. Put another way, an approach is a paradigm with a general structure which may change in specifics according to the task (Biggs, 1986). In attempting to measure study approaches, however, there is an assumption that students will exhibit

sufficient consistency in intention and process across broadly similar academic tasks to justify measuring it as a dimension (Entwistle, 1979).

It has been found that approaches to study correlate with academic performance (Biggs, 1987a; Enwistle, 1987; Meyer, Parsons, and Dunne, 1990). There are two distinct study approaches which are commonly reported, referred to as deep and surface approaches. A deep approach, as characterized by Marton and Saljo (1976), is concerned with relating ideas together, finding the main points in a text, and constructing meaning from learning materials. A surface approach is essentially the antithesis of the deep approach in that it is related to the memorization of details with the emphasis on assimilating knowledge and information. According to several authors (Biggs, 1987a; Enwistle, 1987; Meyer, Parsons, and Dunne, 1990), tendencies to adopt deep approaches correlated positively with academic performance such as self-rated progress, level of understanding, and examination performance. A study conducted by Ramsden and Entwistle (1983) in United Kingdom using students' self-rated progress showed that the coefficient correlation between deep approach and self-rated progress ranged from .14 to .27. By contrast, the correlation between surface approach and self-rated progress was negative, ranging from -.14 to -.39.

Since approaches to study have been demonstrated to have a relationship with academic performance (as reported by Biggs, 1987a; Enwistle, 1987; Meyer, Parsons, and Dunne, 1990), it could be important to identify the approaches to study used by UT students. It might be that part of the problem of the weak academic performance of UT's students is the result of inappropriate approaches to study on the part of the students.

Problem Statement

A number of studies have been conducted on approaches to study. However, there have only been a few investigations into approaches to study in either a distance education setting or a cross cultural setting. There has never been any research on approaches to study specifically at Universitas Terbuka. In addition, most studies using the Approaches to Study Inventory (ASI) such as those conducted by Ramsden and Entwistle (1983), Harper and Kember (1986), and Wong (1992) used the English language version. Only one study used the ASI in another language version, a study conducted by Martenson (1986) which used a Swedish translation of a shortened ASI.

Since the approaches to study may have considerable effect upon the student's course grades and GPA, it was considered to be useful to conduct a study of approaches to study at Universitas Terbuka in Indonesia, the world 's fourth largest country in terms of population.

Purposes of the study

1. To develop an Indonesian language version of ASI that is comparable to the original English language version.

2. To identify any statistical difference between the ASI English version and the ASI Indonesian version.

3. To investigate whether UT students show different approaches to study from other distance education students in a different cultural setting.

4. To investigate whether UT students show different approaches to study among the four faculties at UT.

5. To investigate whether there is a relationship between the various approaches to study and student achievement (GPA).

6. To investigate whether students with different levels of achievement have different characteristic approaches to study.

7. To investigate whether approaches to study relate to the contextual variables used in this study.

CHAPTER II

LITERATURE REVIEW

Overview

The purpose of the literature review in this study is to review briefly the literature associated with the process of student learning by considering students' approaches to studying.

This literature review will discuss such features as the concept of learning, the research on approaches to study, the Approaches to Study Inventory (ASI), the relationship between approaches to study and student achievement, and the relationships between contextual variables and approaches to study. The results of several researches on approaches to study with distance education students are also presented.

Review of the Literature

Learning

The concept of learning can be described from various perspectives. Therefore, as pointed out by Moore (1986), it is difficult to specify the differences in meanings of learning as a psychological construct, as a term for daily use, and as a special meaning for education.

However, Moore (1986) pointed out that even though there is no single learning theory generally accepted, there is a generally accepted classification of the main theories. This generally accepted classification in describing learning can be seen from the experiential, neurological, and behavioral perspectives (Schemeck, 1988).

From the experiential (or phenomonological) perspective, learning is defined as individuals engaged in learning. The learners describe their experience of events involved in learning. Learning, in this fashion, can be categorized in several different ways, that is, everyone's experience of learning is different.

The neurological perspective, on the other hand, defines learning as the process whereby the nervous system is transformed by its own activity. Neutral activity changes the neurons that are active, and that change is the structural basis of learning.

The behavioral perspective defines learning as an observable change in a person's reaction to an equally observable stimulus situation. Learning from this perspective was supported by Verduin (1991). He stated that learning is signified by a change in behaviour or a movement from one state of behavior to another through the acquisition of new knowledge or skills for personal use.

According to Moore (1986), the theories of learning are commonly classified as those which view learning as a mechanistic process of response to externally induced stimuli;as a reorganization of cognitive structures; as an adjustment of the person in the environment; and as the development of social relationships. Even though the theories are stated in different ways, they all explain how people learn -- that is, how perceptions and behaviours change as a result of experience.

The characteristics which distinguish between the concept of learning from the educational point of view and from other points of view are the characteristics of intent and planning in learning activities, as stated by Allen Tough (1976).

> .....it is the intention of the activity so that regardless of what the person is doing if he is trying to learn, trying to change through that activity, then we call it a learning project. People do learn in other ways. There are lots of activities that lead to learning. However, if that is not the person's primary intention then we do not include it in our definition of a learning project.....it is defined as an effort to change (Tough, 1976, p.62).

It can be said, therefore, that the concept of learning in education has a more narrow focus. In any educational setting, students' reactions to test events (e.g., examinations, essays, recitations) change as a result of educational experiences. Thus, educators view learning from a behavioral perspective which is concerned with learning as an observable change in behavior (Schmeck, 1988).

Biggs (1979) conceived of student learning as occuring in three stages : input, process, and outcome. The third stage, the outcome of learning can be assessed in terms of what the student has achieved; the criterion of learning is usually in terms of performance on an external test (Wilson, 1981).

Learning is generally viewed as an important part affecting student success in the process of education (Bower and Hilgard, 1981). Therefore, specific consideration should be given to student learning by any individual involved in the process of education. Research in student learning has been reviewed by Morgan (1991) who pointed out that there are five elements which should be considered in order to understand student learning. One of the five elements is the students' approaches to study which are described as the ways students tackle their learning.

Research on Approaches to Study

Many researches have been conducted into student learning. However, little direct attention has been paid by researchers to the process of student learning itself (Ramsden and Entwistle, 1983). The same notion is also stated by Harper and Kember (1986). They stated that little attention has been given to the intermediate step of the process of learning. The process can be seen as the way in which the student approaches learning.

The term "approaches to study" initially referred to "levels of processing" in studying. However, to avoid the mechanistic overtones of "processing" as pointed out by Marton (1976), the term "approaches to study" was subsequently used as a more accurate description of the meaning of the concept. Thus, the term "approaches to study" was used to include both ***intention*** (***what*** the learner was looking out for) and ***process*** (***how*** that attention was carried out).

By the same token, this notion was supported by Entwistle, Hanley, and Hounsell (1979), Ramsden (1985), and Entwistle (1991). They stated that learning can be viewed as three related terms : intention, process, and outcome. The way students interpret a learning task creates an intention to learn in a particular way. This intention leads to a distinctive process of learning which in turn affects the level of understanding or outcomes in learning. The approaches to study are therefore used in referring to both the intention and the process of learning. Biggs (1989) and Wittrock (1986) pointed out that the learning which then results seems to vary depending upon the various approaches to study.

Biggs (1987) defined the term, approaches to studying, as referring to the motives a student has for engaging in a learning task, and the strategies

adopted so that the student's intentions are realized. Motive-strategy combinations then comprise the common approaches to studying.

Research conducted concerning approaches to study has produced a considerable degree of consistency in descriptions of the approaches to study (Kember and Harper, 1986). A series of studies has been carried out in attempts to develop inventories to measure important aspects of study methods and motivation.

The first study to focus on learning in higher education was reported by the work of the researchers from Gothenburg University in 1976. The Gotherburg group's research concentrated on the way in which students approached the task of reading substantial academic articles. An important dimension in approach to studying and level of understanding which appeared from the study was the distinction between a deep and a surface approach (Marton and Saljo, 1976a and 1976b). Students who employed a deep approach to reading the articles searched for the meaning of the article by examining the author's arguments. They were able to distill out the main point that the author was trying to make. They related evidence and arguments to their own knowledge and critically examined the evidence presented for the author's arguments. By contrast, those employing a surface approach tried to rote-learn information they considered important: rather than seek an understanding of the overall meaning of the article, they attempted to memorize details which they felt might serve to answer later questions.

The following studies of approaches to study were reported by Pask and by Biggs who independently have developed concepts that are similar and also complementary to those of the Gothenburg group. Pask observed the study approach of students who had been set experimental learning tasks such as the discovery of classification principles (Pask and Scott, 1972).

Pask (1976a;1976b) reported a distinction in the strategies employed by the students in the experiments. An important dimension in approaches to study which resulted from the study was the distinction between serialist and holist strategies. The learning associated with the serialist strategy is called operation learning and is concerned with mastering procedural details using a step-by-step approach. Comprehension learning is concerned with the habitual user of the holist strategy. It has been characterized as building descriptions of the knowledge.

Another dimension in approaches to study is learning pathology. The learning pathology associated with an excessive use of the serialist strategy has been called improvidence. Improvident students are unable to see the way in which elements of knowledge relate to one another to form an integrated whole. These students do not make any use of analogies. The opposite learning pathology is globetrotting which is an excessive extreme of the holist strategy. Students who globetrot jump to conclusions too hastily, drawing conclusions without proper considerations of the evidence. Often this closure occurs prematurely. They are over-ready to draw analogies, often irrelevant or inappropriate ones.

Biggs (1978) introduced a model of student learning which had as its focus what he termed process factors that made up the "study process complex". This complex basically comprised three approaches to learning. Each contrastingly different approach consisted of a motive and a matching strategy; each of the three study motives ('deep', 'surface', and 'achieving') was thus combined with a corresponding strategy to form each of the three posited broader 'approaches' to studying. Biggs (1987) developed instruments that measure the extent to which individuals typically endorse common

approaches to learning tasks. The instruments were the Learning Process Questionnaire (LPQ), for use with secondary students and the Study Process Questionnaire (SPQ), for use with tertiary students. The utilizing factor is related to the surface learning dimension of Marton and Saljo (1976a), in that accurate reproduction and syllabus-boundness feature in study strategies. The students tend to be at university with the aim of obtaining paper qualifications;fear of failure in tests act as a shorter term motivational drive. The second dimension is related to the deep approach. Students in this group study because of intrinsic motivation or interest in the subject for its own sake. In their reading, therefore, they seek the real meaning of the work. The final achieving dimension describes the approach of students who are motivated by the satisfaction of winning in a competitive context. The strategy component consists of a highly organized, systematic approach to studying.

Biggs' model of student learning is, however, conceptually conservative in its attempt to 'subsume many individual difference variables that are relevant to institutional learning under consistent motivational and strategic differences' (Biggs, 1985). It nevertheless has considerable appeal among researchers precisely because of its structural simplicity and elegance.

Another study on approaches to study was reported by the work of the Lancaster group. It is considered because it brought together the work on approaches to studying of the Gothenburg group, Pask, and Biggs, and embodied it in an Approaches to Studying Inventory (ASI).

Entwistle and Ramsden (1983) introduced a more comprehensive model of student learning based on an eclectic synthesis of research findings emanating from a variety of research perspectives which served as the basis for the large scale quantitative study of student learning. The model

proposed by Entwistle essentially posited that qualitatively different forms of motivation were not just supported, as in Biggs' model, by corresponding forms of intention (deep, surface or strategic approach) - equivalent conceptually to Biggs' 'strategies'- but by additional corresponding processes, learning styles and pathologies. Entwistle and Ramsden (1983) established more than strong empirical support for this model. There is thus an inescapable tension in the Biggs model that contrasts sharply with the openness of the model proposed by Entwistle that admits, rather than subsumes, the complex determinants of individual qualitative differences.

The Lancaster group used both qualitative and quantitative research methods. It developed an inventory (Ramsden, 1983) so that a larger group of students could be examined for their approaches to studying. Concepts developed by the work of a number of researchers were incorporated into the Lancaster inventory. There was also interaction with the work of Biggs which was taking place simultaneously. The work of the Lancaster group is described by Entwistle and Ramsden (1983).

Approaches to Study Inventory (ASI)

The Lancaster "Approaches to Studying" Inventory (ASI) was developed through a number of pilot versions with factor analysis at each stage to group together variables which inter-relate, and to check the consistency and validity of the inventory (Ramsden and Entwistle, 1981). The evidence from the research studies is that the questionnaire is a useful means of finding out how students learn.

Items included in the final version were drawn primarily from the work of Enwistle and Wilson (1977) and from the work of Marton and Saljo (1976a;1976b) (deep and surface approaches), Pask (1976a;1976b)

(comprehension learning, operation learning and related pathologies) and Biggs (1976;1979) (the motivational states).

The final research version of the questionnaire consisted of 64 items which contributed to 16 sub-scales. The meaning of each of the subscales and scales is given as follow :

Approaches to Study	Description
Meaning Orientation	Intention to understand what is being studied.
Deep Approach	Active questioning in learning.
Inter-relating Ideas	Relating to other parts in the course.
Use of evidence	Relating evidence to conclusion.
Intrinsic motivation	Interest in learning for learning's sake.
Reproducing Orientation	Intention to reproduce what is being studied.
Surface approach	Pre-occupation with memorization.
Syllabus-boundness	Relying on staff to define learning tasks.
Fear of failure	Pessimism and anxiety about academic outcomes.
Improvidence	Over-cautious reliance on details.
Non-academic Orientation	Little concern for academic requirement.
Disorganized Study Method	Unable to work regularly and effectively.
Negative attitudes to studying	Lack of interest and application.
Globe-trotting	Over-readiness to jump to conclusions.
Strategic Orientation	Looking for qualifications for employment.
Achievement motivation	Competitive and confident.
Extrinsic motivation	Interest in courses for the qualifications they offer.
Strategic approach	Awareness of implications of academic demands made by staff.
Comprehension learning	Readiness to map out subject area and think divergently.
Operation learning	Emphasis on facts and logical analysis.

*) Adapted from Ramsden (1983).

The reliability coefficient (cronbach alpha) reported for the ASI ranged from .32 to .78 for the subscales. Although some of the Cronbach alpha values for the subscales are rather low, the values for the composite scales which ranged from .69 to .79 are satisfactory (Ramsden, 1983).

Differently from the instruments of LPQ and SPQ developed by Biggs (1987) which were mostly used in face-to-face educational settings, the ASI has been used in some distance education settings as studies conducted by Morgan, Gibbs, and Taylor at the Open University, United Kingdom (1980);by Harper and Kember (1986) at two Australian colleges of advanced education: Capricornia Institute and the Tasmanian college of advanced education (Tasmanian CAE); and by Wong (1992) at Memorial University of Newfoundland, Canada. These findings, together with analysis of variance data, are taken as evidence that it is valid to use the inventory with distance education students.

Research on Approaches to Study in Distance Education Setting

Distance learning differs from most conventional education in that students must study independently from course materials, with less help from face-to-face lectures. Hence consideration should be given to the needs of these students to develop appropriate approaches to studying at a distance (Ekins, 1992).

In fact, although distance education has several differences from education in conventional settings, research carried out with conventional students can provide a basic framework for developing research paradigms for students studying at a distance (Morgan, 1984).

Much work has been carried out in attempts to describe the student approach to the learning task (Marland, Patching, and Putt , 1984). However, most of the researches were conducted in conventional education. Only few studies focused on both the distance education and cross cultural settings.

Harper and Kember (1987) stated that the constructs of approaches to studying, derived from research on students in full-time study, are still relevant to the part-time distance learner. They also stated that on face value it would seem that the body of knowledge should be appropriate because the research subjects were usually students reading substantial pieces of work, and reading is the major activity of distance learning.

Research on approaches to studying in the distance education setting have been conducted by researchers such as Morgan, Gibbs and Taylor (1980), Harper and Kember (1986), and Wong (1992).

Morgan, Gibbs and Taylor (1980) reported the approaches to study of students at the Open University (OU), U.K. They compared their findings from OU students with the results obtained by the Lancaster group (Entwistle, hanley, and Hounsell, 1979) which consisted of full-time internal students. Based on a factor analysis of the data, they concluded that OU students were not dissimilar to internal (conventional) students.

Harper and Kember (1986) compared the approaches to study of external students with those of internal students studying similar subjects. They found that the "approaches to studying inventory" does have relevance for external students. Their study also revealed that external students appear to show no significant differences in approach to study from their internal equivalents.

