INCREASING PERSISTENCE IN INDONESIAN POST-SECONDARY DISTANCE EDUCATION

by

TIAN BELAWATI

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Department of EDUCATIONAL STUDIES

The University of British Columbia
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Abstract

This study concerns student persistence in post-secondary distance education within the Indonesian context. The primary intent was to test the effectiveness of several interventions designed to increase student persistence at the Indonesian Open University (Universitas Terbuka--UT).

Based on the cultural, educational, institutional, and students' backgrounds, the study proposed several possible institutional interventions to increase UT's student persistence. The proposed interventions include: (1) provision of a transition stage for students to gradually learn, adapt to and adopt the unfamiliar independent learning system, and (2) enhancement of the academic system's openness to address students' conflicts in time and resources.

The effectiveness of some transition stage interventions was tested through a field experiment involving 1102 newly enrolled students in September 1993. The tested interventions were five increasingly detailed sets of written contacts containing information, reminders, encouragements, a brochure about independent learning strategies, and a list of peers' names and addresses. Persistence was measured by the rates of self-test submission, the rates of examination attendance, and re-registration rates in the second semester immediately following the first semester.

The results show that the interventions did not significantly increase student persistence. Variables such as

number of courses and employment status seem to influence persistence slightly more than the interventions. The results further show that students who submitted higher percentages of self-tests, wrote higher rates of examinations, and were somewhat more likely to re-register in their immediate second semester.

Placing these results within the context from which the interventions were derived, it seems that the interventions may have only been tinkering at the margin of an already problematic distance education system in Indonesia. Lack of persistence at UT may be related to aspects of the distance education model that were not adequately "adopted" such as feedback and counselling. The interventions may not have sufficiently accommodated students' accustomed need for direct guidance.

Based on the findings, eight recommendations with regard to UT's registration/administration, tuition, instruction, evaluation/examination, and communication policies and systems were proposed. The recommendations address students' needs for institutional support systems and their conflicts for time and resources.

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Chapter One

Introduction

This study concerns student persistence in Indonesian distance education. Initially, the focus of this study was to reduce dropout rates at the Indonesian Open University (Universitas Terbuka--UT). As the study progressed, it became clear that the concept of dropout was problematic. Thus, the concept of persistence, its measurements and efforts to increase persistence rates became parallel focuses. The conceptualization of student persistence in distance education is discussed in detail in Chapter Four.

Background to the Problem

Lack of persistence has been a central concern in all kinds of education. In any educational setting, there is always a possibility that students will either withdraw, suspend, or even drop their studies altogether. However, the concern about lack of persistence in distance education is probably higher than in conventional education for two reasons.

Firstly, distance education offers an alternative method of education designed to overcome economic, demographic, and time barriers. The strengths of this method are its openness, flexibility, and cost-effectiveness. These characteristics

give a wider opportunity to people who, due to various reasons related to those barriers, cannot secure access to conventional face-to-face education. Usually, because of their structure, distance education institutions accept people who normally are not eligible for admission to conventional face-to-face educational institutions. This, in turn, has also led to the perception of distance education as a second choice in many countries. Therefore, somewhat higher rates of student withdrawal, suspension, or dropout are expected, given this unconventional provision. But excessive rates are alarming, and call into question the educational viability of distance education itself.

A second reason for concern is that low persistence in distance education has a severe impact on the operation of the institution. A high rate of non-persistence decreases the cost-effectiveness of the institution. Furthermore, a low persistence rate also suggests a failure to solve a larger social issue, the equality of educational provision. Thus, when non-persistence rates are high, policy is questioned.

Hence, persistence has been a subject which has given rise to a great deal of discussion and argument within distance education. It has been a source of concern for members of open universities for many years (Woodley and Parlett, 1983). Indeed, Garrison (1987a) claimed that, as of the mid 1980's, there was no area of research in distance education that had received more attention than student persistence.

Despite the variations in definitions and measurements of persistence, studies have shown that persistence rates in distance education are very low. Woodley and Parlett (1983), for example, reported persistence rates in various distance education institutions in terms of "wastage rates"[1], which they defined as the percentage of students who registered in the course(s) but did not gain a course credit. They reported that the wastage rate at the British Open University (BOU) in 1982 was 32%. At Athabasca University (Canada) it was 71%; 42% if it was based on those who submitted the first assignment. At the National University Extension Association (USA), the wastage rate was 40% in terms of completing the degree, or 30% if it was based on those who completed all the written work. At the NKI School (Norway), it was between 20-35% of students based on those who completed at least one of their courses but did not continue to finish the degree[2]. At the Fernuniversitaet (West Germany), it was 47% using similar measurements, after a first year of study, as measured in 1980. More recent data from British Columbia's Open Learning Agency (OLA) shows that 55% of their student population in 1989/90 withdrew or did not complete all course requirements (OLA, 1991). These figures are much higher than dropout rates in face-to-face education programs.

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[1] All terms for persistence are maintained consistent. The precise conception of persistence for this study is clarified in Chapter Four.

[2] The times of measurements for the wastage rates of Athabasca University, the National University Extension Association, and the NKI School were not reported.

The national dropout rate for adult basic education programs in the United States for fiscal year 1973 was 37.3% (Osso, 1975 cited in Irish, 1978). Irish (1978) reported that dropout rates in adult education programs tended to be even lower. She claimed that only 18% of the students who participated in the National Survey of University Adult Education Programs conducted in 1965 subsequently dropped out. More recent data from the University of British Columbia (UBC), Canada shows that the average dropout rate for students enrolled in regular face-to-face degree programs from 1981/82 to 1988/89 was only 6.5% based on students who did not receive any credits at all or withdrew sometime during their degree programs and, therefore, did not complete a degree (UBC, 1992). Even given the difference in time between the two studies, indications are that persistence rates in distance education are considerably lower than in face-to-face education.

Furthermore, newly-enrolled distance education students have been reported as those who are most significantly at risk of non-persistence (Roberts, 1984). Roberts found that a high attrition rate in the initial stages of study is a pattern in research on persistence. Roberts cited James and Wedemeyer (1959) whose study at the University of Wisconsin found that the withdrawal rate before completion of a quarter of the program constituted as much as 93% of the eventual total dropout rate during the whole program. Roberts (1984) also cited Jones and Wylie (1970) whose study at the South West

London College reported a withdrawal rate during the first quarter of that program of 60%. Another cited study by McIntosh (1972) at the British Open University revealed that the dropout rate in the first year of study (based on 1970-1971 data) was reported as approximately 42% of the new enrollment, which was approximately 58.5% of the total number of students who withdrew from the program sometime during the degree process. Roberts' (1984) own study in 1980 at the College of Advanced Education in New South Wales, Australia, found that 93% of students who did not graduate had withdrawn during the first two semesters of a four semester program.

Those studies measured persistence in different ways, but regardless of whether persistence was defined in terms of wastage, attrition, withdrawal or non-completion, distance education studies report higher rates than traditional face-to-face education. Furthermore, the studies strongly indicate that non-persistent behaviors are more likely to occur within students' early or beginning stages of study, rather than at later points.

This lack of persistence is also the situation at the Indonesian Open University (Universitas Terbuka-UT). Universitas Terbuka was established in September, 1984 because of the rapid expansion of senior high schools and the low labor absorption capacity of the Indonesian economy. As with other distance education institutions, it was also founded to serve people who did not have the opportunity to attend conventional face-to-face higher educational institutions due

to lack of funding, time, or access. As such, its student constituency is similar to those of other distance education institutions. Nevertheless, although UT's statistics (1991b, 1992) also show that non-persistent behaviors are more likely to occur early in a student's study, the degree of non-persistence at UT is markedly higher than at other institutions.

Table 1.1 depicts UT students' completion rates from the first graduation in 1989 to 1992. As the table shows, the average rate of degree completion of students whose first registrations were between 1984 and 1990 was only 4.8%. This means that over 95% of students of these seven cohorts (groups of students who register in the same academic years) either withdrew or did not continuously maintain their studies. This completion rate is much lower than, for example, the average degree completion rate at the British Open University (BOU) of 48.8% (based on data from 1971 to 1981 intakes); furthermore, if the BOU rate was based on completion rates within 8 years of study, it was 45.1% (The Open University and the Department of Education and Science, 1991). Universitas Terbuka's completion rate is also lower than the average completion rates at other Asian distance education universities. For example, the completion rate of the Indira Gandhi National Open University's (IGNOU) diploma programs in 1987 was 22% (Reddy, 1989) and the average degree completion rate of Thailand's Sukhothai Thammathirat Open University

Table 1.1

Universitas Terbuka Completion Rates To 1992 Per Year of Students First Registration

Year of First Re-gistration	Total Enrollees	Graduates by 1992[a]		Years elapsed
		Number	Percentage	
1984[b]	54,035	3,065	5.7	8
1985	46,910	3,144	6.7	7
1986	20,051	1,477	7.4	6
1987	8,109	511	6.3	5
1988	9,041	284	3.1	4
1989	5,739	156	3.0	3
1990	14,354	194	1.4	2
Average Completion Rate			4.8	

[a] Including graduates of the Faculty of Education's programs which theoretically can be finished within as short as one year (for teacher students who already have Diploma Three or High School Teaching Certificate).

[b] First graduation was in 1989.

(STOU) based on its 1980-1985 intake was 17% (Sriprasart et al., 1988).

Statistics show that UT's students did not usually undertake their study continuously. Table 1.2 shows the pattern of UT's first cohort (i.e students whose first registration was in the first semester of 1984) as to student re-registration rates after the first semester (the complete table of student re-registration patterns of subsequent cohorts is presented in Appendix 2). The table shows that

Table 1.2

Patterns of Re-registration of Cohort 1984.1 Universitas Terbuka Students

Semester	Student Re-registration	
	Number	Percentage
1984.1	54,035[a]	-
1984.2	31,294	57.9
1985.1	28,185	52.2
1985.2	38,479	71.2
1986.1	8,811	16.3
1986.2	11,669	21.6
1987.1	6,117	11.3
1987.2	7,408	13.7
1987.3[b]	10,784	20.0
1988.1	10,624	19.7
1988.2	9,794	18.1
1989.1	7,603	14.1
1990.1	6,765	12.5
1990.2	5,842	10.8
1991.1	4,688	8.7
1991.2	3,988	7.4

[a] First registration
[b] In 1987, UT tried to administer three semesters (three examination times) but this was not continued.

most UT students did not maintain their registration continuously in every semester. The percentage of re-registration shows that only 57.9% of the 54,035 students re-registered immediately in the second semester (semester

1984.2). However, some students returned to the program in later semesters (note that 71% of these students re-registered in the second semester of 1985). The last row, however, shows that only 7.4% (3,988 students) among the original 54,035 registrants were still in the program by September 1991 (1991.2). Adding these remaining students to those who had already graduated (3,065 students as shown in Table 1.1) gives a total of only about 13% of students as actual or potential graduates from the 1984.1 original cohort. In other words, about 87% of the enrollees of this cohort did not persist in their programs over the eight year period. This example illustrates that student persistence rates are low at UT.

Indeed, Table 1.3 illustrates that all study cohorts from 1984.1-1991.1 showed low re-registration rates in the semesters immediately following the original semester. These immediate re-registration rates range from as low as 9.1% to as high as 81.2%. The exceptionally low re-registration rates in 1986 to 1987 (9.11%-12.7%) were due to the changes in UT's administration systems. Prior to 1986, students had to pick up their course materials in the appointed post offices. But in 1986, UT started to send course materials directly to individual students' addresses. This change caused considerable confusion and resulted in delays of the course materials to students. Furthermore, in 1987, UT tried to administer three examination times (i.e. three semesters within a year) but found this unmanageable, and so changed back to the two-semester system.

Table 1.3

Universitas Terbuka Students' Re-registration Rates in the Immediate Second Semester per Student Cohort (1984.1-1991.1)

Cohort	Enrollment	Re-registration	Percentage
1984.1	54,035	31,294	57.9
1985.1	46,910	38,105	81.2
1986.1	8,586	1,011	11.8
1986.2	11,069	1,006	9.1
1987.1	1,174	149	12.7
1987.2	2,062	922	44.7
1987.3	4,273	2,085	48.8
1988.1	3,550	1,588	44.7
1988.2	5,491	2,006	36.5
1989.2	5,739	2,777	48.4
1990.1	4,563	2,597	56.9
1990.2	9,791	5,333	54.5
1991.1	3,903	2,241	57.4
Average Re-registration rates			46.3

Note: UT did not open its registration for new students in semesters (cohort) 84.2, 85.2 and 89.1 .

It is interesting to note that, with the exception of the cohort whose first registration was in Semester 1985.1, Table 1.3 shows that the immediate re-registration rate was less than 60% (range from 9.1% to 57.4%). On average, about 46.3% of new enrollees over this period continued their studies into a second semester without interruption. This means that, on average, the other 53.7% of new students did not re-register for a second semester right after their first one.

In short, Tables 1.2 and 1.3 indicate that student non-persistence rates at UT are high. Furthermore, as shown by

students' re-registration pattern (Table 1.2), there is no single point of measurement that can give the absolute number of dropouts as is the case in traditional face-to-face education. Students who were not actively registered at the measurement time (and therefore could have been labelled as dropout students by most studies) may or may not have dropped their studies. They might have merely been suspending them expecting to eventually return and re-register at a later stage. Indeed, some did. Therefore, it seems that monitoring students' persistence at different points/stages of students' studies is more meaningful and more consistent with UT's system than simply measuring whether students have dropped out at a single point in time. Thus, a focus on persistence is more congruent and relevant with UT's context than a focus on dropout.

Studying this phenomenon is highly topical; the low persistence rate has significant implications for UT and Indonesia. Organizationally, low persistence can jeopardize the existence of UT; a drop in the number of students means a drop in tuition income. This, in turn, influences the institution's ability to extend and increase the quality of its instructional technology and services. Further, low rates of persistence may also jeopardize the image of the institution, since they may give the impression of an unsatisfactory system. As mentioned, UT was designed and established in large part to serve people unable to attend conventional institutions. Therefore, a drop in the number of

students also means a drop in absorption of these target populations. This implies the failure of government policies regarding education equity. Finally, and most importantly, low persistence rates also imply inefficiency in the use of national resources.

Research Questions

A great deal of research regarding persistence in distance education has been conducted. However, most studies have been descriptive; few have dealt with efforts (or interventions) to increase persistence rates. Due to the severity and urgency of the problem of non-persistence at UT, this study was designed to increase knowledge about, and the efficiency of, measures to enhance persistence. Specifically, this study was constructed to answer the following questions:

1. What is the nature of the persistence phenomenon at UT?, and
2. What kind of institutional interventions can be applied in order to increase student persistence rates?

Accordingly, this study was intended to:

1. Develop a conceptual framework of persistence at UT;
2. Derive possible institutional interventions from the proposed framework; and
3. Test the effectiveness of some interventions, namely the transition stage interventions, designed to increase persistence in the early stages of study at UT.

Chapter Two

Literature Review

In order to pursue the research questions, it was necessary to propose a framework addressing the phenomenon of adult student persistence within Indonesia, which was, in turn, used to derive institutional interventions designed to increase student persistence rates at UT. To do this, it was important to explore the complexity of the persistence phenomenon through a review of existing theoretical literature and empirical research regarding persistence in distance education, as well as that describing the contextual background of Indonesia. Thus, this literature review consists of two parts: previous studies of persistence (or dropout as it is termed by most studies) in distance education and related fields (Chapter 2) and the contextual background of Indonesia (Chapter 3).

It is important to clarify that, while the focus of this study was student persistence, the language of the review uses the names and definitions of concepts as they are found in the literature; e.g., dropout was the term most commonly used by many researchers in discussing this phenomenon. Furthermore, throughout this chapter, readers will find different terms used even for dropout, e.g. completion/non-completion, attrition, withdrawal, failure, wastage, persistence/non-persistence, and continuation/discontinuation. Each refers to

the particular usage of a particular researcher, and will be defined in terms of that research. Eventually, in Chapter Four the comprehensive measurement of persistence as used in this study will be clarified.

Concepts and Processes of Dropout

Studies of dropout in distance education have been mostly descriptive and predictive in nature. Few studies have developed theories and models concerning both dropout and participation in distance education. Although descriptive studies are important, they have not contributed much to the understanding of the phenomenon of distance education. Thus, this review examines the concepts and models of dropout not only in distance education but also in related fields such as higher and adult education. Extensive review of dropout literature in these fields leads to a better understanding of the phenomenon and therefore to a proposed framework for this study.

Dropout in higher education. One of the attempts to explain the process of dropout in higher education was made by Tinto (1975). He tried to formulate a theoretical model that explains the process of interaction between individuals and an institution that results in individuals dropping out from institutions of higher education.

Figure 2.1 illustrates Tinto's model. Students enter an institution of higher education with a variety of family backgrounds, individual attributes, and pre-college schooling experiences. These individual characteristics influence the development of their goals and institutional commitments. During a protracted period of interactions between the individual and the academic and social systems of the institution known as an integration process, a person's experiences continually modify his/her goals and institutional commitments in ways which lead to persistence or dropout. Given prior levels of goal and institutional commitments, it is the individual's normative and structural integration into the academic and social systems of the institution that lead to new levels of commitment.

Normative integration refers to the individual's identification with the norms of the social and academic system in the college; whereas structural integration relates more directly to how well an individual meets certain explicit standards of the college system. Other things being equal, the higher the degree of both normative and structural integration, the greater will be a student's commitment to the institution and the goal of college completion. Finally, according to Tinto, it is the interplay between the individual's dual commitments to the goal of college

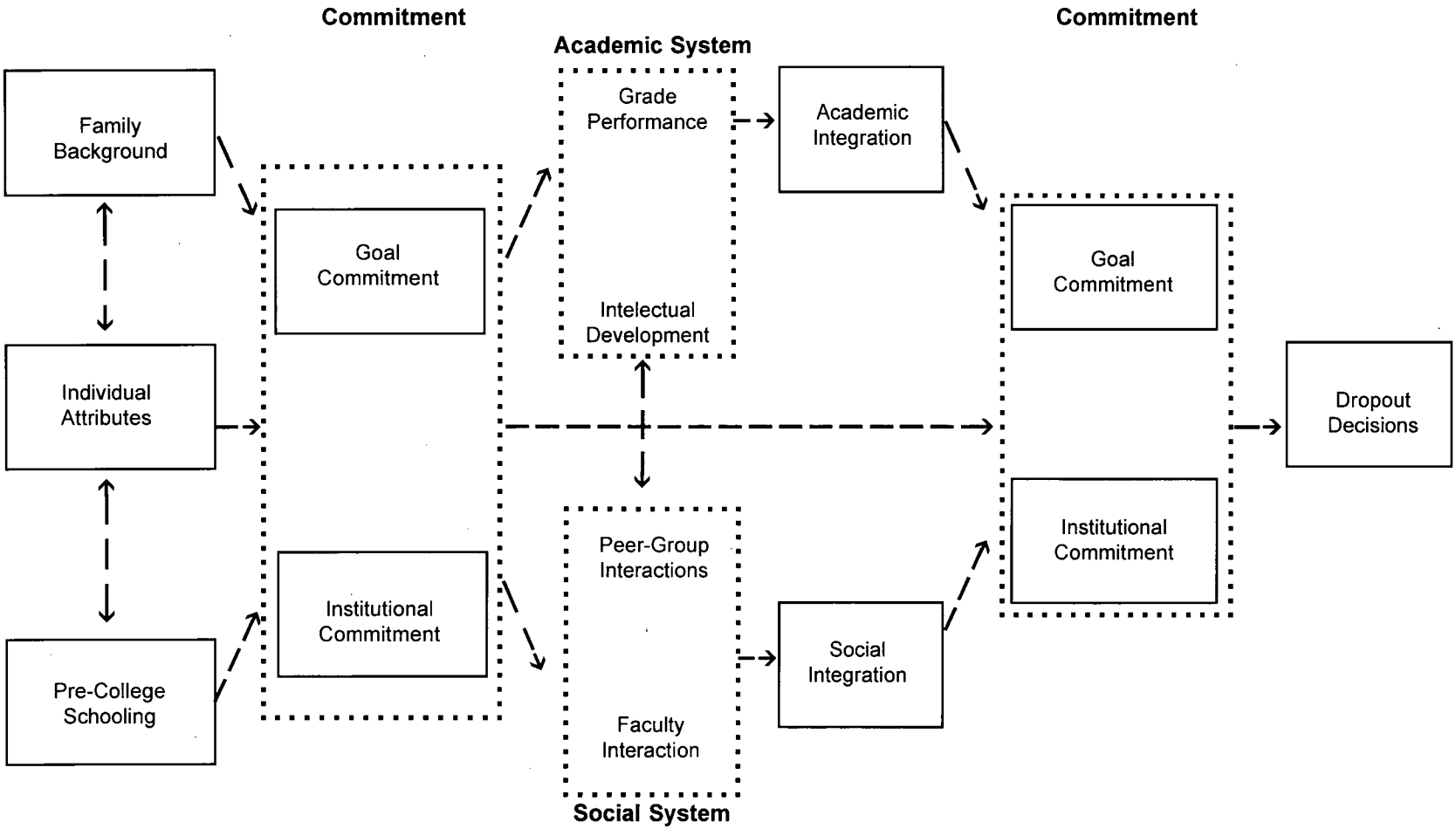

Figure 2.1. Tinto's model for dropout in higher education.

completion and the institution itself that determine whether the participant decides to drop out or persist.[1]

Tinto's model distinguishes academic from social integration. Both were perceived as equally important. Further, it implies the possibility of external (institutional) interventions into a student's integration process. In other words, the model provides space for the institution to help its students in their integration process. For example, developing a good communication network might help strengthen interactions between students and students, as well as between the institution and students. These interactions might, as suggested by the model, assist students with their social and academic integration.

However, although this model recognizes the importance of social integration, Tinto stressed only peer-group interactions and faculty interactions with students. The model is limited as it simply addresses the integration of students to the on-campus environment. While peer-group and faculty interactions may be easily conducted in conventional face-to-face education, they are limited in distance education. Furthermore, because the model does not consider or explain the influences of off-campus social systems (such as family) or other off-campus commitments, it must be adapted to apply to distance education. In distance education, it is

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[1] Notice, the duality of possibilities raised. Dropout is contrasted against persistence, which is implicitly defined as completion of course(s).

a given that students study independently at their own locations and in the context of prior commitments.

Dropout in adult education. Boshier developed both an Education Participation Scale (EPS) and a "Congruence" model of dropout. Boshier's (1973) Congruence Model is based on Carl Rogers' "self" theory and was proposed to account for adult education participation and dropout. Boshier believes that dropout is in some ways an extension of non-participation and that variables associated with one were also associated with the other. According to him, ". . . both participation and dropout stem from an interaction of internal psychological and external environmental variables" (Boshier, 1973, p. 256).

His model (Figure 2.2) asserts that congruence both within the participant and between the participant and the educational environment are what determine participation/non-participation and dropout/persistence. The model begins by identifying motives for participation, which he categorizes as "growth" or "deficiency"-oriented.

Growth motivated people are defined as those who are "expressing rather than coping" and the behavior of these people is primarily acted out of "inner" (or intrinsic) motivations. Deficiency-motivated people, on the other hand, are considered to be impelled by social and environmental pressures, and use work and educational activity "more for achieving gratification of lower basic needs, of neurotic

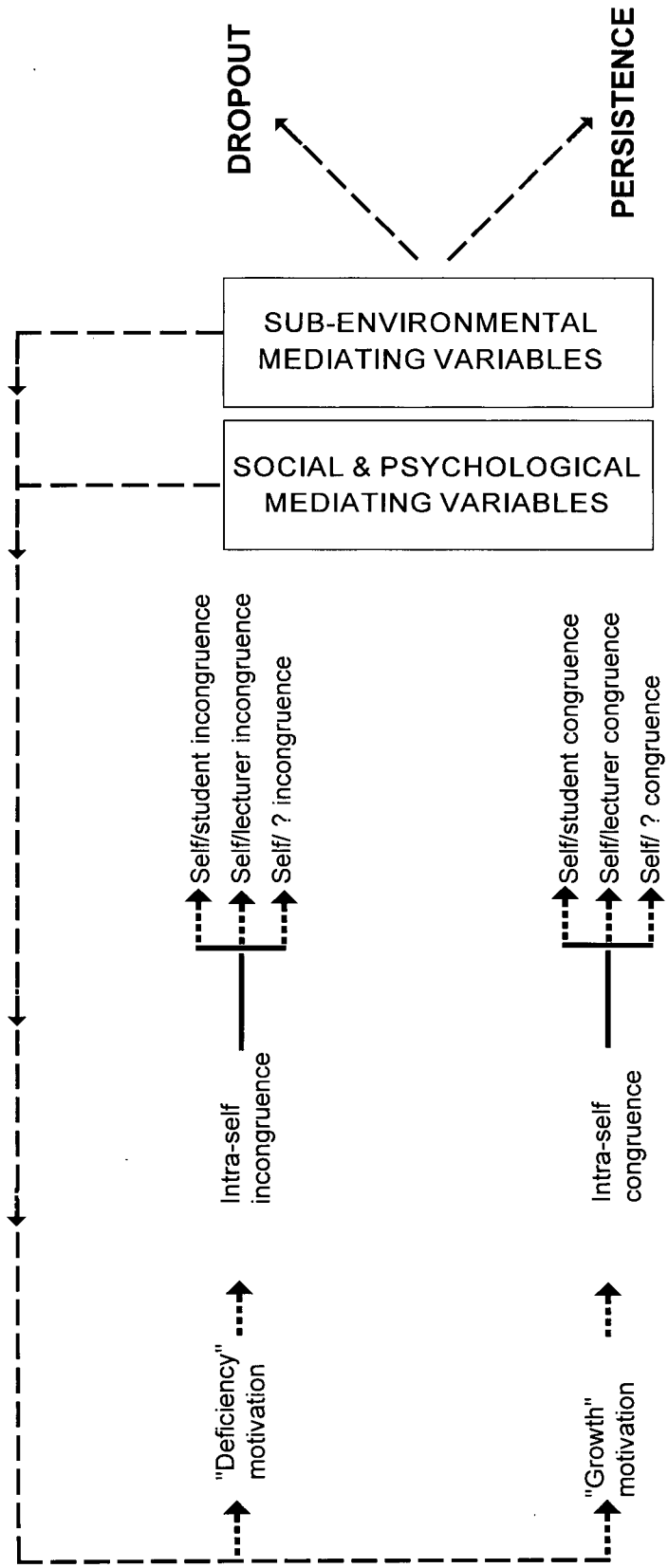


Figure 2.2. Boshier's congruence model

needs, as a means to an end ... or as a response to cultural expectation" (Maslow, 1967 cited in Boshier, 1973, p. 256).

In this model, the individual participant is considered to be ". . . a unified system with two problems: maintaining inner harmony with himself [sic] and with the environment" (p. 259). According to Boshier, incongruences can develop within the person and between the person and his/her other-than-self experiences when confronted with new situations. Either of these lead to anxiety, uneasiness, discomfort, or unrest. On the other hand, maintaining or re-establishing harmony or congruence produces a sense of satisfaction or fulfillment.

Boshier claims that when growth-motivated people encounter new situations, they seek congruence internally (self/ideal) and externally (self/other) and thus develop satisfaction within the educational environment. On the other hand, deficiency-motivated people, when they experience intra-self (self/ideal) incongruence, often in turn experience self/other incongruence and thus dissatisfaction with the education environment. His model postulates that participation and dropout are functions of the magnitude of the discrepancy between the participant's self concept and key aspects (largely people) within the educational environment.

Further, the model suggests that it is these incongruences that mainly influence student participation/non-participation and dropout/persistence; other social, psychological, and institutional variables typically discussed in dropout studies appear less influential. Thus, according

to this model, if a participant manifests intra-self and self/other congruence, social variables such as age, marital status, educational qualification, place of residence, previous participation, or religion, will be less likely to trigger dropout.

Like Tinto's model which posits the possibility of institutional supports (interventions) to influence the learners' integration process, the Congruence Model seems to suggest that it is the institution's responsibility to enhance congruence. Nevertheless, since the Congruence model was also developed in the context of conventional (face-to-face) adult programs, it seems that it was primarily concerned with the "people" (self/other students and self/lecturer incongruence) aspect of the academic environment, which is less relevant to the distance education academic environment. Thus, some adaptation of the model is needed if this model is to be useful in studying persistence in the field of distance education.

Dropout in distance education. An early attempt to understand the phenomenon of dropout in distance education was made by Kennedy and Powell (1976). Based on considerable empirical research, they asserted that the phenomenon had to be investigated from two general aspects: the characteristics of students (e.g., their motivations, ages, etc.) and their circumstances (e.g., financial situations). According to them, a student's profile is composed largely of either:

(1) characteristics, which are constant (e.g., previous educational background) or subject to slow change (i.e., motivation, stage of adult development, educational background, personality, aptitude, and educational self-concept); or (2) circumstances, which are subject to rapid, indeed almost overnight, change (i.e., occupation, relationship with family and peer group, health, finance, and support from institution).

Their model (Figure 2.3) is based on the cases of four students as described by the counsellors. They believed that, although there was room for some poor and mistaken judgement by counsellors, the level of validity of the data (the information) was far higher than if the information had been obtained from the students themselves. Figure 2.3 depicts a two-dimensional model of the "learners at risk" situations. The model implies that

> . . . while all students are faced with the task of performing a balancing act with opposing pressures and demands on their time and energy, some students (i.e. those with weaker characteristics) are more vulnerable than others. (Kennedy and Powell, 1976, p. 70)

According to the model, the stronger the characteristics of students, the more unlikely is an increase in pressure to upset their equilibrium. In other words,

> . . . the movement of [a] student from a position of relative security in his studies with the Open University to an 'at risk' situation is likely to be

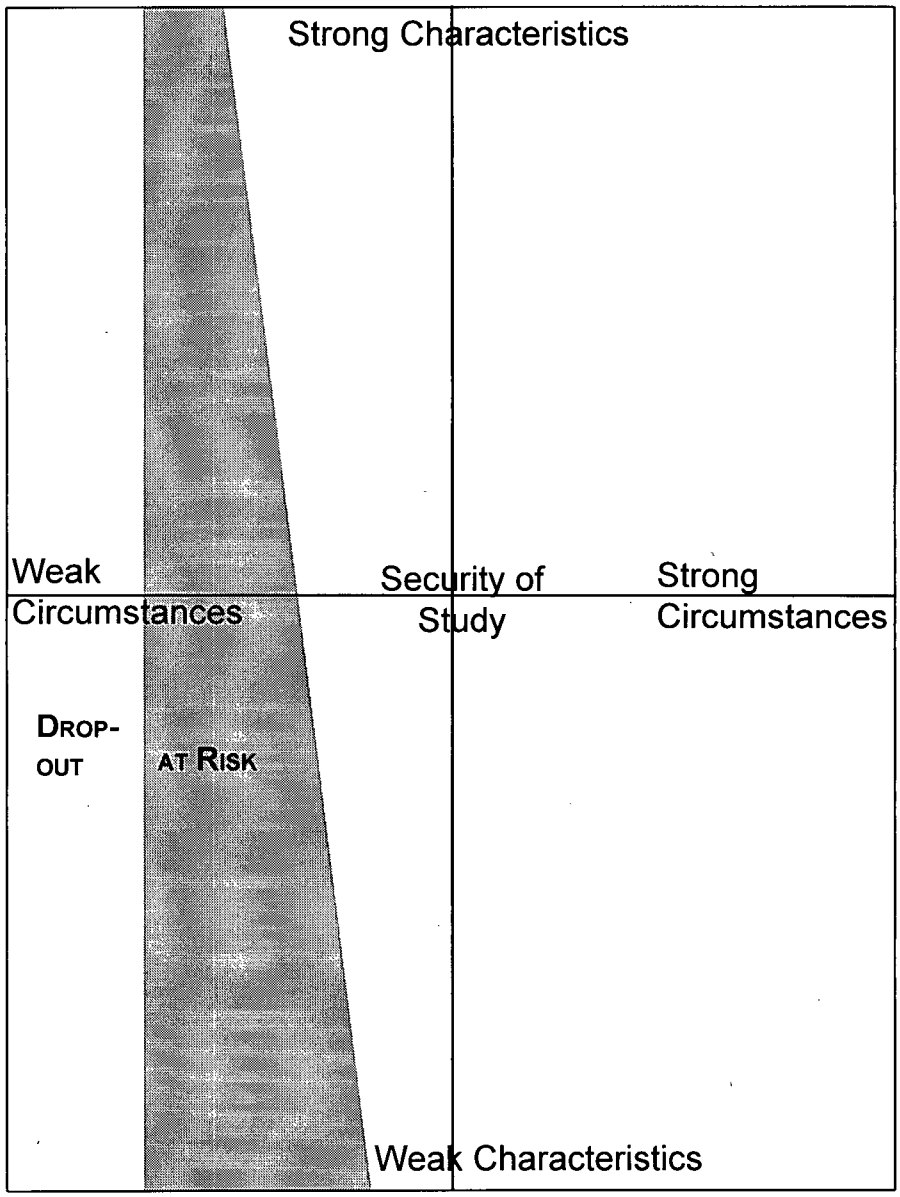


Figure 2.3. Kennedy & Powell's model of dropout in distance education.