Wong (1992) also conducted a study on approaches to study of distance education students. The study compared the approaches to study of teleconferencing students with those of internal students. As opposed to the results found by Harper and Kember (1986), Wong's results indicated that external students appear to show siginificant differences in approach to study from their internal equivalents.

Approaches to Study and Student Achievement

Some studies have examined the relationship between approaches to studying and student achievement. Marton and Saljo (1976a) have investigated how approaches to study is related to learning outcomes. They found a clear relationship between a deep approach and a deep level of understanding.

Svensson (1977) related the propensity to employ a deep or surface approach with examination performance. Those classified as using a deep approach passed a far greater proportion of their examinations than those who normally employed a surface approach. Only 23 % of the students classified as surface learners in both experiment and normal study passed all examinations. However,90 % of the students classed as deep learners in both passed all examinations. Svensson also found that those employing a deep approach tended to study for longer periods as the search for understanding made the work more interesting.

Ramsden and Entwistle (1981) examined the relationship between approaches to studying and self-reported ratings of academic progress. The results of the study leads to a degree of circularity which may account for the correlations observed.

Watkins (1982) reports a study of the relationship between approaches

to studying and academic grades awarded. This study found that disorganized study methods, surface approaches, and negative attitudes to studying were consistently related to low academic performance.

Harper and Kember (1986) drew the distinction between achievement, as an academic outcome, and persistence. Arguing that academic grades from failure to high achievement were not a reliable uniform measure of performance, they investigated the differences in study approach between high achievers and those who barely passed their courses.

It can be said, therefore, that approaches to study correlate with academic performance (Biggs, 1987a; Enwistle, 1987; Meyer, Parsons, and Dunne, 1990). Most commonly reported are two distinct study approaches referred to as deep and surface approaches. A deep-level approach, as characterized by Marton and Saljo (1976), is concerned with relating ideas together, finding the main points in a text, and constructing meaning from learning materials. Deep Approach is associated with an intention to understand and search for meaning in what is studied (Marton and Saljo, 1976a). It is a prerequisite for understanding, although for understanding to be achieved, other conditions are required (Ramsden, 1985). A surface approach is essentially the antithesis. It is related to the memorization of details with the emphasis on assimilating knowledge and information unchanged. According to Biggs, (1987a); Enwistle, (1987); Meyer, Parsons, and Dunne, (1990), tendencies to adopt deep approaches correlated positively with academic performance, and tendencies to adopt surface approaches correlated negatively. Surface Approach (SA) indicates an intention to concentrate on the 'signs' of learning thus implicitly excluding an

intention to search for meaning (Marton and Saljo, 1976a). Such an approach cannot lead to understanding and must produce a qualitatively inferior outcome (Ramsden, 1985).

The relationship between the other subscales of approaches to studying and academic performance are mentioned as follows :

Strategic Approach (ST)

It is similar to what Miller and Parlett (1974) described as 'cue seeking'. It indicates an approach that focuses on marrying effort to the reward system as perceived by the student (Entwistle, 1988). It does not have firm theoretical associations with qualitative learning outcome as do the other two approaches and its position must be viewed as ambigous when considering individual orchestrations.

Comprehension Learning (CL)

It is a strategy for building up an overview; it is a process necessary for complete understanding, although it has been hypothesized that, in a naturalistic learning situation, it is generally not sufficient alone to achieve understanding (Pask, 1976).

Operation Learning (OL)

It is a step-by-step concentration on particulars and, as a strategy, cannot alone lead to complete understanding (Pask, 1976). However, in a naturalistic learning situation, it has been hypothesized that both operation learning and comprehension learning are required -the so-called versatile style (Pask, 1976; Entwistle, 1988).

Improvidence (IP) and Globetrotting (GT)

They are extreme manifestations of the operation learning and comprehension learning styles respectively and their presence, by definition, excludes the achievement of complete understanding.

Use of Evidence (UE) and Relating Ideas (RI)

They are both concepts related to the processes required for the achievement of understanding (Entwistle, 1988).

Intrinsic Motivation (IM)

It is represented by a number of constructs in the ASI. There is a posited relationship between Intrinsic Motivation (IM) and deep approach, as well as between success and Achievement Motivation (AM) (Entwistle, 1988).

Extrinsic Motivation (EM)

It is associated with a surface approach and is linked to lack of academic success while Fear of Failure (FF) may be linked to success, although it is more typically associated with poor performance (Entwistle, 1988).

Negative Attitudes (NA) and Disorganized Study Methods (DM)

They are, by definition, undesirable constructs while Syllabus-Boundness (SB) is not likely to be positively associated with constructs such as deep approach, intrinsic motivation and comprehension learning.

From the theoretical derivation of the constructs imbedded in the ASI, it is clear that there are associations between constructs that would be desirable and other associations that would be undesirable at the level of an individual approach to studying.

According to Meyer, Parsons, & Dunne (1990), Deep Approach (DA), Use of Evidence (UE), Relating Ideas (RI), Intrinsic Motivation (IM), and Comprehension Learmning (CL) may constitute a Meaning Orientation. Associated with this orientation at the level of the individual may be Strategic Approach (ST), Achievement Motivation (AM) and Operation Learning (OL). On the other hand, a Reproducing Orientation may be constituted in terms of

Surface Approach (SA), Syllabus Boundness (SB), Negative Attitudes (NA), Disorganized Study Methods (DM), Improvidence (IP), and Fear of Failure (FF). Associated with this orientation at the level of the individual may be Globetrotting (GT) and Extrinsic Motivation (EM).

There was also evidence of influence of study 'orientation' on learning outcome (Watkins, 1982; 1983). There was clear evidence that academic performance was negatively associated with both Reproducing and Non-academic 'orientations' to a far greater extent than it was positively influenced by the Meaning 'orientation'. However, academic performance was also positively associated with an Achieving 'orientation'.

Contextual Variables and Approaches to Study

Eley (1992) stated that approaches to study related to a range of variables which are associated with the adoption of particular study approaches. Some of these related variables are within the student, some are within the learning environment. Study approaches thus seem to involve aspects of both to act consistently across situations.

Biggs (1987) also stated the same notion, that factors influencing student approaches to study are of two kinds : personal such as prior knowledge and age; and situational such as subject area and course structure. Biggs (1987) called these two factors "presage factors". The presage factors exist before the student enters the learning situation. Each of these factors has an immediate and direct effect on performance but each is likely to affect in various ways the student's motives for undertaking learning, and the strategies adopted in approaching learning.

According to Biggs (1987), prior knowledge, year of study, and discipline among faculties affect student's approaches to study. The effect of discipline area was also stated by Ramsden and Entwistle (1985).

Research on full-time face-to-face students has revealed a number of variables which influence the way in which students approach their academic tasks. On the other hand, there are many distance education variables which have not been investigated which may have an influence on students' approaches to study.

Summary

In summary, from the literature review, there are some issues which can be considered. Firstly, research in student learning generates unique insights into students' approaches to study, that is, how students tackle their studies. Secondly, the Approaches to Study Inventory (ASI) might be used for description of study approaches. Thirdly, the importance of study approaches is its crucial relationship to the quality of learning outcomes. Several authors, such as Marton (1976), Ramsden and Entwistle (1983), and Morgan (1991), support this notion. They point out that the importance of an approach to study is its crucial relationship to the quality of learning outcomes. Fourthly, variables in individuals can have effects on study approach. Fifthly, in distance education, with the reduced opportunity for dialogue both with student peer group and with lecturers, it is crucial to consider the ways students tackle their studies. With students studying at a distance, the descriptions of approaches to study can provide direction for helping students with their study approaches. Helping students to develop as learners will allow them to become more aware of how and why they are studying. Thus,

students are expected to develop more appropriate study approaches which, in turn, can be used to improve their academic performance.

CHAPTER III

RESEARCH OVERVIEW

The rationale of the study, definition of terms used in the study, and research questions to be addressed will be presented in this section.

Rationale

It has been found that approaches to study correlate with student achievement (Ramsden and Entwistle, 1983; Biggs, 1987; Entwistle, 1987; Meyer, Parsons, Dunne, 1990). These studies found that tendencies to adopt particular approaches to study, such as the Deep Approach, correlate positively with student achievement, and tendencies to adopt particular approaches to study, such as the Surface Approach, correlate negatively with student achievement.

Student achievement as a form of learning outcome is an important variable in student learning because it is the major index of student success. It can be said, therefore, that the adoption of inappropriate approaches to study can influence student achievement. It is, thus, becoming essential to be concerned with the students' approaches to study. Hence consideration should be given to the needs of students to develop appropriate approaches to study. According to Koymen (1992), there is some evidence that study approach can be taught and improved through educational interventions such as through training programs. Thus, it is reasonable that an investigation of students' approaches to study would be worthwhile.

The research conducted in this study offers guidelines for improving the learning of students at a distance education university. Information about study approaches can be used to help students to develop as learners and to

employ an appropriate study approach which correlates positively with high achievement. This could be expected to improve the quality of student learning, especially in relation to improving UT students' achievement.

Operational Definitions

The terms used throughout this study are defined as follows :

Approaches to Study

The term " Approaches to Study" used here refers to the ways in which students approach their studies as measured by the Approaches to Study Inventory (ASI), developed by Ramsden (1983). The ASI measures 16 subscales indicating students' relative emphasis on a particular study approach : Deep Approach, Relating Ideas, Use of Evidence, Intrinsic Motivation, Surface Approach, Syllabus-boundness, Fear of Failure, Improvidence, Disorganised Study Methods, Negative Attitudes to Studying, Globetrotting, Achievement Motivation, Extrinsic Motivation, Strategic Approach, Comprehension Learning, and Operation Learning. These 16 subscales are pooled to produce four composite scales indicating students' relative emphasis on study orientations : Meaning, Reproducing, Non-academic, and Strategic Orientations.

The concept of approaches to study stresses relationships between ***intention*** (***what*** the learner is looking out for) and ***process*** (***how*** that intention is carried out). The way students interpret the instructions and the learning task creates an intention to learn in a particular way. This intention leads to a distinctive process of learning which in turn affects the level of understanding or outcomes in learning. The term, approaches to study, is therefore used in referring to both the ***intention*** and the ***process*** of learning (Marton, 1984;

Enwistle, 1979 & 1991). As an example, an intention to learn deeply can lead to a deep-level of processing which in turn can lead to a deep level of understanding.

In this study, approaches to study were based on the scores which the students receive on the Indonesian language version of the Approaches to Study Inventory (ASI) which was originally developed by Ramsden (1983) in English. As a major part of this study, the ASI was translated from English to Indonesian language. Some minor modifications were made in the wording of the questionnaire to conform with the context of the study, i.e., distance education setting and local terminology.

Student Achievement

The student achievement used here refers to UT students' Grade Point Average (GPA). The GPA is derived by dividing the total number of grade points a student earned with the total number of credit units taken on a four-point system (a grade of A is awarded four points; a grade of B is awarded three points; a grade of C is awarded two points; a grade of D is awarded one point; a failing grade of E is awarded zero). The students' GPAs were collected from the most recent semester during which the research was conducted.

Research Questions

The main focus of this study was to investigate the approaches to study of Universitas Terbuka students using a standardized instrument called the Approaches to Study Inventory (ASI). The research questions addressed in this study are related to student achievement and a few contextual variables.

Research Question #1

Is there any difference between the ASI in the English version and the ASI in the Indonesian version ?

Research Question #2

Do UT students show different approaches to study with other distance education students in a different cultural
setting ?

Research Question #3

Do UT students show different approaches to study among the four faculties at Universitas Terbuka ?

Research Question #4

What is the relationship between the various approaches to study and student achievement (GPA) ?

Research Question #5

Do students with different levels of achievement have different characteristic approaches to study ?

Research Question #6

Do approaches to study relate to the contextual variables used in this study ?

CHAPTER IV

METHODOLOGY

Overview

The study was conducted at Universitas Terbuka (UT), Indonesia. Data collection was conducted for three months from early May to the end of July 1993. A quantitative research approach was employed in the study.

To measure the students' approaches to study, a standardized questionnaire in Indonesian language was developed from an existing Approaches to Study Inventory (ASI) developed by Ramsden (1983). Statistical analyses used in the study were correlation, t-tests, and oneway ANOVA.

The study consisted of two major components : instrumentation, and data collection from a sample of UT students in all four faculties.

Instrument

The instrument used for the study was the Approaches to Study Inventory (ASI) developed by Ramsden (1983). It consisted of 64 items about how students approach their study. Each item consisted of a statement about study approach and five alternative responses indicating students' agreement with the statement . The five alternative responses are described as follow :

- "DA" means Definitely Agree
- "AR" means Agree with Reservation
- "DP" means Doesn't Apply
- "DR" means Disagree with Reservation
- "DD" means Definitely Disagree.

The items in the questionnaire were not presented in any apparent order. However, in scoring responses, the items were grouped together to form what are known as subscales and scales. The 64 items of the questionnaire were grouped into 16 subscales which in turn were grouped into four scales.

The description of the determination of the subscale and scale scores were presented below.

1. **Subscale**.

	Items	k
a. Deep Approach (DA)	: 5 + 10 + 24 + 34	4
b. Relating Ideas (RI)	: 2 + 29 + 50 + 56	4
c. Use of Evidence (UE)	: 33 + 38 + 54 + 61	4
d. Intrinsic Motivation(IM)	: 39 + 47 + 55 + 64	4
e. Surface Approach (SA)	: 16 + 19 + 30 + 36 + 41 + 48	6
f. Syllabus Boundness (SB)	: 9 + 25 + 52	3
g. Fear of Failure (FF)	: 12 + 26 + 53	3
h. Improvidence (IP)	: 13 + 51 + 60 + 62	4
i. Disorganised Study Method(DM)	: 1 + 14 + 17 + 28	4
j. Negative Attitude (NA)	: 8 + 23 + 49 + 63	4
k. Globetrotting (GL)	: 3 + 40 + 46 + 57	4
l. Achievement Motivation (AM)	: 4 + 15 + 42 + 58	4
m. Extrinsic Motivation (EM)	: 7 + 22 + 32 + 35	4
n. Strategic Approach (ST)	: 18 + 20 + 37 + 45	4
o. Comprehension Learning (CL)	: 6 + 21 + 31 + 44	4
p. Operation Learning (OL)	: 11 + 27 + 43 + 59	4

2. **Scales**.

	Subscales	k
a. Meaning orientation	: DA + RI + UE + IM	16
b. Reproducing orientation	: SA + SB + FF + IP	16
c. Non-academic orientation	: DM + NA + GL	12
d. Strategic orientation	: AM + EM + ST	12

*) k = number of items

The descriptions of the meaning of the subscales and the composite scales are presented as follow.

Meaning orientation

A composite scale including four subscales (deep approach, relating ideas, use of evidence, and intrinsic motivation). High scores in meaning orientation indicate that students intend to understand what is being studied.

Deep Approach

High scores indicate that students are looking for meaning in their studying, interacting actively with what is being learnt, and linking what they are studying with real life.

Relating Ideas

High scores indicate that students are actively relating new information to previous knowledge.

Use of evidence

High scores show that students are examining evidence critically and using it cautiously.

Intrinsic Motivation

High scores indicate that students are interested in what they are learning for its own sake.

Reproducing Orientation

A composite scale made up of the four subscales (surface approach, syllabus boundness, fear of failure, and improvidence). High scores in reproducing orientation indicate that students intend to reproduce what they are studying.

Surface Approach

High scores indicate that students are relying on rote learning.

Syllabus-boundness

High scores indicate an intention to restrict learning to the defined syllabus and specific tasks.

Fear of Failure

High scores indicate that students lack self-confidence and are anxiously aware of assessment requirements.

Improvidence

High scores indicate that students are not prepared to look for relationships between ideas and are fact-bound.

Non-academic Orientation

A composite scale made up of three subscales (disorganised study method, negative attitude, and globetrotting). High scores in non-academic orientation indicate that students have little concern for academic requirements and are experiencing study difficulties linked to poor academic performance.

Disorganised Study Methods

Low scores indicate that students report that they are organising their time effectively and planning ahead.

Negative Attitudes

High scores indicate that students have little involvement with their work and are cynical and disenchanted about higher education.

Globetrotting

High scores indicate that students are over-ready to generalise and jump to conclusions without evidence.

Strategic Orientation
A composite scale made up of the three subscales (achievement motivation, extrinsic motivation, and strategic approach). High scores in strategic orientation indicate that students are studying to gain qualifications for employment and see this task as a game which they must win.

Achievement Motivation

High scores indicate competitive and self-confident students, driven by hope for success.

Extrinsic Motivation

High scores indicate that students see qualification as the main source of motivation for learning.

Strategic Approach

High scores indicate that students are actively seeking information about assessment requirements and trying to impress staff.

Comprehension Learning

High scores indicate that students use illustrations analogies and intuition to build up a general picture of what they are learning.

Operation Learning

High scores indicate that students concentrate on details and logical analysis.

The questionnaire used for the present study was translated from the English language into the Indonesian language without losing the integrity and meaning of the original Approaches to Study Inventory (ASI). For the purpose of the study, some minor modifications of the questionnaire were made both to conform to the local terminology and to make the statements

meaningful to distance education students as opposed to the conventional students for whom the questionnaire was originally designed. One important wording which was modified was the word "lecturer" (e.g. Lecturers seem to delight in making the simple truth unnecessarily complicated). The modification was done because distance education institutions do not provide face-to-face lecturers; the primary instructional system in learning at a distance is provided through printed materials (modules). Thus, for the purpose of the study, the word of "lecturer" was translated to be "module writer".

The questionnaire consisted of two sections. The first section requested students' personal information such as continuity in registering courses, year of study, study status, work status, previous educational level, and student satisfaction with distance education in general and UT in particular. In addition, students were asked to give their names and student number. These were required in order to obtain their GPA from student records. The second section contained the 64 items of the ASI.

Translation

For the purpose of the study, the ASI was adapted and translated from English to Indonesian language. The process of translation involved several steps. First, the researcher translated the questionnaire from English into Indonesian. Second, in order to avoid ambiguities in the translation of the questionnaire, several preliminary checks were carried out before using the questionnaire for the study.

The first preliminary check involved a number of bilingual individuals (English/Indonesian) examining the appropriateness of the translation. Thirteen staff members of Universitas Terbuka who were enrolled in a

graduate program at the University of Victoria were given a copy of the questionnaire in English and in Indonesian. For each item, the Indonesian version was presented below the English version so that the evaluators could compare the translation directly. A space was provided for written comments. The UT staff evaluated the clarity of each statement of the questionnaire in the Indonesian version. The evaluation of the clarity was based on their own understanding of the statements in English and in Indonesian. In general, the evaluators supported the appropriateness of the translation. However, their comments on several items in the questionnaire were used to make revisions. The important comments were that the translation of "relate" ("I try to relate ideas in one subject to those in others, whenever possible") which was translated by the researcher as "menghubungkan" (this word seems equivalent to "connect" in English), should be translated as "mengkaitkan"; that the translation of "implication" ("I usually don't have time to think about the implications of what I have read") which was translated by the researcher as "penerapan", should be translated as "implikasi" because the word "implikasi" has already been adapted into Indonesian. This preliminary check constituted the first draft of the translation.

A second preliminary check involved a bilingual (a native in English). As noted by Prieto (1992), one of the methods of translation that is recommended is the bilingual technique. This technique involves bilinguals taking the instrument in both languages. The bilingual, an academic staff member at University of Victoria, who was fluent in English and Indonesian languages, was given a copy of the questionnaire in both English and Indonesian languages. He was asked to evaluate the approriateness and the clarity of the translation. As well, he was interviewed to discuss his comments in the appropriateness and the clarity of the translation. His comments on

several items were used to make further revisions of the questionnaire. The important comments were that the translation of "precisely" ("I like to be told precisely what to do in essays or other assignments") which was translated by the researcher to be "singkat", should be translated as "tepat"; that the translation of "memorize" ("When I am reading, I try to memorize important facts which may come in useful later") which was translated by the researcher to be "mengingat", should be translated as "menghafal"; that the translation of "interpreting" ("In reporting practical work, I like to try to work out several alternative ways of interpreting the findings") which was translated as "menterjemahkan", should be translated as "menafsirkan". This preliminary check constituted the second draft of the translation.

The next preliminary check was a pilot testing which took place at Universitas Terbuka, Indonesia, the site of the study and involved administration of the revised Indonesian version of the ASI. This step involved fourteen UT students who were enrolled at KBM (Kelompok Belajar Mahasiswa = Student study groups) taking intensive tutorials at the head office of UT in Jakarta. They were asked to evaluate the clarity of each item in the questionnaire. The levels of clarity were categorized into three levels : Not clear = 1; somewhat clear = 2; clear = 3. The students ranked most of the items (56 items) as "clear". The items which were ranked as "somewhat clear" (three items) and as "not clear" (five items) were subjected to further revision. In addition, three students were interviewed to discuss the lack of clarity of the items. Based on the interviews, necessary improvements were made. Two students were then asked to respond to the revised questionnaire. The results of this round of item evaluation indicated that the students found no difficulty in responding to the revised questionnaire. This

version (the third draft of the translation) constituted the instrument used in this study.

Reliability of the ASI

The original English language version of the ASI was developed in Lancaster, England, through a number of pilot versions to check the consistency of the inventory (Ramsden, 1983). Cronbach alpha values which are accepted indices of the internal consistency of groupings of questionnaire items are displayed for the 16 subscales of the ASI on Table 2.

The ASI has been used in different settings for both conventional students and distance education students. Studies using the ASI for conventional students have been conducted by Ramsden and Entwistle (1983) in the United Kingdom, representing a sample of 2208; Meyer and Parsons (1989) in Cape Technicon in South Africa, representing a sample of 1194; Richardson (1990) at Brunel University in the United Kingdom, representing a sample of 99. Studies using the ASI for distance education students have been conducted by Harper and Kember (1986) at two Australian colleges of advanced education : Capricornia Institute and the Tasmanian College of Advanced Education, representing a sample of 779 ; Wong (1988) at Memorial University of Newfoundland (MUN), Canada, representing a sample of 201. Their findings revealed a considerable consistency (in terms of Cronbach alpha values) in descriptions of approaches to study. Since similar patterns in the description of study approach were found across those studies, it can be said that the Approaches to Study Inventory (ASI) is consistent for describing the approaches to study.

Table 1. Cronbach alpha of the original ASI (Ramsden, 1983)

Approaches to Study	k*	Cronbach alpha (n=2208)
Subscale		
Deep Approach	4	.56
Relating Ideas	4	.47
Use of Evidence	4	.38
Intrinsic Motivation	4	.72
Surface Approach	6	.49
Syllabus-boundness	3	.51
Fear of failure	3	.45
Extrinsic Motivation	4	.78
Strategic Approach	4	.32
Disorganised Study Methods	4	.71
Negative Attitudes	4	.60
Achievement Motivation	4	.58
Comprehension Learning	4	.65
Globetrotting	4	.36
Operation Learning	4	.49
Improvidence	4	.42
Scale		
Meaning Orientation	16	.79
Reproducing Orientation	16	.73
Non-academic Orientation	12	.70
Strategic Orientation	12	.67

k* = number of items.

A study using the inventory (Speth and Brown, 1988) reported that reliabilities obtained for the four scales (Meaning, Reproducing, Non-academic, and Strategic) ranged from .58 to 73 which are similar to those reported by Ramsden (1983) and Entwistle and Waterson (1985).

Sample

The sample for this Indonesian study consisted of 600 UT students enrolled in four faculties at Universitas Terbuka (UT): Faculty of Social and Political Sciences; Faculty of Economics; Faculty of Mathematics and Natural Sciences; Faculty of Education. The four faculties were chosen in order to

examine the differences in the approaches to study among students of the four faculties. The samples for each faculty consisted of 150 students who were active in that they were registered for the first semester of 1993 (93.1), the period during which the research was conducted. In order to minimize differences in study program requirements, the target population consisted of students enrolled in a degree program (S1) only, as opposed to diploma or certificate program students. Random sampling was employed in selecting the samples of students among the four faculties.

Data Collection

The questionnaires were sent to the students by mail in early June, 1993. Accompanying the questionnaire was a letter explaining the purpose of the study and a postage-paid envelope for its return. The respondents were asked to complete the questionnaires and return them immediately by mail.

The Grade Point Average (GPA) data for each student who responded to the questionnaire was provided by the computer centre at the end of the semester during which the research was conducted. The GPAs were obtained by matching of the student's registration number from the computer centre.

Data Analysis

The Approaches to Study Inventory (ASI) handbook was used as a guideline to determine students' approaches to study. The data were scored by adding together the numbers that the respondents circled when they replied to the questions making up the subscales and scales. For example, to obtain a score for the subscale "Deep Approach", responses on items 5, 10, 24, and 34 were added together.

The data analysis employed in this study will be described in terms of the specific research questions which were addressed.

To answer the first research question -- Is there any difference between the ASI in the English version and the ASI in the Indonesian version ? -- descriptive statistics such as means, standard deviations, and distributions were used. In addition, the reliability coefficient of the ASI in the English version and the Indonesian version were compared on each subscale and scale.

To answer the second research question -- Do UT show different approaches to study from other distance education students in a different cultural setting ? -- descriptive statistics such as means and standard deviations was used. The research question was addressed as a comparison between UT students and other students studying at a distance in a different cultural setting.

To answer the third research question -- Do UT students show different approaches to study among the four faculties at UT ? -- both descriptive statistics and analysis of variance were employed. ANOVA was used to compare results across four faculties (Faculty of Social Sciences; Faculty of Economics; Faculty of Mathematics and Natural Sciences; Faculty of Education) and acted as independent variable. The dependent variables were the scores on the Approaches to Study Inventory. Whenever there were significant F tests from the Oneway ANOVA tests, multiple comparison tests to determine which group means were significantly different at .05 level were performed. The multiple comparison test used was the Scheffe test (Howell, 1989).

To answer the fourth research question -- What is the relationship between the various approaches to study and student achievement (GPAs) ?

-- Pearson product-moment correlation coefficients were used to estimate the relationship between approaches to study and student achievement (GPAs). This research question was addressed to examine the degree of relationship between study approach and student achievement.

To answer the fifth research question -- Do students of different levels of achievement have different characteristic approaches to study ? -- Oneway ANOVAs were employed. This research question was addressed as an alternate approach to examine the relationship between the different levels of student achievement and study approach. Since different achievement levels may perform different characteristics in approaches to study, total samples were categorized into three groups of achievement (GPA) : low achievement (for GPAs less than or equal to 1.35), average achievement (for GPAs above 1.35 and less than 2.35) and high achievement (for GPAs equal to or higher than 2.35). The categorization was based on the mean and standard deviation of GPA found in this study (the mean GPA is 1.85 with the standard deviation of .50). The three groups' achievement levels acted as independent variables. The dependent variables were the scores on the approaches to study. Whenever there were significant F tests, multiple comparison tests to determine which group means were significantly different at .05 level were also performed.

To answer the sixth research question -- Do approaches to study relate to the contextual variables used in this study ? -- both T-tests and oneway ANOVAs were used. The T-tests were used for two grouping variables : continuity in registering courses (abbreviated as CON) consisting of two groups : continue and not continue; work status (abbreviated as WS) consisting of two groups : working and not working; study status (abbreviated as ST) consisting of two groups : part-time and full-time; previous educational

level (abbreviated as PEL) consisting of two groups : high school and other than high school. The oneway ANOVAs were used for more than two grouping variables. The first grouping variable was student satisfaction with UT (abbreviated as SUT) which is concerned with UT as an operational institution in particular. The SUT has five response categories : Very dissatisfied, somewhat dissatisfied, somewhat satisfied, very satisfied, and no opinion. The second grouping variables was student satisfaction in studying at a distance in general (abbreviated as SDE) which has five response categories : very dissatisfied, somewhat dissatisfied, somewhat satisfied, very satisfied, and no opinion. The third variable, year of study (abbreviated as YS), has three categories : first, middle, and last years. The fourth variable was age which has four categories : age less than or equal to 20, age from 21 to 30, age from 31 to 40, and age higher than 40. Whenever there were significant F tests, multiple comparison tests (Scheffe tests) were employed.

CHAPTER V

RESULTS

Overview

Prior to the statistical analysis, some general procedures for processing and analyzing the data were conducted.

From a total of 382 returned questionnaires, 34 questionnaires were deleted because they were undeliverable or incomplete (for example, the respondents completed less than 50 % of the total items in the questionnaire). The remaining 348 questionnires were valid for further analysis. The response rates for each faculty can be seen in Table 2.

Table 2. Response rates of the questionnaire

	FACULTY				TOTAL
	FISIP	FMIPA	FEKON	FKIP *)	
- Number sent	150	150	150	150	600
- Number returned (gross)	93	104	90	95	382
- Response rate in %(gross)	62	69.3	60	63.3	63.7
- Non deliverable	8	5	9	7	29
- Non valid responses	2	2	1	-	5
- Valid responses (net)	83	97	80	88	348
- Response rate in % (net)	55.3	64.7	53.3	58.7	58

*) FISIP = Faculty of Social Sciences
FMIPA = Faculty of Mathematics and Natural Sciences
FEKON = Faculty of Economics
FKIP = Faculty of Education

From Table 2, it can be seen that the response rates were 348 from a total of 600, representing a response rate of 58 per cent. The response rates across faculties were very similar. The return rate for the Faculty of Social and Political Science was 55.3 %; for the Faculty of Mathematics and Natural

Sciences was 64.7 %; for the Faculty of Economics was 53.3 %; and for the Faculty of Education was 58 %.

To prepare and organize the data for statistical analysis, several steps were taken such as entering the data into a data file by coding the data to numbers which represent the responses, describing the data in terms of their variable labels and value labels, and transforming the data to subscale and scale scores.

Each respondent had values for four scales : 16 subscales, and eight contextual variables, a total of 28 values. The results were aggregated by faculty and GPA.

Results

The presentation of the results of the study were categorized into six sections. Each section dealt with the main results of the study. It was organized to answer the following research questions :

1. Is there any difference between the ASI in the English version and the ASI in the Indonesian version ?
2. Do UT students show different approaches to study from other distance education students in a different cultural setting ?
3. Do UT students show different approaches to study among the four faculties at UT ?
4. What is the relationships between the various approaches to study and student achievement (GPA) ?
5. Do students with different levels of achievement have different characteristic approaches to study ?.
6. Do approaches to study relate to the contextual variables used in this study ?

Indonesian Version of ASI

This section addresses the first research question: Is there any difference between the ASI in the English version and the ASI in the Indonesian version ?

To answer this question, the means, standard deviations, and reliability found in this study were presented and compared to those found in the original researches that are available. For more detail, maximum scores (appendix B) and distribution of the data (appendix C) were also displayed.

The results indicated that the means (Table 2) found in this study, compared to the original study (Ramsden, 1983) tended to have similar scores on the Approaches to Study Inventory. In terms of the scales, although a higher mean score was found on Meaning Orientation (mean = 52.3 compared to mean = 38.8), essentially similar mean scores to the original study were found on Reproducing (mean = 41.6 compared to mean = 34.5), Non-academic (mean = 23.4 compared to mean = 22.5), and Strategic Orientations (mean = 33.7 compared to mean= 25.2). In terms of the subscales, although there were higher mean scores on several subscales, generally similar mean scores were also found. The data shown on Table 3 indicated that higher score on Meaning Orientation was indicated by higher scores on its subscales such as Relating Ideas (D = 3.8), Use of Evidence (D = 4.1), and Intrinsic Motivation (D = 3.9).

In terms of the reliability (Table 4), generally there were similar patterns in the values from the Indonesian data to that of original (Ramsden, 1983). For more detail, the complete results of reliability analysis can be seen in Appendix A.

Table 3. Means and standard deviations of the Approaches to Study Inventory (UT data compared to original data).

Approaches to Study	UT Data (n=348)		Original Data* (n=2208)	
	Mean	Sd	Mean	D**
Subscales				
Deep Approach	12.4	2.2	10.7	1.7
Relating Ideas	13.9	2.2	10.1	3.8
Use of Evidence	13.7	2.2	9.6	4.1
Intrinsic Motivation	12.3	2.7	8.4	3.9
Surface Approach	15.9	3.8	13.1	2.8
Syllabus Boundness	10.1	1.5	8.2	1.9
Fear of Failure	4.5	2.8	5.9	-1.4
Improvidence	11.2	2.6	7.5	3.7
Disorganised Method	9.6	4.2	9.4	-0.2
Negative Attitude	4.9	3.9	5.4	-0.5
Globetrotting	9.0	2.9	7.7	1.3
Achievement Motivation	12.9	1.8	9.6	3.3
Extrinsic Motivation	8.6	3.7	5.4	3.2
Strategic approach	12.2	2.7	10.2	2.0
Comprehension Learning	9.6	3.0	8.8	0.8
Operation Learning	12.6	2.5	9.9	2.7
Scales				
Meaning Orientation	52.3	7.0	38.8	13.5
Reproducing Orientation	41.6	7.6	34.5	7.1
Non-academic Orientation	23.4	7.9	22.5	0.9
Strategic Orientation	33.7	5.5	25.2	8.5

*)adapted from Ramsden (1983)
**)D = Mean differences

In terms of the scales (Table 4), although a lower value was found on Strategic Orientation (Cronbach Alpha = .49 compared to .67), essentially similar reliability coefficients were found on Meaning, Reproducing, and Non-academic Orientations, compared to that of the original study. The values found in this study on Meaning, Reproducing, and Non-academic Orientations were .76, .64, and .68 respectively. These results are similar to the Ramsden

findings (1983) which used an English version of the ASI. The values found in the original study on Meaning, Reproducing, and Non-academic Orientations were .79, .73, and .70 respectively.