> horizontal and from right to left on the diagram as characteristics (vertical movement) tend to be fairly constant. (p. 70)

This model, although simpler than Tinto's and Boshier's, appears to give equal weight to both inner psychological variables (characteristics) and other external variables (circumstances). For example, the model suggests that weaker students (those who are most at risk of dropping out) can be helped by strengthening the circumstances (e.g., by providing them with support from the institution). Further, the model also suggests that if a student had strong characteristics, weak circumstances will not put him/her in the position of being at risk to drop out.

This model is relatively weak in terms of its validity and generalizability. Although Kennedy and Powell believed that counsellors' judgements were better than student responses in depicting students' characteristics, they never tested this belief. Since they only used four cases, they could have, for example, cross checked the validity of the counsellors' judgements by interviewing the corresponding students. Further, because the model was based on only four cases, its generalizability to other populations still needs to be tested. Moreover, the model uncritically adopted a pejorative discourse using the terms strong and weak for categorization of the characteristics and circumstances.

Another attempt to understand dropout in distance education was made by Kember (1989). Unlike Kennedy and

Powell, who based their model on empirical data, Kember developed a model based on existing models in the literature.

As discussed earlier, Tinto's model of dropout stresses the social systems of the peer-group interaction and faculty interaction. While these interactions may be easily conducted and are a big part of conventional face-to-face education, they are limited in distance education where students independently learn at their own paces in different locations. Kember (1989) modifies Tinto's model and proposes a model of dropout for distance education which considers this difference (Figure 2.4). Kember's model is also based on the six elements of distance education listed by Keegan (1980). These six elements are: (1) the separation of teacher and learner; (2) the influence of an educational organization; (3) the use of technical media, usually print; (4) the provision of two-way communication; (5) the possibility of occasional meetings; and (6) the participation in an industrialized form of education, which is the use of mass-pre-produced learning materials as the teaching-learning media.

The main difference between Kember's and Tinto's model is in the inclusion of work background and work environment. Kember considers this crucial because most students of distance education are adults who usually are employees. Therefore, it is not only their individual attributes, family backgrounds, and educational experiences that are important; their work circumstances must also be taken into consideration.

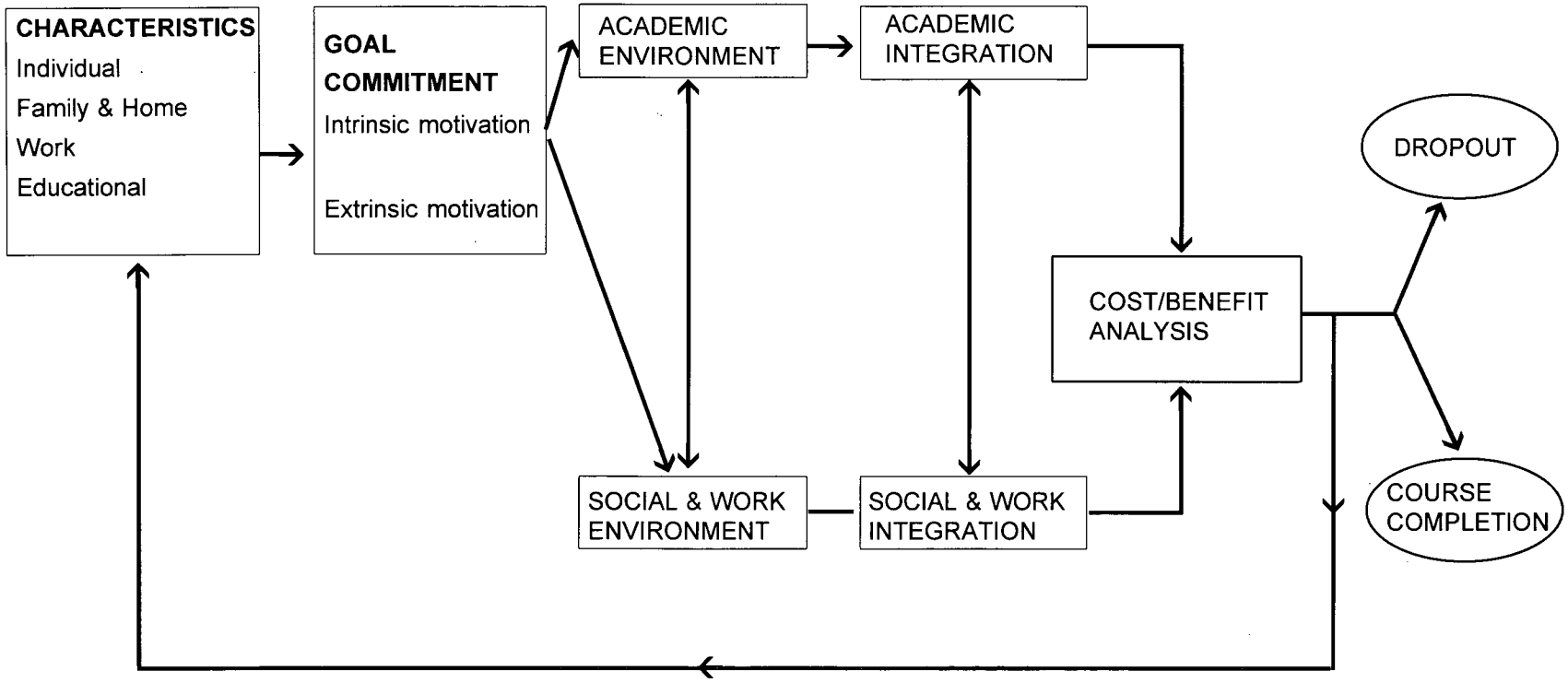


Figure 2.4. Kember's model of dropout in distance education

As depicted in Figure 2.4, goal commitments can be either intrinsic or extrinsic. Intrinsic motivation is understood as the interest students have in the subject matter for its own sake, while extrinsic motivation is concerned with the students' commitment to obtaining a qualification. These motivations are similar to Tinto's definition of goal and institutional commitments.

This model also includes components which measure the integration of students into the academic way of life, and the effects of the academic intrusion into the student's family, work, and social life. Thus, this model provides an extension of Tinto's academic and social integration to include work integration. This longitudinal model provides a way to interpret the effect of a course and institutional support services for the student, and the degree to which study is compatible with the student's lifestyle. It also recognizes the potential impact of interventions by the institution and events in the student's life, rather than merely relate the non-persistence behavior to a set of apparently pre-determined variables.

In Kember's model, the academic environment includes all facets of the offering of the distance education course of study by the institution. Included are the study packages mailed to the student, interaction via assignments, any tutorial assistance provided, and any other interactions between student and institution of either an academic or administrative nature.

This model, like Tinto's, does not emphasize the impact of inner psychological variables (such as self-esteem and perception of self/other congruence/incongruence suggested by Boshier's Congruence model) on the behavior of dropout. Rather, the stress is put on the ability of students to integrate the academic environment into their other commitments. In a way, this model is akin to Kennedy and Powell's, which suggests there is an opportunity for preventing students from getting into the "at risk" position by strengthening their (academic) circumstances.

Kember's model has recently been applied as the framework for predicting student progress in distance education programs in Hong Kong (Kember, Lai, Murphy, Siaw and Yuen, 1994). In this study, a previously developed Distance Education Student Progress (DESP) instrument was employed to measure student demographic variables, as well as two areas of Kember's model, social and academic integration.

Social integration in the DESP is measured in terms of positive and negative social variables. The positive ones, known as emotional encouragement include enrollment encouragement, study encouragement, and family support. The negative ones, known as external attribution variables include insufficient time, events hindering study, distractions and the threat of potential dropout. Academic integration is measured on a similar scale, where positive "academic accommodation" variables include a deep approach to studying, intrinsic motivation, positive impression of the course,

positive telephone counseling and steady reading habits. "Academic incompatibility" variables, in turn, consist of a surface approach to studying, extrinsic motivation, negative impression of the course, lack of English ability and threat of dropout. In the study, outcome variables are GPA as a measure of academic achievement and "fail ratio" (proportion of modules/courses failed out of the number of modules attempted) as a measure of student dropout. On each statement representing social and academic integration, students in the Hong Kong study were asked to respond using a five-point Likert scale from Definitely Agree to Definitely Disagree.

Based on a survey of 555 students enrolled in a range of courses in arts, science and business offered by the Open Learning Institute of Hong Kong (OLIHK) and in two upgrading courses for teachers and counselors, the researchers concluded that social and academic integration (as reformulated for the context of distance education in Hong Kong) acted as intervening variables, which in turn were linked to the outcome measures. They believed, as suggested by Kember's model, that

> entry characteristics [demographic characteristics] should be seen as influences upon the social and academic integration variables rather than direct predictors of student progress and persistence. (p. 298)

Thus, demographic characteristics, as postulated by the model, were likely to influence the ease with which students

were able to achieve social and academic integration. Those in favorable situations (categorized as strong characteristics by Kennedy and Powell) might find it relatively easy to integrate part-time study into their schedule of work, family and social commitments. This would help those students accommodate the academic demands of their course. On the other hand, those in a negative situation, who received less support or experienced greater difficulties in home, family and social environments (weak characteristics) were likely to have difficulty adapting to the demands and conventions of academic requirements and were at greater risk of dropping out.

In the Hong Kong study, the researchers concluded that because social and academic integration were intervening variables, students could shift from being in weak situations to being in positive ones with the institution's assistance. Such assistance would include making students aware of time requirements and the nature of academic demands before a course began. And once the course had started, the integration process could be facilitated by enhancing both collective affiliation (a sense of belonging) and normative congruence (a sense of familiarity with system's values).

Common elements in existing models. All models, regardless of their differences, conceptualize dropout as a phenomenon which can be understood through an analysis of the interaction between individual participants and their

environments. Tinto (1975) and Boshier (1973) stress the involvement of the individual with the academic environment, while Kennedy and Powell (1976), as well as Kember (1989), also emphasize the importance of the family and work environments.

Despite the differences in terms used, all the models argue that the more compatible the participant's personal situation (including characteristics, self-esteem, and background circumstances) are with the academic circumstances, the higher the likelihood of persistence. Most importantly, all models imply that the student integration process can be influenced and facilitated by institutional interventions.

Within the context of distance education, in which non-academic circumstances play and or have a probably higher role/influence on students' studying processes than in traditional face-to-face education, it is important to understand the complexity of the phenomenon beyond students' academic (on campus) circumstances. Although all models imply the existence of these off-campus aspects, only Kember's model explicitly address them. By including the social/work environment, Kember requires that it be part of one's analysis. Therefore, Kember's model is considered to be most suitable for understanding the persistence phenomenon in distance education and was used as the basis for understanding the nature of persistence within UT's context.

Definition and Measurement of Dropout

Two formulas for measuring dropout that have been widely used are the Total Enrollment Formula (TEF) and the National University Extension (NUEA) formula (Coldeway and Spencer, 1980). The TEF defines dropout as the percentage of course completers out of the total enrollment, while the NUEA formula defines it as the percentage of course completers out of the total enrollment who start the course (i.e., it excludes the non-starters).

Applying either of these two formulas to calculate dropout rates in distance education is problematic. These two definitions measure dropout at the end of the learning/study period, such as at the end of the semester/term or the end of the program. Thus with these formulas, students are categorized into two groups: those who complete and those who do not (Wong, 1987).

Distance education students do not usually initially declare either their ultimate goals or the period over which they intend to spread their study. Thus, it is difficult to decide whether non-completion means merely an interruption or a stoppage of study (Holmberg, 1977). Indeed, some students may take courses without the intention of getting credits.

As a result, distance educators usually define and measure dropout in various other ways. Woodley and Parlett (1983), for example, proposed four measures of performance which are: (1) non-completion of final registration (the

percentage of new enrollees who do not complete the final registration); (2) withdrawal rate (the percentage of students who register but do not sit for the end-of-year examination); (3) failure rate (the percentage of students who sit for the end-of-year examination but do not gain a course credit due to failure); and (4) overall wastage rate (the percentage of students who register but do not gain a course credit for reasons including withdrawal and failure).

Roberts (1984) proposes three other approaches to measuring dropout in distance education. According to Roberts, to make student dropout measurement easy to maintain and useful for purposes of comparison, the term dropout has to apply to three classes of students. These are: (1) those who inform the institution that they no longer wish to continue; (2) those who are prevented from continuing by the institution because of failure to satisfy regulations, such as not meeting academic standards; and (3) those who disappear and fail to respond to all forms of follow up procedures instigated by the institution. According to Roberts, students who request and are granted leave by the institution to discontinue their studies for a given period of time are not dropouts and should be excluded from the definition.

Wong (1987) believes that simply categorizing students as either completers or dropouts is not sufficient for the purpose of research:

> Surely, someone who completes more than 80 percent of the course should fall into a different category

> from someone who completes ten percent. (Wong, 1987, p. 5)

Therefore, he argues that a more dynamic and precise measure of completion is needed, one that could show completion rate at each point of the course for each student. Wong is interested not only in completion, but in student performance. According to him, completion rate, grades, and deviations (time taken by students to submit the assignments) all describe student performance; together with turnaround (time taken to return marked assignment to students), they provide a comprehensive and precise profile of distance education program outcomes.

Based on his study of 773 correspondence students enrolled at The Chinese University of Hong Kong for the 1984 Summer Session, Wong found that with each element of outcome (completion, deviation, grades and turnaround), it was possible to measure student performance throughout the course. As such, his study provided an instrument to look at what was happening at various stages of the distance education courses, so that necessary actions (interventions) could be taken to prevent students from dropping out.

Compared to the TEF and NUEA formulas, the latter definitions and measurements (Woodley and Parlett, 1983; Roberts, 1984; Wong, 1987) seem to be more suitable for the distance education context. Distance education has the dimension of "openness," that is it seeks to lift the demographic, economic and time barriers inherent in

conventional face-to-face education. As dropout is a measurement related to a specific "learning process" within a particular time frame, by conception, dropout seems to be contradictory to the dimension of openness intended by some distance educational programs. In the context of life-long learning, students at any point should be able to continue their learning process. Therefore, as long as students live, there will always be a possibility of continuation. Thus, the concept of dropout as used and measured in much of the literature is problematic for the context of this study.

However, some kind of measurements still need to be defined and conducted. Due to the uniqueness of distance education, perhaps a more useful focus than measuring "dropout" is a focus on "persistence." For the purpose of preventing students from "totally dropping out," student performance throughout a course can be monitored and addressed. Early recognition of potential non-persisters (such as students who do not sit the examinations or who have low grades) can be helpful in warning the institution to initiate actions to encourage the students to persist and continue.

Reasons for and Variables Related to Dropout in Distance Education

To provide this kind of early warning to the institution about students whose persistence is in doubt, it is helpful to

review the broad and detailed research devoted to exploring reasons for and variables related to dropout specifically in distance education. Such a review may reveal multiple variables (factors) that are related to students' decisions about dropping out, and may also show whether any of those variables are consonant with those suggested by the previously discussed models concerning dropout.

The review of this phenomenon in distance education starts with studies that explore the relationships between student persistence/dropout and variables related to student background characteristics, motivational/psychological, and academic and non-academic factors (Bartels, 1982; Woodley and Parlett, 1983; Gatz, 1985; Sweet, 1986; Taylor et al., 1986); Wong, 1987; Mardiani, 1988; and Wihardit, 1988). Next, it focuses on the relationships between dropout and learning style (Thompson, 1984 and Knox, 1987). The review closes by discussing Paul's 1990 study, which concentrates on analysis of institutional factors that contribute to lack of persistence in programs (Paul, 1990).

Individual characteristics, and academic and social environments. Based on questionnaires completed by withdrawn students at the end of academic years, Bartels (1982) analyzed the dropout problems at the Distance University Department of Fernuniversitaet, Germany. The analysis was specifically based on questionnaires completed by full-time and part-time students whose aim was to get a degree. Dropout students were

defined as those who had given up their studies at the Distance University altogether plus those who had changed their course of studies from that for which they initially registered.

The results of analyses showed that dropout was significantly related to school education before entering the Distance University, as well as to gender and age. Bartels found that students of Mathematics, for example, who did not have a formal entrance qualification discontinued their studies quickly. He also found that women students usually discontinued their studies more frequently than male students. Finally, he found that the older the part-time students, the lower the dropout rate.

His analysis of factors affecting dropout resulted in the identification of several distinctive factors: work load, deadlines, support services, and student's personal incompetencies. The effect of those factors on students' dropout was a rather integrated one:

> The triple stress caused by vocational commitment, family and study proved to be too great and, moreover, unexpected. Often, too, the printed study material could not be mastered within the periods set by the university. In addition, the fact that a student has to study in isolation also plays an essential part in dropping-out (Bartels, 1982, p. 8).

Woodley and Parlett (1983) investigated the reasons why students drop out from distance education in the British Open University. Based on information which had been collected

during more than ten years of study, they found that dropout was associated with various factors such as: (1) course factors (design, workload, level of difficulty, expectation of the content, broadcast, tuition, and other factors such as late mailings, ambiguous assessment questions, frequent errata in course materials, and faulty home experiment kits); (2) study environment factors (personal/domestic, work, financial support, lack of encouragement by spouse or employer, loss of quiet place to study); (3) motivational factors (goal achieved, goal changed, goal met better elsewhere, lack of impetus--student needs rest or time with family after several years of open university study, poor grades, never wanted credit); and (4) other factors (fear of exams, heavy workload caused by enrolling for too many courses, administrative errors, accidents such as registering for the wrong course, turning up on the wrong day for the exam, effects of receiving a decision on entitlement to credit exemptions).

They also investigated whether certain types of students were more likely to drop out than others. Unlike Bartels, they found that men were more likely than women to drop out (33% vs. 27%). Among new students, the curve was approximately U-shaped with the young (less than 29 years old) and the old (over 50 years old) more likely to drop-out. With regard to previous educational qualifications, the lower a person's previous educational qualifications, the more likely he or she was to drop out. They also found a high wastage rate among those in manual occupations, the retired and

unemployed, and those in institutions such as prisons and hospitals.

Based on those findings, they concluded that dropout is related to such variables as sex, occupation, educational qualifications, and choice of course. They continued to say that in trying to understand why some students persist while others drop out, one must acknowledge the complex interplay of certain 'push' and 'pull' factors. Push factors encourage students to continue, while pull factors lead to withdrawal. The push factors are: wants degree to get promotion, likes to finish something started, very interested in the subject matter, spouse was very encouraging, allowed time off for summer school. The push factors were: wants to spend more time with family, course was very difficult, fees were high, doesn't like course tutor, part time degree course available nearby. Dropout occurs when the pull factors outweigh the push factors. Finally, they suggest that for research to help in reducing dropout, experimental research on strategies to reduce student dropout could be more vigorously tried on certain courses and in certain regions.

Gatz (1985) believes that the examination of reasons for student dropout have been heavily focused on reactional, comparative and inferential methods. He argues that reactional studies are flawed because, due to the negative connotations of dropout, students had a tendency to give outside reasons as causes, rather than assessing themselves. Also, he claims that it is, at the least, difficult for

students to translate the complexity of reasons they identify as causes for dropout. Of the three types of methods, Gatz finds inferential methods, which provide descriptive (qualitative) information, are the most appropriate for an understanding of dropout.

Using inferential methods, Gatz interviewed 45 correspondence study students at Indiana University over the telephone. Each interview took, on the average, 45 minutes. Based on these interviews, he found that factors associated with completion and attrition were composed of five major dimensions: (1) significance and relative advantage of course to the student's goal; (2) appropriateness of the independent learning method; (3) feasibility in time; (4) integration with interests and background of the students; and (5) accommodation of the student's learning style.

It is helpful to detail each of these dimensions. The first dimension includes clarity about the significance of the course to student's interest, urgency of the course and strength of the importance of the course to the achievement of the goal. The second dimension is related to the appropriateness of an independent method for the student's personal study needs (including academic achievement, guidance, and discussion needs), and how these needs were facilitated by the study environment and the nature of the course. The third dimension, is associated with the student's attitude and the willingness to devote time to study. This is also related to the fact that students have other

responsibilities that limit their time for studies. The fourth dimension concerns the interplay between personal initial interests (reasons for entry) and the availability of study resources (study materials or content of the course and experts). And finally, the fifth dimension refers to the accommodation of the student's learning style via learning supports and instructional design of the course.

A year later, Sweet (1986) tested the application of Tinto's dropout model in distance education. His data were collected from 356 students who enrolled in courses under the British Columbia's Open Learning Institute during September and November, 1982. Due to the nature of distance education, he modified some measurements of the variables included in the model. For example, to measure academic integration, he found it necessary to include a measure of student involvement with, and reaction to the package of learning materials students received through the mails in addition to the student grade point average and students' perceptions of their course performance.

Using discriminant analysis, Sweet showed that the variables in Tinto's model were able to predict persistence and to correctly classify completers (40%) and non-completers (60%), despite the fact that key elements in Tinto's model had to be modified to suit the distance education situation. The result showed that, for the most part, relationships among model variables were consistent with Tinto's theoretical expectations. Goal satisfaction and institutional commitment

(measured by the intention to re-enrol in an OLI course within a year) were found to have direct effects on persistence, and, as anticipated for distance education students, goal satisfaction (as an attitude orientation) exerted the strongest influence. Sweet also found that academic and social integration variables had direct effects on goal satisfaction and institutional commitment, respectively. The complete results of Sweet's study are depicted in Figure 2.5.

However, Sweet's findings must be interpreted cautiously. Ideally, data for a process study like this should be gathered both when the students enter the program and throughout the semester. That way, both students' expectations and perceptions could be measured independently from their achievements. However, in this study, all but the demographic variables were collected after the semester ended. Therefore, the direct relationship between grade expectation and perceived academic performance may be misleading because everything students' felt at the point when the data were collected must have had been influenced by their experiences. Furthermore, as seen in Figure 2.5, only 19% of the variance in course persistence behavior could be explained by the variables in the model.

Also using Tinto's model, Taylor et al. (1986) conducted a cross-cultural multi-institutional study on student persistence in distance education. Their study was based on Tinto's model and Rekkedal's findings in NKI-Skolen Norway (discussed in a later section) which suggested that dropout

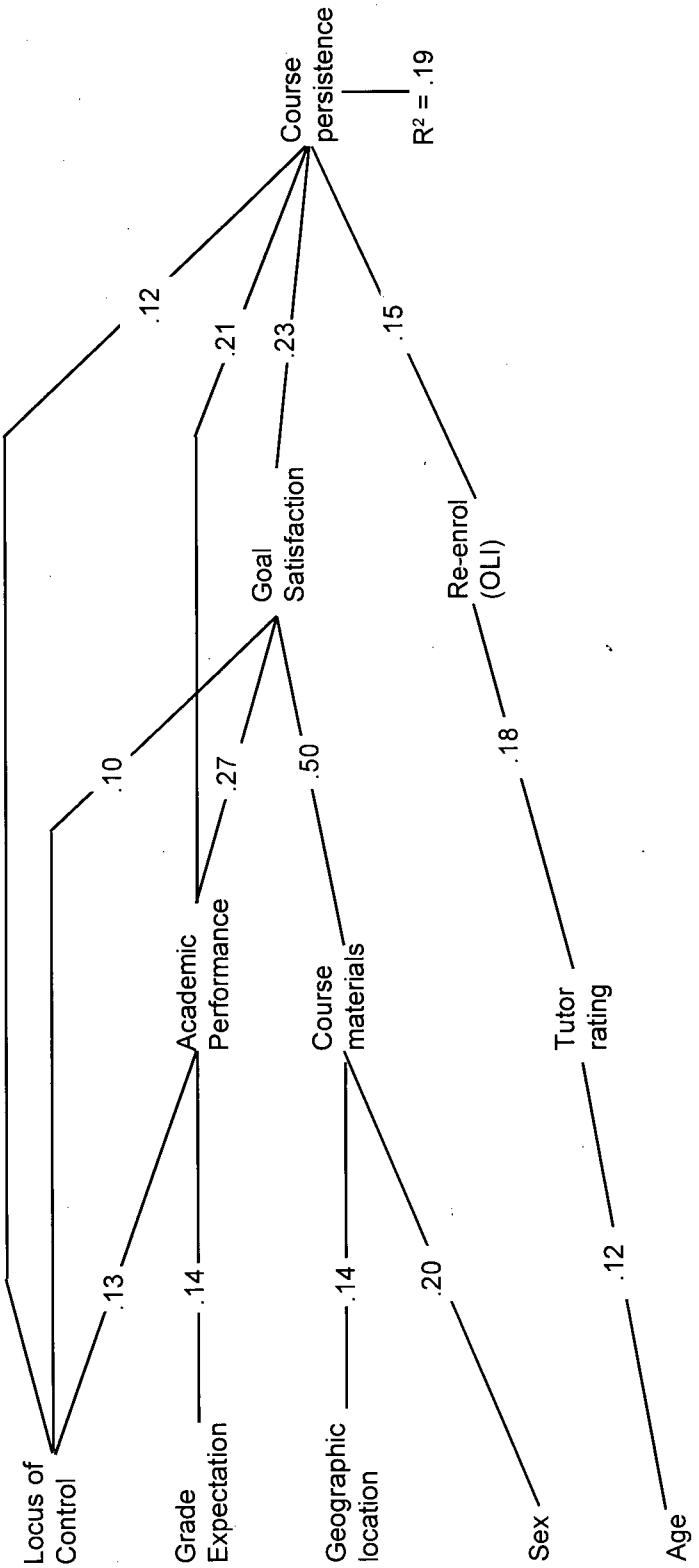


Figure 2.5. Sweet's path analysis on dropout in distance education

rates could be reduced by lowering the turnaround time. The turn-around time in this study was defined as the time from the moment the student mailed in the homework assignment for a study unit until it was received by the student with the tutor's corrections and comments (Rekkedal, 1983a; Rekkedal, 1983b).

Specifically, Taylor et al. used this turn-around time as a variable in examining the relationships between persistence until the end of each study unit ("unit level") and factors associated with social and academic integration, as well as the influence of age and gender on persistence. Social and academic integration were measured by the turnaround time, feedback interval and the number of additional contacts between student and institution beyond those demanded by the submission of assignments. The turn-around time in this study was defined as the elapsed time (in days) from mailing an assignment to receiving the commented on and/or corrected assignment, whereas the feedback interval was defined as "... the elapsed time (in days) between the receipt of feedback on consecutive written assignments" (Taylor et al., 1986, p. 77). Persistence was measured in terms of whether a student completed all the required assignments for the selected unit of study. This approach was chosen because of the difficulty of getting similar courses or programs in the five institutions sampled (Allama Iqbal Open University of Pakistan, Darling Downs Institute of Advanced Education of Queensland (DDIAE), OLI of British Columbia, Tasmanian State

Institute of Technology of Tasmania, and University of the South Pacific).

This study found there are no consistent relationships between turn-around time, feedback interval, and additional contacts and persistence among institutions. Only DDIAE's results seemed to be consistent with Rekkedal's conclusion that low turnaround time was likely to increase persistence. The DDIAE was also congruent with Tinto's model, which would tend to support the notion that regular feedback was likely to enhance persistence. With regard to additional contacts, the researchers found that only the Allama Iqbal Open University (AIOU) and DDIAE supported Tinto's perspective that the more contacts between students and institution, the more likely students were to persist. However, data on these additional contacts were not available from the OLI and the University of the South Pacific (USP). Taylor et al. pointed out, however, that this result needed to be interpreted cautiously, because students who did not complete requirements might drop out sufficiently early in the semester to limit contacts with the institution when compared with those students who remained active throughout the total period of the course.

The findings of Taylor et al. show that it is difficult to generalize findings derived from one context to another. This lack of generalizability of much of the research in distance education, therefore, makes replication studies necessary and important.

Using a comparative method, Wong (1987) tried to identify relationships between completion and a variety of factors in 14 separate studies. He found that completion was related to what he termed "student demographic characteristics" (age, sex, education level, occupational status), and "outcome variables" (completion of pre-course assignment, completion of first assignment, number of assignment submitted, turnaround time, deviation time of first assignment submission, and duration of the course).

Although Wong criticized these studies because they used incompatible or incomparable measurements of completion rate, he supported Taylor et al. who suggested that the relationship between the factors and dropout varied across institutions. In other words, factors significantly related to dropout in one study were not necessarily found to be significantly associated with dropout in other studies.

One study addressed Indonesia's situation directly. Mardiani (1988) examined the extent to which student support services were used by students, and how important the role(s) played by those services were in preventing student attrition at Universitas Terbuka (UT), the Indonesia Open University. First, she identified 450 active and non-active students. Active students were defined as those who registered during the time of data collection (December 1986), whereas non-active students were those who registered in the first semester of UT (September 1984) but did not register for any subsequent years. She asked (through questionnaires) these

active and non-active students to indicate their use of, and the importance of student support services. Non-active students were asked about why they withdrew.

Based on the frequency distribution of responses, she found that student withdrawal was not primarily due to the lack of student services. Her findings showed that the major causes for student withdrawal were lack of motivation and lack of time to study. This was understandable since about 80% of the sample (and of UT students) were full-time employees in the work place. She also found out that, among the student services available (face-to-face tutorials, tutorials by phone, tutorials by mail, advising services, study groups, student guidance, and information services), face-to-face tutorials and information services were the ones most used by students. Further, students also rated face-to-face tutorials and information services as the most important support services for gaining knowledge, for improving their grades, for motivating them to learn, and for preventing them from withdrawal. The services listed as the most needed by students were information services, library services, face-to-face tutorials, study groups, advising services, supplementary materials, student guidance, and counselling services.

These findings, however, are not surprising. This is because the other support services listed in the questionnaire were more difficult or less preferable to use. Telephone tutorials were not officially offered by UT, even though the very few students who had telephones might contact UT through

this medium. Mail, although accessible to almost all students, was not much used by students.

Wihardit (1988) also conducted a study at UT. He investigated characteristics that differentiated between non-registered (non-active registered students) and continuing students of UT. Based on responses from 800 students (400 non-active and 400 continuing students), he found that non-registered and continuing students were significantly different on characteristics such as sex, age, marital status, working areas (types of employer: private or government institutions), frequency of regional center visit, frequency of sending letters to UT, frequency of telephoning UT, and the location of the regional center to which the student belonged.

The nature of relationships between registration and these characteristics were described as follows: (1) male students had a higher rate of continuing registration than did female students, (2) students younger than age 31 tended to have higher rates of non-registration than those who were older, (3) students who worked for the government or as teachers had the lowest rates of non-registration, (4) students who discontinued their studies were those who were less likely to communicate with UT (either in person, by mail, or by telephone), and (6) the largest proportion of non-continuing students were located in Jakarta. This last variable (student location), however, should be interpreted cautiously, since the largest proportion of total UT students is located in Jakarta. Therefore, it should be expected that

Jakarta would also have the highest number of non-continuing students in this study.

Wihardit also found that there were significant relationships between late responses to questions asked by students (similar to Wong's "turnaround"), difficulty in getting information, and low scores, and the length of non-registration period (the period when students become non-active). This relationship between difficulty in getting information and the length of non-registration was congruent with Mardiani's findings. As discussed earlier, Mardiani found that information services were one of the support services rated most important to prevent withdrawal.

Relationship between learning style and dropout. In a rather simplistic rendering of the question, Thompson (1984) studied the possible relationship between dropout in distance education and students' learning style, by focusing on students' predisposition to field-dependent and field-independent cognitive styles. Thompson cited Messick's (1986) definition of field-dependence versus field-independence as an analytical versus a global approach to learning.

In this study, field-dependent persons referred to those who tended to employ external referents to define needs and standards, and who had difficulty in maintaining their own direction. Field-independence, on the contrary, referred to persons who were less influenced by authority figures and external standards. Thompson found that field-independent

persons learned more than field-dependent persons under conditions of intrinsic motivation. He suggested that field-independent persons tended to be more independent and autonomous, whereas field-dependent persons tended to have a greater need for the provision of structure and reinforcement. Field-dependence was associated with a preference for being with other people, while field-independence was associated with a more impersonal orientation.

Staying with this single-variable explanation, Thompson suggested that field-independent people appear to be more suited than field-dependent people for correspondence study. In other words, field-independent people are more likely to both survive and succeed in distance education than field-dependent people.

Knox (1987) tested this proposition. He investigated whether field-dependent persons were less suited than field-independent persons to correspondence study. Specifically, he wanted to see: (1) if students who register for correspondence study were characterized more by a cognitive style of field-independence than were normative groups; (2) if, among those students who register for correspondence study, field-dependent students were more likely than field-independent students to withdraw from their courses; and (3) if field-dependent students evaluated their correspondence study experience less positively than did field-independent students.