Table 4. Cronbach Alpha of the Approaches to Study Inventory (UT data compared to the original data)

Approaches to Study	k*	Cronbach Alpha	
		UT data (n=348)	Original Data (n=2208)
Subscale			
Deep Approach	4	.32	.56
Relating Ideas	4	.58	.47
Use of Evidence	4	.52	.38
Intrinsic Motivation	4	.51	.72
Surface Approach	6	.46	.49
Syllabus Boundness	3	-.03	.51
Fear of Failure	3	.49	.45
Improvidence	4	.29	.42
Disorganised Method	4	.65	.71
Negative Attitude	4	.50	.60
Globetrotting	4	.32	.36
Achievement Motivation	4	.08	.58
Extrinsic Motivation	4	.52	.78
Strategic Approach	4	.35	.32
Comprehension Learning	4	.39	.65
Operation Learning	4	.24	.49
Scale			
Meaning Orientation	16	.76	.79
Reproducing Orientation	16	.64	.73
Non-academic Orientation	12	.68	.70
Strategic Orientation	12	.49	.67
Total	64	.83	-

* k = number of items

In terms of the subscales, the data shown in Table 4 indicated that, although lower reliability coefficients than those of the original study were found in several subscales, generally there were similar reliability coefficients

to those of the original study. The subscales of Syllabus Boundness and Achievement Motivation had lower reliability coefficients than those of the original study (-.03 compared to .51 and .08 compared to .58 respectively). Considering that reliability value can be influenced by the number of items and of standard deviation, such low reliability coefficients might be a result of low numbers of items (the numbers of items for Syllabus Boundness and Achievement Motivation are 3 and 4 respectively) and of low standard deviations on the subscales (the standard deviations for Syllabus Boundness and Achievement Motivation are 1.5 and 1.8 respectively).
Although the reliability coefficients on those two subscales were low, the data in Table 3 indicated that the other subscales (Relating Ideas and Use of Evidence) tended to have higher values (.58 compared to .47 and .52 compared to .38 respectively).

Thus, it can be concluded that there were similar patterns in the means and reliability coefficients of approaches to study between the UT study and the original research. Although the means and the reliability coefficients for several subscales found in this study were rather low, the values for the four scales (main domains) were satisfactory. This result suggest that the Indonesian version of the ASI was a successful translation of the ASI, the Indonesian version of the ASI is comparable to the original version.

UT Students Compared to MUN Students

This section addresses the second research question : Do UT students show different approaches to study from other distance education students in a different cultural setting ?

As there was little available research on the use of ASI at distance education institution, to answer this question, the data of a study by Wong

(1992) employing the ASI at a distance education institution were used for comparison with the UT data. This study involved Memorial University of Newfoundland (MUN) distance education students. Table 5 shows the means and standard deviations of the Approaches to Study Inventory scores (UT data compared to MUN data).

Table 6. Means and standard deviations of the Approaches to Study Inventory scores (UT data compared to MUN data)

Approaches to Study	UT data (n=348)		Original Data(n=112)		
	Means	Sd	Means	Sd	D**
Subscale					
Deep Approach	12.4	2.2	12.7	2.0	-.03
Relating Ideas	13.9	2.2	12.2	2.2	1.7
Use of Evidence	13.7	2.2	10.4	2.7	3.3
Intrinsic Motivation	12.3	2.7	9.2	3.1	3.1
Surface Approach	15.9	3.8	12.3	3.8	3.6
Syllabus Boundness	10.1	1.5	8.1	2.2	2.0
Fear of Failure	4.5	2.8	5.6	2.7	-1.1
Improvidence	11.2	2.6	8.0	2.9	3.2
Disorganised Method	9.6	4.2	7.5	4.0	2.1
Negative Attitude	4.9	3.9	3.9	2.9	1.0
Globetrotting	9.0	2.9	6.5	2.8	2.5
Achievement Motivation	12.9	1.8	9.7	3.1	3.2
Extrinsic Motivation	8.6	3.7	8.5	3.7	0.1
Strategic Approach	12.2	2.7	12.5	2.6	0.3
Comprehension Learning	9.6	3.0	8.3	3.3	1.3
Operation Learning	12.6	2.5	11.9	2.6	0.7
Scale					
Meaning Orientation	52.3	7.0	44.5	-	7.8
Reproducing Orientation	41.6	7.6	34.0	-	7.6
Non-academic Orientation	23.4	7.9	17.9	-	5.5
Strategic Orientation	33.7	5.5	30.7	-	3.0

* k = number of items

From Table 5, it can be seen that, in general, UT students tended to have similar scores in study approaches to MUN students. On the scales, similar mean scores in study approach to those of MUN study were found in this study. The same patterns of high to low values were also found between UT students and those of MUN. The patterns of high to low values were Meaning, Reproducing, Strategic, and Non-academic Orientations respectively. In terms of the subscales, although higher scores than those found in the MUN study were found in several subscales, similar mean scores to those of MUN study were found in this study. The subscales which had higher mean scores were Use of Evidence (D = 3.3), Intrinsic Motivation (D = 3.1), Surface Approach (D = 3.6), Improvidence (D = 3.2), and Achievement Motivation (D = 3.2).

In summary, it can be said that there were similar mean scores in study approaches between UT students and MUN students except for the subscales of Use of Evidence, Intrinsic Motivation, Surface Approach, Improvidence, and Achievement Motivation. This suggests that, in general, UT students did not show different study approaches from other students in a different cultural setting.

Approaches to Study and the Four Faculties of UT

This section addresses the third research question : Do UT students show different approaches to study among the four faculties at UT ?

To answer this question, students were classified into four faculties: Faculty of Social Sciences (FISIP); Faculty of Economics (FEKON); Faculty of Mathematics and Natural Sciences (FMIPA); and Faculty of Education (FKIP). The four faculties were the categorizing variables. The dependent variables were the scores on the approaches to study. Oneway ANOVA was conducted for each of the subscales and scales. The results are displayed in Table 6.

Table 5. Means and standard deviations of the Approaches to Study Inventory among the four faculties.

Approaches to Study		Faculty				TOTAL
		FISIP	FEKON	FMIPA	FKIP	
Subscale						
Deep Approach	Mean	12.3	12.4	12.4	12.6	12.4
	Sd	2.2	2.4	2.1	2.2	2.2
Relating Ideas	Mean	13.9	14.0	13.6	14.0	13.9
	Sd	2.0	2.3	2.2	2.2	2.2
Use of Evidence	Mean	13.6	13.9	13.5	13.9	13.7
	Sd	2.3	2.2	2.2	2.1	2.2
Intrinsic Motivation	Mean	12.5	12.7	12.2	11.9	12.3
	Sd	3.1	2.5	2.6	2.7	2.7
Surface Approach	Mean	16.0	16.4	15.6	15.7	15.9
	Sd	3.5	4.4	3.4	4.0	3.8
Syllabus Boundness	Mean	9.8	10.2	10.1	10.1	10.1
	Sd	1.5	1.5	1.6	1.5	1.6
Fear of Failure	Mean	4.2	4.6	4.4	4.7	4.5
	Sd	2.6	3.1	3.0	2.6	2.8
Improvidence	Mean	11.5	11.4	11.0	10.9	11.2
	Sd	2.8	2.6	2.4	2.7	2.6
Disorganised Method	Mean	8.9	9.6	9.7	10.0	9.6
	Sd	4.5	4.5	4.0	4.0	4.2
Negative Attitude	Mean	5.0	5.4	4.2	5.1	5.0
	Sd	3.4	3.5	3.4	3.5	3.5
Globetrotting	Mean	8.7	9.2	9.1	8.8	9.0
	Sd	3.0	2.8	3.0	2.7	2.9
Achievement Mot.	Mean	12.8	13.1	13.0	12.9	12.9
	Sd	1.6	1.8	2.0	1.9	1.8
Extrinsic Motivation	Mean	8.8	8.9	8.0	8.7	8.6
	Sd	3.8	3.8	3.7	3.7	3.7
Strategic Approach	Mean	12.3	12.1	11.7	12.6	12.2
	Sd	2.7	2.7	2.8	2.5	2.7
Comprehension L.	Mean	9.9	10.1	9.0	9.6	9.6
	Sd	2.7	3.5	2.9	3.0	3.0
Operation Learning	Mean	12.5	12.5	12.3	13.1	12.6
	Sd	2.4	2.7	2.5	2.4	2.5
Scale						
Meaning Orientation	Mean	52.3	53.0	51.6	52.4	52.3
	Sd	7.6	7.4	6.7	6.5	7.0
Reproducing Orient.	Mean	41.4	42.6	41.1	41.4	41.6
	Sd	7.6	8.7	6.7	7.5	7.6
Non-academic Orient.	Mean	22.6	24.3	22.9	23.9	23.4
	Sd	8.1	8.3	7.8	7.4	7.9
Strategic Orientation	Mean	33.9	34.1	32.7	34.2	33.7
	Sd	5.1	5.6	6.0	5.1	5.5

The results (Table 6) indicated that there was very little difference in the mean scores of the Approaches to Study Inventory across the subscales and scales in the four faculties. This was confirmed by the results of the analysis of variance.

The analysis of variance employed for each of the subscales and the scales to test differences among the four faculties indicated that there were no significant differences in the mean scores of study approach across the subscales and scales in the four faculties. This indicated that UT students did not show different approaches to study across the four faculties. This suggests that the faculties at UT were not related to the variation in study approaches.

In summary, it can be said that there were no significant differences in the mean scores of approaches to study scores across the four faculties at UT. This indicated that UT students did not show different approaches to study across the four faculties at Universitas Terbuka.

Approaches to Study and Student Achievement

This section addresses the fourth research question : What are the relationships between the various approaches to study and student achievement (GPA) ?

In this study, the approaches to study scores were correlated with UT student GPAs. Pearson product-moment correlation was employed for each of the subscales and scales in each faculty.

The results (Table 7) indicated that generally there were no significant correlations between the approaches to study and student GPAs in the

subscales and scales across the four faculties and total sample. This indicated that study approach did not relate to student GPA.

Table 7. Correlation coefficients between approaches to study and GPA crosstabulated by faculty.

	FACULTY				TOTAL
	FISIP (n=83)	FMIPA (n=80)	FEKON (n=97)	FKIP (n=88)	(n=348)
Subscale					
Deep Approach	.24	-.03	.02	.21	.12
Relating Ideas	.12	-.12	-.04	.23	.05
Use of Evidence	.10	-.14	-.13	.19	.01
Intrinsic Motivation	.11	-.04	-.18	.04	-.02
Surface Approach	-.28*	-.18	-.02	-.27*	-.19**
Syllabus Boundness	-.16	.14	.05	-.23	-.05
Fear of Failure	-.17	-.03	.25*	-.04	.02
Improvidence	-.00	-.01	-.05	.03	-.01
Disorganised Method	-.03	-.04	.07	-.17	-.04
Negative Attitude	-.37*	-.13	-.10	-.14	-.19**
Globetrotting	.11	-.09	-.01	.02	.01
Achievement Motiv.	-.05	-.01	-.02	-.03	-.03
Extrinsic Motivation	-.08	.01	.07	-.19	-.05
Strategic Approach	-.03	-.06	-.12	-.10	-.08
Comprehension Lear.	.02	-.02	.15	-.06	.02
Operation Learning	.05	-.19	-.03	-.06	-.05
Scale					
Meaning Orientation	.18	-.10	-.12	.23	.05
Reproducing Orient.	-.22	-.08	.09	-.19	-.11
Non-academic Orient.	-.13	-.11	-.01	-.15	-.10
Strategic Orient.	-.09	-.03	-.02	-.20	-.08

* $p < .05$
** $p < .001$

However, there were a few exceptions where significant correlations were found for several subscales. These significant correlations, however, were only 6 out of 100 possible correlations. For FISIP students, Surface Approach ($p < .05$) correlated negatively with GPA ($r = -.28$) and Negative

Attitude ($p < .05$) correlated negatively with GPA ($r = -.37$); for FEKON students, no correlation appeared between the approaches to study and GPA; for FMIPA students, Surface Approach ($p < .05$) correlated positively with GPA ($r = .25$); for FKIP students, Surface Approach ($p < .05$) correlated negatively ($r = -.27$) with GPA; for Total UT students, Surface Approach and Negative Attitude ($p < .001$) correlated negatively ($r = -.19$ respectively) with GPA.

A possible explanation for the lack of significant relationships found in this study is that it might be a result of the nature of student GPAs which have low standard deviations. In fact, correlation coefficients are influenced by the standard deviation of GPA. A low standard deviation will tend to result in a low correlation coefficient.

It can be said, therefore, that with a few exceptions, no relationships with a few exception were found between study approach and student GPA. This finding indicated that study approach did not relate to student GPA.

Approaches to Study and Different Levels of Student Achievement

This section addresses the fifth research question : Do students with different levels of achievement have different characteristic approaches to study ?. This question is another way of investigating the relationship of approaches to study to GPA.

To answer this question, students' GPAs were categorized into three groups : Low GPAs (for GPAs less than or equal to 1.35), Average GPAs (for GPAs higher than 1.35 and less than 2.35), and High GPAs (for GPAs equal to or higher than 2.35). Analyses of variance were conducted for each of the subscales and the composite scales. The results of the means and standard deviations are displayed in Table 8.

Table 8. Means and standard deviations (in brackets) of the Approaches to Study Inventory at different levels of achievement.

Approaches to Study	GPA		
	Low (n=68)	Average (n=224)	High (n=56)
Subscale			
Deep Approach	12.1(2.5)	12.4(2.1)	12.9(2.2)
Relating Ideas	13.4(2.4)	14.0(2.1)	13.8(2.2)
Use of Evidence	13.4(2.4)	13.9(2.1)	13.6(2.3)
Intrinsic Motivation	11.9(3.3)	12.5(2.6)	12.0(2.6)
Surface Approach*	16.7(3.6)	16.0(3.9)	14.8(3.6)
Syllabus Boundness	10.2(1.5)	10.1(1.5)	9.7(1.5)
Fear of Failure	4.5(3.0)	4.5(2.9)	4.4(2.5)
Improvidence	10.8(3.0)	11.4(2.5)	10.9(2.5)
Disorganised Method	9.2(4.1)	9.8(4.3)	8.8(4.2)
Negative Attitude*	5.9(3.4)	4.8(3.4)	4.0(3.6)
Globetrotting	8.8(2.8)	9.0(2.9)	8.9(2.8)
Achievement Motivation	12.9(1.9)	13.0(1.8)	12.8(1.8)
Extrinsic Motivatio	8.7(4.2)	8.6(3.6)	8.2(3.6)
Strategic Approach	12.2(2.7)	12.2(2.7)	12.0(2.3)
Comprehension Learning	9.2(3.4)	9.7(2.9)	9.9(3.0)
Operation Learning	12.3(2.7)	12.7(2.5)	12.2(2.0)
Scale			
Meaning Orientation	50.8(7.9)	52.8(6.6)	52.2(7.3)
Reproducing Orientation	42.1(7.7)	41.9(7.5)	39.7(7.5)
Non-academic Orientation	23.9(7.5)	23.7(7.9)	21.7(8.1)
Strategic Orientation	33.8(5.7)	33.8(5.6)	33.0(5.0)

* $p < .05$

Analysis of variance employed to test significant differences among the three groups of student achievement indicated that generally no significant differences were found among the three groups of student achievement. This indicated that the different levels of student achievement did not have different characteristics in study approach.

However, there were two out of 16 significant differences in the subscales of Surface Approach ($p < .05$) and Negative Attitude ($p < .05$) among the three groups of GPAs. The results of ANOVA are presented in Table 9 and Table 10.

Table 9. Analysis of Variance for Surface Approach by GPA

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	2	109.21	54.60	3.82	.02
Within Groups	345	4934.64	14.30		
Total	347	5043.85			

Table 10. Analysis of Variance for Negative Attitude by GPA

Source	D.F	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	2	121.76	60.88	5.22	.005
Within Groups	345	4024.52	11.67		
Total	347	4146.28			

Since there were significant F statistics, Scheffe tests to determine pairs in the different levels of student achievement which show significant differences were then conducted. The results of Scheffe tests indicated that the significant differences on Surface Approach and Negative Attitude were between the groups of low and high GPAs. Low achievement students tended to have higher scores on Surface Approach and Negative Attitude. The mean score of Surface Approach for the groups of low and high GPAs were 16.7 and 14.8 respectively. The mean score of Negative Attitude for the groups of low and high GPAs were 5.9 and 4.0 respectively.

In conclusion, it can be said that essentially no significant differences were found between study approach and different levels of student achievement. Significant differences, however, were found in two out of 16 subscales (Surface Approach and Negative Attitude). This suggests that, generally, different levels of student achievement did not have different characteristics of study approach except for Surface Approach and Negative Attitude. This finding is similar to that of correlation (research question #4).

Approaches to Study and Contextual Variables

This section addresses the sixth research question : Do approaches to study relate to the contextual variables used in this study ?

To answer this question, the data were grouped according to the eight contextual variables. For each of the eight variables, comparisons were made of Approaches to Study Inventory scores using t-test or ANOVA, depending on its appropriateness.

To confirm that there were statistically significant differences between group categories on the contextual variables, ANOVA and T-test were conducted.

The summary results of ANOVA and t-test are displayed in Table 11. For more detail, full results of Anova and t-tests for the subscales can be seen in Appendix E.

From Table 11, it can be seen that there were no significant relationships between study orientations and the contextual variables of work status, year of study, and previous educational level. This suggests that those contextual variables did not relate to the variations in study orientations.

Table 11. Contextual variables which show significant differences in the Approaches to Study Inventory scales.

Scale	Contextual Variables							
	Age	CON	WS	ST	YS	PEL	SUT	SDE
Meaning Orientation							**	***
Reproducing Orientation							*	
Non-academic Orientation				*			*	
Strategic Orientatio	**	*						

* $p < .05$
** $p < .001$
*** $p < .0001$
Note :CON = continuity in registering courses
WS = work status
ST = study status
YS = year of study
PEL = previous educational level
SUT = student satisfaction with Universitas Terbuka
SDE = student satisfaction in studying at a distance

However, the contextual variables of age, continuity (CON), study status (ST), student satisfaction with UT (SUT), and student satisfaction in studying at distance education (SDE) had significant relationships with at least one study orientation. These contextual variables contributed to seven significant relationships out of the 32 possible relationships. The data shown in Table 10 indicated that student satisfaction measures seem to have a greater linkage to student approaches to study.

Age. Analysis of variance employed to examine the differences in the mean scores across the four groups of ages (the ages of less than or equal to 20, the ages from 21 to 30, the ages from 31 to 40, and the ages higher than 40) indicated that the variable of age showed no significant differences on

Meaning, Reproducing, and Non-academic Orientations. This indicated that the variable of age did not relate to those three study orientations. However, a significant difference was found on Strategic Orientation ($p < .05$). The result of analysis of variance for age on Strategic Orientation is displayed in Table 12.

Table 12. Analysis of variance for age on Strategic Orientation.

Source	D.F	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	3	276.71	92.24	3.10	.03
Within Groups	344	10238.81	29.76		
Total	347	10515.53			

Since there was a significant F, a Scheffe test was employed to determine the pairs which showed significant difference. The results of the Scheffe test indicated that the students who were older than 40 had a lower score on Strategic Orientation (mean = 33.0) than those who were younger or equal to 20 (mean = 37.9). Older students are likely to have lower scores on Strategic Orientation.

Continuity in registering courses (CON). T-tests used to examine the differences between the two groups of continuity (the group of students who were continue in registering for courses and those who did not) indicated that no significant differences were found in meaning, reproducing, and non-academic orientations. This indicated that the variable of continuity in registering for courses did not relate to those three study orientations.

However, a significant difference was found on Strategic Orientation

($p < .05$). The group of students who continued to register for courses tended to have higher scores (mean difference of .8) on Strategic Orientation (mean = 33.0) than those who did not continue to register for courses (mean = 32.2).

Study Status (ST). Study status was categorized as two groups of students : those who study only at UT (full-time students) and those who study at other institutions in addition to studying at UT (part-time students).

A t-test employed to examine the differences between the two groups of study status indicated that there were no significant relationships between study status and the three study orientations (meaning, reproducing, and strategic orientations). This indicated that study status did not relate to those three study orientations.

A significant relationship was found however on Non-academic Orientation ($p < .05$). Students who study only at UT (full-time students) tended to have lower scores on Non-academic Orientation (mean = 23.0) than did part-time students (mean = 25.9).

Student Satisfaction with Universitas Terbuka (SUT). Student Satisfaction with UT was categorized into five response categories (Very Satisfied, Somewhat Satisfied, No Opinion, Somewhat Dissatisfied, and Very Dissatisfied).

Analysis of variance employed to test significant differences among the groups of student satisfaction with UT indicated that no significant difference was found on Strategic Orientation. This indicated that student satisfaction with UT did not relate to Strategic Orientation.

Significant differences were found on Meaning ($p < .001$), Reproducing ($p < .05$), and Non-academic ($p < .05$) orientations. The results of analysis of

variance for Student Satisfaction with UT on Meaning, Reproducing, and Non-academic Orientations are displayed in Tables 13, 14, and 15.

Table 13. Analysis of variance for Student satisfaction with UT on meaning orientation

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	4	1332.03	333.01	7.26	.00
Within Groups	343	15727.65	45.85		
Total	347	17059.69			

Table 14. Analysis of variance for Student satisfaction with UT on reproducing orientation

Source	D.F	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	4	743.93	185.98	3.32	.01
Within Groups	343	19240.66	56.10		
Total	347	19984.58			

Table 15. Analysis of variance for Student Satisfaction on non-academic orientation

Source	D.F	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	4	1589.43	397.36	6.88	.00
Within Groups	343	19812.44	57.76		
Total	347	21401.87			

Scheffe tests employed to examine the pairs which show significant differences indicated that : on Meaning orientation, the significant differences

were among No Opinion (mean = 43.0) and Somewhat Satisfied (mean = 52.3) and Very Satisfied (mean = 54.4); on Reproducing orientation, the significant differences were between Somewhat Dissatisfied (mean = 44.7) and Very Dissatisfied (mean = 36.7); on Non-academic orientation, the significant differences were among Very Dissatisfied (mean = 19.7), Somewhat Satisfied (mean = 23.9), Somewhat Dissatisfied (mean = 25.9) and No Opinion (mean = 31.1). Given this finding, the more satisfied students are likely to have higher scores on meaning and non-academic orientations but lower score on reproducing orientation.

Looking at the distribution of responses on student satisfaction with UT (Appendix E.7), it can be seen that the distribution of responses tended to cluster only on two alternative responses : Very Satisfied (number of responses = 90) and Somewhat Satisfied (number of responses = 199). The other alternative responses (No Opinion, Somewhat Dissatisfied, and Very Dissatisfied) seemed to have low distribution. Such strict distribution of responses might constrain the relationships between the variable of student satisfaction with UT and study approach. In spite of possible constraints, there were significant relationships between study approach and student satisfaction with UT.

In summary, given the findings in this study, the variable of student satisfaction with UT tended to influence students' study orientations.

Student Satisfaction in Studying at A Distance (SDE).

Student Satisfaction in Studying at a Distance was categorized into five response categories (Very Satisfied, Somewhat Satisfied, No Opinion, Somewhat Dissatisfied, and Very Dissatisfied).

The analysis of variance employed to examine the significant differences among the groups of SDE indicated that no significant

relationships were found on Reproducing, Non-academic, and Strategic Orientations. This indicated that student satisfaction in studying at a distance did not relate to those three study orientations. However, a significant difference was found on Meaning Orientation ($p < .0001$). The result of analysis of variance is displayed in Table 16.

The Scheffe test employed to examine the pairs which show the significant differences on Meaning Orientation indicated that the significant differences were among No opinion (mean = 45.6), Somewhat Dissatisfied (mean = 52.0) and Very Satisfied (mean = 55.0). This indicated that the more satisfied students tended to have higher scores on Meaning Orientation.

Table 16. Analysis of variance for SDE on meaning orientation

Source	D.F	Sum of Squares	Mean Squares	F Ratio	Prob.
Between Groups	4	2103.68	525.92	12.06	.00
Within Groups	343	14956.01	43.60		
Total	347	17059.69			

Concerning the distribution of responses, the variable of student satisfaction in studying at distance education (Appendix E.8) also has restricted distribution of responses. From the Appendix, it can be seen that the distribution of responses tended to cluster only on two of the five alternative responses : Very Satisfied (number of responses = 111) and Somewhat satisfied (number of responses = 182). Such strict distribution of responses, thus, might also constraint the relationships. However, there were still significant relationships between study approach and student satisfaction in studying at a distance.

As an overall summary of the results of relationships between study approach and contextual variables, it can be concluded that most of the contextual variables have no significant relationships with study approach. However, the contextual variables of age, continuity, study status, student satisfaction with UT, and student satisfaction in studying at a distance related to at least one study orientation. Given the findings in this study, student satisfaction as measured seems to have greater links with study approach.

CHAPTER VI

DISCUSSION

Overview

The discussion of the results of the study was divided into six sections :

1. The Indonesian Version of ASI.
2. UT students compared to other distance education students in a different cultural setting.
3. Approaches to Study and the Four Faculties of Universitas Terbuka.
4. Approaches to Study and Student Achievement.
5. Approaches to Study and Different Levels of Student Achievement.
6. Approaches to study and Contextual Variables.

Indonesian Version of ASI

This section discusses the results of the first research question in this study : Is there any difference between the ASI in English and and the ASI in Indonesian ?

The results indicated that, in terms of the mean scores, generally the Indonesian version of the ASI tended to have similar pattern of mean scores to the original ASI. In addition, the Indonesian version values were consistently higher. Although a higher mean score was found on Meaning Orientation (D = 13.5), the other scales tended to have mean scores similar to the original ASI. As well, although higher mean scores were found in several subscales (Relating Ideas, D = 3.8, Use of Evidence, D = 4.1, and Intrinsic Motivation, D = 3.9), generally mean scores similar to the original ASI were found in the other subscales.

In terms of the reliability, generally the Indonesian version of the ASI also had similar values with the English version of the ASI. Although some of the reliability values for the subscales were substantially lower, the values for the scales (study orientations) were relatively consistent. The reliability scores found in this study for the scales of Meaning, Reproducing, Non-academic, and Strategic Orientations were .76, .64, .68, and .49, compared to those in the original research which were .79, .73, .70, and .67 respectively.

Possible explanations for the differences in results might be related to the differences between the Indonesian version and the original ASI. Firstly, the original ASI was developed in a different cultural and language setting (in the United Kingdom using the English language) which is different from Indonesia. It is possible that the differences might be related to the translation into another language and the effects of the culture of the respondents. It is also possible that Indonesian education emphasizes different study approaches from those emphasized in the United Kingdom. Secondly, the original ASI was developed in a conventional education setting which is different from Universitas Terbuka, which uses distance education. Distance education is, in fact, different from conventional education in that students in distance education have to study independently from printed materials, with little help from face-to-face lecturers as would be common in conventional education. Thus, it is possible that any differences are related to the educational setting. It might be possible that distance education emphasizes different study approaches from those of the conventional education. Thirdly, the original ASI was developed for conventional education institutions, which generally deal with younger students while UT, as a distance education institution, generally deals with adult students. It is

possible that adult students have different study approaches from those of younger students.

Although the original ASI was developed in the United Kingdom which is quite different from Indonesia (where Universitas Terbuka is located), surprisingly similar values were found. This suggests that the Indonesian version of ASI was successfully translated. Thus, the Indonesian version of ASI is comparable to the original version of ASI. In addition, the consistency in results supports the validity of the ASI.

In summary, considering that the Indonesian version of the ASI is comparable in terms of the pattern of the reliability to the original version, it can be said that the Approaches to Study Inventory (ASI) could be used for describing students' study approaches both in a different cultural setting and with distance education students such as those studying at Universitas Terbuka.

UT Students Compared to MUN Students

This section focuses on the second research question of this study : Do UT students show different approaches to study with other distance education students in a different cultural setting ?

The results indicated that, in general UT students tended to have similar mean scores on the Approaches to Study Inventory to those of Memorial University of Newfoundland (MUN) students. On the scales, essentially similar mean scores were found between UT students and those of MUN. As well, on the subscales, although higher scores were found on several subscales (use of evidence, D = 3.3), (intrinsic motivation, D = 3.1), (surface approach, D = 3.6), (improvidence, D = 3.2), and (achievement motivation, D = 3.2), generally there were similar mean scores on the other

subscales. This suggests that, although this study was based on the only available research on a distance education setting (Memorial University of Newfoundland) which is, in fact, quite different from Universitas Terbuka, surprisingly similar values were found. This also indicated that UT students did not show different approaches to study in relation to other distance education students in a different cultural setting.

Approaches to Study and the Four Faculties of Universitas Terbuka

This section focuses on the results of the third research question in this study : Do UT students show different approaches to study among the four faculties at UT ?.

The results of ANOVA indicated that there were no significant differences in students' study approach among the four faculties. This indicated that students in the Faculty of Social Sciences, the Faculty of Economics, the Faculty of Mathematics and Natural Sciences, and the Faculty of Education did not show different study approaches. This suggests that the faculties at UT were not related to the variation in study approach.

These findings are not in line with other studies such as that conducted by Ramsden and Entwistle (1983). Their study indicated that there were differences in study approach in different disciplines. For example, comprehension learning was found to be more common in the arts and social sciences than the physical sciences, while the reverse would be true of operation learning. It might be that the arts and social science students are dealing with knowledge which is more amenable to personal interpretation. Similarly, science students are likely to be dealing with knowledge which is hierarchically structured and related to accepted paradigms.

A major reason for the lack of significant differences among the four faculties at Universitas Terbuka may simply be that all faculties are similar in course design and type of assessment at UT. On theoretical grounds, it has been argued that curriculum factors such as course design and types of assessment are those components of the academic environment which are most intimately related to learning (Bernstein, 1971). In fact, at UT, the type of assessment and course design tend to be the same for all faculties. Printed materials (modules), used as the main study media, are designed on a similar format for all faculties. The printed materials are written by module writers who all use the same guidelines in designing the objectives of the courses. Similarly, the type of assessment UT uses for the four faculties is a multiple choice form.

Another possible explanation might be that the students sampled in this study did not represent core characteristics of the discipline. This is supported by the fact that most of the students in this study were first year students. In fact, at UT, every student in each faculty has to pass several Basic Introductory Courses in the first year of enrollment. The Core Courses may only be taken after completing the basic introductory courses. Thus, it might be that the first year students who took the basic introductory courses display similar study approaches.

In addition, the lack of significant differences among the four faculties at UT might be a result of the open access policy at Universitas Terbuka. As UT is open to all students, there is no selection in enrollment process. The only requirement is that students must have high school certificates. Except for the Faculty of Education, which has specific requirements, such as students must be teachers and have several years of teaching experience, each faculty may be entered by any student without any specific qualifications. Thus, it

might be that UT attracts low achievement students who behave similarly in their approaches to study across the four faculties.

In summary, no significant differences in student study approach were found among the four faculties at UT. These results may be influenced by several factors such as the characteristics of courses, assessment, and course design. Considering that those factors might relate to the variation in student study approach across the four faculties at UT, this finding suggests that greater attention should be given to these factors.

Approaches to Study and Student Achievement.

This section focuses on the results of the fourth research question in this study : What is the relationship between the various approaches to study and academic achievement (GPA)?.

The results indicate that no significant correlations were found between study approach and GPA in most subscales and in all of the composite scales across the four faculties and the total sample. This suggests that approaches to study do not account for differences in student achievement. Changes in study approach were likely not associated with changes in student GPA. Thus, the unsatisfactory student achievement experienced at UT is likely not related to student study approach. There may be other factors which affect student achievement. This finding suggests that study approach in relation to student GPA as measured by the Approaches to Study Inventory (ASI) is not a critical factor.

There are several possible explanations for such results. Firstly, the correlations were likely influenced by the nature of UT students' GPAs. As stated earlier, approximately 80 % of UT students have GPAs below 2.00 (Indrawati, 1993). Furthermore, these low GPAs have low standard

deviations. This would tend to constrain the values of the correlation coefficient. Secondly, study approach might be more closely related to individual courses whereas the GPAs are based on the achievement of the students on a number of courses within a program of studies. Given that this study used GPAs instead of individual course grades as dependent variables, it might be that no significant correlations were found in this study because GPA was employed as dependent variable. Use of GPA, as an average score from several courses, might have an influence on the correlations. These findings suggest that further research using course grades as dependent variables should be recommended.