Based on the research conducted at the University of Manitoba, Knox concluded that participation in correspondence study was associated with field-independence. This implies that field-dependent persons are less inclined than field-independent persons to register for correspondence study. However, he further concluded that among those who registered, there is no significant difference between the more field-independent students and the more field-dependent students in persistence and evaluation of their correspondence study. The last two conclusions are based on the results which showed that there was no difference in: (1) the extent to which students felt tempted to withdraw from the course, and (2) the scores for the evaluation statements most closely related with the correspondence method.

This conclusion, however, should be interpreted cautiously. This is because the subjects of this study were clearly skewed in the direction of field-independence, so that even the subjects characterized as field-dependent persons in this study were more field-independent than the normative groups. Thus, the field-dependent group in this study was not representative of field-dependent persons in general. Therefore, it is understandable that there was no difference in attitude between the two groups of this study.

Institutional variables related to dropout. The final part of this study of variables specific to distance education concerns institutional variables. In the first relevant study

of these variables, Paul (1990) examined why many students of the National Correspondence College (NCC) of Zambia did not complete their studies. He interviewed the administrators, lecturers, and supervisors of the NCC, and analyzed students' record cards. Based on these, he concluded that there are two main factors which have caused the "demotivation" of students.

The first factor is related to the "irregularity" delivery (or "dispatch") of study materials. In many cases, students do not get study materials in sequence. In one of his studies, for example, he noted that students were sent later lessons before initial ones, due to the non-availability of the first ones.

The second factor has to do with the ability of the institution staff. He concluded that many members of the staff were not trained for their jobs. For example, in 1986, a mass cancellation of records about inactive students was carried out and new numbers were allocated; there was considerable confusion. Many students were not informed of their new numbers so that when they decided to continue their studies, they re-registered with their old numbers. This created problems in recording their files.

Paul, therefore, drew a relationship between student demotivation and irregularity in the administration of the NCC. These irregularities were due , he believed, mainly to the economic decline of the country which had adversely affected the smooth running of the college. Nevertheless, Paul's study is very interesting in light of Tinto's and

Kember's models concerning the importance of academic integration. This study showed that interruption in the academic and administrative environments could decrease students' motivation. The study is, unfortunately, limited in that it is based on the researcher's judgement rather than the students' points of view.

Summary of findings of studies about reasons for and variables related to dropout. Collectively, these studies reveal that dropout in distance education as well as in conventional education is a phenomenon related to both student characteristics and their academic and social environments. Student characteristics include demographic characteristics and other inner-psychological characteristics such as learning styles and motivation. Environmentally, dropout is associated with both the academic/institutional context and other external circumstances. All the studies indicate that these characteristics, factors and variables are invariably associated and (inconsistently) interact with each other; together they influence the experience of learning and the students' decision to persist or to drop out. None of the studies suggests a single variable that consistently explains dropout or persistent behavior. In other words, there appears to be no single reason for student dropout, and no single measure which can dramatically reduce dropout at a stroke (Kember, 1990).

Furthermore, it is apparent that the relationships between dropout and influential variables are context bound. Variables that were significantly associated with dropout in one institution (or sample) were not necessarily associated with it in others (Taylor et al., 1986; Wong, 1987). Even when the same variables were found to be significantly related to dropout in different institutions, the significance was not necessarily the same; one variable that was positively associated with dropout in one institution could be negatively related to dropout in another institution. For example, Bartels' study in Fernuniversitaet (Germany) found that female distance education students were more likely to discontinue than male students (1982), while Woodley and Parlett's in the British Open University study (1983) found the reverse. Such contradictory findings, combined with non-standard definitions and research methods further underline the necessity of regarding each study of dropout/persistence as highly context bound.

Efforts to reduce dropout: Empirical Studies

Despite the significance of the problem, few empirical studies have directly dealt with efforts to reduce dropout rates. Most studies, as reviewed above, have been descriptive and do not involve interventions.

One of the empirical studies devoted to reducing dropout was conducted in Athabasca University, Alberta. In its

project, Research and Evaluation of Distance Education for the Adult Leárner (REDEAL), a team of researchers explored the effects of a personalized system of instruction (PSI), the use of computer generated schedules, and a behavioral self-control package on student completion (Spencer, 1980a; Spencer, 1980b).

Personalized System of Instruction (PSI), as originally outlined by Keller (1968 cited in Spencer, 1980a), contains four basic components:

1. Reliance on the written word for instructional purposes.
2. Self-pacing; students work at a rate commensurate with their own abilities and other demands on their time.
3. Mastery; progress through a course is contingent on performing at a specified criterion [level].
4. The use of tutors to help students progress through a course and provide immediate feedback on their performance (p. 2).

According to Spencer, previous studies showed that PSI was effective in producing higher student achievement and course ratings in conventional (face-to-face) education. However, the facts showed that many distance courses either do not combine the elements of PSI in a systematic manner or leave out essential features (e.g., frequent assessment, immediate feedback, clear objectives, match between objectives and assessment, and systematic integration of the tutoring function) (Coldeway, 1982). Based on this, Spencer's study compared one version of the course (PSI-P), to a version of the course which was found to be instructionally weak (PSI-C),

a revised version of the course which had an improved instructional design (PSI-IB), and a version of the course which was exactly the same as the PSI-P version except feedback to the student was delayed (PSI-M).

The study showed that the original personalized system of instruction (PSI-P) version resulted in three times as many completions as in the course with structurally weaker personalized system (PSI-C) version, over twice as many completions as in the course with strengthened personalized system (PSI-IB) version, and twice as many completions as in the course with delayed feedback (PSI-M) version. Based on these results, the author analyzed the reasons for PSI's superiority and concluded it was because the PSI model had an instructional as well as management system for dealing with students. Specifically, the results suggested that the instructional design of a course could integrate course components with an effective delivery/management system. In the case of this study, one key element was the use of telephones for delivering feedback to the students.

Spencer (1980b) also reported the investigation of the effects of computer generated schedules on the performance of Athabasca University learners. This study was conducted during the academic year of 1978-1979 on students enrolled for an Introductory Interpersonal Communication course and Management course. Learners enrolling in these courses were contacted by phone and asked if they would like a study schedule generated for them. The study schedules were

generated using a unique computer program specifically designed for those courses. Basically, the schedules specified dates by which assignments and exams should have been completed based upon an estimation of the percentage of time the learners would require to complete each assignment and exam. Since learners could enroll any time during the year and some learners wished to complete the course in less than the specified time allotted (i.e. six - twelve months), the program was designed to take these variables into account. Learners who did not request the schedules proceeded in their studies without aid of specified dates by which to complete assignments and exams.

The results show that most learners, when given an option between receiving a study schedule or not, chose to receive a study schedule. This was interpreted to indicate that many of the learners felt some need for assistance in planning their course activities. However, the results also showed that the computer generated schedules did not appear to provide learners with the assistance they seemed to need, as only a small percentage of learners actually used the schedules. Furthermore, the learners indicated to their tutors a dislike for the schedules. Regarding completion rates, learners who received the schedules had an equivalent or lower completion rate than those who did not. However, it was difficult to generate generalizable conclusions about the effectiveness of the study schedules in positively influencing completion rates. This was because only a few learners actually followed

the schedules. All that could be concluded was that sending learners a study schedule did not appear to be an effective means of increasing completion rates.

These findings confirm the suggestions that institutional interventions could increase completion rates. These also support the findings of other studies (Woodley and Parlett, 1983; Gatz, 1985 and Paul, 1990) regarding the relationships between completion/dropout and variables related to course (design), motivational, and time factors. Furthermore, it is possible that students' dislike for, and non-use of, the computer generated schedules may indicate that the school-based schedules were incongruent with students' other commitments. Such a suggestion would seem to be indicated by the importance which other models suggested about the compatibility or congruence between students' academic and social circumstances and student completion.

NKI-Skolen in Norway (a private, non-profit foundation offering courses mainly within technical and vocational fields), is another institution which has conducted, in all, five experimental studies in the effort to increase persistence (Rekkedal, 1983a). The NKI distance teaching department is the second largest distance teaching institute in Norway, and enrols approximately 10,000 students annually.

The two primary goals of NKI's the experimental studies were first, to reduce the number of students discontinuing their studies and, second, to maintain persistence among active students. The studies were conducted after the

institute had observed a high rate of student discontinuation. Discontinued students included all individuals who had ceased submitting assignments without completing the number of study units for which they originally enrolled. A previous survey had found that 76.6% of the NKI students discontinued their studies about two and a half years after enrollment.

The first study of the five measured the effect of postcards and letters to encourage submission of assignments. A sequence of one postcard and two letters were sent to inactive students over three months, at one month intervals. The sequence was started automatically when a student failed to submit assignments for one whole calendar month, and stopped when the student resumed studies or made other contacts with the school's administration or counsellors. Both experimental and control groups consisted of 240 students. Data were analyzed by chi-square. Large and highly statistically significant differences between the groups were found after three months, e.g. during the third month, 46% of the experimental group had submitted lessons or made other contacts, compared to only 31% of the control group.

The second study involved three experimental groups and one control group. Each experimental group received one of the following:

(1) a course in study techniques that was sent to individual students immediately after receiving an enrollment form; the study material was posted one week later. Reminding

letters to submit the assignments were sent upon enrollment and 14, 28, and 42 days afterwards.

(2) the course in study techniques and the study material were sent immediately after enrollment. The same system of reminding letters was used.

(3) study materials were sent immediately after enrollment, but the students received no course in study techniques. The same system of reminding letters was applied.

The letters were typed on an automatic typewriter, personally addressed and signed by hand by the student's personal counsellor. The final letter (on the 42nd day) was not posted if the student had started on his/her ordinary studies. About one and a half months after enrollment, the students in all groups were given the treatment described in the first experiment if they had become inactive.

Rekkedal reported that students who received the follow-up letters started their studies earlier than those who did not receive the letters. All experimental groups showed better results than did the control group (although the exact figures were not reported). With respect to discontinuation rates, the data supported the conclusion that the course in study techniques and follow-up letters together might have helped to decrease the discontinuation rate.

The third study was based on the problem of long turn-around time, which is the lapse of time from the point when the student sent in an answer and then received it back with the tutor's comments on it. One hundred and twenty seven

students who enrolled in a 4-unit course in arithmetic were randomly assigned into experimental and control groups. The treatment for the experimental group was that the turn-around time was reduced by 3 days in relation to the control group. The result showed that the percentage of completions in the two groups were 91 and 69 respectively. The difference was found to be highly significant statistically. In summary, quicker handling of the students' assignments seemed to result in higher completion rates, which were considered to be the most important criterion variable.

The fourth study concerned pre-produced tutor's comments. Most correspondence tutors had found that written comments needed to be relatively long in order to be educationally efficient, and that more or less the same factual content was often written to many students. Thus, it was deemed reasonable to examine the effects of introducing pre-produced common materials covering general academic and study problems, in addition to the tutor's personal written comments to individual students. The aim was to increase the tutor's ability to individualize teaching within the realistic constraints of time and money. Parallel experiments were carried out at NKI and NKS (another correspondence institute) in Norway. Even though there were no general results from the two institutions because of the differences in their courses, content, and the tutor's responsibilities, the researchers found that one of the two experiments showed a statistically significant increase in completion rate (from 61 to 80%) in a

four-unit course. Students in both experimental groups also expressed very favorable attitudes towards the additional pre-produced comments.

The fifth study concerned the use of personal tutor-counsellors. This experiment tried to integrate educational and administrative arrangements which had seemed to help distance students complete courses. In this experiment, researchers tried to personalize the teaching by introducing one person who integrated the roles of tutor (in different subjects), student advisor and minor administrator, as per the standard distance education system. Thus, the functions normally carried out by different persons in a "specialized and industrialized" system of distance education were combined to personalize and individualize instruction. The results, taken 8 months after enrollment, showed that 27% of the experimental group and only 16% of the control group completed their studies, a highly significant difference. One year after enrollment, these figures had gone to 37% and 22% respectively. The experimental students also expressed significantly more favorable attitudes toward help and support received from the tutor.

NKI's findings, congruent with those of Athabasca University as reported by Spencer (1980), confirm the influences of institutional interventions on students' integration processes. That is, appropriate study supports (such as the provision of study technique guidance, reminders, feedback and personal tutor-counsellors) appear to facilitate

students' integration process and encourage persistence. In regard to turnaround, the finding of this study also support Wong's finding (1987) which showed that turnaround could be used as a predictor of completion.

Based on these studies, it is apparent that, although dropout is a very complex phenomenon, it is not too complex for intervention (Kember, 1990). Studies reported by Spencer (1980a, 1980b) and Rekkedal (1983a, 1983b), as well as elements implied by Tinto's and Kember's models of dropout, show that institutional interventions (such as the provision of feedback, encouragement, tutor comments, and tutor-counsellors) may help reduce dropout rates in distance education. However, as shown by Taylor's study, these intervention designs have to take into account the interplay of multiple influences, if they are to be successful (Kember, 1990).

Efforts to Reduce Dropout: Guided Didactic Conversation and Tutor-Counsellor.

Distance education is a mode of education that includes

> . . . various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organization (Holmberg, 1986, p. 2).

Distance education comprises one-way communication (presentation of content) by means of printed, broadcast or recorded presentations of learning materials, and two-way communication between students and the supporting institution (regarding both academic and administrative matters). Most two-way communication occurs in writing, or by telephone or via other media, and only secondarily and supplementarily occurs face-to-face.

Interaction or communication between students and the supporting institution, as well as with peer learners is very important in the student learning process. Even though distance education is designed for self-study, the students are by no means to be left alone.

Holmberg (1983) elected to test a form of distance education based on communication which could take the form of face to face conversation. He contended that even when such real conversation could not take place, it was the spirit and atmosphere of conversation that should - and largely did - characterize educational endeavors. He also believed that real learning was primarily an individual activity, attained only through an internalizing process. This is, in his view, a background theory on which distance education should be based. In Holmberg's view, individual learning can be supported and facilitated via what he calls a "guided didactic conversation." This is a kind of two-way conversation which occurs through written and telephone interaction between the students and the supporting institution.

Both the presentation of learning material in a printed or otherwise pre-produced format and the two-way communication brought about by assignments (and other interactions) serve the purposes of didactic conversation. The latter method of communication represents the real communication, while the former (course design or learning material presentation) represents the kind of simulated communication that paves the way for profitable interaction with the study materials.

The characteristics of guided didactic conversation are:

(1) easily accessible presentations of study matter; clear, somewhat colloquial language, easily readable writing; moderate density of information;

(2) explicit advice and suggestions to the student as to what to do and what to avoid, what to pay particular attention to and consider, with reasons provided;

(3) invitations to an exchange of views, to questions, to judgements of what is to be accepted and what is to be rejected;

(4) attempts to involve the student emotionally so that he or she takes a personal interest in the subject and its problems;

(5) personal style including the use of the personal and possessive pronouns; and

(6) demarcation of changes of themes through explicit statements, typographical means or, in recorded, spoken communication, through a change of speakers, e.g. male followed by female, or through pauses.

The assumption is that if a distance study course consistently represents a communication process resembling the character of a conversation, then the students will be more motivated and more successful than if the course has an impersonal textbook character (Holmberg, 1983).

A modification of Holmberg's guided didactic conversation concept was suggested by Roberts (1984), based on Peters' (1983) argument about distance education. Peters (1983) believes that distance education is a natural development of the industrial era and, therefore, distance education needs to be explained and analyzed using economic and industrial theories. He sees similarities between the development of a rapid changeover from individual labor to manufacture to mass production, a development from tools to mechanization to automation (Roberts, 1984).

Roberts believes that Peters' concept of industrialization is necessary for the future maintenance of cost efficiency in distance education but, at the same time, the contribution of Holmberg's concept of guided didactic conversation must be incorporated into any effective approach. In accordance with this, his suggestion was to develop guided didactic conversation by forwarding appropriate letters to students at the beginning of a program (as a welcoming letter), at the start of each semester (as an encouragement letter), and at the end of each semester (as a congratulation letter for the good results). Roberts also stressed the importance of helping students gain/increase self-confidence,

cope with the freedom of open learning, and improve study habits. These suggestions are much like the idea behind the NKI's experiments reviewed earlier.

Further, Roberts argues that there are more than educational outcomes to these structures. He notes that cost-effectiveness in distance education is keenly related to the effectiveness and success of its delivery system. In structure, it has

> ...the need for large numbers of distance education students to be enrolled in a small number of subjects where highly efficient industrialized processes [can be maintained]... Unfortunately, such mass production techniques are not enough on their own, since enormous numbers of students would drop out because of the lack of student support systems. Student support systems are expensive, though, and quickly reduce the cost-effectiveness of distance education. (Roberts, 1984, p. 63)

Therefore, it is necessary to find, somewhere along the line, a balance between the cost-saving industrialization and the cost-raising approaches of more elaborate student support systems (Roberts, 1984).

Another attempt to find answers for reducing dropout in distance education was made by Sewart (1984). He, like Holmberg, was also concerned with the interaction and communication between students and the institution or system. He argues that a package of pre-produced materials cannot perform all the functions of a conventional teacher. He points out that distance students lack immediate feedback and peer interaction as a benchmark against which to measure their

own performance. Students, Sewart believes, have an infinite variety of individual needs which are not wholly related to the subject that is being studied. These needs are of an educational kind, even of an academic kind, but they are not strictly related to a subject:

> The subject matter would embrace the strictly academic content of the course and advice/support would embrace general study problems arising from the individual circumstances of the student or the system of teaching peculiar to the institution... the subject matter is information or knowledge and the advice/support covers the way in which the student as an individual fits this new knowledge into his own peculiar pre-existing framework and into his everyday life style (Sewart, 1984, p. 10)

As such, Sewart argues for a structured support system, along the lines of NKI's tutor-counsellors (Rekkedal, 1983), to help address all of the students' needs (Sewart, 1982). He argues that, given these tutor-counsellors, distance education is not really a discrete teaching methodology, in that it offers a service to students at least as rich and as individualized as conventional education.

According to Sewart, unlike regular tutors who are usually responsible for only a particular subject matter, these tutor-counsellors should be responsible for all tuition and counselling of the students in their foundation year. They should be available on a regular basis for face-to-face, correspondence and telephone contact. In addition to this, a tutor-counsellor should also be responsible for marking and commenting on assignments. These tutor-counsellors could then

continue to advise the same students throughout the students' educational careers, although, after the first year, the responsibilities for tuition would pass to specialist faculty. In this arrangement, the original tutor-counsellors would provide educational support across disciplines and across faculties, and remain constant for the student from initial registration until graduation. Sewart believes that this individual and long standing relationship breaks down the isolation of the students, by providing sympathetic help in planning a beneficial student work pattern within a highly complex system.

All of these theories taken together suggest that, although distance education is characterized by the physical absence of teachers during study time, the functions of teachers still need to be accommodated. Those functions, such as giving encouragement, feedback, and comments, are very important in learning. Therefore, it is important for the institution to communicate with its students through intermediary agents or other means to address the multiple needs of both the student and the institution.

Summary

Table 2.1 summarizes the scope of the studies reviewed in this chapter. The table shows that the phenomenon of dropout has been widely reviewed and studied in various countries around the world.

Table 2.1

Summary of the Scope of Studies on Dropout.

Researcher	Institution	Country
Studies of Models and Concepts of Dropout:		
Tinto (1975)	-	-
Boshier (1973)	Wellington High School Evening Institute, the Department of University Extension of Victoria University, and the Wellington Workers' Educational Association	New Zealand
Kennedy & Powell (1976)	-	-
Kember (1989)	Open Learning Institute of Hongkong	Hongkong
Studies of Reasons:		
Bartels (1982)	Fernuniversitaet	Germany
Woodley & Parlett (1983)	British Open University	United Kingdom
Gatz (1985)	Indiana University	United States
Sweet (1986)	Open Learning Institute	B.C., Canada
Taylor, et al. (1986)	Allama Iqbal Open University	Pakistan
	Darling Down Institute of Advanced Education	Queensland
	Open Learning Institute	B.C., Canada
	Tasmanian State Institute of Technology	Tasmania
	University of the South Pacific	South Pacific
Wong (1987)	Chinese University of Hongkong	Hongkong
Knox (1987)	University of Manitoba	Canada
Mardiani (1988)	Universitas Terbuka	Indonesia
Wihardit (1988)	Universitas Terbuka	Indonesia
Paul (1990)	National Correspondence College (NCC)	Zambia
Studies of Efforts:		
Spencer (1980a, 1980b)	Athabasca University	Alberta, Canada
Rekkedal (1983a, 1983b)	NKI-Skolen	Norway
Holmberg (1986)	Fernuniversitaet	Germany
Roberts (1984)	Charles Sturt University	Riverina
Sewart (1984)	British Open University	United Kingdom

The dropout models reviewed initially, regardless of their differences, conceptualized dropout as a phenomenon which could be understood through an analysis of the interaction between individual participants and their environment. Tinto (1975) and Boshier (1973) stress the interactions of the individual with the academic environment, while Kennedy and Powell (1976) as well as Kember (1989) also emphasize the importance of the family and work environments. Despite the differences in terms used, all the models argue that the more compatible the participant's personal situation with the academic circumstances, the higher the likelihood of persistence.

In line with the models, the reviewed empirical studies show that student characteristics which seem to influence persistence include demographic characteristics and other inner-psychological characteristics such as learning styles and motivation. All the studies show that these characteristics are associated and interact with each other, and with both academic and non-academic environments. None of the studies suggests a single variable that consistently explains dropout.

With regard to the definition and measurement of dropout, the literature reveals that the persistence phenomenon has been mostly viewed, defined and measured in terms of dropout. As discussed earlier, applying this view (dropout) to distance education is problematic. Woodley and Parlett's (1983), Roberts' (1984) and Wong's (1987) approaches of measuring

student persistence in distance education rather than dropout seem to be more suitable compared to the others (i.e. TEF and NUEA approaches). Wong, in particular, proposes a continuous approach through measurements of students' performances or outcomes sought by the distance educators such as grades, submission of assignments, and course completion. Even though these approaches seem to be reasonable and manageable, some adaptations still need to be applied across different purposes and institutions.

Fortunately, studies also show that, despite its complexity, it would seem dropout could be somewhat prevented and reduced by a combination of institutional interventions. Such interventions include the accommodation of face-to-face teaching functions such as giving encouragement, feedback, and comments. The provision of these functions could be aided by employing Holmberg's concept of guided didactic conversation, tutor-counsellors, telephone tutoring, or letters.

Furthermore, the findings of Taylor et al. show that generalization of distance education research findings is problematic. Therefore, any method of interventions for a particular distance learning environment should be designed based on information derived from the context of the distance learning program in question; the review of the literature clearly shows that investigations, models, and theories do not seem to be generalizable across different institutions and programs.

Accordingly, in order to allow the reader to understand the contextual nature of the persistence phenomenon at UT, the next chapter reviews the literature detailing the contextual background of Indonesia (and UT) in which the study was conducted.

Chapter Three

Contextual Background

The National Context

Indonesia: demographic characteristics, economics, and politics. Indonesia is the largest archipelago in the world, stretching more than 3,500 miles, and consisting of over 14,000 islands (Asian Development Bank, 1986). It is the fifth most populous country in the world (179 million), with a relatively high population growth rate of almost two per cent per year.

Demographically, Indonesia has extensive age distribution characteristics with each age group significantly larger than that born before it (Hugo et al., 1987). In 1991, half of the population was under 20 years of age and 85 percent of the people still lived in the rural areas. The spread of the population throughout the country is very unbalanced with over 60 percent of the people living on the densely populated islands of Java, Bali, and Madura (National Development Information Office, 1992).

Economically, the country depends very much on oil revenue, although the agricultural and manufacturing sectors are becoming increasingly important. Major characteristics of the economy include low labor absorption rates and low rates of income per capita (about US $590.00 per annum). In the mid

1980's, the unemployment rate was about 42 per cent among the less educated in the rural areas, and 22 per cent among the educated in the urban areas (Asian Development Bank, 1986). These unemployed people tended to be those persons who, because of their illiteracy, could not be absorbed by the public or private sector. Despite this, during the last 20 years, the Indonesian economy has grown at an average of 7 per cent per year (Asian Development Bank, 1986).

Indonesia is probably the most ethnically and culturally heterogeneous of the world's largest nations (Hugo et al., 1987). Given the diversity and inter-regional heterogeneity, MacAndrews (1986) argued that what holds Indonesia together besides geographical contiguity is the strong, highly centralized government. Policy making is essentially a "top down" process in which the central government plays a prominent role. The political hierarchy is based in Jakarta, and the 27 provinces are not autonomous; therefore, the government management is highly bureaucratic.

Socio-cultural context. Indonesian society is a mosaic of ethnic and regional cultures (Hugo et al., 1987; Hill, 1989). Because of this, it would be misleading to assert that there is a social tradition representing the entire spectrum of Indonesian society. Rather, there is a mainstream culture which amalgamates characteristics of ethnic, religious, and regional values that are applicable to any social or geographical area in Indonesia.

Despite efforts to decentralize government to the provinces, Jakarta is still considered central for physical and social criteria of national achievements (Hill, 1989). Thus, the mainstream values of Jakarta are likely to become the values accepted throughout the country.

Over the last two decades, increased access to education in general has opened up more opportunities for vertical and horizontal movement of individuals within the society (regardless of cause). This opportunity has created an atmosphere in which mainstream values are more widely accepted. Thus, together with the decline in the importance of royal titles (Indonesia proclaimed its independence in 1945 as a republic but local rajahs and sultans are still recognized), academic achievements have become an important vehicle for attaining social status.

Recent demographic trends have shown an increase in the number of families and a decline in the number of members of a nuclear family (Hugo et al., 1987). These trends, however, do not necessarily mean a direct decline in the value of extended family or in the importance of the extended family in the decision making process of an individual or a (nuclear) family within that extended family. In many cases, extended family plays a very significant role in an Indonesian individual's life, especially in making decisions which will affect the status of the extended family. While individuals are more likely be left alone in deciding where they would like to live, other decisions, such as whom they will marry, what

religion they will follow, what school they will attend and what subject they will study, are likely to be strongly influenced by others in their family.

"Keleluasaan individu" (individual space) in making a decision has to be explained by referring to the two most formative forces in the society: the government and the kinship association. The bureaucratic government systems require individuals to blindly obey regulations to avoid direct contact (i.e. confrontation) with the enforcing agents. Further, while government controls many aspects of individuals' lives and might precondition individuals to avoid decision making, there may also be cases when individuals simply hesitate to make decisions because they do not want, or cannot not afford to, offend the reference figures (e.g. employer, teacher, etc.) who are socially expected to have the wisdom to decide for them.

On the other hand, Hugo et al. also claim that, within ethnic groups, Indonesians have kinship and regional or local grouping loyalties, and frequently their behavior is influenced by group norms formalized in a body of customary ("adat") law (Hugo et al., 1987). Furthermore, Maude (1979) and Naim (1976) suggested that, although the explicit or apparent rationale of a decision might be economic, it also might be more strongly influenced by institutionalized customs.

Another value still strongly felt in Indonesian society, regardless of the accepted complementary roles of women and

men, is that men are still expected to be more educated than women (Locher-Scholten and Niehof, 1987). They are expected to pursue higher education, and become the bread (or rather rice) winners in the families.

Perhaps the most concise description of Indonesian socio-cultural characteristics is found in the work of Dunbar (1991). He listed six key factors influencing decision making, relation to authority, and attitude toward confrontation. Indonesian society, he explained, included:

1. the existence of elaborate, formal social hierarchies;
2. [an overall pattern of] individual behavior which was determined by relative status in social situations, which for most means submission to an authority figure, and approval seeking;
3. unconditional deference to the authority figure in matters of taste, judgement, knowledge, and opinion;
4. a strong sense of communality or group identification, and the shunning of individualism;
5. social behavior delineated by numerous implicit rules which establish 'correct' behavior and attitudes;
6. an overriding requirement for social harmony and the avoidance of confrontation (p. 167).

Education. One of the primary ways these socio-cultural norms are reinforced is, of course, through the educational system. At the current time, six years of primary education is compulsory for every child aged 7-12 years. Secondary education (for ages 13-18 years) is divided into two levels, junior and senior secondary. At the junior level, most schools are general secondary schools (Sekolah Menengah Pertama - SMP); only a few are vocational and technical. At

the senior level, while the majority are still general secondary schools (Sekolah Menengah Atas - SMA), proportionately more vocational and technical schools exist (Asian Development Bank, 1986).

The curricula for both primary and secondary education are developed by the Directorate of Primary and Secondary Education of the Ministry of Education and Culture. Schools are to adopt this standardized curriculum with minimum adaptation to local situations. For example, in addition to pre-vocational, technical, and general subjects, the secondary schools must also teach moral and ideological courses. The government heavily emphasizes this moral and ideological training in order to have students internalize the political aspirations of the nation (Asian Development Bank, 1986).

These observations speak to the content of the standard curricula, but this content heavily affects teaching methods as well. For example, senior secondary school students must take seventeen courses in almost every semester. Efforts to reduce this large number of courses and create a more effective curriculum have not been successful (Asian Development Bank, 1986), even though the requirement of so many courses hampers the development of a holistic or deep approach to learning. The study load inevitably forces students into rote learning, and entrenches examination/testing-oriented methods.

Interestingly, Dunbar (1991) found that serious reading and writing are widely unpopular and not highly valued as a

means of gaining or communicating knowledge or a source of personal improvement in Indonesia. Rather, he claimed that people still prefer direct, oral, interpersonal communication, ideally in a sociable atmosphere, for gaining new knowledge. Furthermore, Dunbar observed that learning is usually perceived in Indonesia as part of an immediate and hierarchical relationship with teachers who possess correct and unchallengeable knowledge. This consideration of educational content, methods, and cultural preconceptions about teachers thus seems to reinforce a tendency for Indonesian learners to focus their efforts on passing examinations and passively submitting to the directions of their teachers (Dunbar, 1991).

Testing this tendency is outside the scope of this study. Nevertheless, the focus of this study, i.e. to test mechanisms designed to improve persistence in adult distance education at UT, necessarily considers the implications of Dunbar's observations. Specifically, it considers that distance education, by conception, largely involves reading, writing, minimal face-to-face contact, and independent rather than examination driven or teacher led study patterns. If Dunbar's cultural observations (which are corroborated by the researcher's personal experience as a member of the Indonesian culture) about Indonesians are valid, distance education could prove problematic in an Indonesian context; one manifestation of this could be a high rate of student non-persistence.

Implications for distance education. The distance education program designed by Universitas Terbuka was originally deeply influenced by the system established in western countries, particularly that of the British Open University (BOU). The BOU model involves the large-scale dissemination of mainly text-based instructional media supported by a centralized student administration and support service. It appears the UT planners assumed that

> Indonesian distance learners would behave in much the same ways as their western counterparts when faced with teaching and learning via mediation, most eventually mastering the technique of education without a direct and continuous personal relationship with a teacher. (Dunbar, 1991, p. 162)

However, based on the previous discussion, this assumption must be questioned.

Unlike western culture, which is in general more likely to foster personal independence, individualism, and personal autonomy, Indonesian culture emphasizes respect, submission, and deference (Dunbar, 1991). Within Indonesian culture, individualistic behavior, no matter how creative, original, or useful, is usually discouraged. The western concept of individual intellectual and physical self-sufficiency, leading to a strong sense of separate personal identity, might even be considered anti-social and arrogant by Indonesians. Accordingly, Indonesians are unlikely to act with individual autonomy and are accustomed to avoid behaviors or statements which might be construed by others to be expressions of personal independence (Dunbar, 1991). With regard to learning

situations, they are acclimatized to be told what to do and not to question anything that teachers tell them, and therefore they are most likely teacher-dependent learners.

On the other hand, the model adopted by UT assumes that students are capable of autonomous learning behaviors, and that on entry they are psychologically prepared for the personal demands imposed by a teacher-independent, self-study regime. Perhaps because of cultural expectations to get university degrees, students themselves apparently believed this non-familiar educational approach was worth trying. Indeed, when UT was initially opened, the number of applications was overwhelming. This illustrates the extent of the desire to meet the expectations of family and society for university degrees, to increase employability, and to enhance individual ability to move vertically both in career and in social status.

However, the applicants seemed to be ignorant of the requirements of distance education and the consequences of not fulfilling them. This lack of readiness combined with minimum guidance from the institution resulted in high attrition rates. As Table 1:1 showed, the highest completion rate of UT students since it opened in 1984 was only 7.4 percent (see Table 1.1). This means that about 92.6 percent of enrollees did not complete their programs or did not graduate within a ten year period. This is markedly higher than, for example, the wastage rate (defined as the percentage of students who registered in the course(s) but did not get the course credit)

of Athabasca University in Alberta (71%) and The National University Association in USA (40%) as they are reported by Woodley and Parlett (1983).