The results of this study, however, indicated two significant correlations out of possible 20 significant correlations across the subscales and the scales in total samples. Significant correlation ($p < .05$) were found in the subscales of Surface Approach ($r = -.19$) and Negative Attitude ($r = -.19$). The correlation coefficients indicated that increases in Surface Approach and Negative Attitude scores are associated with decreases in student GPA.

In referring to the meaning of the ASI (page 40), higher scores in surface approach indicate students who rely on rote learning. Higher scores in negative attitude indicate students who have little involvement with with their study. These study approaches indicate an intention to concentrate on the reproducing of learning which implicitly excludes an intention to search for meaning. As noted by Ramsden (1985), such study approaches can not lead to understanding and must produce a qualitatively inferior outcome. It is, thus, not surprising that such study approaches showed negative correlations with academic achievement.

The findings of significant negative correlations between surface approach and negative attitude, and student achievement are in line with

other studies such as a study conducted by Watkins (1982). His study, employing first year students' grade point averages at the Australian National University found that surface approach and negative attitudes to study were negatively correlated with academic performance (GPA).

In summary, the present study indicates that most relationships between study approach and student achievement were not significant. This suggests that approaches to study were not associated with student achievement. The fact that only two significant correlations were found, out of a possible 20 significant correlations across the subscales and the scales were so not crucial. Given the results which indicate that study approach did not contribute to student achievement, it may be that the unsatisfactory student achievement experienced at UT is related to other factors.

Approaches to Study and different levels of student achievement.

This section focuses on the results of the fifth research question in this study : Do students of different levels of achievement have different characteristic approaches to study ?

The results of ANOVA indicated that there were essentially no significant differences found in student study approaches across the different levels of student achievement. This indicated that the different levels of student achievement did not correspond to different characteristics in study approaches. Students with high, average, and low achievement are likely to behave similarly in their study approaches. One possible explanation might be the nature of UT students' GPAs which have similar patterns (low GPA and low standard deviation). Thus, the groupings of GPAs did not reflect different

levels of student achievement. It might be that the similar patterns in GPAs are reflected in similar study approaches.

However, two incidents of significant differences out of a possible 20 across the subscales and the scales were found in the subscales of surface approach ($p < .05$) and negative attitude ($p < .05$). This finding is similar to the previous results (research question #4). Thus, research question #5 which was addressed as an alternate approach for examining the relationship between the different levels of student achievement and study approach supports the finding in research question #4.

The results of the Scheffé test indicated that low achievement students tended to have higher scores in surface approach and negative attitude than did high achievement students. The mean scores of low achievement students were 16.7 and 14.8 for surface approach and negative attitude respectively while those of high achievement students were 5.9 and 4.0 respectively.

In referring to the interpretation of the ASI (page 40), "surface approach" indicates students who rely on rote learning while "negative attitude" indicates students who have little involvement with their studies. Thus, this finding indicates that low achievement students, as compared to those of high achievement students, tended to place a greater emphasis on rote learning and showed a strong tendency to memorize what was being learned. A higher score in negative attitude indicated that low achievement students, as compared to those of high achievement students, tended to place a greater emphasis on having little involvement in what they were studying.

This finding seemed to support other studies such as that conducted by Ramsden and Entwistle (1983). Their study discovered that low achievement

students used surface approach. As well, this finding seemed to support the previous research question (the fourth research question) which found that surface approach and negative attitude correlated negatively with academic achievement.

In summary, it can be said that generally there were no significant differences in student study approaches across the different levels of student achievement. Students with different levels of achievement did not show different characteristics in study approaches. The fact that there were two incidents of significant differences, out of a possible 20, is therefore not crucial. In the present study, the different levels of student achievement were not found to be associated with the variation in student study approaches.

Approaches to Study and Contextual Variables

This section focuses on the results of the sixth research question in this study : Do contextual variables of age, continuity in registering for courses, work status, year of study, previous educational level, and student satisfaction have relationships with approaches to study ?

The results indicated that no significant relationships were found in the variables of work status (WS), year of study (YS), and previous educational level (PEL). This suggests that those variables did not relate significantly to the variations in student study approaches.

However, the results indicated that seven, out of a possible 32, significant relationships in at least one scale of the study approach were found in the variables of age, continuity (CON), study status (ST), and student satisfaction with UT (SUT), student satisfaction with studying at a distance (SDE). This indicated that those contextual variables were found to be associated with the variation in student study orientations.

Age. No significant differences were found in the variable of age in meaning, reproducing, and non-academic orientation. This suggests that the variable of age did not contribute significantly to the variations in those three study orientations.

A significant difference ($p < .05$) in the variable of age however was found on Strategic Orientation. Students who were more than 40 years of age had a lower score on strategic orientation (mean = 33.0) than those who were less

than or equal to 20 years of age (mean = 37.9). In looking at the meaning of the study approach (page 40), this suggests that older students are less likely to look for qualifications for employment. This is reasonable in that most of the older students already possess professional qualifications. Perhaps their motivation in studying at UT is only as a means to improve their prospects. On the other hand, unlike the older students, the majority of younger students are still actively pursuing careers. It is possible that the differing motivations of the older and younger students are likely to influence their approaches to study. For example, younger students who have motivation to get qualifications for employment may have higher scores on Strategic Orientation.

This finding is in line with other studies in this areas such as those conducted by Watkins and Hattie (1981), Harper and Kember (1986) and Wong (1992). The findings of these studies suggest that mature students tend to be less motivated by pragmatic concerns than are younger students.

This finding suggests that the variable of age has particular relevance for distance education administrators since distance education deals predominantly with mature students. This indicated that the variable of age is

an important one. Thus, it would seem important to consider the different motivations of older students.

Continuity in registering for courses (CON). No significant differences were found in the variables of continuity (CON) in Meaning, Reproducing, and Non-academic Orientations. This indicated that continuity in registering for courses did not relate to the variations in meaning, reproducing, and non-academic orientations. A possible explanation might be that continuity in registering for courses is not a major decision, particularly in comparison with traditional university. In fact, one of the advantages in studying at a distance education institution is that students can determine on their own whether or not they want to continue to register for courses. Thus, since continuity to register for courses is a matter of decision, it is possible that it did not relate to their scores in those study orientations.

A significant difference was found on Strategic Orientation ($p < .05$). Students who continued to register for courses tended to have a higher score in strategic orientation (mean = 33.9) than those who did not (mean = 32.2). This indicates that those who continued to register for courses tended to have a stronger motivation to obtain qualifications for employment. It is possible that their continuity in registering courses was motivated by their intentions to get qualifications. A possible explanation might be that the intention could increase students' motivation which could encourage them to continue to register for courses.

Study Status (ST). No significant differences were found in the variable of study status in meaning, reproducing, and strategic orientations. This suggests that study status did not contribute to the variations in those study orientations.

A significant difference was found in non-academic orientation ($p < .05$). Students who studied only at UT (full-time students) tended to have a lower score (mean = 23.0) in non-academic orientation than those who studied concurrently at other institutions (mean = 25.9). Looking at the meaning of the study orientation (refer to page 40), higher scores on non-academic orientation indicates that part-time students have little concern for academic requirements. It is possible that part-time students study at UT only as additional education,
and that their main focus is their studies at other institutions. It is also possible that part-time students have difficulty in managing their time and effort to study in both institution. It is, thus, possible that their study status influence their study approach.

Student Satisfaction with UT (SUT). No significant difference was found for student satisfaction with UT on Strategic Orientation. This suggests that student satisfaction with UT does not relate to the variation in the scores of strategic orientation.

Although strict distribution of responses (the distribution of responses which tended to cluster only on two of five alternative responses) in student satisfaction with UT might constrain the correlation, there were significant differences for SUT on Meaning ($p < .001$), Reproducing ($p < .05$), and Non-academic Orientations ($p < .05$). This indicated that student satisfaction with UT was related to the variation in these three study orientations. Given the findings in this study, student satisfaction with UT seems to have a greater linkage to study approach than the other contextual variables used in this study.

On Meaning Orientation, the significant differences were among students who did not give their opinion about their satisfaction with UT (mean = 43.0), students who were somewhat dissatisfied (mean = 52.3), and students who were very satisfied (mean = 54.4). Looking at the meaning of the study orientation (refer to page 40), the higher score indicated that those who were very satisfied with UT tended to have a greater intention to understand what is being studied than those who had no opinion and those who were somewhat dissatisfied. A possible explanation might be that students who were very satisfied with UT do not have problems in their studies so that they have a certain degree of confidence that they can complete their study at UT. It is possible that student satisfaction with UT influences the study approach. It is likely that the more satisfied the students are with UT the stronger their intention to understand what is being studied will be. This finding is important since searching for meaning in what is being studied is a skill that students need to develop in studying. Thus, UT needs to provide more attention to student satisfaction with UT in order to improve UT services.

On the reproducing orientation, the significant difference was between students who were very dissatisfied (mean = 36.7) at UT and students who were somewhat dissatisfied (mean = 44.7). This indicated that those who were somewhat dissatisfied tended to have a greater intention to reproduce what is being learned than those who were very dissatisfied.

On non-academic orientation, the significant differences were among students who were very dissatisfied (mean = 19.7), those who were somewhat satisfied (mean = 23.9), those who were somewhat dissatisfied (25.9), and those who had no opinion (31.1). Referring to page 40, the higher score indicated that those who had no opinion tended to have a lower concern for

academic requirements than those who were very dissatisfied, somewhat satisfied, and somewhat dissatisfied.

In summary, given the findings in this study that student satisfaction with UT is linked to study approach, further research concerning student satisfaction in relation to variations in study approach are recommended.

Student Satisfaction in Studying at Distance Education (SDE). No significant differences were found in reproducing, non-academic, and strategic orientations. This suggests that student satisfaction in studying at a distance did not contribute to the variations in those three study orientations.

Although the low distribution of responses in student satisfaction in studying at a distance (SDE) might constrain the correlation, there was a significant difference for SDE on meaning orientation ($p < .0001$). The significant differences were among students who did not give their opinion about their satisfaction in studying at a distance (mean = 45.6), students who were somewhat dissatisfied (mean = 52.0), and students who were very satisfied (mean = 55.0). This suggests that those who were very satisfied with studying at a distance tended to have a greater intention to understand what is being studied than those with no opinion and those who were somewhat dissatisfied. A possible explanation might be that students who were very satisfied with studying at a distance were more capable of self-directed study. Thus, it might be that their readiness influences their study behavior or more specific their study approach. It is more likely that, the more satisfied the students are in studying through distance education, the stronger their intention will be to understand what is being studied.

In summary, although generally no to low relationships were found, it can be said that student satisfaction in studying at a distance is linked to study approach. This suggests that further research on student satisfaction in

relation to variations of study approach is recommended. Further, a distance education university could focus its attention on the limited number of approaches to study that have been shown to have an impact on student learning.

CHAPTER VII

CONCLUSION AND OVERALL SUMMARY

Conclusions and overall summary are presented in this section. The presentation of the conclusions is based on the reseach questions addressed in the study.

Conclusions

1. Although several differences in the means and reliability of the approaches to study were found in this study, similar patterns to the original English version in the means and reliability of study approach were found in the Indonesian version of the ASI. This suggests that the Approaches to Study Inventory (ASI) was successfully translated from English to the Indonesian language. As well, the Indonesian version of the ASI which dealt with distance education students was found to be comparable to the original English version which dealt with conventional university students. This finding suggests that, despite the quite different learning environments of full-time study by lecture on a campus and part-time study from learning packages on a non-campus basis, the study approaches researched in the environment of full-time study is still feasible for distance education. Thus, this suggests that the ASI could be used for investigating student study approaches in a distance education setting such as at Universitas Terbuka (the Indonesian Open Learning University).
2. A comparison of UT results with the results of a study at Memorial University in Newfoundland (the only available ASI data from a distance education setting). The results from the two distance education settings are surprisingly similar although the two groups of students are culturally

quite different. It was found that generally UT students did not employ different on study approaches from distance education students in a different cultural setting. This finding is important since culture can be a factor affecting student learning. The similarities found in this study also support the validity of the Approaches to Study Inventory (ASI) for the investigation of study approaches in a different cultural setting.

3. No significant differences were found in students' approaches to study among the four faculties at Universitas Terbuka. This indicated that students in the Faculty of Social Sciences, the Faculty of Economics, the Faculty of Mathematics and Natural Sciences, and the Faculty of Education did not show different study approaches. Several possible explanations for the results might include the characteristics of the courses used in this study and the open admission policy. However, a major reason may simply be that the four faculties at Universitas Terbuka are similar in the type of assessments and course design which might mean that students employ similar study approaches.
4. Essentially, no significant relationships were found between study approach and GPA in the most subscales and all of the composite scales of the ASI across the four faculties and total sample. This indicated that changes in study approach are not associated with changes in student achievement. This suggests that the approaches to study did not contribute to student achievement. This result of a non significant relationship between study approaches and student GPA is likely influenced by the nature of students' GPAs which have low standard deviations. The fact that only two, out of a possible 20, significant correlations across the subscales and the scales were found in this study, indicated that, given the fact that approaches to study did

not contribute to student achievement, the unsatisfactory student achievement experienced at Universitas Terbuka might be related to other factors.

5. There were no significant differences found between different levels of student achievement and study approach in the composite scales and in the most subscales. This indicated that the different levels of student achievement did not show different characteristics of study approach. The fact that there were two out of 20 significant differences across the subscales and scales (on Surface Approach and Negative Attitude) was therefore not so crucial. This finding indicated that the level of student achievement is not an important factor in the variation in study approach.
6. The results indicated that there were no significant relationships in the variables of work status (WS), year of study (YS), and previous educational level (PEL). This suggests that those variables did not relate significantly to the variations in study approach.

However, the results indicated that seven of 32 possible significant relationships in at least one scale of the study approach were found in the variables of age, continuity (CON), study status (ST), and student satisfaction with UT (SUT), and student satisfaction in studying at a distance (SDE). This indicated that the contextual variables of age, continuity in registering for courses, study status, student satisfaction with UT, and student satisfaction in studying at a distance were related to approaches to study. This suggests that those contextual variables are important for the variations in some components of study approach. Thus, distance education institution should consider those contextual variables in order to help students develop more appropriate study

approaches but should limit the consideration to a number of subscales. The institution should be quite careful in selecting study approaches that are of significance.

In the variable of age, there was a significant difference ($p < .001$) on Strategic Orientation. Students who were over 40 years old tended to have lower scores on strategic orientation than those who were younger than 20 years old. Looking at the meaning of the study orientation (page 41), the lower score indicated that, in studying at UT, older students are less likely to look for qualifications for employment than those of younger students. Thus, they may be studying for interest, which is likely to lead to an intense approach to courses which capture interest. This finding is important since such study orientation needs to be developed in studying. Thus, given that most UT students are mature, it would seem important to to take into account the study orientation of the mature students.

For the variable of continuity in registering for courses, a significant difference was also found on strategic orientation ($p < .05$). Students who were continuing to register for courses tended to have higher scores on strategic orientation than those who were not.

For the variable of study status, a significant difference on non-academic orientation ($p < .05$) was found between students who studied only at UT and those who also studied at other institutions.

For the variable of student satisfaction in studying with UT (SUT), significant differences were found on meaning ($p < .001$), reproducing ($p < .05$), and non-academic ($p < .05$) orientations. On meaning orientation, the difference was among No Opinion, Somewhat Satisfied, and Very Satisfied. On Reproducing Orientation, the difference was

between Very Dissatisfied and Somewhat Dissatisfied. On Non-academic orientation, the difference was among Very Dissatisfied, Somewhat Satisfied, Somewhat Dissatisfied, and No Opinion. In general, the more satisfied students are likely to have higher scores on meaning and non-academic but lower scores on reproducing orientations. This finding is important since higher scores on meaning orientation and lower scores on reproducing orientation need to be developed in studying. Thus, in providing its service, UT should consider student satisfaction.

In the variable of student satisfaction in studying at a distance (SDE), significant difference was found on meaning orientation ($p < .0001$). The significant difference was among No opinion, Somewhat Dissatisfied, and Very Satisfied. The more satisfied students are likely to have higher scores on Meaning Orientation. This is important since looking for meaning in what is being studied needs to be developed in studying. Thus, UT needs to consider student satisfaction in studying at a distance.

Given the findings in this study, although generally no to low relationships were found, student satisfaction, as measured in this study, seems to have a greater linkage to study approach than other contextual variables.