As noted by Mardiani's 1988 study in Indonesia, most students rated face-to-face tutorials and information services as the most important support services for gaining knowledge, for improving their grades, for motivating them to learn, and for preventing them from withdrawing. The study also showed that the services listed as the most needed by students were information services, library services, face-to-face tutorials, study groups, advising services, supplementary materials, student guidance, and counselling services. These findings would appear to support the contention that UT students were still looking for conventional face-to-face and guided teaching methods, even while engaged in distance education.

Universitas Terbuka's Institutional Background

History and purpose of the establishment of Universitas Terbuka.

Indonesia started using a distance education system in 1955 with the establishment of a correspondence diploma program for upgrading teachers. However, it was not until 1981 when two distance education projects were started to give in-service training to secondary and tertiary level teachers that a distance education system was widely utilized. These

programs were established as crash programs for teacher training to keep up with the demand for additional teachers. Subsequently, the skills of those teachers who needed upgrading could only be met with distance education, since regular training was too expensive and replacing teachers for further training was difficult. It was these programs which later formed a part of UT.

Universitas Terbuka (UT) is a state university and the only open university in Indonesia. It was established in September 1984 with three main objectives: (1) to widen access to higher education, especially for recent graduates of senior high schools; (2) to train increasing numbers of students in areas demanded by the economic and cultural development of the country; and (3) to upgrade secondary school teachers who graduated from the short-term programs to enable them to obtain the full-teacher training degree (Asian Development Bank, 1986). Specifically, UT was intended to be a flexible and inexpensive university focusing on serving people who did not have the opportunity to attend conventional face-to-face higher education institutions for various reasons, including lack of funding, living in isolated and rural areas, and working full-time (Universitas Terbuka, 1991a).

At the time of this study, UT offered both diploma and degree programs under four different faculties: (1) the Faculty of Economics and Management; (2) the Faculty of Mathematics and Statistics; (3) the Faculty of Social and

Political Sciences; and (4) the Faculty of Education. The Faculty of Education is actually the transferred in-service teacher training program mentioned earlier, and accepted only practicing teachers. The emphasis of UT is more on social sciences and mathematics rather than on physical sciences and technologies. This is because UT could not provide facilities for courses which required laboratory work such as physics and biology.

Admission and registration system. Unlike the British Open University (BOU), UT requires formal entrance qualifications such as the Indonesian High School certificate or its equivalent. However, there are no further requirements for students to be accepted. It is very easy to become an UT student. Students simply have to buy a registration form from either a regional office or a post office. The completed registration form may be mailed directly to the central office or to the regional offices. However, all registrations are processed and the records are kept in the computing center at the central office in Jakarta.

Students may register throughout the year except in what is called the "off-registration session." Students' registration is valid for 15 months from the date of registration, or for two following final examination periods (two semesters). The validity of this registration determines the eligibility of the students to take final examinations in the registered courses. UT administers two final examinations

per year (in June and December). Students are eligible to take the first exams for the courses in which they are registered after at least 10 weeks and no later than 15 months from the registration date. In other words, if they missed their first examination, they are still eligible to write the examinations the following semester (without paying the course registration fee); but, if they miss this second chance, they are not eligible to write the examinations without re-registering for the courses (which means paying the course registration fee again).

New enrollees have to register for a package ("PAKET 1") consisting of 4 to 5 foundation courses (depending upon the major they take). Students, however, are allowed to take as many or as few courses as they want in the subsequent semesters. The only restriction students have to consider regarding the number of courses taken is the course registration fees (tuition fees). Tuition fees are determined by the number of credits such as follows:

(1) 2 - 9 credits : Rp. 45,000 Cdn $28

(2) 13 - 15 credits : Rp. 60,000 Cdn $38

(3) 16 - 18 courses : Rp. 90,000 Cdn $56

(4) 19 - 21 credits : Rp. 105,000 Cdn $66

(5) 22 - 24 credits : Rp. 120,000 Cdn $75

where Cdn $1.00 is about equal to Rp.1,600 (1.600 rupiahs).

Student records (personal and academic) are maintained as long as they are actively taking courses. Students are allowed to suspend their studies for up to two academic years

(i.e. four semesters). If students do not register for any course in four continuous semesters, their records are "frozen." This means that if they wish to continue to study again, they must apply as new students. However, their previous courses may be transferred into their new records.

Instructional system. Because of the diverse target population, UT has elected to use the simplest system of distance education possible with available and accessible resources. Print materials were selected as the primary instructional delivery system. The choice of print materials as the primary medium was based on the low price and the relatively simple production process. Occasionally, certain course content such as language pronunciation may be delivered via audio-cassettes. In general, print materials represent about 96% of the total course materials (UNESCO/ICDE, 1990).

The course materials are generally the work of individuals rather than teams. The team approach is used only to develop the curriculum and to select the course writers (content experts). The course writers (who are nationally known professors from conventional universities) have almost no communication with UT's staff who are responsible for editing and typing the materials into the ready-to-typeset form.

Course materials are sent to students (who put in an order) by post. In the first two years of operation (1984-1986) the students had to pick up the course materials from

the post office; but beginning September 1986, after a new administrative system was introduced, students were able to get their modules at their homes. The new system also allowed students to take their choice of courses within the limits posed by the curriculum. Previously, students had to take courses in packages, so that all students would have to register for the same courses. In 1986, the delivery system became much more complicated. Before the new system was introduced, every student within the same study program received the same course materials at the post office. After the new system was applied, registration for courses had to be administered and recorded separately for each student.

Students are expected to study the provided materials independently. As a support, two free tutorial sessions per semester are provided. It was originally expected that tutorial sessions would be used to help students overcome difficult parts of course content. However, those tutorial sessions are limited to only twice per course per year (each only lasts about 60-120 minutes) and are usually held in the cities where the regional offices are located. Therefore, tutorial sessions are mostly unpopular and attended by only about 10 per cent of the student population (Asian Development Bank, 1986). Because of this, only courses that are requested by students (through their study group--see below) are offered in tutorials. If and only if a study group consists of at least 20 students, it may request tutorials for particular

courses. Individual requests for tutorials are not granted since they are not considered cost-effective.

UT encourages students to set up study groups. Survey results indicated that, at one point, throughout the country more than one thousand study groups existed (Asian Development Bank, 1986). Further, it is also common for students to form study groups and take advantage of private tutors. Private tutors are tutors who are not hired by UT but by students themselves (Belawati, 1988). The large number of UT students has also attracted private sector organizations to offer intensive tutorial programs for students. However, since this type of tutorial usually requires relatively high fees, few students take advantage of this service.

Radio and television broadcasts supplement the print materials, but are used minimally--about 1% of the total course materials--(UNESCO/ICDE, 1990), though for different reasons. Unfortunately, radio, although it is accessible to most students, does not seem to be popular with them. This is perhaps because students are only able to hear the program once, and because of some scheduling problems. Television, on the other hand, is used only on a limited basis (25 minutes for every two weeks), due to the high cost of transmission. The allotted broadcast time is used more for promotional aspects than for instructional ones.

UT has established 32 regional offices throughout the 27 provinces. Many inexpensive channels were tried to communicate with these offices. However, apart from the

postal service which is adequately accessible to people throughout the country, no other channel appeared to function well. Telephone and telex are used for urgent data transfer and administrative matters. However, the use of telex services is limited because only about half of the regional offices have telex machines. It is not easy to set up telex machines at these offices because of the low quality of the telephone network. Although Indonesia has an excellent domestic satellite system, the ground telephone lines are antiquated and full of noise interference (Asian Development Bank, 1986).

Communication with students is even more difficult to establish and to maintain. Communication channels such as those widely used in distance education in developed countries (e.g. computer networks, audio conferences, etc.) are difficult if not impossible for students to access. Thus, the only communication channel accessible to all students is mail, while telephone is only accessible to some students in urban areas. A telephone is still a luxury for most Indonesians.

The examination system requires students to come to particular places, usually local schools in the regional center's areas, to write final examinations. In addition to these final examinations, students are also encouraged to do self-tests contained in the course materials and to write a take-home mid-term examination in the middle of the semester. The completed mid-term examination is to be submitted to UT by a certain deadline. All examinations are in the form of

objective tests and students' answers are scanned and scored by computer at the main office in Jakarta. The mid-term examination score, however, is not always added to the final examination score for students' final grades because of the infrequent rate at which it is submitted. Therefore, final examination results (grades) are usually the only feedback given to students, and those grades are the only regular feedback that students receive from the institution. In general, two-way communication between students and the institution is limited to this final examination event.

Institutional factors related to persistence. Distance education, as defined by Holmberg (1986), includes

> . . . various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organization. (p. 2)

It comprises one-way communication (presentation of content) by means of printed, broadcast and recorded presentations of learning materials, and two-way communication between students and the supporting institution (regarding both academic and administrative matters).

This kind of education, as modeled by the British Open University (BOU) and Open Learning Agency (OLA), is followed by UT. However, unlike BOU which takes advantage of accessible high technologies to supplement its printed course

materials, UT has to rely heavily on the print medium. The limitation in accessible technologies such as telephone and television makes two-way communication between the institution and students difficult to establish and to maintain. Yet, UT was convinced that its distance education system could succeed.

Despite its initial success in attracting applicants, the lack of communication between students and the institution and among other students remains. Soon after enrollment students find out that the institution can offer only limited support services, and can maintain no regular individual contact. Basically students are expected to study on their own without assistance from the institution. Decrease in enrollment and re-registration rates seem to show that this lack of support has decreased the initial enthusiasm and good expectations held by students.

The lack of communication channels has also created problems that have possibly contributed to a poor image of UT. When the university implemented the new administration system in 1986, there was a lot of confusion. The new system allowed students to receive the package of course materials at their own homes. However, the university administrators did not realize that some students might have not have written their addresses properly on the computer sheets, and therefore many students never received their course materials. Since they did not know where to ask and were very upset, many students complained in the national newspaper. This led to a decrease

in the rates of re-registration and the rate of new enrollments in the following academic years.

The quality of course materials is also a concern. Students often complain about the number of mistakes they find in the modules. In addition, the widespread use of outside course writers (content experts) also leads to loss of control over the process, and errors and delays in materials production (UNESCO/ICDE, 1990). This, again, has been mentioned by students as a source of dissatisfaction; and may possibly contribute to the reasons for high rate of attrition.

Additionally, UT over-centralizes most functions in Jakarta for the supply of a service to a geographically-dispersed students/clientele (UNESCO/ICDE, 1990). The use of a regional center network purely for administrative purposes makes the system of administration lack cohesiveness and responsiveness. Although students are welcome to contact personnel at the regional centers, no special personnel have been formally appointed as, for example, tutor-counsellors, such as those employed by the Open University in United Kingdom (Sewart, 1982).

As described earlier, UT uses multiple choice forms for assessing student learning performance. This assessment (examination) is the only well-used form of two-way communication between UT and its students. There is no other substantial mechanism to monitor the learning progress of students or to attend to student feedback. Therefore, students are expected to monitor their own progress and

provide self-feedback for their performance. The self-tests contained in the course materials (modules) are expected to be used for this self-feedback. Interestingly, there is no mandatory requirement for students to actually possess or study learning materials produced by the university. It will be assumed that students have learned from the pre-produced materials if they pass the final examination.

As a comparison, Table 3.1 illustrates the differences between UT and four other distance education institutions (British Open University, British Columbia's Open Learning Agency, Thailand's Sukhothai Thammathirat Open University, and India's Indira Gandhi National Open University) regarding instructional and support system. The table shows that, unlike OLA, BOU and STOU, which deliver learning materials through multimedia instructional channels, UT uses mainly printed text materials. Furthermore, while OLA, BOU, IGNOU and STOU employ both various tutorial and counselling systems, UT employs only limited face-to-face tutorials. Moreover, unlike the other four institutions' students who receive written comments on their assignments in addition to their examination grades as feedback, UT's students only receive examination grades as feedback. The self-tests (if they were submitted) are not commented on and returned to the students. The table also shows that UT applies restrictions for course tuition payments and course registration. On the other hand, both OLA and BOU allow students to pay tuition based on individual credits. This shows that compared to other

Table 3.1

Instructional and Support Systems of Universitas Terbuka (UT)[a], British Columbia Open Learning Agency (OLA)[a], the British Open University (BOU)[a], the Indira Gandhi National Open University (IGNOU)[b], and Sukhothai Thammathirat Open University (STOU)[c]

	UT	OLA	BOU	IGNOU	STOU
Registration	Limited Registration Periods	Open All Year (Open Entry)	Start Point in January	Start Point in Januari/ February	Start Point in January
Nature of Course Registration	Must be for the whole program	May or may not be for the whole progrma	May or may not be for the whole program	Must be for the whole program	Must be for the whole program
Course Registration (one payment)	Valid for two semesters	Valid for one year	Valid for one year	-	Valid until Pass the examination
Payment Policy	Per Credit Packages	Per Individual Credits	Per Individual Credits	-	-
Instructional Media	Mainly Printed Text (96%)	Multimedia	Multimedia	Mainly Printed Text (80%)	Multimedia

Continued on the next page...

[a]1995
[b]Reddy (1989)
[c]Sriprasart et al. (1988)

Table 3.1 continued...

	UT	OLA	BOU	IGNOU	STOU
Tutorial System	Limited Face-to-face	Telephone Audio-conferencing Computer-conferencing	Face-to-face Telephone Summer School Correspondence Computer-conferencing	Face-to-face	Face-to-face with pre-produced materials
Counselling System	Not Available	Personal Subject-Tutor	Personal Tutor-Counsellor	Academic Counsellor	30 minutes counselling prior to tutorials
System of Examination	Mass	Individual	Individual	Mass	Mass
Types of Evaluation	Non-commented Assignment Final Examinations	Commented Assignments Final Examinations	Commented Assignments Final Examinations	Commented Assignments Final Examination	Commented Assignments Final Examination
Evaluation Time	Set by the university	Set by individual students	Set by the university	Set by the university	Set by the university
Student Feedback	Examination Grades	Written Comments on Assignments Grades	Written Comments on Assignments Grades	Written Comments on Assignments	Written Comments on Assignments
Credit Transfer	Not Transferable	Transferable	Transferable with arrange-ments	-	-

distance education institutions, UT offers very limited instructional and support systems to its students.

In summary, the institutional factors that may be related to lack of persistence at UT are:

(1) the lack of communication channels other than the postal service;
(2) the lack of personal contact, guidance, and counselling for students;
(3) the lack of feedback system to assess student progress;
(4) the reliance on single final examinations for getting information on student progress;
(5) the exclusive use of regional centers for administrative matters; and
(6) the exclusive use of low quality printed materials (modules) as the learning materials.

The Background of the Students

Demographic characteristics. With regard to age, UT students are very similar to both OLA and BOU students (Table 3.2). UT statistics (1992) show that the largest group of students registered in 1991 (67.4%) were between the ages of 25 and 39 years. The percentage of students under 25 years old, the more recent high school graduates, was only about 13 percent. These figures show that UT attracted more older adult students than the high school graduates initially targeted. Similarly, the largest group of 1991 OLA students

Table 3.2

Student Demographic Characteristics of Universitas Terbuka (UT), Open Learning Agency (OLA), and the British Open University (BOU)

Characteristics	Percentage of the total population		
	UT[a]	OLA[b]	BOU[c]
Age			
25-39	67.4	52.0	56.0
<25	12.75	28.0	4.5
Full-time Workers	73.3	59.0	73.7
Highest Previous Education			
High School	78.7	23.0	32.9[d]
Some University Experience	18.8	58.0	22.4
University Graduates	1.7	17.0	11.0
Gender			
Male	75.9	31.0	52.4
Female	24.1	69.0	47.6
Number of Course Taken in One Semester	4-6	1[e]	1[f]

[a]Universitas Terbuka, 1991.
[b]Based on student data of 1990-1991 (Open Learning Agency, 1991).
[c]Based on student data of 1989 (The Open University and The Department of Education and Science, 1991).
[d]'A' level: equivalent to high school diploma qualified to enter university.
[e]Black (1992).
[f]Woodley & Parlett (1983)

(52.0%) and 1989 BOU students (56.0%) were between the ages of 25 and 39 years.

The vast majority of 1991 UT students were full-time workers and therefore only part-time students (73.3%). Further, most students worked in government agencies or the civil service (44%). Both OLA and BOU students were also mostly employed (59.0% and 73.7%). The majority of employed OLA students were white collar workers and professionals/technicians (82.2%).

However, UT's students seem to be different from OLA students in terms of educational background and course load. The majority of UT's students (78.7%) had only a senior high school certificate; only about 18.8 percent of them had some post-secondary education. By contrast, over 58% percent of OLA university students had some post-secondary education experience; 17.0% of them were university graduates. BOU students' categories, on the other hand, were difficult to compare since the qualification requirements were somewhat different. The table shows, however, that almost 34% of BOU students had some university experience or a degree.

The other difference is that the vast majority of UT students were male (75.9%). This is consistent with the Indonesian socio-cultural tradition, in which males, more than females, are more urged and expected to go into higher education. As a comparison, most of 1991 OLA students were female (69.0). At BOU, on the other hand, the percentage of

male and female students was almost equal (52.4% male and 47.6% female).

Further, unlike most of OLA (85%) and BOU (78%) students who took only one course at a time, UT students took 4 to 6 courses in one semester. There are several possible reasons for this behavior. First, it is perhaps because they did not want to waste the registration fee which they had paid (see UT's tuition policy on page 86). And second, it is probably due to their enthusiasm to graduate as soon as possible combined with their ignorance of the course requirements.

In summary, the table indicates that UT deals with less educated and part-time students who take more courses than, for example, both OLA and BOU students.

Reason, goal, and satisfaction. Putra (1993), in an effort to further clarify characteristics of these students, conducted a survey on a random, representative 195 active and 287 nonactive (dropout) students regarding their experiences of studying at UT. Active students were those who maintained their registration and did not suspend their studies for more than two years. Nonactive students were those who had left their studies for at least four consequent semesters (two years). Putra mailed open-ended questionnaires asking students to identify their reasons for entering UT (or reasons for choosing UT), their goals in studying, and their satisfactions from studying at UT. The questionnaire also

gave students the opportunity to give general comments regarding these variables.

The question regarding reasons for choosing UT was a closed multiple choice one providing three possibilities: (1) could not get admitted to other universities (conventional ones); (2) could study while continuing to work; and (3) the cost of studying at UT is relatively cheap. Responses to this question show that the majority of students (77.4% of active students and 82.2% of nonactive students) entered UT because of its time flexibility ("could study while continuing to work"). This shows that UT students expected to successfully combine their studies at UT with working full-time.

Further, students were asked to identify their goals of studying through a closed multiple choice question containing five possibilities: (1) escape and get relief from boredom; (2) make new and interesting friends; (3) improve or get ahead on the job/new job; (4) fulfill requirements set by the authority (employer); and (5) seek learning for its own sake. The results show that the majority of students indicated job improvement and fulfillment of an authority's request fulfillment (about 53 percent of active students and 46 percent of nonactive students), and learning for the sake of learning itself (about 40 percent of active and 48 percent of nonactive students) as their main goals for registering at UT. Only a few students gave making friends and escaping from boredom as their main goals.

Among the total sample, some 255 students (107 active and 148 nonactive students) provided comments regarding their reasons, goals and satisfactions. These comments were grouped by Putra (1993) into five categories: examinations, fees or finance, communication, job and family responsibilities, and course materials.

Examinations. Comments regarding examinations related to the delay in the announcement of the results, the level of difficulty of examination items, the locations in which the examinations were held, the number of examinations held in one year, and the number of courses examined within each day of the examination schedule. The examination results (grades) at UT are usually announced more than 10 weeks after the examinations take place. Putra found that his sampled students were not satisfied with this length of waiting time, because they wanted to know whether or not they passed the previous courses, and whether or not they had to take make-up examinations for those courses in the next term before they could re-register. They said that the delay was discouraging and made them hesitate to re-register. They expected UT to be able to announce their grades within a shorter time.

Students also complained about the examination items. They considered the test items to be too difficult, especially in courses such as Mathematics and Statistics. These courses are compulsory courses so that failure in these courses comprised failure to complete the program. Putra reported

that repetitive failures in these courses have made students frustrated and less self-confident.

Universitas Terbuka's final examinations are held twice a year, for two days each time (the third and the fourth Sundays of June and December). All offered courses are thus examined within two Sundays each term. This means that students may have to write more than one examination in one day, depending on the number of courses they have registered for. Many have to write several in one day. Because of this, some students requested one additional examination time. Putra's sampled students proposed that UT hold three examination times as it used to do in the first two years of operation. It is worth noting here that UT changed its original examination schedule into two examination times because it could not keep up with the work load associated with three examination times.

On Putra's questionnaire, students also commented that the locations of the examinations were still too far from their residences. UT currently administers examinations in regional offices. Some additional locations are often arranged if the number of students residing in that area is large enough. Apparently, students felt that still more/new locations need to be set up.

Fees. Students commented on both the tuition fees and the course materials (modules) purchase. Although UT's tuition fees are equal to those of other state conventional universities, they were still regarded by Putra's sampled students as too high by some students. Although there are

several choices of tuition package, the tuition fee policy still requires students to pay at least 45 thousand rupiahs. The fees are still much lower than that at private universities, which can be ten times higher that they are at UT. However, since most UT students are adults with other responsibilities (such as family), this cost has to be covered by their family's budget. The financial concern may also be related to the fact that most UT students work for government agencies and earn very low salaries.

Communication. Lack of communication is the major comment made by students. Putra's sample reported feeling remote, isolated, and disoriented. They commented that it was very difficult to communicate with UT. They did not know where to go to get needed information. They suggested UT should more actively communicate with its students through, for example, mass-media such as nationally circulated newspapers and television. Some students suggested UT open info-lines operating 24 hours a day to provide information to students.

The lack of communication from UT was also indicated by nonactive students. As cited by Putra (1993), students suggested that UT should actively communicate to and remind its students, especially the nonactive ones, to return to their studies. Some non-active students even mentioned that receiving Putra's questionnaire has reminded and encouraged them to continue their study which was suspended due to personal problems. These comments suggest that some reminders

and encouragements may urge students who have left their studies for various reasons to continue their study.

Job and Family Responsibilities. This is the next most common reason given by dropout and nonactive students. It is closely related to the reasons of financial situation and time availability. Putra's sampled students expressed their difficulty in managing their times between study, family and work. This problem is exacerbated by the fact that students tended to take too many courses at a time. As discussed earlier, this made the time constraint even more significant. A comment given by an active student illustrated that the key to his success was working hard combined with strict time management. He suggested that as working people, students should take a manageable number of courses so that they were able to meet the course requirements properly.

Course Materials. UT's primary instructional medium is printed materials (modules). Students' comments centered around their ability to read and understand the course materials. Dunbar (1991) observed that Indonesian cultures emphasize oral communication. Putra (1993) discovered that UT students found that exclusive use of text-based materials was difficult to follow. These comments are concurrent with the findings of UT's own survey (Dunbar, 1991) which indicated that the main reasons for course non-completion were the volume and difficulty of the self-study materials, and the difficulty of mastering an unguided self-study system. These

two factors combined seem to lead students to lose confidence and become discouraged through repeated examination failure.

Student variables related to dropout. Putra's 1993 survey shows that only occupational status and education background variables are significantly related to dropout. Putra found that civil servants were more likely to drop out than other occupational groups of students; and that the lower the previous level of education (in which high school was the lowest), the higher the chance of dropping out. Financial realities were also reflected in the dropout rate; the higher percentage of dropout within civil servant and lower education groups is understandable. Civil servants, and especially those who do not have university degrees, have much lower incomes than do those who work in the private sector.

Another student characteristic Putra found statistically significantly related to dropout was students' age. Putra discovered that older students (over 36 years) tended to be more persistent than younger students. Putra argued that this was probably because older students were more experienced in resisting pressures and financially more capable than younger students (who were just starting their careers). Another possible explanation for this, according to Putra, was that perhaps because of the age pressure, older students were more desperate to move vertically in social status, and regarded UT as the best vehicle to do so.

With regard to students' reasons and goals for entering UT, Putra's analysis shows no significant difference between active students and nonactive students. As discussed earlier, most students identified "could study while working" as their main reason for entering UT. Further, half of both active and nonactive students stated "to improve and get ahead with the job/new job" and "to fulfill requirements set by the authority (employer)" as their goals for studying at UT. The other half of the active and nonactive students stated "learning for its own sake" as their goal for studying at UT. However, although it was not statistically significant, the frequency of responses between active and nonactive students is interesting. Among its own group, the number of active students who chose improving job and fulfilling authority's requirement (53.3%) was larger than those who chose learning for its own sake (40%) as their main goals. On the other hand, the number of nonactive students who chose learning for its own sake was larger (48.1%) than nonactive students who chose the other two goals (46%). This seems to suggest that there may be a tendency of active students to have more extrinsic goals than intrinsic goals, and of nonactive students to have more intrinsic than extrinsic goals.

Putra's analyses of students' responses about satisfaction show no significant difference between active students and nonactive students with regard to the content or course materials, language used (clarity and easiness), course design, the price of the course materials, examination

administration, the difficulty of examination items, and the service provided by the examination committee. In general, students felt satisfied with those aspects. This is interesting since it was expected that nonactive students would be less satisfied; such dissatisfaction could lead them to drop out. However, since nonactive students have (by definition) left their studies for at least two years, there is a possibility that they have already forgotten their experience and their earlier feelings of satisfaction/dissatisfaction. Another possibility is that nonactive students tried to hide their dissatisfaction because they were afraid of being considered stupid. For example, if they disagreed with the statement "I find it easy to understand the content of UT course materials," they may have been afraid that their disagreement would be interpreted as personal inadequacy.

Nonactive students were found by Putra to be more satisfied than active students with regard to the announcement of the examination results. This may be because they have left their studies before writing the examination so that they never experienced the inconvenience of the delay in the announcement of the results. Another significant difference between active students and nonactive students was in their satisfaction in obtaining the registration and examination form. Putra found that nonactive students found it more difficult to get the form.

Nonactive students were also different from active students in terms of their attendance at intensive tutorials held both by regional offices and by their own study groups and in their frequency of making contact with UT. Putra discovered that nonactive students attended intensive tutorials more frequently yet made less contact with UT than active students. However, this result must be interpreted cautiously since the students may have different interpretations of what they understand as "intensive tutorials." Intensive tutorials are different from the free tutorials. Students who wish to attend intensive tutorials have to pay, and the tutorials are held 6 to 16 times per semester depending on students' requests. This service started about two years ago as a response to students' requests for more tutorials. However, this service has only been administered in a few regional offices, and the fees for it are quite high. Therefore, there is a possibility that nonactive students were not aware of the existence of different kinds of tutorials and interpreted these intensive tutorials in the questions as the regular free tutorials.

Although nonactive students were not found to differ from active students in their feeling regarding their decisions to enter UT, they were found as significantly different in their motivation toward continuation, completion, and confidence about getting a job after graduation. Putra discovered that active students were more motivated to continue their studying in the next semester, felt graduating was more important, and

were more confident that they would get a job or a new job after graduating from UT.

Nonactive students were also found to be different significantly from active students in the ownership of course materials. Putra discovered that active students were more likely to own their own course materials (modules) than nonactive students. In terms of completing the take home mid-term examination and reading all the required materials, Putra found that the two groups did not significantly differ. However, a previous study conducted by Belawati (1988) shows that students who did more home assignments (self-tests or exercises contained at the end of every chapter in the modules as well as the take home examination) achieved higher scores in the examination than those who did less.

Based on Putra's sampled students' comments, it is apparent that beside students' personal characteristics, other variables also contribute to students' decisions to persist. These variables (delay in receiving examination results, fees, lack of communication, time availability, and course materials) are similar to the institutional variables related to dropout discussed earlier.

Summary

Based on the above discussion, it is apparent that the lack of persistence at UT is a function of multiple variables

related to socio-cultural, institutional, and personal factors.

This review suggests that UT's students are probably not as autonomous as distance education students in western countries. According to the literature review, they are more approval-oriented and teacher-dependent than their western counterparts. Distance education, by its very nature, requires not only independent study patterns, but also an independent, individual approach to goal setting, and time management. This mismatch between the expectations and cultural norms of Indonesian learners and the requirements of distance education suggest that adaptation of the educational system to Indonesia's cultural context is imperative for the success of distance education.

Nevertheless, UT seems to have several institutional factors that seem to contribute to UT's low rates of student persistence: the lack of communication channels, contact, guidance, feedback and counselling; the reliance on final examinations for getting information on student progress, the exclusive use of regional centers for administrative matters, and the exclusive use of low quality printed materials (modules) as the learning materials.

Finally, according to the literature, students' personal factors that seem to correlate with persistence include their previous education before entry, age of entry, motivation, and job type. Students also identified obstacles both in their own lack of time availability to study and in the failings of

instructional system: lack of communication channels, lack of feedback, and the low quality of course materials (Putra, 1993). These factors combined with the lack of students' inclination to be independent learners and a heavy study load have resulted in low persistence rates.

The detailed analysis of the interaction among these factors and their relationships with students' decisions to persist is discussed in the next chapter.

Chapter Four

Conceptual Framework

As broadly discussed in the previous chapters, dropout (as it was termed by most literatures) in distance education is a complex phenomenon influenced by multiple variables. However, in order to be meaningfully investigated, dropout itself must be re-conceptualized. As such, this chapter begins with a discussion about how, in the context of distance education, measuring dropout must be replaced by measuring student persistence within courses/programs. This is immediately followed by a discussion of how, within UT's unique context, such measures were understood. Following this, there is a need to consider more generally the multiple variables which might influence students to persist. Those variables include students' personal characteristics and background, learning environments, and other off-learning environments (such as family, work, and other social environments).

In order to consider how these variables interact at UT, the next section of this chapter presents a variation on a model suggested from the literature, and examines certain aspects of it in detail. Finally, a set of possible interventions derived from the model and the measurements of persistence are proposed; the actual intervention chosen is described in detail in the following chapter.

Measuring Persistence at Universitas Terbuka

The literature review chapter shows how the phenomenon of persistence has been conceptualized, labelled and measured by different studies. Most studies bifurcated the phenomenon with dropout as one end, and completion as the other end for purposes of measurement. Such studies categorized students as either completers (e.g those who successfully completed their courses and, sometimes, obtained a degree) or dropouts (e.g. those who did not finish the course nor get a degree).

Other studies also tried to measure the phenomenon in between those two extremes (completers and dropouts). Terms such as withdrawal, attrition, and discontinuation have been variously and interchangeably used to describe students' behaviour in studying. These latter terms have also been reported in terms of wastage or failure rates which basically describe the percentage (out of the total enrollments) of those who withdraw and discontinue before completion. There is within these terms/measurements a connotation of wasted efforts and resources if students do not complete a course/program. This pejorative framing of the phenomenon takes a particularly narrow and strictly economic view of why people enrol, and what purpose is served, in distance education.

The differences in terms also suggest that the phenomenon of persistence does not lend itself to either simple representation or measurement. Furthermore, with regard to

time flexibility, distance education necessarily involves a less definite time frame for students to begin and complete their learning process. It restricts the openness of the institution to set a deadline when students should start and complete their studies, or to be labelled as either graduates/completers or dropouts from their distance education programs. Such an attitude hampers the attainment of the distance education's intentions to promote a more open and life-long learning.

Therefore, in order to adopt an openness toward time, student persistence should be measured in various ways at various stages. This is important since there will always be a possibility of students returning to their program and completing it. In other words, students should not be seen as either completers or dropouts but rather as persisters and non-persisters (who will possibly come back and continue at a later stage). Accordingly, in this study it was considered more useful and meaningful to focus on persistence rather than dropout. The issue therefore became one of investigating and identifying the occurrences of non-persistence within the educational system.

Universitas Terbuka's academic system and policy allow students to study at their own pace. This means that students can register, suspend, and re-register any time as long as the study suspension is no longer than 4 consecutive semesters. Administratively, UT's definition of non-persisters (termed as non-active students by UT) are those who do not maintain their

student status (or do not re-register for any new course) for more than 4 consecutive semesters (see discussion of admission and registration system of UT). Those non-persisters, however, can always re-apply to the university as new students and transfer the previously earned courses' credit into their new student records. At the time of this study, there was no time limit for transferring those credits from the old records into the new ones. Therefore, any students who are seen as non-persisters are not necessarily dropping out of the programs but often are suspending them for unknown periods and reasons. However, since students do not have to notify the university of their study intentions, non-persisters are usually assumed to be dropouts by the university.

As suggested by Wong (1987), persistence is meaningfully measured only by doing it continuously along a student active learning process, rather than at only one point (determined as the completion point). Such an approach, according to Wong, recognizes the degree of persistence of students in relation to that of other students. For example, students who complete 75 percent of the course would fall into a different category (more persistent) from those who complete only 25 percent (less persistent). It is the researcher's job to decide the boundaries of measurements that are consonant with the institution's policy and system in which the research is conducted, and that can meet the research purposes. Wong, for example, suggested that for the Chinese University of Hong Kong, deviations (lateness in submitting assignments) and

grades could be used as the proxy for students' progresses and achievements.