Overall Summary

Approaches to study is defined to include both ***intention*** (***what*** the learner was looking out for) and ***process*** (***how*** that attention was carried out). The way students interpret the learning task creates an intention to learn in a particular way. This intention leads to a distinctive process of learning which

in turn affects the level of understanding or outcomes in learning. The study approach is therefore important because it has a demonstrative relationship with learning outcome. As pointed out by Morgan (1984), Marton (1976), and Ramsden and Entwistle (1983), the importance of approaches to study is its crucial relationship to the quality of learning outcome. Given that study approach relates to the learning outcome, it may have an impact on student success which, in a broader sense, can impact on the educational system as a whole.

The Approaches to Study Inventory (ASI) is an instrument which has been used for the investigation of study approaches. However, there have been few studies using the ASI either in cross cultural settings or with distance education bases. This fact then leads to the theme in the present study.

The present study used the Approaches to Study Inventory (ASI) which was translated from English to the Indonesian language. The Inventory was employed for the investigation of students' study approaches and was related to student achievement (GPA) at Universitas Terbuka (the Indonesian Open University), which is different in both cultural setting and distance education system from those of the original studies.

The results in the present study, however, found no significant relationships between study approach and student achievement (GPA). Perhaps study approach as measured by the ASI is not so critical. Given the fact that study approach did not contribute to student achievement, the unsatisfactory student achievement experienced at UT might be related to other factors.

However, although generally no to low relationships were found, student satisfaction measured in this study appears to have a greater linkage

to study approach than the other contextual variables. This suggests that further research on student satisfaction in relation to variations in study approaches is recommended.

Overall, given the results of this study, the utility of the Approaches to Study Inventory (ASI) can be described in terms of its consistency in results. Thus, the ASI which was developed for conventional English speaking students, does have relevance to Universitas Terbuka which deals with distance education students in a different cultural setting and language.

REFERENCES

Bernstein, B.B. (1971). On the classification and framing of educational knowledge. In young, M.F.D. (Ed.): Knowledge and Control. London: Collier-Macmillan.

Biggs, J.B. (1976). Dimensions of study behaviour: another look at ATI. British Journal of Educational Psychology, (46), 68-80.

Biggs, J.B. (1978). Individual and group differences in study processes. British Journal of Educational Psychology, (48), 266-279.

Biggs, J.B. (1979). Individual differences in study processes and the quality of learning outcomes. Higher Education, (8), 381-394.

Biggs, J.B. (1979). Approaches to the enhancement of tertiary teaching. Higher Education Research and Development, (8), 7-25.

Biggs, J.B. (1986). The role of metalearning in study processes. British Journal of Educational Psychology, (55), 185-212.

Biggs, J.B. (1987a). Student Approaches to Learning and Studying. Melbourne: Australian Council for Educational Research.

Biggs, J.B. (1987b). Study Process Questionnaire Manual. Melbourne: Australian Council for Educational Research.

Biggs, J.B. (1989). Approaches to the enhancement of tertiary teaching. Higher Education Research and Development, (8), 7-25.

Bower, G.H., & Hilgard, E.R. (1981). Theories of learning (5th ed.). Englewood Cliff, NJ: Prentice-Hill, Inc.

Ekins, J. (1992). Study approaches of distance learning students studying in a second language. Conference Abstracts: Distance Education for the Twenty-firstCentury. Nonthaburi, Thailand: International Council for Distance Education, 72.

Eley, G.M. (1992). Differential Adoption of Study Approaches Within Individual Students. HigherEducation, (23), 231-254.

Entwistle, N.J. (1984). Contrasting perspectives on learning. In Marton, F., Hounsell, D., and Entwistle, N.J.: The Experience of Learning. Edinburgh: Scottish Academic Press.

Entwistle, N.J. (1987). A model of the teaching-learning process, in Richardson, J.T.E., Eysenck, M.W. & Warren Piper, D (eds.), Student Learning, 13-29. SRHE and OUP, Milton Keynes.

Entwistle, N.J. (1988). Motivational factors in students approaches to learning', in Schmeck, R.R. (ed.), Learning Strategy and Learning Styles. Plenum Press, New York.

Entwistle, N.J. (1991). Approaches to learning and perceptions of the learning environment: Introduction to the special issue. Higher Education, (22), 201-204.

Entwistle, N., Hanley, M., & Hounsell, D. (1979). Identifying Distinctive Approaches to Studying. Higher Education, (8), 365-380.

Entwistle, N., & Susan Waterston, (1988). Approaches to Studying and Levels of Processing in University Students. Journal of Educational Psychology, (58), 258-265.

Entwistle, N.J., & Wilson, J. Degrees of Excellence: the academic achievement game. Hodder ans Stoughton. London.

Harper, G., & Kember, D. (1985). Learning styles ofstudents in two distance learning institutes. Paper presented at the 13th world conference, International Council for Distance Education, Melbourne.

Harper, G., & Kember, D. (1986). Approaches to Study of Distance Education Students. British Journal of Education Technology, 17 (3), 212-222.

Harper, G., & Kember, D. (1987a). Implications for instruction arising from the relationship between approaches to studying and academic outcomes. Instructional Science, (16), 35-46.

Harper, G., & Kember, D. (1987b). Approaches to Studying Research and Its Implications for the Quality of Learning From Distance Education. Journal of Distance Education, 2 (2), 15-30.

Howell, D.C. (1992). Fundamental Statistics for the Behavioral Sciences. Second Edition. Boston: PWS-Kent Publishing Company.

Indrawati, E. (1993). Attrition and completion rates at Universitas Terbuka, Indonesia. Unpublished maters's thesis, University of Victoria, Victoria, BC.

Koymen, U. (1992). Comparison of learning and study strategies of traditional and open learning system students in Turkey. Conference Abstracts: Distance Education for the Twenty-first Century. Nonthaburi, Thailand: International Council for Distance Education.

Laurillard, D. (1979). The Processes of Student Learning. Higher Education, (8), 395-409.

Marland, P., Patching, W., Putt, I., & Store, R. (1984). Learning from distance-teaching materials: a study of students' mediating responses. Distance Education, 5 (2), 215-236.

Marton, F. (1976). What does it take to learn ?. In N.J. Entwistle (Eds.), Strategies for Research and Development in Higher Education. Amsterdam: Swets and Zeitlinger.

Marton, F., & Saljo, R. (1976a). On qualitative differences in learning, outcome and process I. British Journal of educational Psychology, (46), 4-11.

Marton, F., & Saljo, R. (1976b). On qualitative differences in learning, outcome and process II. British Journal of Educational Psychology, (46), 115 -127.

Meyer, J.H.F., & Parsons, P. (1989). Approaches to studying and course perceptions using the Lancaster Inventory--a comparative study. Studies in Higher Education, 14 (2), 137-153.

Meyer, J.H.F., Parsons, P., & Dunne, T.T. (1990). Individual Study Orchestrations and Their Association With Learning Outcome. Higher Education, 20 (20), 67-89.

Miller, C.M.L., & Parlett, M. (1974). Up to the Mark: A Study of the examination Game. S.R.H.E., Guildford.

Moore, M. (1986). Self-directed learning and distance education. Journal of Distance Education, 1 (1), 7-24.

Morgan, A. (1984). A report on qualitative methodologies in research in distance education. Distance Education, 5, (1), 252-266.

Morgan, A. (1991). Research into student learning in distance education (Report No. ISBN-0-7300-1352-9). Victoria (Australia): Deakin University. (ERIC Document Reproduction Service No. ED 342 371).

Morgan, A., Gibbs, G., & Taylor, E. (1980). The work of study methods group (Study Methods Group Report No. 1). Milton Keynes: The Open University. Institute of Educational Technology.

Morgan A., Gibbs, G., & Taylor, E. (1982). Variations in students' approaches to studying. British Journal of Educational Technology, 2 (13), 107-113.

Norusis, M. J. (1990). SPSS/PC+ 4.0 Base Manual for the IBM PC/XT/AT and PS/2. Chicago: SPSS Inc.

Norusis, M. J. (1990). SPSS/PC+ Statistics 4.0 for the IBM PC/XT/AT and PS/2. Chicago: SPSS inc.

Pask, G. (1976a). Styles and strategies of learning. British Journal of Educational Psychology, (46), 128 -148.

Pask, G. (1976b). Conversational techniques in the study and practice of education. British Journal of Educational Psychology, (46), 12-25.

Pask, G., & Scott, B.C.E. (1972). Learning strategies and individual competence. International Journal of Man-Machine Studies, (4), 12-25.

Priadnyana, K. (1993). Learning styles and achievement of students at Universitas Terbuka (Indonesian Open Learning University. Unpublished maters's thesis, University of Victoria, Victoria, BC.

Prieto, A.J. (1992). A method for translation of instruments to other languages. Adult Education Quarterly, 43 (1),1-14.

Publication Manual of the American Psychological Association. (1990). (3rd ed.). Washington DC: Author.

Ramsden, P. (1983). The Lancaster approaches to studying and course perceptions questionnaire: Lecturers' handbook. Mimeograph, Educational Methods Unit, Oxford Polytechnic.

Ramsden, P., & Entwistle, N.J. (1981). Effects of academic departments on students' approaches to studying. British Journal of Educational Psychology, (51), 368 -383.

Ramsden, P., & Entwistle, N.J. (1983). Understanding Student Learning. London: Croom Helm.

Ramsden, P. (1985). Student learning research: retrospect and prospect, Higher Education Research and Development, (4), 51-69.

Richardson, J.T.E. (1990). Reliability and Replicability of the Approaches to Studying Questionnaire. Studies in Higher Education, 15 (2), 155-168.

Schmeck, R.R. (1988). Learning Strategies and Learning Styles. Plenum Press, New York.

Sinar, T.E. (1993). Difficulties encountered by rural students while enrolled at Universitas Terbuka. Unpublished maters's thesis, University of Victoria, Victoria, BC.

Setijadi. (1988). Indonesia: Universitas Terbuka. Prospects, 8 (2), 189-197.

Setijadi. (1987). Distance Education in Indonesia. In Asian Development Bank. Distance Education in Indonesia and the Pasific (Vol. 2). Manila, Phillipines: Asian Development Bank.

Speth, C., & Brown, R. (1988). Study Approaches, Processes and Strategies : Are Three Perspectives Better Than One ?. British Journal Educational Psychology, (58), 247-257.

Svensson, L. (1977). On qualitative differences in learningIII. Study skill and learning. British Journal of Educational Psychology, (47), 233-243.

Universitas Terbuka. (1986). Guide to registration, teachings, and examinations 1986/87. (2nd ed.). Jakarta: Universitas Terbuka.

Universitas Terbuka. (1989). General Information on Universitas Terbuka. Jakarta: Universitas Terbuka.

Universitas Terbuka. (1991). Katalog dan Suplement 1991. (Catalog and supplement 1991). Jakarta: Universitas Terbuka.

Universitas Terbuka. (1992). Statistik Mahasiswa Universitas Terbuka Tahun 1991 (The 1991 Universitas Terbuka Statistical Book). Jakarta, Indonesia: Universitas Terbuka.

Verduin, J.R. Jr., & Clark, T.A. (1991). Distance Education: The foundations of effective practice. San Fransisco: Jossey-Bass Publishers.

Watkins, D. (1982). Identifying the study process dimensions of Australian university students. The Australian Journal of Education, 26 (1), 76-85.

Watkins, D. (1983). Assessing tertiary study processes, Human Learning, (2), 29-37.

Watkins, D., & Hattie, J. (1981). The learning processes of Australian university students: Investigations of contextual and personological factors. British Journal of Educational Psychology, (51), 384-393.

Wittrock, M.C. (1986). Students' thought processes, in Wittrock, M.C.(ed), Handbook of Research on Teaching, 279-314. New York: Macmillan.

Wilson, J.D. (1981). Student Learning in Higher Education. London: Croom Helm.

Wong, S. (1992). Approaches to Study of Distance Education Students. Research in Distance Education, 4 (3), 1-17.

APPENDIX A

Cronbach Alpha for the ASI Scales

	Meaning Orientation		Reproducing Orientation		Non-academic Orientation		Strategic Orientation	
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED	
DA1	.7626	SA1	.6490	DM1	.6359	AM1	.4850
DA2	.7669	SA2	.6159	DM2	.6415	AM2	.4907
DA3	.7580	SA3	.6587	DM3	.6434	AM3	.4805
DA4	.7487	SA4	.6167	DM4	.6349	AM4	.4998
RI1	.7603	SA5	.6424	NA1	.6749	EM1	.4127
RI2	.7439	SA6	.6529	NA2	.6603	EM2	.3843
RI3	.7488	SB1	.6664	NA3	.6661	EM3	.4431
RI4	.7392	SB2	.6615	NA4	.6495	EM4	.4803
UE1	.7524	SB3	.6291	GL1	.6416	ST1	.4722
UE2	.7572	FF1	.6339	GL2	.6883	ST2	.4483
UE3	.7454	FF2	.6211	GL3	.6737	ST3	.4814
UE4	.7363	FF3	.6503	GL4	.6496	ST4	.4660
IM1	7645	IP1	.6448				
IM2	.7514	IP2	.6239				
IM3	.7492	IP3	.6605				
IM4	.7456	IP4	.6773				
REL 16 ITEMS ALPHA =.7639		REL 16 ITEMS ALPHA =.6598		REL 12 ITEMS ALPHA =.6752		REL 12 ITEMS ALPHA =.4863	

Cronbach Alpha for the ASI Subscales

	Deep Approach		Relating Ideas		Use of Evidence		Intrinsic Motivation
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
DA1	.3445	RI1	.5850	UE1	.4597	IM1	.4260
DA2	.2946	RI2	.4664	UE2	.5486	IM2	.4712
DA3	.2397	RI3	.5914	UE3	.4246	IM3	.5096
DA4	.1844	RI4	.3776	UE4	.3542	IM4	.3294
REL 4 ITEMS ALPHA=.3235		REL 4 ITEMS ALPHA=.5840		REL 4 ITEMS ALPHA= 5214		REL 4 ITEMS ALPHA=.5074	

	Surface Approach		Fear of Failure		Syllabus Boundness		Improvidence
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
SA1	.4418	FF1	.3867	SB1	-.0275	IP1	.0795
SA2	.3493	FF2	.3867	SB2	-.0216	IP2	.2872
SA3	.4815	FF3	.4055	SB3	-.0648	IP3	.2441
SA4	.3613					IP4	.2754
SA5	.4238						
SA6	.4351						
REL 6 ITEMS ALPHA=.4648		REL 3 ITEMS ALPHA=.4879		REL 3 ITEMS ALPHA=-.0304		REL 4 ITEMS ALPHA=.2855	

Table continous.....