Within UT's system, students' persistence can be monitored through course completion and re-registration (continuation) at various monitoring points. Course completion measures student persistence in regard to their initial commitment: whether or not they persist to complete the registered courses. Re-registration measures student persistence in regard to continuation of their studies: whether they intend to continue their studies by registering for a new course(s).

These monitoring points can be in accordance with UT's admission and registration policies: times when students are recommended to submit a take-home examination (hereafter called self-test) for each course in the middle of the semester, when students have to write a final examination for each course at the end of the semester and when students have to re-register (during the three months registration period, usually start in two weeks after final examination time) if they wish to continue to subsequent semesters. Therefore, to measure persistence of students registered in semester 1, for example, the monitoring points can then be their self-test submission in the middle of semester 1, their examination attendance at the end of semester 1 and their re-registration in semester 2.

However, students' registration is valid for two consecutive examination periods (two semesters). This allows

students to write the registered courses' final examinations within two consecutive examination times without re-registering and paying the fees again. Thus, some students may wish to intentionally break down their course load into two semesters, and this will make the semester period longer for some students. For example, students who register for five courses can write three examinations at the end of the same semester and write the examinations of the other two remaining courses at the end of the following semester.

Therefore, students who do not write an examination(s) at the end of Semester 1 (previous example), will not then necessarily be less persistent than those who do. They may simply intend to write the examination(s) at the end of semester 2. To do so, all they have to do is apply for the examinations of the remaining courses before the examination time (at the end of the semester 2) so that an examination seat number can be assigned to them. However, if students fail to write the examination(s) by the end of semester 2, they have to re-register for the course(s) again and pay accordingly. With this possibility (of students breaking down their course loads into two semesters) in mind, measuring persistence through course completion should then ideally be done within at least two consecutive semesters (two examination chances).

With regard to re-registration, the boundaries are even more complicated. Self-test submissions and final examinations measure to some extent the degree of student

commitment and persistence in completing the registered course(s) within the allowable time (one fee payment). Re-registration policy, on the other hand, is more flexible and thus students can always re-register in any semester. Since students are allowed to break the course load of one semester into two consecutive semesters, the start and end points of one semester may then be different for different students. Some students may complete their first semester by the end of the same semester and some may complete theirs by the end of the following semester. Similarly, the starting point of students' second semester can be different for different students as well. Students who complete their first semester's course load at the end of the same semester may start their second semester in the immediate following semester of first registration. On the other hand, students who complete their first semester course load at the end of the following semester may then start their second semester in the third semester.

To simplify the discussion, imagine six hypothetical semesters (semester 1 to 6) for seven hypothetical new enrollees (students A, B, C, D, E, F and G) depicted in Figure 4.1. In this example, all these students enrolled or registered for the first time in Semester 1 (A1-G1).

Student A completed the final examinations for all registered courses at the end of Semester 1 (therefore the length of her/his first semester was A1-A1[1]). A then immediately re-registered for new course(s) in Semester 2 (A2)

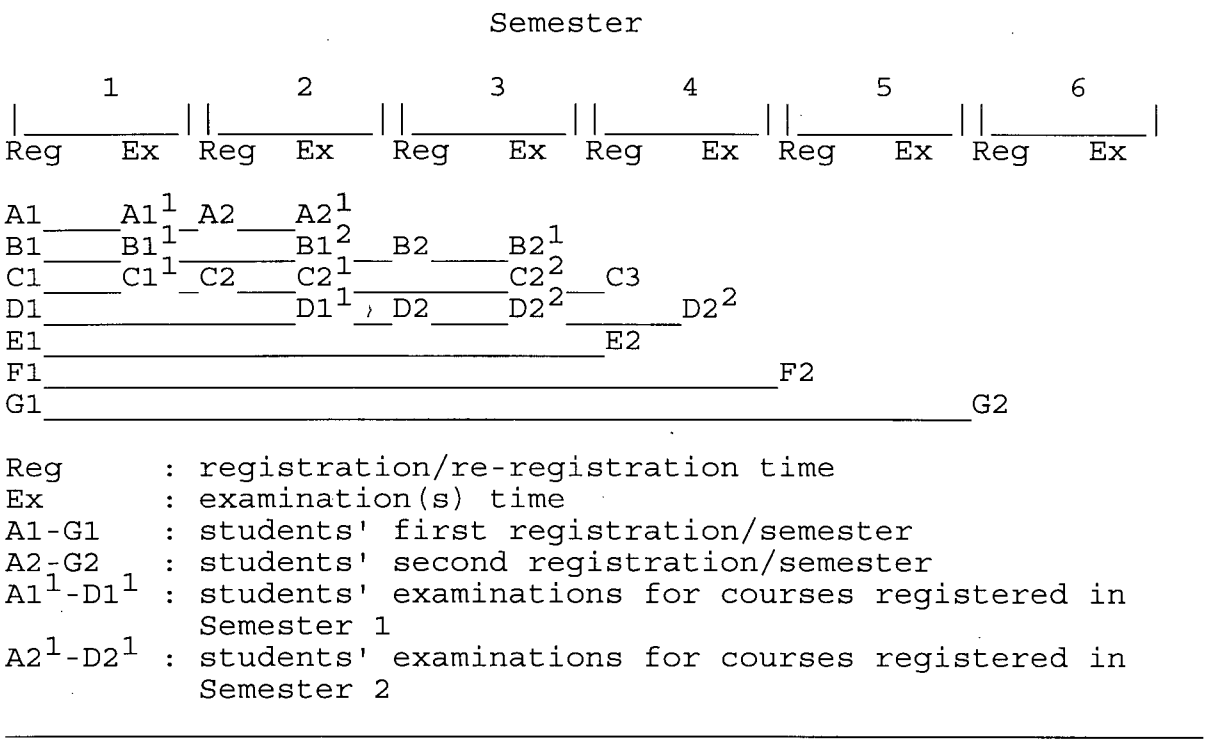


Figure 4.1. Example of registration patterns of seven hypothetical students within six hypothetical semesters.

and also completed all registered course(s) for her/his second semester at the end of Semester 2 ($A2\text{-}A2^1$).

Student B, unlike student A, broke down her/his first semester's study load into two semesters and completed examinations for all her/his registered courses at the end of Semester 2 (therefore the length of her/his first semester was $B1\text{-}B1^1\text{-}B1^2$). The time period of B's first semester was then one semester longer than A's. B then re-registered for new courses in Semester 3 (B2). Thus, unlike A whose second

registration/semester was in Semester 2, B's second registration/semester was in Semester 3.

Like A, C completed all first registered courses at the end of her/his first registration (Semester 1) and immediately re-registered for her/his new courses in Semester 2 (C2). However, unlike A who completed all her/his second semester in the same semester (Semester 2), C broke down her/his second semester course load into two semesters (Semester 2 and 3) and completed them at the end of Semester 3 ($C2\text{-}C2^1\text{-}C2^2$), and then re-registered for more new course(s) in Semester 4 (C3). Therefore, C's second semester was longer than A's second semester even though both A and C started theirs at the same time. Similarly, as pictured by the diagram, the second semester of student D, E, F and G also started at different semesters: D in Semester 3, E in Semester 4, F in Semester 5, and G in Semester 6 (D2, E2, F2 and G2).

This example shows that monitoring student persistence at registration (re-registration) times is complicated. Technically, monitoring can be done at the start point of any semester. However, because of the difference in students' behaviors such as those of students A, B, C, D, E, F, and G, different monitoring points can result in different outcomes of measurements (rate of persistence or persistence level).

For example, if persistence is measured by re-registration in Semester 2, students like B, D, E, F and G would fall into the non-persisters category while in fact, B and D were merely those who expanded the period of one

semester time into two semesters. Furthermore, if persistence is measured by re-registration in Semester 3, student C will fall into the non-persisters category while, in fact, s/he already re-registered in Semester 2 and intended to write her/his course(s) examination(s) at the of Semester 3.

With regard to course completion, if student persistence is measured at the end of Semester 1, students B and D will be excluded from the persisters category. Measurement of persistence at the end of Semester 2, as discussed earlier, will give a better proxy of course completion. This is because after two examination times (at the end of Semesters 1 and 2), students such as D, E, F and G will have to re-register for any courses as new ones and will have to pay accordingly. Thus, for students who miss the second examination opportunity (free of course registration fees), there will be some financial consequences. This approach (monitoring course completion within two consecutive semesters) will include every student who completed all first registered courses and would exclude only those who failed to complete them within the allowable free of tuition fees time.

Under this approach, UT's definition of non-persistence would apply only to student G, who did not maintain her/his registration for more then four consecutive semesters. Student G's record would be closed and, if s/he wished to continue, s/he would have to re-apply as a new student. Students E and F, according to UT's policy, would still be considered as persistent students and could re-register any

time. In accordance with this, a researcher who wants to measure student persistence at UT should take this system and policy into consideration and decisions of measurements should then be based on the constraints encountered.

Within UT's context, an ideal measurement for student persistence will have to cover the period of at least six semesters as UT's definition of non-persisters only include those who fail to re-register in Semesters 2 to 5 (student G in the previous example). Therefore, students who re-register at least once during the monitored six semesters (like students A, B, C, D, E, and F) can be defined, according to the administration system, as more persistent than those who do not.

The second possibility for monitoring persistence at UT is ones which assess at points within two semesters as a single registration fee is valid for two semesters. Such measurements could include the number of self-tests submitted and the number of examinations written by students within the allowed two semester periods. These proxies would show student persistence concerning course completion of courses initially registered for or concerning students' initial study intention. Student re-registration after completing those first registered courses would then show their persistence for continuation.

The third possibility is a measurement within a single semester. This could include, again, self-test submissions and sitting examinations within one semester. This could also

be a good prediction for student persistence. Given the students' backgrounds discussed earlier, it could be assumed that students who succeeded in completing all registered courses within the same registration semester are more persistent than those who did not. This assumption is based on the knowledge of the traditional way of schooling in Indonesia, which is not open.

Self-test submissions which are not compulsory (only recommended) would give some indication about student persistence up to the middle of the semester. This indication, however, is not to be interpreted to suggest that those who do not submit the self-tests are already dropping their study. They would simply inform the institution about students who were committed enough to submit the self-tests even though they did not have to. Therefore up to that point of measurement, these students can be assumed as more persistent than those who do not submit the self-tests.

Unlike B.C.'s OLA, for example, in which students can transfer their credit courses to other universities, UT's course credit(s) are not transferable. Furthermore, unlike some other distance education institutions in other countries, UT does not offer independent course(s). All courses are parts of the offered degree (or diploma) programs and students who wish to take any course have to register and apply for a complete degree program. Therefore, within UT's system and the context of the Indonesian educational system, UT students who do not complete all registered courses (do not write the

courses' examinations) and do not ever re-register again (or attain their degree) are declared to be non-persisters, .

The Nature of Persistence at Universitas Terbuka

The previous discussion explains in detail, how and when suitable measures for student persistence can be monitored. These measures do not occur in a vacuum however; the intention of this research is to study how to positively influence student persistence at UT. As such it is necessary at this point to introduce a conceptual framework of the entire phenomenon of persistence, including elements where interventions are appropriate. This framework can then be adapted to the specific circumstances at UT.

The model of dropout developed by Kember (1989) was considered suitable for explaining persistence in distance education. This model, as previously discussed, adapted Tinto's model (1975) for dropout in general higher education to the specific context of distance education. Accordingly, Kember's model was used as the basis for understanding the problem of lack of persistence at UT (Figure 4.2). It is important to note that the purpose of utilizing Kember's model of dropout is to help describe the phenomenon and not to operationalize the model. The intention was to show the parts within the model where institutional interventions could be applied.

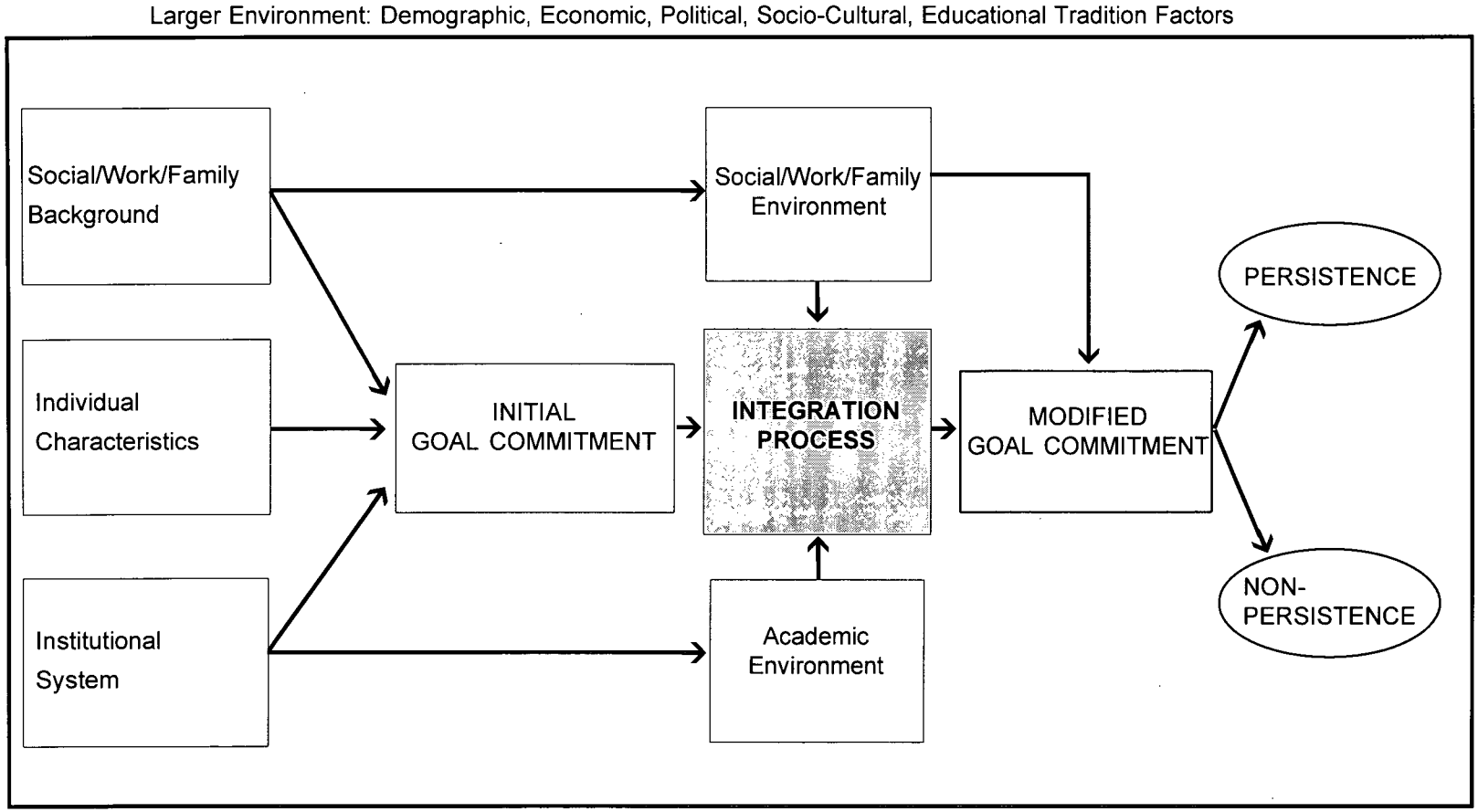


Figure 4.2. Kember's dropout model adapted to the Universitas Terbuka (UT)

As seen in Figure 4.2, an adaptation of Kember's model includes the demographic, economic, political, socio-cultural, and traditional education factors believed to influence the whole process of persistence at UT. These factors address the contexts that students come from and live within including their expectations, motivations, study habits and preferences, and their preparedness for being independent learners. To illustrate how this model was applied to the context of UT and its students, each element is discussed below with descriptions of the details of the UT situation.

Social/work/family background, individual characteristics and institutional system. Students enter UT for various reasons related to both social/work/family factors and personal/individual factors. As discussed in Chapter Three, within Indonesia, educational achievement (i.e. university degrees) could enable people to move vertically in their social and work lives. This may influence people's desire to get a university degree to fulfill pressures and expectations that may come from society at large as well as from family and significant others. However, some people are not able to attend conventional higher education institutions for various reasons. The existence of UT, providing as it does an opportunity to those people disadvantaged by the conventional system, seems to re-open their hopes and expectations of getting a higher education degree. Therefore, the distance system used by UT seems to somehow contribute to the

development of student initial motivation to continue their education.

Initial goal commitment. It is these personal, social/work/family, and institutional factors that develop students' initial goal commitments. The goal commitments of UT students seem to be equally divided between those who were extrinsically motivated and those who were more intrinsically motivated (Putra, 1993). Putra found that students entered UT for both extrinsic reasons (such as "to improve or get ahead on job or new job" and "to fulfill requirements set by some authority") and intrinsic reasons (such as "to seek learning").

Integration process. This process begins when students enter their programs. This is the process whereby students have to integrate their goal commitment into their two environments: the social/work/family and the academic. In this process, students have to meet the requirement and standards set by the institution within the limits of their personal capabilities and other commitments. In other words, during this time students have to match their personal characteristics (including preparedness and preferences) and their social/work/family commitments to the academic environment.

Figure 4.3 focuses on the integration process part of the model. If students' individual factors are depicted as the I

circle, the social/work/family circumstances as the F circle, and the academic circumstances as the A circle, the overlapping areas depict the extent to which the circumstances and the individual characteristics are compatible or matching. The FI area therefore depicts the degree of compatibility between individual factors and characteristics and social/work/family circumstances; the FA area depicts the degree of compatibility between social/work/family and academic circumstances; the IA area depicts the degree of compatibility between individual characteristics and academic circumstances; and the FIA area depicts the degree of compatibility of the three factors. The integration process is the process by which students try to match the new academic

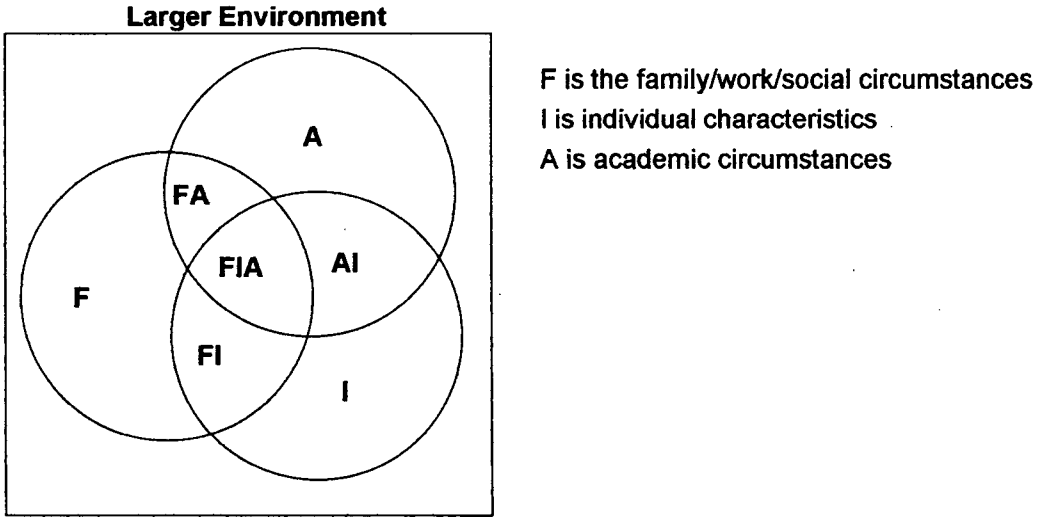


Figure 4.3. The Integration process diagram

circumstances into their own conditions and their social/work/family circumstances, or the process of placing area A into areas I and F.

The I circle at UT was characterized by adults, 24-39 years old, who came from an extended family background, worked for relatively low incomes, and had only secondary level education which, for most of them, was completed years before entering UT (Universitas Terbuka, 1992). Since UT was established to provide opportunities to those usually disadvantaged by the conventional system, it is politically unwise for UT to influence the background characteristics of the overall student population by, for example, a selection policy.

In addition, UT students come from socio-cultural and educational traditions that accustom them to be less autonomous and more dependent on others (teachers) when it comes to learning situations (or any situation). Therefore, they may be psychologically and technically less prepared to study independently than are distance students in western countries from which the educational system was adopted. This implies that UT students may have a greater need to be guided in their study than do their counterparts in western countries.

This diagram also emphasizes the importance of the degree to which students are able to integrate the demands of part-time off-campus study with their family, work, and social commitments (the F circle). This seems to be especially

important in UT's case. The vast majority of students are adults who are full-time workers with job and family responsibilities. The success of the integration process depends heavily on the support and attitude of the significant others in their family, work, and social lives. This means that if their studies do not fit well with the agenda of those significant others, it is likely that study would become a lower priority on their agenda also.

The A circle (academic environment) includes both academic and administrative support systems, and the package of study materials. This, according to Kember (1989), is the component of his model over which the institution had the greatest control. Kember argued that non-persistence was more likely to occur if at least one of two forms of integration was lacking. These two forms of integration he called value integration or normative congruence, and collective affiliation.

Normative congruence is associated with the question of whether the institutional value system is compatible with that of students. In UT's case, Indonesians are not used to being autonomous or independent learners. They are psychologically and technically less prepared to be fully independent learners. Nevertheless, UT has apparently, ignored these factors and made no attempt to prepare students to adapt to a new learning system featuring independent learning.

Normative congruence is also associated with whether students' study approaches and the instructional design of the

course(s) are congruent. According to Kember (1989), the use of multimedia (media mix) should suit the learning style of students. However, as discussed earlier, UT's courses are designed primarily as printed text. This exclusive use of printed materials, therefore, limits the possibility of matching students' different learning styles. This, combined with the students' primary culture of an oral/conventional learning style and the fact that Indonesian students are accustomed to guided learning in which they are always told what to learn and how to learn it, lessen the normative congruence.

The second key form of integration, collective affiliation, is established through the interactions related to academic support for the courses, such as, the frequency and nature of contacts, the speed of response to students' initiated contacts, the provision of local tutorials, and the use of telephone or satellite conferencing (Kember, 1989). Collective affiliation can be influenced by administrative support or by the lack of it. Based on both the institutional background and students' comments, this support appears to be lacking at UT. The only regular contacts between UT and its students are at registration and examination times. Students are basically on their own between these two stages. Other possible stages that may involve contacts between students and the institution are the tutorial sessions which are held two times per semester; however, these are poorly attended by the students. The more frequent intensive tutorials,

unfortunately, only provide opportunities to students who can afford to attend them. Even those who attend tutorials find that they do not get any feedback except the final examination results, and these are considered by students to be forwarded at a very late date. The exercises/tests contained in the course materials list correct responses only, and the completed/submitted self-tests are never commented upon and or returned. These factors illustrate that students do not get sufficient support from the institution during their course of study. This lack of support and communication seem to lessen the collective affiliation.

Modified goal commitment. After going through the integration process, according to the process outlined in Figure 4.2, students should have a better idea of what their commitment to studying means. Based on their studying experiences, their initial goal commitment would be modified. The degree of both their academic and social/work/family integration is influenced by changes in characteristics, development of goal commitments, the nature of courses, support from the institution, and attitudes in their work, family, and social environments. Consciously or subconsciously, students at this stage examine the congruence/incongruence between what they initially thought and expected and what they actually experienced. It is important to note that students examine the success of their integration process at every stage of their study.

At UT, it seems that the change (most likely the decrease) in students' initial goal commitment is mainly influenced by lack of support from and or lack of communication with the institution. This, in turn, underscores students' lack of technical and psychological preparedness, lack of financial capability, lack of time, and difficulty with the course.

Persistence/non-persistence. A student's modified goal commitment which is the reflection of what the student perceived about his/her integration process, would be reflected by his/her actual behaviour of either continuing, suspending or dropping the study. Maintained or enhanced goal commitment would lead to persistence while decreased goal commitment would lead to non-persistence. Again, the process of examining whether to persist or not (either to suspend or to drop) is a continuous, rather than static, process.

In summary,

> while all students are faced with the task of performing a balancing act with opposing pressures and demands on their time and energy, some students (i.e. those with weaker characteristics) are more vulnerable than others. By and large the stronger the characteristics of a student the more unlikely an increase in pressure will upset his equilibrium. (Kennedy and Powell, 1976, p. 70)

In line with this, the "weaker" the characteristics of a student, the more likely an increase in pressure will upset his/her equilibrium. The previous discussion suggests that lack of persistence at UT is substantially the result of the

lack of both normative congruence and collective affiliation. Therefore, if UT is to help students integrate their present circumstances into the academic circumstance, it must modify the academic aspects to be more accommodative of personal and circumstantial factors.

Proposals For Possible Institutional Interventions

At this point it is possible to attempt to design some specific interventions to improve student persistence at UT. The discussion suggests that lack of persistence at UT, as in other institutions, is the result of a longitudinal process. Therefore it is unrealistic to pretend that an instant intervention can exist which will immediately increase persistence. Further, Figure 4.2 illustrates that in addition to personal and institutional factors, lack of persistence at UT is related to the contextual background in areas such as socio-cultural and educational traditions. The figure has also shown that student persistence in the program is based on students' experiences during the integration process. This is essentially students' examination of the success of their integration process or of the congruence between their personal characteristics, their social/work/family circumstances, and their academic circumstances.

Based on Figure 4.3, it is apparent that the more compatible the "off campus", "individual" and "academic" circumstances are, the easier it is for students to integrate

their new academic lives into their present lives. Further, the more successful the integration process, the more likely that students' initial goal commitments (whether extrinsic or intrinsic) are to be maintained or even enhanced; thus, the more likely it is for students to persist. Accordingly, any institutional interventions have to be designed to push the A circle toward the I and F circles so that the overlapping areas can be broadened. In other words, the institution should modify the academic circumstances so that students (especially those who are at risk) will find it easier to deal with and to integrate the academic environment into social, work, and family circumstances. The rationale for each type of intervention to normative congruence and collective affiliation is described below.

Accommodating individual characteristics/conditions (A-->I). Interventions in this area would seek to increase the integration of individual characteristics and the academic environment. They are to push the A circle toward the I circle in order to increase the overlapping AI area.

As suggested earlier, UT students may not be psychologically and technically accustomed to being either independent learners or fully autonomous in their studies. If UT acknowledged that students might be thus unprepared for sudden (abrupt) changes in their familiar pattern of studying (e.g. face-to-face and teacher-directed), UT could propose a grace period for students to learn about and adapt to a new

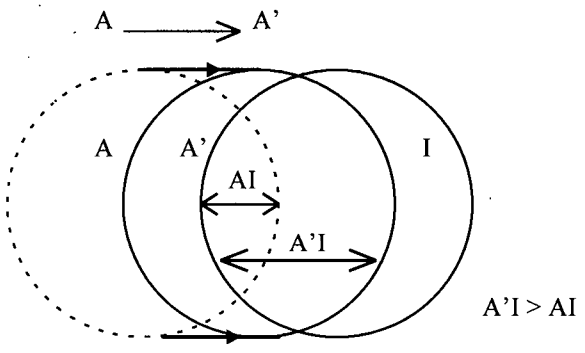


Figure 4.4. Accommodation of individual characteristics/preferences.

style of studying. Although it is financially impossible for the institution to provide some special remedial programs before students entered the institution, the first semester could be thoughtfully designed to serve as a transition stage to initiate students into new studying habits.

The modification of the first semester into a transition stage could provide new students with the opportunity to enhance their normative congruence with the institution, and also their collective affiliation with both the institution and peers. One possible modification would be to employ various instructional media (Kember, 1990) instead of the present exclusive use of printed media. The present approach emphasizing print media may discourage students who have difficulty learning through reading, which is not a popular way of seeking knowledge among Indonesians. The use of other

media could accommodate different study styles and preferences. More extended use of audio-cassettes, for example, could be considered since cassette-recorders are easy to access, and allow students to have control over the schedule and the pace of studying.

Another individual characteristic that influences lack of persistence is students' preference for oral communication. Although nothing can completely replace oral communication in education, interventions applying Holmberg's concept of guided didactic conversation in the instructional design of UT's courses could prove helpful. Using a conversational way of writing might make students feel more associated with the writer, and might therefore better accommodated their custom of oral communication.

A third way to enhance normative congruence would be provision of some elements of conventional educational method of guided face-to-face. This could be done by providing students with regular teaching elements (such as feedback, guidance, encouragement, reminder, and information) which are usually given by the teacher in the classroom through a mediated agency.

Another modification, specifically to enhance collective affiliation during the transition stage, would emphasize more extensive provision of communication with students and of communication channels for students to interact with each other. This could include regular contacts such as face-to-face counselling, telephone tutoring, and letters of

encouragement or information regarding both administrative and academic matters. Given that financial constraint is a concern at UT, of all possible interventions, it seems that regular contacts through letters would seem to be the most suitable method, even though mail is slower than the telephone.

Accommodating social/work/family circumstances (A-->F). In this area, interventions would seek to modify academic circumstances so that they could better accommodate the social, work, and family circumstances of the students. In other words, these efforts would push the A circle toward the F circle in order to increase the overlapping AF area (Figure 4.5).

Although UT has limited control over students' social/work/family circumstances, this does not mean that it is impossible to accommodate them. Students' comments (see Putra, 1993) show that the social/work/family factors mostly related to their decisions to either persist or not persist were conflicts in time and resources (funding). Therefore, interventions which recognize these conflicts would result in education packages designed to be more accommodating to these circumstances, such as a more flexible registration policy. This type of intervention could be designed to remove restrictions on student participation and could allow students to register or to take as many or as few courses as they could manage financially and physically.

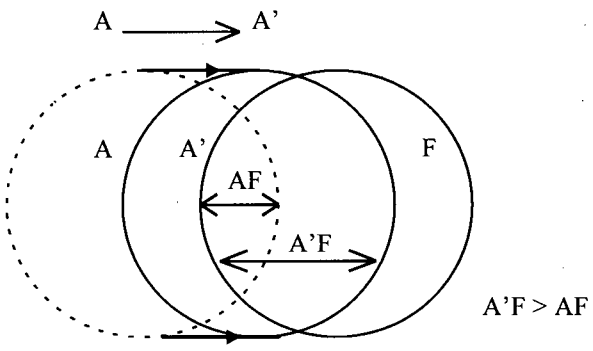


Figure 4.5. Accommodation of social/work/family environment

Summary of the possible interventions. The institutional interventions discussed above can be summarized as follows:

(1) Provision of a modified transition stage for students to gradually learn, adapt to, and adopt an unfamiliar academic system. This would involve enhancing normative congruence by employing a greater variety of media for course delivery, and or by revising the instructional design of the course materials to reflect a more Guided Didactic Conversation style. It would also involve enhancing collective affiliation by providing regular contacts, such as letters of encouragement, reminders, and information to students.

(2) Enhancement of the academic system's openness to address students' conflicts in time and resources (funding).

All these interventions are important if UT wants to increase its persistence rates. However, some interventions require more complicated and integrated planning than others. For example, revision of instructional design requires more integrated and careful planning, since it needs more resources than, for example, provision of encouragement letters during the transition period.

Given the constraints of planning, implementing, and evaluating a meaningful study within a contained research budget and time frame, this study focused on the most financially and logistically reasonable possible intervention, namely the provision of regular written contacts during the student transition stage.

The Design of Interventions To Facilitate Student's Transition Stage

The transition stage occurred during a student's first semester and this study's interventions involved a series of written contacts constructed to introduce students to and give them opportunities to become gradually accustomed to an academic system of independent study. Thus, with the provision of this support, students would have the chance to learn and shift from being fully guided students to being semi-independent ones.

These written contacts were intended to modify academic circumstances that might be unfamiliar, and make them more

acceptable to students (to enhance the normative congruence). Thus, the transition interventions as envisioned provided students with some conventional teaching methods (such as encouragements and reminders usually given by the teachers), but at the same time also provided students with the opportunity to learn to be independent learners. In other words, students were guided, but the guidance was given in a way that required students to act on their own initiative. The written contacts provided only the necessary information, suggestions, and encouragement without telling the students what to do and how to do it. In this way, students had to decide for themselves the best thing to do and the best way to do it, in their own contexts.

Two issues that were addressed within such a modified transition stage were psychological and technical elements. Psychological elements included developing in students an awareness of being fully responsible for their study, encouraging study within the absence of guidance from others (teachers) as to what and how to study, developing the commitment to study, and developing an increased awareness in students of the time they have available for doing the study. Technical elements, on the other hand, included the skills which affect the students' abilities to study, such as the ability to manage time, to read the course materials (since the course materials were in printed text forms), to concentrate, to take notes, etc.