	Disorganised Study Method		Negative Attitude		Globetrotting
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
DM1	.5541	NA1	.4348	GL1	.2031
DM2	.6245	NA2	.3251	GL2	.3428
DM3	.5500	NA3	.4737	GL3	.2803
DM4	.5788	NA4	.2342	GL4	.2017
REL 4 ITEMS ALPHA=.6451		REL 4 ITEMS ALPHA=.4472		REL 4 ITEMS ALPHA=.3216	

	Achievement Motivation		Extrinsic Motivation		Strategic Approach
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
AM1	.0461	EM1	.3932	ST1	.2490
AM2	.0533	EM2	.3156	ST2	.4104
AM3	-.0223	EM3	.5049	ST3	.2769
AM4	.3133	EM4	.5499	ST4	.2311
REL 4 ITEMS ALPHA=.0805		REL 4 ITEMS ALPHA=.5221		REL 4 ITEMS ALPHA=.3474	

	Comprehension Learning		Operation Learning
	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
CL1	.3468	OL1	.1429
CL2	.1803	OL2	.2285
CL3	.2301	OL3	.0862
CL4	.4730	OL4	.3183
REL 4 ITEMS ALPHA=.3939		REL 4 ITEMS ALPHA=.2406	

Cronbach Alpha for the ASI Total Items

	ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED		ALPHA IF ITEM DELETED
DM1	.8264	DM3	.8260	UE1	.8292	NA3	.8298
RI1	.8291	ST1	.8268	DA4	.8270	RI3	.8287
GL1	.8255	SA2	.8257	EM4	.8287	IP2	.8250
AM1	.8298	ST2	.8274	SA4	.8226	SB3	.8269
DA1	.8320	CL2	.8253	ST3	.8290	FF3	.8293
CL1	.8268	EM2	.8267	UE2	.8275	UE3	.8298
EM1	.8278	NA2	.8286	IM1	.8291	IM3	.8312
NA1	.8297	DA3	.8300	GL2	.8262	RI4	.8290
SB1	.8304	SB2	.8295	SA5	.8271	GL4	.8258
DA2	.8262	FF2	.8241	AM3	.8289	AM4	.8272
OL1	.8286	OL2	.8258	OL3	.8288	OL4	.8297
FF1	.8261	DM4	.8245	CL4	.8290	IP3	.8273
IP1	.8256	RI2	.8277	ST4	.8283	UE4	.8276
DM2	.8270	SA3	.8283	GL3	.8296	IP4	.8295
AM2	.8299	CL3	.8241	IM2	.8292	NA4	.8269
SA1	.8264	EM3	.8283	SA6	.8272	IM4	.8280

RELIABILITY COEFFICIENTS 64 ITEMS
ALPHA = .8300

APPENDIX B

Maximum Scores of the ASI Scales

Scale	Faculty				
	FISIP	FEKON	FMIPA	FKIP	Total
Meaning Orientation	64.0	64.0	64.0	64.0	64.0
Reproducing Orientation	58.0	62.0	55.0	60.0	62.0
Non-academic Orientation	41.0	39.0	42.0	41.0	42.0
Strategic Orientation	45.0	45.0	44.0	44.0	45.0

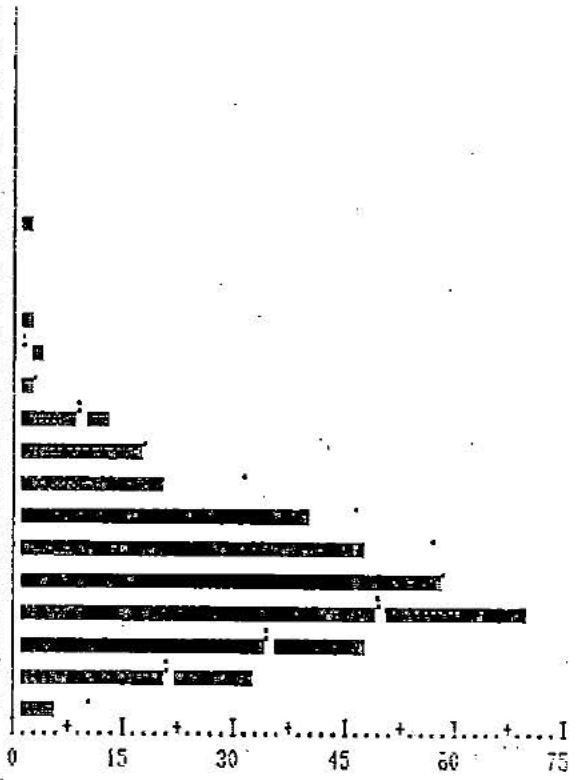
Maximum Scores of the ASI Subscales

Subscale	Faculty				
	FISIP	FEKON	FMIPA	FKIP	Total
Deep Approach	16.0	16.0	16.0	16.0	16.0
Relating Ideas	16.0	16.0	16.0	16.0	16.0
Use of Evidence	16.0	16.0	16.0	16.0	16.0
Intrinsic Motivation	16.0	16.0	16.0	16.0	16.0
Surface Approach	23.0	24.0	23.0	24.0	24.0
Syllabus Boundness	12.0	12.0	12.0	12.0	12.0
Fear of Failure	10.0	12.0	11.0	12.0	12.0
Improvidence	16.0	16.0	16.0	16.0	16.0
Disorganised M.	16.0	16.0	16.0	16.0	16.0
Negative Attitude	12.0	12.0	13.0	14.0	14.0
Globetrotting	16.0	16.0	14.0	14.0	16.0
Achievement Mot.	16.0	16.0	16.0	16.0	16.0
Extrinsic Motivation	16.0	16.0	16.0	16.0	16.0
Strategic Approach	16.0	16.0	16.0	16.0	16.0
Comprehension L	16.0	16.0	16.0	16.0	16.0
Operation Learning	16.0	16.0	16.0	16.0	16.0

APPENDIX C
Histogram of the ASI Scales

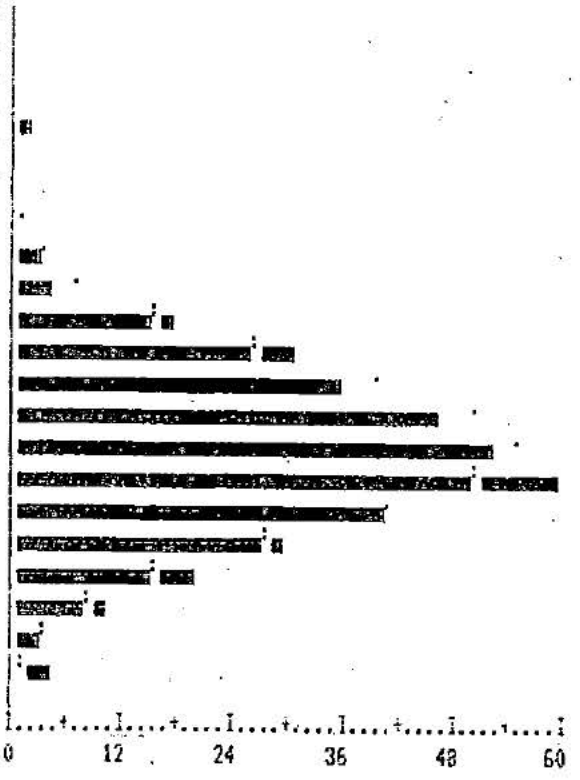
Meaning Orientation

Count	Midpoint
0	2.50
0	5.50
0	8.50
0	11.50
0	14.50
0	17.50
1	20.50
0	23.50
0	26.50
1	29.50
3	32.50
2	35.50
12	38.50
16	41.50
19	44.50
39	47.50
46	50.50
57	53.50
69	56.50
47	59.50
31	62.50
5	65.50



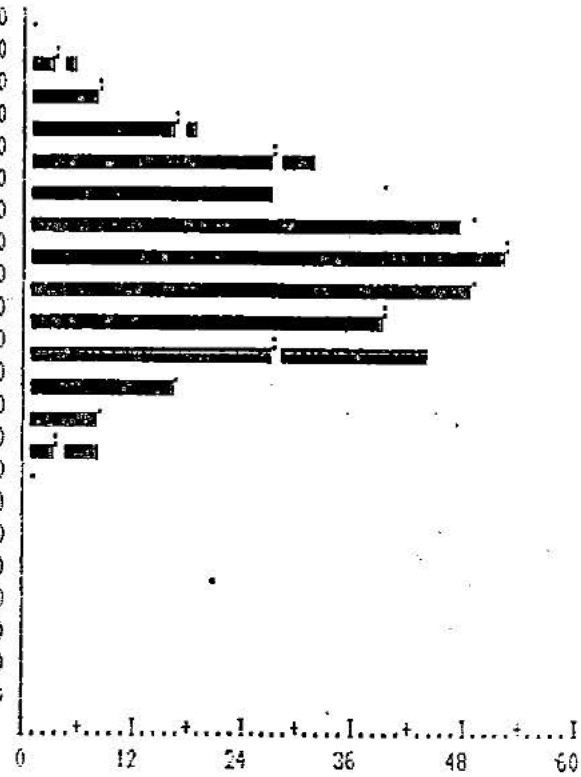
Reproducing Orientation

Count	Midpoint
0	2.50
0	5.50
0	8.50
1	11.50
0	14.50
0	17.50
0	20.50
2	23.50
4	26.50
17	29.50
30	32.50
35	35.50
46	38.50
52	41.50
59	44.50
39	47.50
23	50.50
19	53.50
9	56.50
3	59.50
3	62.50
0	65.50



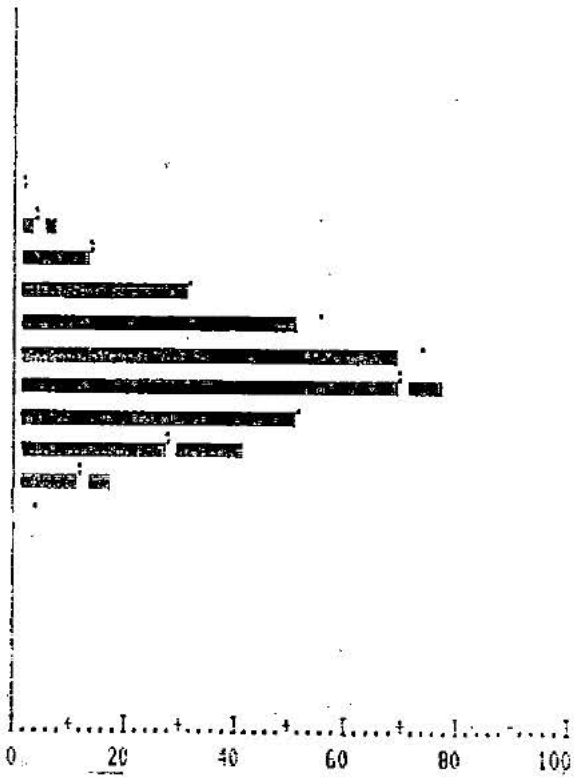
Non-academic Orientation

Count	Midpoint
0	2.50
5	5.50
8	8.50
18	11.50
31	14.50
26	17.50
47	20.50
53	23.50
48	26.50
39	29.50
43	32.50
15	35.50
7	38.50
7	41.50
0	44.50
0	47.50
0	50.50
0	53.50
0	56.50
0	59.50
0	62.50
0	65.50



Strategic Orientation

Count	Midpoint
0	2.50
0	5.50
0	8.50
0	11.50
0	14.50
1	17.50
5	20.50
14	23.50
29	26.50
50	29.50
67	32.50
76	35.50
50	38.50
40	41.50
16	44.50
6	47.50
0	50.50
0	53.50
0	56.50
0	59.50
0	62.50
0	65.50



APPENDIX D

Contextual variables which showed significant differences in the Approaches to Study Inventory Subscales

Subscale	Contextual Variables							
	Age	CON	WS	ST	YS	PEL	SUT	SDE
Deep Approach								**
Relating Ideas							**	**
Use of Evidence							*	*
Intrinsic Motivation							**	**
Surface Approach								
Syllabus Boundness						*	*	
Fear of Failure			*				***	
Improvidence								
Disorganised Method							*	*
Negative Attitude			*	*			**	
Globetrotting								
Achievement Motivation			*					
Extrinsic Motivation								
Strategic Approach					*			
Comprehension Learning								
Operation Learning								

APPENDIX E

Distribution of Contextual Variables (Frequencies and Percentages)

1. Age

Age	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
<= 20	2	6	5	-	13
	.6%	1.7%	1.4%	-	3.7%
21 - 30	38	35	65	52	190
	10.9%	10.1%	18.7%	14.9 %	54.6%
31 - 40	26	23	21	28	98
	7.5%	6.6%	6%	8%	28.2%
> 40	17	16	6	8	47
	4.9%	4.6%	1.7%	2.3%	13.5%

2. Continuity

Continuity	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
Continue	67	69	69	85	290
	19.3%	19.8%	19.8%	24.4%	83.3%
Not Continue	16	11	28	3	58
	4.6%	3.2%	8%	.9%	16.7%

3. Year of Study

Year of Study	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
First year	39	36	35	78	188
	11.2%	10.3%	10.1%	22.4%	54.0%
Middle year	11	9	53	7	80
	3.2%	2.6%	15.2%	2.0%	23.0%
Last Year	33	35	9	3	80
	9.5%	10.1%	2.6%	.9%	23.0%

4. Study Status

Study Status	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
Part Time	74	61	84	80	299
	21.3%	17.5%	24.1%	23.0%	85.9%
Full Time	9	19	13	8	49
	2.6%	5.5%	3.7%	2.3%	14.1%

5. Work Status

Work Status	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
Working	71	59	82	86	298
	20.4%	17.0%	23.6%	24.7%	85.6%
Not working	12	21	15	2	50
	3.4%	6.0%	4.3%	.06%	14.4%

6. Previous Educational Level

Previous Educational Level	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
High School	66	59	81	2	208
	19.0%	17.0%	23.3%	.6%	59.8%
Other*	17	21	16	86	140
	4.9%	6.0%	4.6%	24.7%	40.2%

*) Other = higher than higher school

7. Student Satisfaction with UT

SUT	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
Very Satisfied	33	17	23	17	90
	9.5%	4.9%	6.6%	.9%	25.9%
Somewhat Satisfied	39	45	56	59	199
	1.2%	12.9%	16.1%	17.0%	57.2%
No Opinion	9	14	15	1	49
	2.6%	4.0%	4.3%	3.2%	14.1%
Somewhat Dis.	-	2	1	-	3
	-	.06%	.03%	-	.9%
Very Dissatisfied	2	2	2	1	7
	.06%	.06%	.06%	.03%	2.0%

8. Student Satisfaction in studying at a distance (SDE)

SDE	Faculty				TOTAL
	FISIP	FEKON	FMIPA	FKIP	
Very Satisfied	36	30	18	27	111
	10.3%	8.6%	5.2%	7.8%	31.9%
Somewhat Satisfied	36	37	61	48	182
	10.3%	10.6%	17.5%	13.8%	52.3%
No Opinion	9	11	14	11	45
	2.6%	3.2%	4.0%	3.2%	12.9%
Somewhat Dis.	-	1	1	-	2
	-	.03%	.03%	-	.6%
Very Dissatisfied	2	1	3	2	8
	.06%	.03%	.09%	.06%	2.3%

APPENDIX F

LIMITATIONS, IMPLICATIONS, AND RECOMMENDATIONS

This section addresses the limitations and implications of the study. Recommendations for further research are also provided.

Limitations

This study has several limitations which should be considered. Firstly, this study is an exploratory research which might lead to further investigations. Secondly, the sample used in this study was limited to 348 UT students so that the results and the discussion are limited to the sample of the study. Thus, the generalization of the study can not be made for the overall population. Thirdly, this study was limited to students' GPAs which were very similar (low standard deviations), possibly leading to non-significant results.

Implications

Based on the results of this study, there are several practical implications which can be drawn. The findings of this study provide the information about the study approaches of UT students. As well, the present study provides information about contextual variables, as measured in this study, which have impact on student study approaches. The result of this study using the Indonesian version of Approaches to Study Inventory indicated that the Inventory could be used in describing students' study approaches at Universitas Terbuka which is different in nature from the setting of the original study in which the inventory was developed (English, conventional students compared to Indonesian, distance education students).

The results found in this study also indicated that distance education students (UT and MUN students) did not show different study approach across a

different cultural setting. This finding is important since culture may have an impact on study approches.

Given the fact that no significant relationships were found in this study between study approach and student achievement, approaches to study, as measured by the Approaches to Study Inventory (ASI), are therefore not so critical. As no relationships were found between study approach and student achievement, the unsatisfactory student achievement experienced at Universitas Terbuka is likely not related to approaches to study. There might be other factors affecting the unsatisfactory student achievement at UT.

Although generally no to low relationships were found between the variable of student satisfaction and study approach, the student satisfaction measured in this study seems to have a greater linkage to study approach than other contextual variables. Thus, in providing its services, UT needs to consider the student satisfaction factor.

Recommendation

Based on the results found in this study, there are several recommendations which are suggested for further research.

The sample of this study was limited to only 348 students. It is therefore recommended for further study to enlarge the sample so that generalization of the study can be made for a larger population.

As this study considered students studying different courses, and given the fact that study approach may vary by courses, it might be valuable for further study to consider students studying the same courses.

Given the findings that student satisfaction measured in this study seems to have a greater linkage to study approach than other contextual variables,

further research into student satisfaction in relation to variation in study approach is recommended.

Finally, considering that not all subscales and scales of the Approaches to Study Inventory had an impact on the variables measured in this study (for example, student achievement), a distance education university could focus its attention on a limited set of those study approaches which appear to have an impact.

VITA

Surname : Huda Given Name : Nurul

Place of Birth :Jakarta Date of Birth : 29, July 1963

Educational Institution Attended:

Bogor Agricultural Institute, Indonesia : 1981 to 1985

University of Victoria, Canada : 1991 to 1994

Degree Awarded:

Sarjana (B.Sc.)
Institut Pertanian Bogor : 1985

Honour and Awards:

CIDA Scholarship : 1991 to 1994

Publications: _____
_____
_____
_____

PARTIAL COPYRIGHT LICENSE

I hereby grant the right to lend my thesis to users of the University of Victoria Library and make a single copy only for such users or in a response to a request from the Library of any other university, or similar institution, on its behalf or for one of its users. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by me or a member of the University designated by me. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Title of Thesis: **Approaches to Study and Achievement of the Students of Universitas Terbuka (the Indonesian Open Learning University)**.

Author : [redacted]
(Signature)

Nurul Huda
(Name)

February 16, 94
(Date)