Thus, the transition interventions were accordingly designed to:

(1) Provide students with information regarding studying at a distance and the requirements to succeed;

(2) Make students aware of the commitment they have to make to study independently and the impact of this on the other commitments they already have;

(3) Provide students with some suggestions and guidelines regarding time management, reading and note-taking, as well as examination preparation;

(4) Provide students with information (names and addresses) about their peers to encourage peer-communication and to enhance their sense of affiliation with other students; and

(5) Provide reminders and encouragement to enhance their self-confidence and motivation.

These items of information, encouragement, reminders, and suggestions were given in written form for two reasons. Firstly, even though the provision of tutor-counsellors such as suggested by Sewart (1984) would seem to suit this purpose, UT has limited funding and few available tutors, and thus, this alternative would not be feasible. Secondly, other communication channels such as telephone, audio-video and computer conferencing were hardly accessible to most UT's students and therefore would have more limited accessibility than letters.

Therefore, a written form was a feasible, low cost strategy since it could be both personalized and pre-produced. This method is similar to suggestions made earlier by Roberts (1986), who believed that interventions in distance education should be cost-effective. The interventions were designed as a series of letters relatively short and written in a conversational way based upon Holmberg's observation that the conversational style of writing would enhance students' sense of affiliation with the institution.

In summary, the transition interventions were intended to:

1. Help students adapt to and adopt the new way of studying (normative congruence). This stage might allow students to gradually understand the academic system and its requirements. This might minimize their "system shock" and their anxiety, and therefore might maintain or even enhance their initial motivation or commitment for completing the first stage of their study. In other words, this modified transition stage might help reduce attrition rates in the earlier year of higher education when students were most at risk of withdrawing (see Introduction).
2. Enhance students' sense of collective affiliation. Since during this modified transition stage students were contacted regularly, it was hoped that they might develop a higher sense of affiliation with the institution. As discussed earlier, some contacts from the institution (i.e. receiving a questionnaire) did make students feel that they

were important and that the institution cared that they continue their study. These kinds of feelings might strengthen students' motivation to persist.

3. Prepare students for their subsequent years of study. After students go through this modified transition stage, they expectedly would be psychologically and technically more prepared for independent study than students who entered without this adjustment to a regular first semester. The interventions (written contacts) were intended to help students develop a better understanding of the system and the study commitments required to succeed. Therefore, other things being equal, a successful modified transition stage might produce stronger students who would be more resistant to pressures in their subsequent stages of their study.

It is the first two intentions of the transition stage that were tested. The testing was done through a field experiment; the design and methodology of that experiment are explained and discussed in the next chapter.

Chapter Five

Experimental Design and Methodology

Objectives

In order to test the first two intentions of the transition interventions, a field experiment was designed to test the effectiveness of the regular written contacts (letters) during students' transition stage (the first semester). The main objective of this experiment was to test whether or not the interventions influenced persistence of new enrolled students. In other words, did the students who received more of the interventions (written contacts) during the first semester persist more than those who received fewer intervention(s) and or did not receive any contact at all? The third intention of the transition interventions (i.e. to prepare students for their subsequent semesters) was not evaluated because that would have required a longitudinal study, and additional years of research time.

Sub-objectives of this experiment were:

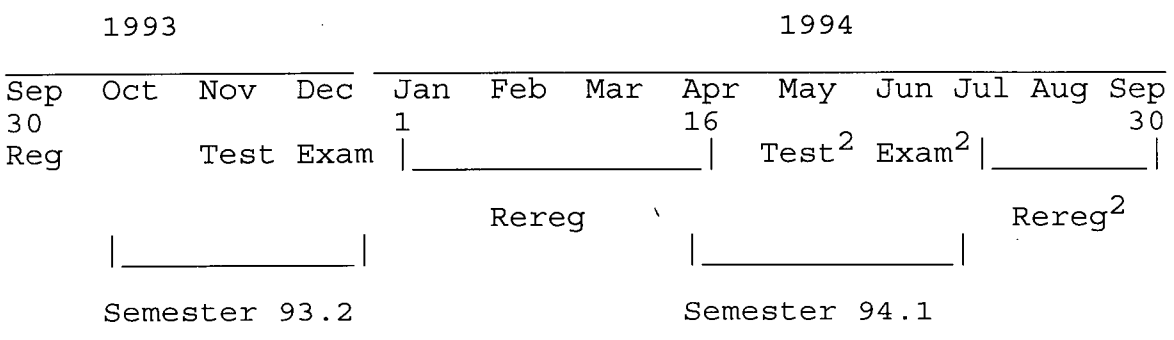
1. to test the effect of transition stage interventions on grade point average (GPA); and
2. to explore students' perceptions and opinions about the interventions given during the transition stage.

Definition and Measurement of Persistence

Persistence in this study was defined as course completion and continuation (re-registration). Course completion was employed as the proxy of student persistence in completing their initial commitments within the given time (two semesters), and re-registration was used as the proxy of students' intentions for continuation or for maintaining their registration status without interruption.

Since students' course registrations are valid at UT for two consecutive semesters, course completion was measured and monitored across a two-semester time frame. Specifically, this study focused on the completion of courses that new students registered for by September 30, 1993, within the next two semesters: Semester 93.2 and 94.1. For this period, students had to pay only one tuition fee. Re-registration was also monitored at two re-registration times: by April 16, 1994 for Semester 94.1 and by September 30, 1994 for Semester 94.2. The second re-registration time was monitored to see whether or not students who completed their first registered courses within two semesters immediately re-registered for their new courses in Semester 94.2. In summary, student persistence in this study was monitored on the scheduled points shown by Figure 5.1.

Course completion was measured by the self-test submissions in both November, 1993 (Test) and May, 1994 ($Test^2$) and by examinations attendance in both December,



Reg : First registration of courses in semester 93.2 (during the registration period of July 1, 1993 - the deadline on September 30, 1993).

Test : Self-test submission of the 93.2 courses at the middle of semester 93.2 (deadline was on November 15, 1993).

Exam : Examination attendance of the 93.2 courses at the end of semester 93.2 (December, 1993).

Rereg : Re-registration for the second semester in semester 94.1 (during the registration period of January 1, 1994 - deadline on April 16, 1994).

$Test^2$: Self-test submission of the 93.2 (remaining) courses in the middle of semester 94.1.

$Exam^2$: Examination attendance of the 93.2 (remaining) courses at the end of semester 94.1 (June, 1994).

$Rereg^2$: Re-registration for the second semester in 94.2 (during the registration period of July 1, 1994 - deadline on September 30, 1994).

Figure 5.1. The monitoring schedule for persistence at Universitas Terbuka.

1993 (Exam) and June, 1994 ($Exam^2$). Self-test submission in May, 1994 and examination attendance in June, 1994 were recorded to see whether students who had not completed their course requirements by December, 1993 (semester 93.2) continued to complete them by June, 1994 (semester 94.1). This way, all students who completed their first registered courses (regardless of whether they were completed within

one or two semesters) would fall into the same category, namely persisters. New courses that students registered for during the registration period of January-April 1994 (to be studied in Semester 94.1), however, were not included in this study since they would have had to be monitored until the end of the subsequent semester (which was the examination time of Semester 94.2). Students who submitted the self-tests (even though it was not compulsory) were perceived to be more committed to their studies than those who did not, and therefore, were assumed to be more persistent.

Furthermore, since each student could have different numbers of courses in her/his first study package (and thus had a different number of self-tests to be submitted), persistence was measured by the percentage of self-tests submitted (within the two monitored semesters: 93.2 and 94.1) out of the total number of courses registered for in Semester 93.2. Thus, a student who had 6 registered courses and submitted 3 self-tests would have the persistence rate of 3/6 or 50 percent.

Like the self-test submission, students also had different numbers of examinations to write. Therefore, the same measurement was employed as for the self-test submission: the percentage of examinations written out of the total number of courses registered for in Semester 93.2. It was important to note that, since self-test submission was not compulsory, it was possible for students to have

higher rates of examination attendance than self-test submission. Thus, examination attendance rates were assumed to be a closer proxy for persistence (in terms of course completion) than the self-test submission rates.

Within these two measurements was an assumption that students who had lower rates of self-test submission and examination attendance were less persistent than those who had higher rates, regardless of their number of registered courses. For example, students who wrote four out of four courses (100%) were defined as more persistent than those who wrote four out of five courses (80%). Therefore, even though they wrote the same number of courses, students who registered for four courses were defined as more persistent than those who registered for five courses. The measurements, as stated earlier, were constructed to see student persistence in completing their initial study intention. Therefore, regardless of the number of courses they registered for, students who completed higher percentages of courses were defined as more persistent than those who completed lower percentages, although the statistical analyses corrected for this by including number of courses as a covariate.

Re-registration for a second semester was measured by students' actual behavior during the registration periods of Semester 94.1 and 94.2 (January-April, 1994 and July-September, 1994). This is because some students might expand their first semester into two semesters and therefore

some students (those who expanded the length of their first semester into two consecutive ones) might not re-register in the earlier semester but do so in the later one. The intention of these two measurement times was to see the rate of students' continuation after the given treatments within the two monitored semesters.

Sample selection

Two thousand four hundred new students (about 26% of the total new enrollees) were used as the study population. These students were all new enrollees in the degree programs of the Faculties of Economics, Social and Political Sciences, and Mathematics whose registration forms had been received and processed by the Computer Center of the Indonesian Open University (UT) by September 30, 1993. The registration system, which allows students to send their registration forms to the regional offices, rendered the rest of the new enrollees unavailable at the time of sample selection (September 30, 1993).

Even though there were several regional offices not represented in the study population, students in the study population were spread throughout almost all islands (Table 5.1), and represented all study programs or departments within the three faculties (Table 5.2). This was because, at the time of sample selection, the registration/application of students located in the non-

Table 5.1

Total and Study Population by Regional Office

Regional Office	Population of new enrollees		
	Total	In the study	Total/Study (%)
Sumatera			
Aceh	14	5	35.71
Medan	144	2	1.39
Padang	75	1	1.33
Pekanbaru	91	0	-
Jambi	149	57	38.25
Palembang	227	0	37.00
Bengkulu	100	37	-
Bandar Lampung	253	42	16.60
Java			
Jakarta	3,956	1,265	31.98
Bogor	462	182	39.39
Bandung	707	154	21.78
Purwokerto	350	131	37.43
Semarang	486	112	23.05
Surakarta	129	0	-
Yogyakarta	518	137	26.45
Surabaya	295	0	-
Malang	54	0	-
Jember	10	0	-
Kalimantan			
Pontianak	299	43	14.38
Palangkaraya	32	18	56.25
Banjarmasin	47	30	63.83
Samarinda	51	47	92.16
Bali and Nusa Tenggara			
Denpasar	76	0	-
Mataram	14	11	78.57
Kupang	55	35	63.63
Dili	77	43	55.84
Sulawesi			
Ujung Pandang	17	0	-
Palu	62	23	37.10
Kendari	30	0	-
Manado	49	11	22.45
Maluku			
Ambon	25	12	48.00
Irian Jaya			
Jayapura	127	0	-
Total	**8,981**	**2,400**	**26.72**

Table 5.2

Total and Study Population by Study Program

Study program of	Total population	Study population	Percentage study/total population
State Administration	3,384	879	25.96
Business Admin.	736	202	27.45
Tax Administration	174	73	41.95
Economics	536	168	31.34
Management	3,986	1,021	25.61
Applied Statistics	108	38	35.19
Mathematics	57	19	33.33
Total	**8,981**	**2,400**	**26.72**

represented regional areas (i.e. Pekanbaru, Palembang, Surakarta, Surabaya, Malang, Jember, Denpasar, Ujung Pandang, Kendari, and Jayapura) had not been received by the central office in Jakarta.

All students in the study population were listed based on the order their applications were processed by the UT's computer system. Each student was assigned either an odd or even number in the list. A coin toss determined that even numbered students would be assigned to a peer group while odd numbered students would be used as the study sample population, by a method discussed below.

Students in the sample population list were randomly assigned to either the control group or one of the five treatment groups using a die (dice) toss. The dice was tossed six times to assign students to groups. The sides of

the dice with one spot to five spots corresponded to Treatment Groups 1 to 5 respectively (hereafter termed as Welcome+Guide, Peer, Encourage1, Encourage2, and Encourage3 groups). The side of the dice with six spots represented the control group. The top side of the dice after each toss was used as the basis for selecting students for each group. The order of the six tosses were as follows: side with (1) six spots, (2) three spots, (3) five spots, (4) two spots, (5) one spot, and (6) four spots. Thus, student number 1 was assigned to the control group (side with six spots), student number 2 was assigned to Treatment group 3 (Encourage1), student number 3 was assigned to Treatment Group 5 (Encourage3), student number 4 was assigned to Treatment Group 2 (Peer), student number 5 was assigned to Treatment Group 1 (Welcome+Guide), and student number 6 was assigned to Treatment Group 4 (Encourage2). Subsequent students for each group were determined by adding 6 (the number of groups in the experiment) to the first students' order number. Therefore, students assigned to the control group, for example, had order numbers of: 1, (1+6=) 7, (7+6=) 13, etc. The results for all groups were:

Welcome+Guide : students #5, #11, #17, etc.

Peer : students #4, #10, #16, etc.

Encourage1 : students #2, #8, #14, etc.

Encourage2 : students #6, #12, #18, etc.

Encourage3 : students #3, #9, #15, etc.

Control : students #1, #7, #13, etc.

Based on this ordering, six new lists, each consisting of 200 students, were then generated from the original study sample of 1200 (Table 5.3). Each treatment group was given a different set of treatments (to be discussed in detail in

Table 5.3

Numbers of the Returned Treatment Letters

By date	Students of treatment group				
	1 Welcome + Guide	2 Peer	3 Encourage1	4 Encourage2	5 Encourage3
10/13/93	6	6	6	8	7
10/15/93	1	1	3	3	2
10/19/93	3	2	1	2	5
10/21/93	1	1	-	1	4
10/25/93	1	1	-	-	-
11/04/93	4	2	1	2	-
11/11/93	1	3	2	5	1
11/15/93	-	1	-	1	-
02/20/94	-	-	-	4	1
02/25/94	-	-	-	1	2
04/10/94	-	-	-	-	2
Total returns	17	17	13	27	24
sample left	183	183	187	173	176

the next section). The treatments were letters sent to the students on scheduled dates throughout and after the first semester. During the experiment, some letters were returned for various reasons such as the student had moved to another unknown address and the student had passed away (one case).

Table 5.3 shows the number of returned letters by date. This table shows that a total of 98 students were not reached by the letters, thus reducing the study sample to 1102 students left in the sample (91.8%).

Description of Sample

Table 5.4 shows the means and standard deviations of personal characteristics of students in the sample. As the

Table 5.4

Means* and Standard Deviations of Sample Characteristics

Variable	Welcome + Guide	Peers	Encou rage1	Encou rage2	Encou rage3	Control	Total
Proportion of employed	**.72** .45	**.72** .46	**.71** .47	**.80** .40	**.76** .43	**.75** .44	**.74** .44
Age	**26.22** 8.92	**27.01** 8.10	**25.96** 7.55	**26.87** 6.52	**27.27** 9.32	**27.19** 6.80	**26.75** 7.88
Proportion of female	**.25** .43	**.27** .44	**.21** .41	**.22** .42	**.26** .44	**.23** .42	**.24** .43
Proportion of married	**.27** .45	**.37** .48	**.30** .46	**.35** .48	**.31** .46	**.34** .47	**.32** .47
# of children	**.26** .73	**.43** .97	**.31** .82	**.39** .90	**.37** .91	**.36** .93	**.35** .88
Timelag	**5.55** 5.14	**6.74** 5.74	**5.75** 5.14	**6.83** 6.28	**6.28** 5.69	**7.44** 8.61	**6.35** 5.71
# of courses	**5.52** 1.11	**5.57** 1.07	**5.60** 1.18	**5.42** .96	**5.57** 1.26	**5.51** 1.11	**5.46** 1.07

* in bold numbers

table shows, students in the sample mostly (74%) claimed to be working, and therefore were part-time students. In other words, only 26 percent of students were studying full time. This was very similar to the aggregate of UT students, which shows that 73.3 percent of UT's students who were registered up to December 1991 were working students (UT Statistics, 1992).

The table also shows that the average age of students was 26.75 years old. Table 5.5 shows the comparison of age

Table 5.5

Student Distributions by Age Group

	Percentage	
Age group	Total population*	Study sample
<= 24	12.7	48.8
25-29	17.5	34.2
30-34	31.8	4.2
36-39	18.1	8.4
40-44	11.3	3.0
>= 45	8.6	1.4

* UT Statistics, 1992.

clusters between the study sample and the overall UT student population. This table shows that the study sample was slightly younger than UT students in general. For the total population, only about 62 percent of the students were under 35 years old, while over 87 percent of the study sample were

under this age. It also shows that almost 49 percent of the study sample were 24 years old or under, while only about 12 percent of the students in the total population were under 24 years old.

Table 5.4 further shows that only 24 percent of the study sample were female. This means that 76 percent of the study sample were male. This was very similar to the total population which shows that 75.7 of UT students who were registered up to December, 1991 were male (UT Statistics, 1992). With regard to marital status (% of married) and number of children (# of children), 32% of the study sample were married and over 82 percent of students did not have any children (see frequency table in Appendix 9).

Regarding the timelag between high school graduation and registration in UT, Table 5.4 shows that the average number of years (Timelag) between these events for the study sample was 6.35 years. This was consistent with the fact that over 50 percent of the study sample graduated from high school between 1988 and 1993.

Another set of data recorded was the number of registered courses (# of courses). Even though students were advised to take only courses contained in the First Study Packages (which consisted of only 4 to 5 courses), data show that some students took a higher number of courses--some as many as nine (See Appendix 9). This was also suggested by the number of courses taken shown in Table 5.4, which average higher than 5.

Two other personal characteristics of the study sample that warrant inspection were previous education and study program. The coding system for these three variables were categories, not scales, so that they were not interpretable in terms of their means. The frequency of these three characteristics are shown in Appendix 9, and are described as follows.

Over 92 percent of the study sample had only a high school diploma. Table 5.6 shows a comparison of previous education for the study sample and the total UT population. As is shown by the table, even though the percentages were slightly different, students in both the total population and the sample were mostly high school graduates.

Table 5.6

Student Distributions by Highest Previous Education Before Registering at Universitas Terbuka

Highest level of education	Percentage	
	Total population*	Study sample
High School	79.7	92.4
Diploma	18.8	5.2
University	1.5	2.4
Graduate programs	0	0
Total	100.0	100.0

* UT Statistics, 1992

Regarding the kind of program for which they were registered, Table 5.2 (page 154) shows that almost 80 percent of students were registered in either Management or State Administration. This also was consistent with the fact that most UT students were registered for these two study programs (82%).

In summary, students used as the sample in this study had similar characteristics to UT's students in general.

Experimental Treatments

The experiment was based on the Post-test-Only Control Group Design discussed by Campbell and Stanley (1963). The complete design was as follows:

R	Control :				O1	O2			O3
R	Welcome :	T1			O1	O2			O3
R	Peers :	T1	T2		O1	O2			O3
R	Encourage1:	T1	T2	T3	O1	O2			O3
R	Encourage2:	T1	T2	T3	O1	O2	T4		O3
R	Encourage3:	T1	T2	T3	O1	O2	T4	T5	O3
		|_____Time = 7 months_____|							

Where R was random sampling and random assignment to the control and treatment groups, T1 - T5 were the given treatments (Treatment 1 - Treatment 5), and O's were the observation of the outcomes (O1 = self-test submission, O2 = examination attendance, and O3 = re-registration in the second semester).

The experimental treatment letters were mailed to new students during their first semester. The treatment letters were differentiated into five levels of increasing contacts. The experiment consisted of one control group and five treatment groups. The control group received no treatment or contact.

The treatment letters for each treatment group were as follows.

(1) The first treatment group (Welcome+Guide) received a welcoming letter and a brochure of independent learning strategies in the beginning of the semester (sent on October 4, 1993). The letter contained encouragement to set up a study group with peers and to start studying, and included information regarding tutorials, important dates throughout the semester and channels to seek further/more detailed information. Attached to this welcoming letter was a brochure on Independent Learning Strategies (Appendices 3.1 and 4).

(2) The second treatment group (Peer) received all of the items in Treatment group 1, plus a list of several other students (1 to 5 students depending on availability) who registered for the same study program and who lived closest to the respondent students. The list was attached to the welcoming letter which was sent early in the semester. This provision of a list of peers was to give students the opportunity to be in contact with other students in order to enhance their collective

affiliation with their peers (discussed earlier). Since the density and the spread of students varied from one study program to another and from place to place, some students received a list of other students who lived in the same postal code, while others received a list of students in the same district (city), or even only in the same regional office (approximately the size of an Indonesian province). The peers' names and addresses were selected from the non-sample students discussed earlier (Appendix 3.2). Table 5.7 shows the number of students in each treatment group completely unmatched or matched with peers. The "NO PEER" column shows the number of students who could not be matched (using any one of the three criteria) with any other students who were registered in the same study programs.

Table 5.7

Number of Peers Selected per Criterion

Treatment group	No Peer	Postal code	District (city)	Regional office	Total
Peer	3	86	92	19	200
Encou rage1	-	93	85	22	200
Encou rage2	2	91	96	11	200
Encou rage3	4	80	99	17	200
Total	9	350	372	69	800
(%)	1.1	43.8	46.5	8.6	100

As table 5.7 shows, there were nine students who were supposed to receive the peer list but could not be matched with any other students from the non-sample group. The table further shows that 350 students were able to be matched with their peers living in the same postal code area, 372 with their peers within the same city, and 69 students could only be matched with their peers within the same regional office's service area (usually as large as a province).

(3) The third treatment group (Encourage1) received all of the items in group Peer, plus a reminder and an encouragement letter to keep studying. This letter was sent on November 1, 1993, two weeks before the deadline for self-test submission and one month before the first final examination. The letter also contained some reminders and information regarding the due date of the self-tests and the final examination (Appendix 3.3).

(4) The fourth treatment group (Encourage2) received all the previous items, plus a reminder and encouragement letter to re-register for the second semester which was sent on February 15, 1994 (6 weeks after the examination). The letter also contained information regarding the registration period (Appendix 3.4).

(5) The fifth treatment group (Encourage3) received all previous items, plus a second reminder and encouragement letter to re-register for the second semester which was

sent on March 10, 1994 or one month before the closing date of registration for Semester 94.1 (Appendix 3.5).

Table 5.8 summarizes several theoretical constructs applicable to this study, together with their proponents, and illustrates (where applicable) how they are operationalized for this experiment. The table shows that the experiment did not operationalize all theoretical constructs proposed by Kember (1989), Tinto (1975), and others. The experiment focused on the integration process part of Kember's model (1989) during which the institution has some control over and can facilitate students' learning process. The table further shows that the experimental treatment letters embodied the concept of guided didactic conversation proposed by Holmberg (1983) and its modification proposed by Roberts (1984).

All treatments (letters, the independent learning strategies brochure, and the peer list) were sent by mail from the central office of UT in Jakarta. The timelag between the date when the treatments were mailed and received by the student respondents was monitored through the following procedure:

1. In each of the 32 regional offices, a dummy respondent was assigned. These dummy respondents were personnel located in the regional offices who had been contacted in advance and agreed to help.
2. At each mailing time of the treatment, a letter was sent to the home address of these dummy respondents. In the

Table 5.8

Several Theoretical Constructs Applicable to the Experiment and Their Operationalizations (Where Applicable)

Theoretical	Proponent(s)	Operationalization
Goal Commitment	Tinto (1975) Kember (1989)	Not Operationalized
Motivation: * Intrinsic * Extrinsic	Kember (1989)	Not Operationalized
Integration Process:	Tinto (1975) Kember (1989)	Modified Transition Stage
* Normative Congruence	Kember (1989)	* Welcoming letter * Independent Learning Strategies Brochure * Encouragement and reminder letters
* Collective Affiliation	Kember (1989)	* List of Peers' names and addresses * Regular written contacts from the institution
Cost/Benefit Analysis	Kember (1989)	Not Operationalized
Dropout/ Completion/ Persistence	Tinto (1975) Kember (1989) Wong (1987)	Three proxies of Persistence: 1. Self-test submission 2. Examination attendance 3. Re-registration
Guided Didactic Conversation	Holmberg (1983)	Conversational style of the letters

Continued on the next page...

Table 5.8 continues...

Theoretical	Proponent(s)	Operationalization
Industrialization of Guided Didactic Conversation and Cost-effectiveness	Roberts (1984)	Personalized and Pre-produced letters written in conversational way

letter, they were asked to record both the specific date they received the letter and asked to mail back the pre-stamped attached form to the researcher.

As shown by Table 5.9, only two mailing lag-times (the fourth and the fifth treatments/letters) to two different destinations were not known due to the change in the dummy respondents' addresses. The table also shows that the average mailing time for the first, second, third, and the fourth letters was less than a week. However, the average mailing time for the last letter was almost two weeks. This was because the scheduled mailing time of the last letter (March 10, 1994) was very close to the Moslem's "end of Ramadhan (fasting month)" day (March 15, 1994) when people send cards to family and friends--much like Christmas in Canada. The delay in this letter's reception, however, was not too serious since UT's closing date for registration was also postponed until two weeks later. The purpose of monitoring the mailing time was to check the extent to which treatments were received by respondents within the expected time.

Table 5.9

Mailing Time to The Dummy Respondents (in days)

Regional Office	Treatment(s)			
	Welcome+ Guide & Peer	Encourage1	Encourage2	Encourage3
Sumatera				
Aceh	9	3	4	27
Medan	4	3	6	14
Padang	2	2	3	12
Pekanbaru	3	5	5	24
Jambi	2	2	1	13
Bengkulu	2	5	2	11
Bandar Lampung	2	2	4	10
Java				
Jakarta	1	2	3	15
Bandung	2	1	2	12
Bogor	2	3	moved	11
Purwokerto	3	2	4	7
Surakarta	2	4	4	11
Yogyakarta	3	2	3	moved
Semarang	4	1	2	20
Surabaya	3	2	3	9
Malang	3	5	9	11
Jember	4	2	2	8
Bali and Nusa Tenggara				
Denpasar	8	3	5	15
Mataram	4	3	7	10
Kupang	4	5	7	13
Dili	3	5	9	21
Kalimantan				
Banjarmasin	10	3	7	10
Pontianak	3	2	8	14
Samarinda	2	3	4	9
Palangkaraya	4	4	12	14
Sulawesi				
Manado	4	2	3	14
Palu	3	2	3	9
Kendari	2	5	4	14
Ujung Pandang	3	2	6	11
Maluku				
Ambon	4	7	6	12
Irian Jaya				
Jayapura	4	7	17	12
Average in days	**3.4**	**3.1**	**5.1**	**13.2**

Data Collection

The data collected for the study can be grouped into two categories: predictor and outcome variables. Predictor variables (besides the treatments) included students' age, gender, religion, marital status, number of children, timelag between year of graduating from high school and entering UT, employment status, previous education, study program, and number of registered courses. Outcome variables, i.e. the number of self-tests submitted, number of examination written, students' actual re-registration, and grade point average (GPA), were collected during the monitored semesters (Semester 93.2 and 94.1), and after the closing date of the registration periods (for Semester 94.1: April 16, 1994; and for Semester 94.2: September 30, 1994). All data were retrieved from student's personal and academic records maintained in the computer system of UT.

With regard to re-registration in Semester 94.1, data were collected twice. The first set of re-registration data was collected on May 15, 1994 and was assumed to be complete since the deadline of re-registration for Semester 94.1 was April 16, 1994 (one month earlier). This record was updated at the end of May, 1994 when UT's central office received additional re-registration application forms from various regional offices. According to UT's Registration Office, these applications were received by the regional offices before the deadline but somehow had not been sent to the

central office until later. Therefore, these applications were not yet processed when the first re-registration data was collected on May 15, 1994.

In addition, interviews were conducted with sixteen students in order to obtain further information regarding their study experiences and, especially, regarding their perception of the treatments received. Due to limited resources and time, the students interviewed were selectively chosen from those who live near the main campus (office) of UT.

Twenty four selected students were initially invited for interviews. Invitations were sent in early March, which was approximately one and half months before the interviews were scheduled. Only five invited students responded, and three of those agreed to be interviewed in the scheduled time. A follow up invitation letter was sent to each non-responding student and 24 other invitations were sent to new selected students on April 18, 1994. This time, students were given the opportunity to schedule the interview time at their convenience between April 26 and May 31, 1994; and were given two choices of interview sites (at UT and at the researcher's house). A total of 24 students responded; thus in total 27 students agreed to be interviewed. However, out of these 27 students, only 16 students actually came to the interviews at the scheduled time. Those who did not show up in the scheduled interview could not be further contacted due to the time limitations.

The primary intention of the interview was to get information on whether the treatments were received by students the way they were intended, e.g. encouraging, motivating, and reminding so that they were enhancing their collective affiliation and normative congruence. Therefore, it was deemed appropriate to use a sample of convenience.

Data Analysis

The primary objective of the experiment was to test the effectiveness of the transition stage interventions in increasing student persistence. Two procedures of analysis were employed in regard to this objective: SPSS/PC Analysis of Variance (ANOVA) with covariates to see the effect of treatments and covariates on course completion (self-test submission and examination attendance), and SPSS/PC Logistic Regression to see the effect of treatments on re-registration.

ANOVA with covariates was chosen because it was able to measure whether students' behavior (in submitting self-tests and writing examinations) across the experimental and control groups were significantly (statistically) different. Therefore, this method would show whether students who received treatments (those who were assigned to the experimental groups) were more likely to be persistent (submit higher rates of self-tests and write more examinations) than those in the control group. ANOVA would

show whether other independent variables (covariates) besides the treatment significantly related to persistence measurements.

Logistic Regression was employed for all the same reasons, and because re-registration was a dichotomous variable (which only had two values of "1" for re-registered and "0" for not re-registered), there was not much variability in the variables values. Therefore, even though ANOVA could have been used for this purpose, the results would be more restricted because in ANOVA, the analysis is based on the differences of variances within and between the values of variables. Logistic Regression, on the other hand, was a modification of regular multiple regression analysis which correlates multiple independent variables to a dichotomous dependent variable.

The information from the interviews concerning students' learning experiences and, especially, the treatments, was used to help understand how students received and interpreted the treatments. That is, were the letters, the study guide and the peer list received as they were intended? In other words, the interview information was used only to help interpret the quantitative data analysis results.

Finally, since the experiment was conducted in the actual setting (i.e. it was a field experiment), it was important to take into account the effect of other variables besides the given treatments. Therefore, other significant

variables mentioned earlier (age, sex, religion, marital status, number of children, timelag between the year of graduating from high school and entering UT, employment status, previous education, and GPA) were used as covariates in all analyses. The number of registered courses was included in the analysis to account for differences in students' study load.

The Schedule of The Experiment and Data Collection

Table 5.10 depicts the actual times of both the experiment and data collection. As shown by the table, the experimental treatments were given to the students during the period of one semester (October-December, 1993). Furthermore, as discussed earlier, data were collected during and after the experiment covering two academic semesters (1993.2 and 1994.1) and two registration periods (January 1 - April 16, 1994 and July 1 - September 30, 1994).

Specifically, the experimental treatment letters were sent to the sampled students on the following schedules:

1. Welcoming letter and Study Guide): October 4, 1993;
2. Peer list : October 4, 1993;
3. Encouragement and Reminder: November 8, 1993;
4. Encouragement and Reminder: February 15, 1994; and
5. Encouragement and Reminder: March 10, 1994.

Table 5.10

The Schedule of the Experiment and Data Collection

1993				1994											1995	
SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
	Semester 93.2						Semester 94.1						Semester 94.2				
SS																	
	T1																
	T2																
		T3															
					T4												
						T5											
							DC	DC				DC					DC
							-Interview-										

Note:
1. Sample selection (SS): September, week IV
2. Quasi-Experiment conducted:
   T1 - Treatment level 1 (Welcoming letter and Study Guide : October 4, 1993
   T2 - Treatment level 2 (Peer list) : October 4, 1993
   T3 - Treatment level 3 (Encouragement and Reminder) : November 8, 1993
   T4 - Treatment level 4 (Encouragement and Reminder) : February 15, 1994
   T5 - Treatment level 5 (Encouragement and Reminder) : March 10, 1994
3. Data Collection (DC):
   The number of self-tests submitted and
   the number of examinations written : April 18, 1994 and February 4, 1995
   GPA : April 18, 1994
   Re-registration : May 15, 1994 and February 4, 1995
   Interview : April 26 - June 10, 1994
4. Final examination was held in December 1993, week 3 and 4.
5. The deadline for the registration period for Semester 94.1 was April 16, 1994, and the deadline of registration period Semester 94.2 was September 30, 1994.

And both quantitative data and qualitative information were collected during the following times:

1. Self-test submissions: April 18, 1994 - February 4, 1995;
2. Examinations attendance: April 18, 1994 - February 4, 1995;
3. GPA: April 18, 1994;
4. Re-registration: May 15, 1994 and February 4, 1995; and
5. Interviews: April 26 - June 10, 1994.

In total, the conduct of both the provision of the treatments and the data collection took about 13 months (September, 1993 - September, 1994).

Chapter Six

Findings of the Experiment

This chapter begins by presenting the overall picture of persistence at UT, relationships between all possible predictor variables and persistence measurements (self-test submission, examination attendance, and re-registration) and GPA, and the results of analyses of the treatment effect on persistence and GPA. The chapter closes by presenting the interview results concerning how students' received and interpreted the given treatments.

The analysis of the interrelated findings presented earlier.

Overall Picture of Persistence at Universitas Terbuka

Three proxies of persistence measurements were collected: self-test submission, examination attendance and re-registration in the second semester without interruption. As discussed in the methodology chapter, these were measured during the two consecutive semesters from the date of students' first registration (i.e. Semester 93.2 and 94.1). Table 6.1 shows the overall picture of student persistence of each type of measurement at each scheduled time.

The table shows that of the 1102 students sampled, 848 people submitted at least one self-test (by the deadline on

Table 6.1

Overall Picture of Persistence at Universitas Terbuka

	Numbers of Students					
Reg_1 by Sep. 30/ '93	Submit $Test_1$ >0 by Nov 15/'93	Wrote $Exam_1$ >0 in Decem '93	$Rereg_2$ 94.1 by Apr 16/'94	Submit $Test_2$ >0 by May 15/'94	Wrote $Exam_2$ >0 in June '94	$Rereg_3$ 94.2 by Sep 30/'94
	Semester 93.2			Semester 94.1		
1102	Yes=**848**	Yes=**818** (GPA=1.36)	Yes=**627**	No=627	No=627	Yes=**430**
						No=197
			No=191	No=191	No=191	Yes=**25**
						No=166
		No=30	Yes=**5**	No=5	No=5	Yes=**1**
						No=4
			No=25	No=25	No=25	Yes=**1**
						No=24
	No=254	Yes=**149** (GPA=1.19)	Yes=**100**	No=100	No=100	Yes=**49**
						No=51
			No=49	No=49	No=49	Yes=**3**
						No=46
		No=105	Yes=**13**	No=13	No=13	Yes=**6**
						No=7
			No=92	No=92	No=92	Yes=**1**
						No=91
Total Yes	**848**	**967**	**745**	**0**	**0**	**516**
%	77	88	68	0	0	47

November 15, 1993) and 967 people wrote at least one examination (in December, 1993) of the courses registered for in Semester 93.2. The average grade point average of students who submitted at least one self-test (1.36) was higher than that of those who did not submit any self-tests (1.19). Table 6.1 also shows differences in persistence patterns of students sampled during the research period. For example, of the 967 examination writers, 818 were self-test writers and 149 were not self-test writers. Furthermore, of those 848 self-test writers, 30 of them did not write any examination. This was possible because self-test submission was not compulsory.

It is interesting to note that there were 18 students who did not write any examination in December, 1993, yet re-registered in Semester 94.1. Since these 18 students could theoretically continue completing their courses in Semester 94.1 without re-registering, two possible explanations for this were either that those students were not aware of the regulation (of the two examination chances for a single tuition payment) or they re-registered for different courses. Even though this kind of behaviour (registering for new courses before completing the first registered courses) was not recommended, no regulations existed that prohibited it. Universitas Terbuka does not usually monitor or track down individual registration records.

Conceptually, those who went on in their study, whatever course they registered for, were defined as persisting. In general, the Table shows that 848 students persisted up to the

middle of the first semester (the deadline for self-test submission, which was not compulsory) and 967 students (regardless of whether they submitted any self-tests) persisted until the end of the first semester (the final examination). Furthermore, 745 students persisted until at least the beginning of the second semester (re-registered in Semester 94.1) and 516 students even persisted until the beginning of the third semester (re-registered in Semester 94.2). Of those who re-registered in either Semester 94.1 or 94.2, some did not write any examination. This shows that measuring persistence through course completion (self-test submission and examination attendance) and re-registration gives different rates of persistence. Accordingly, this study examined all three manifestations of persistence: self-test submission, examination attendance, and re-registration.

The table further shows that there were no students who submitted and wrote additional self-tests and examinations for the 93.2 semester courses in Semester 94.1 (Test2 and Exam2). This means that even though the definition (and the measurement) covered two full operational semesters, none of those sampled chose the option of two semesters. Therefore, the analyses of treatment effects on self-test submission and examination attendance were based only on data in Semester 93.2. Furthermore, since no students extended their first semester courses over the two semesters, students who had lower percentages of self-test submission and examination attendance at the end of Semester 93.2 (within one semester)

were defined to be less persistent than those who had higher percentages. This means, for example, students who wrote 75% of the number of examinations were less persistent than those who wrote 90% of the number of examinations they were supposed to write.

"Re-registration in the second semester without interruption" was a measure of students' re-registration immediately after their first semester, without taking time off. In this case, because no students expanded the length of their first semester (Semester 93.2) into two consecutive semesters (93.2 and 94.1), re-registration without interruption was based on data of re-registration in Semester 94.1. Students' re-registration in Semester 94.2 ($REREG_3$) was therefore no longer relevant to this study. This re-registration in Semester 94.2 data would have had been relevant if students had tried to complete their Semester 93.2 courses in Semester 94.1 ($Exam_2$). Since no students did so, re-registration in Semester 94.2 was then not considered an "immediate re-registration" after their first semester. In other words, students who re-registered in Semester 94.2 were either those who also re-registered in Semester 94.1 (and therefore have been recorded as persisting students by $REREG_2$) or those who took one semester off (i.e. did not re-register in Semester 94.1, nor did they try to complete their first semester course examinations). The analysis of treatment effects on re-registration was therefore based only on Semester 94.1 re-registration data ($REREG_2$: 745 students).

Predictors of Persistence and Grade Point Average

As discussed in previous chapters, several authors claimed that student persistence was influenced by interrelated multiple variables including students' demographic characteristics and social backgrounds. Eight variables in addition to the experimental treatment that warranted investigating were students' age, gender, marital status, number of children, employment status, highest level of previous education, timelag between high school graduation and registration in UT, and number of registered courses. These variables, except the last one, have been reported as somewhat significant predictors by previous studies (Wihardit, 1988; Mardiani, 1988; and Putra, 1992).

Because those eight variables were all potential predictors of persistence, it was important to first see individual relationships between those predictor variables and the four outcome variables (self-test submission, examination attendance, re-registration, and grade point average-GPA). Table 6.2 shows the Pearson Correlations between those eight predictor variables and the outcome variables. As shown in the table, the outcome variables were three proxies of persistence, plus GPA which was included in the analysis to show students' performance level. The table also shows the inter-correlations among the four outcome variables.

The results show that in general, the relationships between predictors and outcome variables were weak, but

Table 6.2

Pearson Correlation Between Predictor Variables and Outcome Variables

Variables	Proxies of persistence			GPA[a]
	Self-test	Exam	Rereg	
Treatment	-.01	-.02	.06	.01
Age	-.09*	-.01	.08*	-.13*
Gender	.08*	.02	.02	-.05
Marital status	-.06	.00	.05	-.09*
# of children	-.10**	.01	.04	-.05
Employment	-.05	-.00	.09*	-.02
Previous educ	-.09*	-.09**	.01	.07
Timelag	-.05	-.00	.08*	-.10**
# of courses	-.09**	-.11**	-.03	.11**
Self-test	1.00**	.46**	.25**	.15**
Exam	.46**	1.00**	.44**	.13**
Rereg	.25**	.44**	1.00**	.17**
GPA	.15**	.13**	.17**	1.00**

Significance: * $p<.01$ ** $p<.001$
[a]Based on data of examination writers (wrote at least one examination) only.

younger students were slightly more likely to submit self-tests and to re-register; male students and those who had fewer children were slightly more likely to submit self-tests; working students and those with longer timelag (between high school graduation and UT's registration) were slightly more likely to re-register; and students who had a somewhat lower level of previous education and fewer number of courses were slightly more likely to submit self-tests and to write

examinations. With regard to GPA, the table shows that younger students, unmarried students, students with shorter timelag and those who had a somewhat higher number of registered courses were slightly more likely to obtain a somewhat higher GPA. These correlations, however, while they were statistically significant, were generally weak (less than .15).

The inter-correlations among the outcome variables show that higher rates of self-test submission were significantly correlated to higher rates of examination attendance and a somewhat higher GPA. The inter-correlations among these outcome variables were also somewhat higher than those between the predictors and the outcome variables discussed earlier. The results further suggest that the higher students' rates of self-test submission, examination attendance, and GPA, the higher their likelihood to re-register. This indicates that students who were disciplined enough to submit self-tests (even though it was not compulsory) tended to persist until the end of the semester and to write examinations, to obtain a relatively higher GPA, and to continue persisting by re-registering in the second semester.

In regard to the treatment, Table 6.2 shows that treatment (listed as variable Treatment) did not significantly correlate with any proxies of persistence nor GPA. Even though this indicates that treatment did not have any significant linear effect on persistence, it was important to further investigate how student performance (in terms of

persistence and GPA) in the individual treatment groups (who received five different levels of treatment) compared to those in the control group (who did not receive any treatment at all). This investigation gave a deeper insight into the effects of individual treatment levels on persistence. The following section presents this analysis.

Treatment Effects on Persistence

Treatment effect on self-test submission. The first measure of persistence was whether students submitted self-tests of the registered courses in the middle of the semesters. As stated earlier, self-test submission was measured by the percentage of self-tests submitted across the two semesters out of the total number of registered courses. Since no students submitted any self-tests in Semester 94.1, the self-test submission processed in this analysis included only those submitted in Semester 93.2.

The higher percentages of self-test submission indicate higher ratios of self-tests submitted out of the total number of the registered courses. Therefore, students with higher percentages were defined to be more persistent than those with lower ones. Tables 6.3 shows the means and standard deviations of each group's self-test submission rates.

Overall, the student sample submitted almost 68 percent of the self-tests they were supposed to submit. Except for students in Group Peer (who received a welcoming letter, study

Table 6.3

Percentages of Self-test Submission by Five Treatment and One Control Groups

Group	Means %	SD	n
Welcome+Guide	68.71	40.73	178
Peer	62.40	41.75	181
Encourage1	70.45	38.15	183
Encourage2	71.19	37.71	170
Encourage3	70.41	37.50	173
Control	64.63	41.44	194
Total sample	67.88	39.71	1079

guide brochure, and a list of peer's names and addresses), students in the treatment groups had higher averages of self-test submission than did those in the control group. In order to see whether the group differences were statistically significant, they were tested using SPSS/PC ANOVA with covariates. This particular technique was chosen because of its ability to test the pure treatment effects on self-test submission. Table 6.4 presents the summary result of this analysis.

The table shows that, after removing the variances due to the predictor covariates, the average rates of self-test submission among the groups (indicated by heading Treatments) were not significantly different from each other. In other words, the treatment did not encourage students in the

Table 6.4

The Effects of Treatment and Eight Covariates on Self-test Submission at Universitas Terbuka, Indonesia, 1993-1994, Semester 93.2-94.1

Source of variance	Sum of square	df	Mean square	F	Signif of F
Main Effects	69344.76	13	5334.21	3.52	p<.001
Treatments	**12193.10**	**5**	**2438.62**	**1.61**	--
Age	4733.17	1	4733.17	3.13	--
Gender	5643.12	1	5643.12	3.73	--
Marital status	2165.96	1	2165.96	1.43	--
# of children	8825.17	1	8825.17	5.83	p<.02
Employment	627.84	1	627.84	.42	--
Previous educ	3536.36	1	3536.36	2.34	--
Timelag	3020.32	1	3020.32	1.10	--
# of courses	13967.67	1	13967.67	9.23	p<.003
Explained	69344.76	13	5334.21	3.52	P<.001
Residual	1612315.43	1065	1513.91		
Total	1681660.20	1078	1559.98		

treatment groups to submit higher percentages of self-tests than those in the control group. This means that none of the five treatment levels given to the students had any significant effect on their self-test submission; the covariates explained more variance in the self-test submission than did the treatment alone. This shows that if the analysis had not included influence of the covariates, even less variances of the self-test submission would have had been accounted for.

The table further shows that of all other predictor variables, only number of children ($p<.02$) and number of registered courses ($p<.003$) came close to showing any significant relationships with self-test submission. In other words, students who were younger, male, had fewer number of children and took a fewer number of registered courses, were more likely to submit higher percentages of self-tests.

Treatment effect on examination attendance. The second proxy of persistence was examination attendance which measured whether students persisted long enough to complete the final examination of their registered courses within the allowable time under a single tuition payment (i.e. Semester 93.2 and 94.1; from September, 1993 to June, 1994). As discussed earlier, examination attendance was measured as the percentage of examinations written by students out of the total required by their registered courses. As in self-test submission, no students delayed their examinations until June, 1994. Therefore, the number of examinations processed in the analysis included only those written in December, 1993. Tables 6.5 and 6.6 present the means and standard deviations of each group's examination attendance rates and the results of the ANOVA analysis.

Table 6.5 shows that students on average wrote over 85 percent of examinations required. This also shows that, except for students in Group Peer (who received a welcoming

Table 6.5

Percentages of Examination Attendance by Five Treatment and One Control Groups

Group	Means %	SD	n
Welcome+Guide	88.45	30.82	178
Peer	82.38	36.36	181
Encourage1	84.42	34.50	183
Encourage2	90.56	28.00	170
Encourage3	85.20	34.15	173
Control	84.40	35.57	194
Total sample	85.35	35.57	1079

letter, a study guide brochure and a list of peer's names and addresses), students in the treatment groups had higher means of examination attendance than those in the control group. As with the analysis of self-test submission, SPSS/PC ANOVA with covariates tested whether these differences were statistically significant (Table 6.6).

Table 6.6 shows that, after removing the variance due to the predictor covariates, the mean rates of examination attendance among all groups (TREATMENTS) were not significantly different from each other. In other words, as on self-test submission, the treatments did not have significant effects on examination attendance. This table also shows that only previous education ($p<.02$) and number of registered courses ($p<.001$) were significantly related to the

Table 6.6

The Effects of Treatment and Eight Covariates on Examination Attendance at Universitas Terbuka, Indonesia, 1993-1994, Semester 93.2-94.1

Source Of variation	Sum of squares	df	Mean square	F	Sig of F
Main Effects	33957.15	13	2612.09	2.43	p<.004
Treatments	**8296.10**	**5**	**1659.22**	**1.54**	--
Age	75.33	1	75.33	.07	--
Gender	861.46	1	861.46	.80	--
Marital status	209.58	1	209.58	2.00	--
# of children	921.13	1	921.13	.86	--
Employment	10.00	1	10.10	.01	--
Previous educ	7414.74	1	7414.74	6.90	p<.02
Timelag	344.71	1	344.71	.32	--
# of courses	13295.44	1	13295.44	12.37	p<.001
Explained	33957.15	13	2612.09	2.43	p<.004
Residual	1144402.76	1065	1074.56		
Total	1178359.91	1078	1093.10		

rate of examination attendance: students who had a somewhat lower level of previous education and fewer number of courses were more likely to write higher percentages of examination.

Treatment effects on re-registration. The other measurement of student persistence in this study was re-registration for students' second semester without any interruption. As discussed earlier, UT's policy allows students to break their first semester's course load across

two semesters (Semester 93.2 and 94.1 with examination times in December, 1993 and June, 1994). Therefore, students might re-register for their second semester in either Semester 94.1 (immediately following the first semester) or Semester 94.2 and still be categorized as continuing without interruption.

However, data show that students who did not complete their registered courses in Semester 93.2 (the semester of first registration) did not complete them in Semester 94.1 either (the second semester, when students were still allowed to write the examination without re-paying tuition fees). No students wrote examinations of the non-completed courses in June 1994. This means that none of the student sample expanded their studying time into two semesters. Thus, students who re-registered in Semester 94.1 were defined to be continuing their studies without interruption and those who did not were defined as suspending their registration status. Accordingly, re-registration as the proxy of persistence without interruption was based only on students' re-registration in Semester 94.1, the semester immediately following their first registration.

Table 6.7 shows the means and standard deviations of re-registration rates for the control and experimental groups. The table shows that on average 67 percent of the student sample continued to their second semester without interruption. This rate was better than UT's general rates in the previous years (see Table 1.2) when less than 60 percent of new enrollees continued to their second semester

Table 6.7

Percentages of Re-registration by Five Treatment and One Control Groups

Group	Means %	SD	n
Welcome+Guide	63.39	48.31	178
Peer	65.57	47.64	181
Encourage1	63.64	48.23	183
Encourage2	71.10	45.46	170
Encourage3	74.43	43.75	173
Control	68.00	46.76	194
Total sample	67.60	46.82	1079

immediately following their first one. In general, the table shows that the means of re-registration of students in treatment groups Encourage2 and Encourage3 (who received the two highest levels of contact: encouragements to re-register) were greater than that of those in the control group.

In order to test the significance of the treatment effects on re-registration, data were analyzed using the SPSS/PC Logistic Regression method. Logistic regression is a statistical technique that is able to analyze a dichotomous dependent variable which has only two values (re-registered or not re-registered). This technique requires far fewer assumptions about the normality of data variances than, for example, discriminant analysis which allows direct prediction of group membership (Norusis, 1990b). Further, this technique

is able to show the significance of the effects of individual treatment levels on the dichotomous dependent variable. Table 6.8 shows the results of the logistic regression analysis.

Table 6.8

The Effects of Treatment and Eight Covariates on Re-registration at Universitas Terbuka, Indonesia, 1993-1994, Semester 93.1-94.2

Variable	Standard Error	Wald Stats	df	Sig	Exp(B)
Treatments		6.58	5	--	
Welcome+Guide	**.22**	**.86**	**1**	--	**.81**
Peer	**.22**	**.34**	**1**	--	**.87**
Encourage1	**.22**	**.64**	**1**	--	**.84**
Encourage2	**.23**	**.29**	**1**	--	**.13**
Encourage3	**.23**	**1.44**	**1**	--	**1.32**
Age	.03	.72	1	--	.97
Gender	.16	1.39	1	--	1.21
Marital status	.22	.14	1	--	.91
# of children	.10	.12	1	--	1.03
Employment	.16	5.47	1	p<.03	1.46
Previous education	.09	.17	1	--	1.04
Timelag	.03	2.52	1	--	1.06
# of courses	.06	1.02	1	--	.94
Constant	.79	1.47	1	--	

The values of the Exp(B) column can be interpreted as a measure of association which approximates the likelihood of an outcome to be present among one of the treatment group compared to the control group (Hosmer and Lemeshow, 1989). For example, the value of Exp(B) of employment status

(Employment) = 1.46 indicates that re-registration occurs approximately 1.5 times as often among working students than it does among non-working students in the sample.

The Exp(B) values of listings under "Treatments" show the individual effect of each treatment level on re-registration compared to the control group. They show the increase (or decrease) in the probability of students' re-registration as a result of each level of the treatment. For example, the Exp(B) value of treatment group Encourage3 (which received the highest level of contacts) was 1.32. This means that the treatment increased the probability of students in Group Encourage3 to re-register 1.32 times higher than if they did not receive any treatment at all (Control). In general, the results show that only the treatment level which included all interventions, plus two encouragement letters to re-register (Encourage3) slightly increased the probability of re-registration. This means that lower level of treatment did not have much influence on re-registration.

Furthermore, even though the treatments increased the probability of re-registration of students in group Encourage3, the increase was not statistically significant. The Wald statistic values that test the significance level of individual coefficients suggest that none of the experimental interventions had a significant effect on re-registration. The significance level of the Wald Statistics presented in column "sig" show that none of the individual treatment's coefficients were statistically significant.

Of all other predictor variables entered into the logistic model, the only significant contributors to the explanation of students' actual re-registration was employment status ($p<.03$). This suggests that working students were more likely to re-register than were non-working students.

Treatment Effects on Grade Point Average

Grade Point Average (GPA) was measured as an additional element of student progress. Even though GPA does not directly measure persistence, it gives information regarding students' levels of achievement, which in turn, was found to be significantly correlated to students' decisions to re-register (see Table 6.2).

GPA was calculated based on students' examination grades (A=4, B=3, C=2, D=1, E or fail=0) times the total courses' credits divided by the total earned credit. For example, students who wrote two examinations of three credit courses and obtained grades C (or 2) and D (or 1) would have the GPA of ((2x3)+(1x3))/6 = 1.5. Students who failed in all their examinations and who did not write any examinations at all would have a grade point average of zero. To exclude students who did not write examination at all (had GPA = 0), the analysis of treatment effects on GPA was based only on data from examination writers (which still included students who had GPA = 0 due to failure, if any). The means of GPA of each group are presented in Table 6.9.

Table 6.9

Grade Point Average by Five Treatment and One Control Groups

Group	Means	SD	n
Welcome+Guide	1.34	.40	164
Peer	1.38	.45	156
Encourage1	1.32	.46	164
Encourage2	1.36	.39	159
Encourage3	1.32	.36	154
Control	1.30	.40	170
Total sample	1.34	.41	967

[a]Scale : 1 - 4 (1=Low Pass, 2= Pass, 3=Good, 4=Very Good)

Table 6.9 shows that overall, students in the five treatment groups obtained slightly higher means of GPA than those in the control group. The table also shows that overall, students only obtained less than 1.5 GPA (on 1-4 scale) which means a low pass. These figures would seem unbelievably low to western educators. However, these were quite normal figures for UT which defines D as pass. Students, however, usually improve their grades in the subsequent semesters as recommended by the university. Again, SPSS/PC ANOVA with covariate analysis was used to test whether the differences among the groups' performances were significant (Table 6.10).

Table 6.10 shows that the average GPA of treatments groups were not significantly different from each other. This

Table 6.10

The Effects of Treatment and Eight Covariates on GPA

Source of variation	Sum of squares	df	Mean square	F	Signif of F
Main Effects	9.46	13	.73	4.49	p<.001
Treatments	**.58**	**5**	**.12**	**.72**	--
Age	3.78	1	3.78	23.35	p<.001
Gender	1.20	1	1.20	7.43	p<.02
Marital status	.01	1	.01	.07	--
# of children	.01	1	.01	.05	--
Employment	.02	1	.02	.12	--
Previous educ	2.36	1	2.36	14.59	p<.001
Timelag	1.92	1	1.92	11.83	p<.002
# of courses	1.48	1	1.48	9.13	p<.004
Explained	9.46	13	.73	4.49	p<.001
Residual	151.97	938	.16		
Total	161.432	951	.170		

means that, as on persistence, treatment did not have any significant direct effect on GPA. The table also shows that age, gender, previous education, timelag and number of courses were significantly related to students' GPAs (all but gender at p<.004). These relationships indicate that students who were younger, female, unmarried, had a somewhat higher level of previous education, had relatively shorter timelag between high school graduation and UT registration, and had a somewhat higher number of registered courses were more likely to obtain higher GPA. It was interesting to note (and hard to explain) that while higher numbers of courses were correlated to higher

GPAs, they were correlated to lower level of persistence; and, on the other hand, higher GPAs were significantly correlated to higher levels of persistence.

Study Program and Persistence

One other independent variable that warranted investigating was study program. This variable was a categorical variable and therefore was not appropriate to include in either the ANOVA or Logistic Regression analyses as a covariate. One-way analysis of variance was conducted to see whether there were relationships between persistence and study program.

Table 6.11 shows that the highest enrollments were in the State Administration and Management programs (408 and 471); and that study programs in which students were enrolled related to all proxies of persistence ($p<.02$, $p<.03$ and $p<.001$)) but not to GPA. Furthermore, between group differences were found only in the re-registration proxy and between students in the State Administration program and the Management program ($p<.05$). Although it appears that the difference in re-registration between students in the State Administration (76%) and in the Mathematics (40%) programs was the largest, this difference was not statistically significant. This was due to the small number of students (10) in the Mathematics program compared to those in the State

Table 6.11

Relationships Between Persistence, GPA and Study Program

Study program	n	Proxies of persistence			GPA[a]
		Self-test[b]	Exam[b]	Rereg[c]	
State Admin	408	70.89	88.99	**75.98**	1.36
Business Admin	91	67.16	81.10	61.54	1.41
Tax Admin	31	71.79	83.23	64.52	1.35
Economics	77	58.61	85.92	61.04	1.35
Management	471	66.82	84.05	**63.69**	1.29
Applied Statistics	14	39.37	64.29	57.14	1.36
Mathematics	10	46.33	68.00	40.00	1.48
Total	1102	67.38	85.35	67.60	1.34
F-ratios		2.90	2.57	4.01	1.49
Significance of F		p<.01	p<.03	p<.001	--

[a]Based on examination writers data only.
[b]Values refer to percentages of self-tests submitted and examinations written by students.
[c]Values refer to percentages of students who re-registered.

Administration program (408); the Mathematics program did not offer much variation for correlation.

Furthermore, it was interesting to note that students in the State Administration program submitted and wrote the highest percentage of self-test examinations; the State Administration program also had the highest percentage of re-registered students (76%). On the other hand, students in the Applied Statistics program submitted and wrote the lowest percentage of self-tests and examinations, and had the lowest percentage of re-registration. Finally, even though there

were overall differences in self-test submission and examination attendance, no significant two-group differences were identified.

Overall, Table 6.11 indicates that student persistence (in all three proxies) was significantly related to the study program being studied. This was understandable since the kind of program being studied determines the level of difficulty and requirements of course work.

Summary of Treatment Effects on Persistence and GPA

To summarize the results of all analyses of treatment effects on persistence proxies and GPA presented earlier, Table 6.12 shows students' performances by groups and the significant predictors of the measured persistence and GPA.

The summary table shows that even though there were differences in groups' performances (in terms of their persistence levels and GPA), those differences were not statistically significant. The significance levels show that treatment did not significantly affect any of the three measures of student persistence nor GPA. Variables that were identified to have greater impact on students' persistence were age, gender, number of children, previous education, employment status, and number of registered courses (course load). The findings further show that significant predictors of course completion (self-test submission and examination attendance) were different from that of re-registration; and

Table 6.12

Summary of Treatment Effects on Persistence and GPA at Universitas Terbuka, Indonesia, 1993-1994, Semester 93.2-94.1

	Proxies of persistence			GPA
	Self-tests submitted	Exams Written	Rereg	
Groups' means:	%	%	%	
Control	64.63	84.40	68.00	1.30
Welcome+Guide	68.71	88.45	63.39	1.34
Peer	62.40	82.38	65.57	1.38
Encourage1	70.45	84.42	63.64	1.32
Encourage2	71.19	90.56	71.10	1.36
Encourage3	70.41	85.20	74.43	1.32
Significance of predictors[a]:				
Treatments	- .15	- .17	+ .25	+ .61
Age	**- .07**	- .79	+ .40	**- .000**
Gender	**+ .05**	+ .37	+ .23	**- .01**
Marital status	- .23	+ .66	+ .68	- .79
# of children	**- .02**	+ .36	+ .74	- .82
Employment	- .52	- .92	**+ .02**	- .73
Previous educ	- .13	**- .01**	+ .68	**+ .000**
Timelag	- .16	- .57	+ .11	**- .001**
# of courses	**- .002**	**- .000**	- .31	**+ .003**
% of Variances Explained by:				
Treatment	.70	.70	.70[b]	.40
Covariates	3.40	2.20	1.40	5.60
All Variables	4.10	2.90	2.10	6.00
% of Unexplained	95.90	97.10	97.90	94.00
F-ratios of:				
Treatments	1.61	1.59	1.55[b]	.72
Covariates	4.72	2.99	2.19	6.94
Overall explained	3.52	2.43	1.92	4.49
Significance	**.000**	**.003**	**.03**	**.000**
Significance of relationships with[c]:				
Self-tests	**+ .001**	**+ .001**	**+ .001**	**+ .001**
Exam	**+ .001**	**+ .001**	**+ .001**	**+ .001**
GPA	**+ .001**	**+ .001**	**+ .001**	**+ .001**
Study program	**.008**	**.02**	**.001**	.18

[a]the values for re-registration were the significance of Wald Statistics.
[b]Calculated from ANOVA.
[c]Significance of Pearson's correlation coefficients and of F-ratios of the ONE-WAY ANOVAs (for study program).

that the number of courses was a consistent predictor of course completion as the employment status of re-registration.

The F-ratio values show that the covariates explained a somewhat higher portion of the variances of the measured outcomes than did the treatments. Furthermore, although the overall F-ratio values of both the ANOVA and logistic regression analyses were significant ($p<.001$ and $p<.05$), the analysis procedures did not account for much of the variances of the rates of self-test submission (4.1%), the rates of examination attendance (2.9%), re-registration (2.1%) or GPA (6.0%).

The high interrelationships between Self-test, Exam, GPA and re-registration (Table 6.2) show that proxies of persistence (Self-test and Exam) were also significant predictors for other persistence measurements (Exam and Rereg). In separate discriminant analyses (not detailed in this report), Self-test was identified as the variable that best discriminated between examination writers and non writers (85.39% of students correctly classified); and Self-test, Exam and GPA were identified as the three variables that best discriminated re-registering students from non re-registering ones (77.18% of students correctly classified). When these variables were excluded from the discriminant analyses, the results show that other variables could not successfully distinguishing between persisters and non-persisters.

In short, the findings show that variables such as number of courses, employment status, self-test submission,

examination attendance, GPA and study program were somewhat more influential on student persistence than were any of the institutional attempts to enhance congruence between students personal situations and academic requirements.

Post-experimental Interview

The quantitative analysis provides quite a thorough examination of a number of factors influencing the measured persistence in the student sample. In an effort to investigate more perceptual information regarding the treatments, the author also employed a limited qualitative study, across all treatment and control groups, via a semi-structured interview process. The interview questions (see Appendix 7) focused on several aspects of the treatments.

Primarily, the sixteen interviewed students were asked about "how they received and interpreted the given treatments." Were the treatments received as they were intended? Next, they were asked a number of questions concerning their demographic characteristics (e.g. sex, age, employment and previous education) as they have been found (by previous studies and later by this study) to be significantly correlated to either one of the measured outcome variables, goals, perceptions of affiliation, motivation, self-confidence, and their ability to study independently. Finally, they were asked for comments and suggestions about

anything they thought would be related to the success of their study.

Interpretation of Treatment. Regardless of the non-significant results of the statistical analyses, students who received any of the treatments showed positive attitudes toward them. Most students viewed the letters to be encouraging, motivating, and reminding. The most common responses were that the letters gave them the feeling of acknowledgement and attention (said by all students).

The following comments (translated from Bahasa Indonesia - Indonesian) illustrate students' perceptions about and reactions to the letters received in general:

> I was very touched when I received it. I felt like the Vice Rector wrote me that letter personally. That letter made me realize that I am now a real university student and that I have responsibilities to carry on by signing up to UT. When I submitted the application, I was just doing it because one of my close friends at the office did it too. But I was not sure if I would really do the study. (Treatment Group Welcome+Guide)

> The letter was nice because it was welcoming and gave me a sense of pride to be a UT student. The second letter, especially, really reminded me to get back to the "reading and studying". I was very busy at work and had only read the first few pages of the modules. So, when I received the second letter, I felt like being woken up. (Treatment Group Peer)

> The letters were very encouraging and friendly; but the invitation to the interview made me really feel valuable. It shows that UT really cares about students' feelings and opinion. (Treatment Group Encourage1)

> I don't know if, without the letters, I would still be as motivated as I am now. Every time I felt like

> giving up, I received a letter that boosts up my motivation again. The third letter was the most crucial one, I think, because it gave me information regarding the re-registration period. That letter also made me aware that I can re-register before getting my examinations results. (Treatment Group Encourage2)
>
> I like mostly the way the letters were written. It made me feel like having a father/teacher who always reminded me to get back to my study. (Treatment Group Encourage3)

Two students, however, mentioned that the timing in sending the letter(s) was not good enough:

> In my opinion, the letter was kind of too late. I registered in the middle of August and I received a welcoming letter in October. I think it would be more helpful if the letter was received right after my registration. (Treatment Group Welcome+Guide)
>
> I think letter three should be sent earlier so that I could re-register earlier as it was suggested by the letter. I received the letter about one week before the announcement of the examinations grades. In my opinion, it was kind of too late. (Treatment Group Encourage2)

Regarding the "Independent Learning Strategies" (study guide) brochure that was sent together with the welcoming letter, almost all (11) interviewed students said that they read the brochure at least once. All these students who read the study guide found it to be helpful even though "it was difficult to be completely practiced."

> The Study Guide gave simple examples which showed that independent study can be systemized and did not have to be "as it flows". I followed the suggestion regarding setting up my own study schedule. But, it was hard to stick to the scheduled time. (Treatment Group Encourage2)

> It helped me to start studying. It also showed that independent study should not be difficult, and can be done if it is well organized. (Treatment Group Encourage3)
>
> I was really glad to receive it because it has been a long time since I have to study regularly. That guide gave me a foundation to set up my own study schedule and to find my own strategies of reading and taking notes. (Treatment Group Encourage3)

Students were also asked about the list of peer names and addresses which was sent to all students in Treatment Groups (except group Welcome+Guide). All students who received the lists perceived it to be "nice", but only two students tried to make use of the list. However, these two students did not establish relationships with the contacted peers either. They both gave the same reason: the peers they called were not home and did not contact them back.

> The peer list, I think, is a very good idea. It made me feel a part of a group, like having classmates. However, I did not contact any of the names listed because I was too busy. Besides, I am a journalist. So, I did not think I would have common schedules with other students who, I am sure, would be "regular hour" students. But I liked receiving it. (Treatment Group Peer)
>
> I did not contact them because I already have a study group. Three friends and I set up this group about a week before I received the letter. We met in the Regional Office. (Treatment Group Peer)
>
> Everyone I contacted was too busy to return my call. Or maybe they already have a friend to study with. I don't know why. (Treatment Group Encourage2)

Goals, Reasons and Learning Experiences in General.

Table 6.13 shows the characteristics of the interviewed

Table 6.13

The Characteristics of Students Interviewed Concerning Treatments in the Experiment at Universitas Terbuka, Indonesia

Group	Gender	Age	Employment	Previous Education	Study program	Main goal
Control	F	31	Yes	HS	SA	Get a degree
Control	M	32	Yes	DIP	SA	Get a degree
Welcome + Guide	F	39	Yes	UNIV	SA	Give example for my children
Welcome + Guide*	M	27	Yes	HS	DA	Get a degree
Peer	M	36	Yes	UNIV	BA	Get a degree
Peer*	M	20	Yes	HS	SA	Get a Degree
Peer	F	27	Yes	HS	SA	Get a degree
Encourage1	M	29	Yes	HS	MA	Get a degree
Encou-rage1**	M	22	Yes	HS	MA	Get a degree
Encourage2	M	22	Yes	HS	MA	Get a degree
Encourage2	F	35	Yes	DIP	MA	Improve knowledge
Encourage2	M	39	Yes	UNIV	SA	Improve knowledge
Encourage2	F	24	Yes	HS	MA	Get a degree
Encourage3	M	35	Yes	HS	SA	Get a degree
Encourage3	M	19	Yes	HS	SA	Get a degree
Encourage3	M	24	No	DIP	MA	Improve knowledge

Note: Previous education = HS: High School; DIP: Diploma; UNIV: University up to second year.
Study program = SA: State Administration; DA: Development Administration; BA: Business Administration; MA: Management.
* No treatment (treatments were not received).
** Letter 2 was not received.

students as the background to their information discussed earlier. As is shown by the table, only four out of the sixteen interviewed students mentioned that their main goal of entering UT was not to get a university degree.

Regarding the reason(s) for choosing UT to obtain their goals, most students said it was because of its time flexibility (11) and its low cost (8). The other reason mentioned by one student was because "she could not get admitted by other universities".

Most interviewed students had a friend or friends to study with (12 students). However, only three students mentioned that they studied together regularly. The common reasons for not being able to study together regularly were "conflicting schedule" and "too busy." Therefore, even though they had friend(s) with whom they could sometimes have discussions, twelve students said they still felt lonely.

Eleven students said they usually studied alone regularly unless an emergency came up. These eleven students said they developed a study plan, but only five of them were able to follow their plans. Again, the common reasons were conflicting schedule and "too busy".

Further, students were asked if they ever went to or contacted the Regional Office and, if they did, for what purpose(s). All students said they went to the Regional Office at least once during the research period. The most common purpose of visit(s) was to pick up their examination seat numbers which would not be sent through the mail and had to be picked up by the students themselves. The other reasons for students' visits were seeking information about tutorials and study groups.

Students were also asked whether, after going through their first semester, their sense of affiliation with the institution, their motivation and their self-confidence had changed. They were further asked whether, in their opinion, their ability to study and learn independently had increased. Table 6.14 shows students' responses to these questions.

Table 6.14

Changes in Students' Sense of Affiliation, Motivation, Confidence, and Independent Study Ability

	Increase	Decrease	Not Changed
Sense of Affiliation	13	0	3
Motivation	11	0	5
Self-confidence	12	0	4
Independent Study Ability	13	N/A	3

As the table shows, most students felt that becoming a UT student had increased their self-confidence. UT, they said, made it possible for them to be a more highly educated person. After experiencing one semester as a student, most felt they knew more about UT and were more affiliated to UT than at the time when they just started their studies. Furthermore, the table also shows that their motivation to pursue their goals had increased. In fact, as an indication regarding their persistence, all interviewed students had already re-

registered in the second semester when the interview was conducted.

Students who were in the treatment groups were asked further questions regarding the letters sent to them. First of all, they were asked whether they received the letter(s) they were supposed to receive. Apparently, as was shown in the note of Table 6.13, two students who were supposed to receive Letter 1 (the welcoming letter) and the peer names and addresses did not receive those treatments; and 1 student who was supposed to receive two letters said s/he did not receive the second letter.

Students' Comments and Suggestions. The interview also gave students an opportunity to give comment(s) on or suggestion(s) about anything which they thought would be related to the success of their study. The most frequently mentioned comment (from 13 students) was the lack of communication, both among students and between students and the institution.

One student specifically suggested that UT should have a medium of communication and information that links students directly to the institution. She further suggested UT should organize regular meetings (outside tutorials) that would give opportunities to the students to meet their "lecturers." Another student, who was in the control group, suggested UT set up a system that would give students confirmation about registration, provide a regular newsletter, and establish a

"hotline" or voice mail for each course offered. The newsletter, he said, would function as a reminder as much as information. It could also give a list of names and addresses of other students who were looking for study peers. He said he would not mind if he had to pay for this regular newspaper because he was sure that this would make him feel "attached" and not like "a lost child." He continued to say that for a disabled student like himself (he was in a wheelchair), face-to-face media such as tutorials held by the Regional Office were hard to attend.

The second most mentioned comment/complaint (mentioned by 5 students) was the heavy course load. They said there were too many courses in the first study package. This, one student said, was very hard because she had to write too many examinations. For working students like herself, this was considered to be too much and sometimes resulted in frustration and loss of confidence.

The third comment, given by 2 students, mentioned the low quality of course materials (modules). They said that the phrases/ sentences were too long and difficult to understand. Another comment mentioned that the pages of the modules (study materials) came off too easily and were hard to keep intact.

Summary of the Interview Responses

The post-experimental interview was conducted using the semi-structured style which allows students to give responses

in their own words. As discussed, the responses of 16 students could be grouped and summarized as follows:

1. most found the treatment letter(s) to be encouraging, reminding and motivating regarding their study commitments;
2. most found the independent learning strategies brochure to be useful in helping them find their own learning strategies;
3. most found the list of peer names and addresses to be helpful in giving them the sense of grouping, but not in finding them friends to study with.
4. most interviewed students entered UT to satisfy their extrinsic motivations (namely getting a university degree);
5. most chose UT because of its time flexibility and its relatively low cost;
6. most had a friend or friends to study with, yet they still feel lonely as independent learners;
7. most did not study regularly even though some of them had study plans; and
8. most mentioned "no time" or "too busy" as reasons for not studying regularly, whether alone or with study groups;

Conclusion

The findings have shown that although the written contacts were received and interpreted by the interviewed students as they were supposed to be (i.e. encouraging, motivating, and reminding), they did not have a significant

direct effect on the sample population studied on either the proxies of persistence (self-test submission, examination attendance and re-registration) or GPA. Variables such as age, gender, previous education, employment status, timelag, number of registered courses, number of children, and study program were found more influential than the treatments tested in this study.

Chapter Seven

Discussion

A meaningful discussion of the findings in this study needs to address two things: first, the experimental findings; and second, the insights into those findings provided from a combination of the interview data and a consideration of the larger factors of the Indonesian context raised in the literature. Before addressing the experimental findings, however, it is perhaps helpful to re-visit the original intentions, purpose, model, and operationalized variables from which the tested interventions were derived.

Review

In order to contribute towards UT's efforts to improve persistence rates in its distance education programs, this study began with a comprehensive examination of literature related to persistence, measures of persistence, and characteristics which could be institutionally accommodated to improve persistence rates. Particular attention was paid to both the requirements of distance education and some unique cultural aspects of Indonesian society which make the Indonesian distance education context distinctive.

From this melange of considerations, one model--Kember's (1989)--was selected in order to derive a template as a

conceptual framework to suit UT's particular context. Kember's model, and the template proposed in Figure 4.1 based upon it, reinforced the perception that the most efficient and effective institutional interventions which UT could apply would come at the integration stage of a student's educational process. At this critical point, thoughtful actions on the part of the institution theoretically should be able to enhance both the normative congruence of students' adjustment to the UT system, and their sense of collective affiliation with UT. To do so would require careful attention to increasing the overlap of individual, academic, and social/work/family characteristics. As such, consideration was given as to how to operationalize not only a set of interventions, but also the measures by which their impact could be meaningfully gauged.

The experimental phase of the study focused on the transition stage during which five levels of treatment were tested, and which emerged from a wide array of more logistically complicated and expensive interventions. Three proxies which could meaningfully measure occurrences of persistence were chosen: (1) self-test submission, (2) examination attendance, and (3) re-registration. Appropriate statistical tests were run on combinations of variables to determine the relationships and their statistical significances across a representative population of some (1102) students. As a check on the perception of the treatments, a sample of 16 students was also interviewed. It

is the results of the experiment, the comments from the interview, and an examination of points raised in the literature about the Indonesian context that form this chapter.

Discussion: Experimental Findings

The quantitative analyses results show that none of the tested treatments or the intervention letters had significant effects on any of the three measures of persistence, whereas variables such as previous education, number of children, timelag, employment status, and number of courses were slightly more influential on student persistence than were the various levels of treatment. The results further show that the relationships between those significant variables and persistence were not always parallel across the three measured proxies of persistence. For example, number of children was negatively correlated to only the self-test submission while employment status was positively correlated to only the examination attendance.

Among those significant predictor variables, only the variable of number of courses was consistently correlated with both self-test submission and examination attendance as proxies for course completion. The findings suggest that the fewer the number of courses that students have to study for, the higher the rates of their course completion. Data show that students who had five to six courses could complete and

submit 69% of self-tests and write 87-90% of examinations. On the other hand, students who had seven to nine courses to study for only submitted 54-66% of self-tests and wrote only 71-81% of examinations. Thus, increased number of courses from six to eight, for example, resulted in decreased rates of both self-test submission by 14% (from 69% to 55%) and examination attendance by 19% (from 90% to 71%). These figures suggest that students who had heavier course loads tended to have lower course completion rates.

The negative relationships between the number of courses and the rates of both self-test submission and examination attendance are important information. The rates of self-test submission and examination attendance positively related to re-registration in the second semester. Students who submitted higher rates of self-test were more likely to write higher rates of examination and also were more likely to re-register in the second semester. Therefore, although statistical tests of possible direct linear and non-linear relationships between course loads and re-registration showed no significant results, course loads might have some influences upon re-registration.

Interaction between study load and persistence is congruent with Bartels' (1982), Woodley and Parlett's (1983), and Gatz' (1985) studies which found that factors affecting dropout in distance education were mostly those related to work load, deadlines, and feasibility in time for studying. Also congruent are Mardiani's (1988) and Putra's (1993)

findings which suggest that major causes for student withdrawal at UT are lack of time to study and exacerbated by the fact that students tend to take too many courses at a time.

The other significant and consistent findings are relationships among the different measured proxies of persistence and grade point average (GPA). As mentioned, students who submitted higher percentages of self-tests, tended to write higher percentages of examinations, and tended to obtain higher GPAs. This indicates that self-test submission could be a good predictor for examination attendance (R^2=.21), and that self-test submission, examination attendance and GPA could be good predictors for re-registration (R^2=.22). In other words, self-test submission could be used by UT as an early indication to identify students who are at risk of not completing their courses (i.e. not writing the examination of the courses). Similarly, examination attendance and GPA could also be used as indications to identify students who would not be likely to continue their study to the immediate second semester. This, in turn, could be used as warnings to take necessary interventions to prevent those at risk students from actually not-persisting. The finding of positive relationship between GPA and persistence is congruent with that of Sweet's (1986) and Wong's (1987) studies which suggest that student performance (grade) influences or is associated with whether students persist in their studies.

The findings further show differences in persistence among the seven study programs. Students in different programs may need different intervention strategies to maximize persistence. Table 6.11 shows that UT is capable of achieving 76% re-registration rates in the case of the State Administration program. The challenge is to achieve the same rates for the other programs--one of which achieved only 40% of re-registration and the remaining five programs averaged only about 62% re-registration.

Finally, the findings show that different proxies of persistence produced different outcomes. This confirms the previous discussion (Chapter Four) which suggests that measuring persistence in distance education should not be done in one single measurement only but should rather be done continuously. Continuous monitoring of student behaviour, as suggested earlier by Wong (1987), could give the institution early warning signs of students who are at risk of not-persisting and therefore need extra attention and assistance from the institution.

The study undertook to test two propositions in Kember's model; that institutions can enhance student's normative congruence and collective affiliation, and that such enhanced normative congruence and collective affiliation result in increased persistence (see Chapter Four). The results so far show that the institutional interventions had no direct effect on persistence. The next section discusses whether the treatment letters enhance student's normative congruence and

collective affiliation as revealed in interviews with students.

Although the quantitative analyses results show that, statistically, none of the treatment letters enhanced the measured persistence, additional interview based information suggest that the treatment letters were received and interpreted by the interviewed students as they were intended (i.e. encouraging, motivating, and reminding). Therefore, although those non-effects may be discouraging to educators, this study suggests that institutional interventions should not be summarily dismissed, providing that other significant factors such as students' time constraints for studying and the course load are addressed in designing those interventions.

In order to better understand the probable explanations for the non-significant effect of the treatments, it is very important to put the findings of this experiment in the larger context from which the treatments' design was derived. Accordingly, the next discussion examines the possible relationships between the experimental treatments, the findings discussed earlier, other factors found in the literature, and persistence beyond what is statistically measured.

Discussion: Larger Context

The sixteen interviews conducted as part of this study were not, and were not intended to be, representative of the sample population. Further, they did not test any elements of the interventions. Rather, they were intended to elicit confirmation that the treatments were perceived as they were intended, i.e. to be encouraging, motivating, and reminding. In that they had been designed consciously to create the effect of the conversational "didactic" style suggested by Holmberg (1983), such a check seemed essential.

The interviews, however, not only confirmed that, at least in these cases, the perceptions of the treatments matched the researcher's intentions, but also offered possible insight into other realities of distance education students. For example, several students expressed difficulty managing conflicting time demands from work, family, and study. Such a comment would not as visible in a consideration of only quantitative results. Exploring such qualitative aspects is outside the scope of this study, yet it is considered important to put the findings of this experiment in a larger context within which the experiment was conducted.

Indeed, as the treatments tested represented only one of the possible interventions (see Summary of Chapter 4), it is important to consider how the transition stage interventions tested here could be integrated and applied simultaneously with other supporting interventions. In order to better

understand the results of the experiment, this section reconsiders the other significant factors found in this study and relates them to the contextual background discussed in the framework chapter.

Treatments and students' personal characteristics and circumstances. As discussed in Chapter 4, the transition stage interventions tested in this study were intended to enhance the inadequate attempts by UT to address issues of normative congruence and collective affiliation of students with the institution. They were supposed to modify the academic environment so that it would better match students' characteristics, and therefore would ease the students' integration process.

To review, normative congruence refers to the compatibility between the students' and the institution's normative values and customs. As discussed above, UT students are not accustomed to independent learning habits and they can be discouraged and disoriented when faced with situations (especially learning situations) that require independence and autonomy. UT, on the other hand, has partially adopted an educational model that requires a high degree of independence. UT students have had to study independently at their own places with minimal communication, feedback and guidance from the institution. The transition interventions were designed and intended to bridge the incongruity between the dependent learning habits and the independent teaching system.

The regular contacts were intended to somewhat substitute for the teachers' presence. These "substitute teachers" were designed to deliver reminders, encouragements, and information as they were usually given by teachers in regular classes. The findings show, however, that the tested transition stage interventions were not at all successful in delivering those teaching elements.

Indeed, the interviews revealed that students felt lonely, even when they had a friend or friends to study with, usually because they had nobody to ask when they had questions or did not know what to do. Considering that students did identify that they had friends, this may suggest that they were looking for teacher figures. This indicates that students may have been looking for authority and direct guidance common to conventional face-to-face learning-teaching methods to which they are accustomed.

The non-results, therefore, should not be too surprising. The letters contained only information, encouragement, reminders, and suggestions. The letters were in no way directly telling students what to do. Thus, even though they are perceived as encouraging, reminding, and motivating by students, they do not offer practical ways of studying to follow. In other words, the letters do not do what teachers (who are perceived to possess correct and unchallengeable knowledge) will usually do.

In accordance with this, the non-influence of the letters on the students' actions may be due partly to the way the

letters were designed or written. The letters were designed to not provide ready to follow instructions on what to do and how to do things. In both the treatment letters and the Independent Learning Strategies brochure, there was no order or obligation whatsoever regarding everything suggested. This was intended to give students the opportunity to direct their own learning, and to gradually increase their abilities and capabilities to take action on their own and become more independent learners.

However, as shown by the results, indirect guidance (e.g. suggestions, encouragements and reminders) is not an effective tool for helping students to study regularly, submit the self-tests, write the examinations, and re-register. The weak form of interventions failed to have any effect upon students. If it is to be effective, the Guided Didactic Conversation technique may need to be more directive in the UT context. UT students harbor past learning experiences in which they have always been told what to do and followed directions without question. The transition stage interventions proposed and (partly) tested in this study which initially seemed suitable, may have been still too non-directive and full of options for the current UT students.

The second possible explanation for the non-effects results of the experiment is related to time and course load factors. The interviews revealed that students have significant time constraints on studying. The data further show that compared to OLA students (one course), for example,

UT students have to take heavier course loads. Therefore, there seems to be an incompatibility between students' time availability for studying and the weight of responsibility of their study. The experimental treatments did not at any point directly reduce this incompatibility. This issue was only somewhat addressed by the suggestion concerning a time management strategy contained in the Independent Learning Strategies brochure (Study Guide). Even so, the strategies were only intended as guidelines and students were still expected to make their own study plan and schedule.

In short, the intervention letters did not successfully enhance the normative congruence of the students and the institution.

With regard to collective affiliation, the interview transcripts suggest that the treatments increased students' sense of affiliation with both the institution and their peers. All but two of the 16 interviewed students viewed the treatments (letters, peer list, and the study guide) to be informative; several mentioned that the letters had made them feel recognized by UT.

This discussion supports Tinto's (1975) argument that there were two equally important elements in students' integration process that need to be enhanced: collective affiliation and normative congruence. Therefore, even when collective affiliation is somewhat enhanced (according to the interviews), it is not sufficient if normative congruence is not addressed. Also, there is a possibility that even when

both normative congruence and collective affiliation are enhanced, persistence may or may not be necessarily enhanced as suggested by Tinto (1975) and Kember (1989). Testing this possibility, however, was beyond the intention of this study.

UT's administration and registration system and persistence. Another (untested) way that has been suggested as a possible avenue for UT to better accommodate students' characteristics to aid in integration and normative congruence is that of structuring the academic course load more thoughtfully.

Despite the fact that they are studying part-time, students did not seem to be capable of assessing their own situations. Some students (22.5%) in this study took heavier course loads than were recommended. Interestingly, UT has chosen to ignore this fact. Students can register for as many courses as they wish and UT does not monitor or cut off the excess number of courses for first-time students. There is no system that closely monitors individual students' registration records. Such a system might be helpful in cutting off unnecessary (unmanageable) course loads which may, in turn, influence persistence. In other words, UT does not explicitly or directly limit first-time students' course loads so as to facilitate the management of studying commitments into students' busy lives.

Further, this research found that the rate of self-test submission had a significant and positive relationship with

both examination attendance and re-registration; students who submitted more self-tests tended to write more examinations and more likely to re-register in their second semester. However, self-test submission was not compulsory nor encouraged by the registration system. For example, the registration deadline for Semester 94.1 (which was initially on March 30, 1994) was extended until April 16, 1994. In addition, later on it was found that additional applications which came after April 16, 1994 were also still accepted and processed. The last update of the registration for Semester 94.1 was on May 30, 1994. On the other hand, the deadline for submitting the self-tests was on May 15, 1994 (two weeks earlier) and the final examination of that semester was scheduled and held in the second and third week of June, 1994 (two weeks later). Therefore, the registration system allowed students to start their studies even after the deadline of the self-test submission, and only two weeks before the final examinations. This shows that UT took no responsibility to ensure that students had the chance to practice through completing self-tests and had enough time to study for the examinations. This may explain why students (especially those in this study), on average, only obtained the minimum level of grade point average (less than 1.5). Students might not have enough time to prepare themselves for the final examinations. It may be that UT's primary concern is to get as many registrations as possible whether or not students satisfactorily complete those courses.

This discussion suggests that UT could, still within the constraints of cost-effective measures, improve or rationalize its administration and registration systems. If students are unable to set their own limitations, the university should consider not putting them at further risk by allowing late registration and unmanageable course loads. UT could develop a registration system that guides students to register before the deadline and for only a reasonable number of courses.

Summary

Based on the previous points, it can be summarized that:

1. treatments might have been more successful if they were integrated with other interventions addressing students' time constraints and their need for more directed learning-teaching methods, and their heavy study load;
2. the treatment letters provided to the students may have been still too non-directive and full of options for students (who seemed to be still looking for teacher figures);
3. the treatment letters somewhat enhanced students' collective affiliation (according to interviews) but not their normative congruence with UT; and
4. UT's version of distance education provides little or no support that would accommodate and facilitate students' integration process.

Overall, the transition stage interventions tested were still too weakly operationalized and incomplete in modifying the non-accommodative UT's academic environment. More integrated and more powerful interventions are needed if they are to be successful. This is discussed in the next chapter.

Limitations and Threats to the Validity of the Study

This study was limited to tests of only one part of several possible interventions to increase student persistence levels. Furthermore, it was also time-limited: it only monitored students' persistence for their first two semesters. Thus, following this study, there was a possibility that students who did not re-register during the experiment would come back and re-register in the following semester (since the UT registration system allows students to do so). In other words, students who were labelled non- or less persistent in this study may not be so by the end of the subsequent semester. Therefore, the effects of treatments in the long run may be different from those at the point when this study was completed.

This study was conducted in natural settings in which students were exposed to other uncontrolled factors besides the variables measured. In this kind of study, there is always a threat to internal validity such as the John Henry effect (Campbell and Stanley, 1963). This effect occurs if the control group's subjects act differently because they are

aware of being compared to the experimental group's subjects. This threat, however, was unlikely to occur in this study since the students in the control group were not informed about the experiment. The only possibility of this effect occurring was if a student in the control group accidentally met another student from one of the treatment groups, and got the information stated in the letter(s). However, the chance of this was quite low since students were spread throughout the country.

Another threat to the validity of kind of study is the Hawthorne effect. This happens when the behavior of students in the treatment groups changes not because of the treatment but rather because of being in the experiment (for example, receiving attention from the researcher). This threat is related to the novelty effect which may result in members of the treatment groups act differently because they have something new in their study (such as new media). However, since the students were all new enrollees, it is unlikely that they perceived the treatment as a new or unusual addition to the regular study package. In fact, one interviewed student, who happened to be working at UT, did not seem to realize that the letters he received were not the regular instruction until he was informed by the interviewer.

Another concern in this study was the fidelity of the experimental treatments. The experimental treatments in this study were given to students through mail services. The interviews revealed that 3 out of 16 (18%) interviewed

students did not receive the treatment that they were supposed to receive. This might also have happened within the non-interviewed student sample. Therefore, there was a possibility of inadvertent mixing of student groups during the course of the experiment. For example, imagine that a student who was supposed to receive three treatments only received two. Since there was no way of absolutely verifying mailing in the non-interviewed sample, this student (who actually only received two treatments and should therefore be analyzed as a member of treatment group Peer) would still be treated as a member of treatment group Encourage1. The results of this study should be interpreted with these possibilities in mind. Furthermore, there was also a concern related to the strength of the treatments that might partly cause the non-significant effect of the treatments. Perhaps the treatments were: too infrequent, too weak, not personal enough, or insufficiently varied (paper only, no calls, no feedback, and no visits.).

Finally, there is one further consideration. The sample of interviewed students was not structured to be statistically random. Rather, interviewees were selected to represent all the groups in the experiment (including the control group). They were asked to provide information concerning their interpretation about the treatments and their study experience in general. The interview was not intended to predict nor to explain student persistence/non-persistence. With this in mind, the information should, therefore, be understood to be suggested rather than proven.

Chapter Eight

Conclusions, Recommendations, and Implications

Conclusions

The persistence phenomenon at UT, as at any other institution or within any other context, is a complex phenomenon, related to cultural and traditional aspects of its setting. This study shows that despite its complexity, persistence can be understood through an analysis of multiple factors which relate to students' personal characteristics, their family and work circumstances, the academic circumstances, and the cultural and traditional factors to which students are accustomed.

The study tested the impact of one kind of institutional intervention designed to increase student persistence; it consisted of five levels of contact with a sample population--and a control sample of no contact. The findings show that the interventions did not significantly increase student persistence. The non-significance of the findings mean that those particular interventions were not useful in changing student behavior. However, the discussion of the findings and their relationships with the larger contextual factors (Chapter Seven) suggest that the treatments (interventions) may have been only tinkering at the margins of an already troublesome system of education.

Persistence at UT appears to be related to interactions between specific personal characteristics of students, their family and work circumstances, and the arrangements of academic structures. As discussed in the literature, it is the degree of overlap between three arenas that leads to normative congruence and enhanced collective affiliation. The treatments designed and tested in this study seemed likely to the researcher to assist in pushing the circumstances of each of the arenas closer together; the fact that they had no statistically significant impact is cause for a more fundamental modification of the one factor that can be studied more closely: UT's academic circumstances.

It was assumed that UT faithfully adopted a viable model of distance education firmly established in western countries, in particular one from the United Kingdom (the British Open University's model). However, it is apparent that the adoption was only partial and disregarded what may emerge in the Indonesian context as the most crucial elements needed by the students; e.g. the support systems such as tutorials, counselling, and feedback. In other words, this form of partial adaptation resulted in UT relying on educational methods that require a higher degree of student self-direction and independence, even though it serves relatively less (technically and psychologically) prepared individuals to be independent learners than BOU does. In BOU, whose students are assumed to be more independent than UT's students,

students are provided with strong support systems including compulsory face-to-face summer school.

As shown by Table 3.1 in Chapter 3, the distance education system applied at UT is less open and much less supportive than that at both the British Open University (BOU) and the British Columbia Open Learning Agency (OLA). Students of both BOU and OLA are provided with multi-media course delivery methods and are supported by both mediated and face-to-face instructional methods such as summer school, tutorial services, and counselling services. On the other hand, UT uses mainly printed materials and limited face-to-face tutorials. Furthermore, while both OLA and BOU students receive written comments on their assignments in addition to their examination grades as feedback, the only feedback that UT's students receive is their examination grades. This shows that compared to both OLA and BOU, UT offers very limited instructional and support systems to its students.

The adaptation of the distance education system was uneven and denied the crucial elements of the system. Only the method itself, studying at a distance, is used. The support systems required by this method, such as tutorials, counselling, feedback, and payment flexibility were disregarded. Students are expected to be instant experts in independent learning and are left on their own. Beginning students have to explore and find out for themselves the "what" and the "how" about independent studying. With only minimal assistance from the institution, they are, in fact,

only physically monitored on the dates of registration and of examination with no other contact. As a comparison, BOU students are continuously monitored through monthly assignments by their tutors.

This poor adaptation of the educational model created an incongruence between the system as adapted and the students within the Indonesian society with its own cultural and educational traditions. While it is suggested that Indonesians are in greater need of assistance and direction than are western individuals (and thus needed a more assisted and directed model of distance education), UT's planners decided to minimize the provision of those very elements. Thus, the problem of persistence at UT may be more of a systemic or society-wide incongruence than an individual integration problem. The low persistence rates among UT students may stem from the poorly adapted distance education model. This more fundamental inadequacy in UT's provision of academic circumstances, may have made it (relatively) insignificant to attempt to push students into more normative congruence and collective affiliation through the five treatment levels tested in this study.

Recommendations For The Operation of Universitas Terbuka

The discussion thus far shows that lack of persistence at UT seems (among other things) to be rooted in the poor adaptation or lack of fidelity in the adoption of the distance

education model. The findings of this study have practical implications for UT. Based on the interventions previously proposed in Chapter 4 and on the research findings, UT should consider making fundamental changes and improvements to increase its student persistence levels and to come into greater conformity with the common assumptions governing distance education. Some of these can be accomplished at virtually no cost, while others may require a substantial investment. Specifically, by making changes and improvements in policies related to registration and administrative procedures, tuition, instructional and evaluation systems, and involvement with students, persistence rates may be improved.

Registration/Administration. UT's registration system seems to be financially driven: i.e. it is more concerned with getting as many enrollments as possible rather than student persistence. As currently constructed, it does not ensure provision of sufficient time for students to undertake their study before the examination and thus to successfully complete courses. Furthermore, UT does not check or monitor students' registration records in regard to the number of registered courses. Since both insufficient study time and some excessive numbers of registered courses are suggested to be related to student non-persistence, UT needs to improve its registration and administration policies and priorities.

First, UT needs to establish a firm deadline for registration, one that will give students enough time to

study, to do the self-tests and submit them, and to prepare themselves for the final examination. Extending the registration period should not be permissible if it would leave students with insufficient time to do the study satisfactorily. Or, UT could make the registration into an "open-entry" system where students can register, begin their studies, submit self-tests, and take the examinations at any time. The open-entry system, however, will require UT to have stronger administration, evaluation and student record systems than it does now, as each student would have an individual and unique academic schedule. Therefore, establishing firmer deadlines seems to be more feasible initially.

Secondly, since students have other equally important commitments in their lives, UT needs to restrict the number of courses contained in the first study package to a more manageable number. Previous studies (Putra, 1993) and interviews of this study reported that students expressed difficulty in finding time to study. This may suggest that the current numbers of courses contained in the first study package (4 and 5 courses) exceeded their study time availability. Furthermore, UT should also disallow new students from taking on extremely heavy course loads in the first semester. This would therefore require UT to develop a system to do this. The current registration forms have spaces for up to nine courses. So, for example, UT might want to revise these forms to ones that limit the number of courses that can be registered for in a student's early terms.

These first two recommendations are very feasible since they do not require a major investment. Some extra funding will only be needed to re-design and reproduce the registration forms; firmer deadlines can be achieved at no additional cost.

Tuition. The current tuition policy is based on credit packages that discourage registration for individual courses as stand-alone offerings (see discussion on Registration System in Chapter Three). For example, the tuition fee for registering for 2 to 9 credits is Rp. 45,000,- or C $30.00. This means that students have to pay C $30.00 regardless of whether they register for 2, 6 or 9 credits. This therefore discourages students to register for fewer credits than nine. The findings of this study show that the number of courses that students take was related to their persistence. The higher the number of courses, the lower the likelihood of persistence. Therefore, UT needs to change the tuition policy to a more flexible system such as one which allows students to pay for individual credits rather than multi-credit packages. This would encourage students to register only for the courses they will be able to manage physically and financially. The disadvantage of this single credit payment policy will probably be a decrease in the tuition income. However, this may not be for too long a period of time since this will encourage the currently inactive students (those who suspended

their registrations due to time and funding constrains) to re-register.

Instructional systems. Previous chapters suggested that UT employs mainly low quality printed materials for course delivery. As discussed in Chapter Four, UT needs to use a greater variety of media if it wishes to increase the normative congruence between students and the institution. The current sole use of printed media as learning materials is incongruent with what UT students are accustomed to (oral communication as the learning medium) as well as with excellent educational practice in other contexts. This could be quite easily remedied. For example, since audio-video cassettes and players have now become more accessible to students than they were 10 years ago when UT was started, these media could be used to supplement printed texts. Furthermore, since the educational television channel is now available throughout Indonesia, UT can also increase the frequency of television programs used for instructional purposes as well as for encouragement and reminder purposes. Students who were interviewed substantiated this, as they described the printed modules as boring and physically difficult to keep intact.

Therefore, UT needs to improve the quality of the modules in both packaging and content. One way of improving the modules would be to personalize the printed materials by applying the concept of guided didactic conversation style

suggested by Holmberg. That is, they could be re-written into a style that would make reading feel more like listening. The current course materials have mostly been written in a stilted text-book style rather than in a conversational style.

Compared to the previous recommendations, these instructional systems' improvements have greater cost implications. Increasing access to television broadcasting and re-writing the course materials will require a considerably more funding than, for example, re-designing and reproducing the registration forms.

Evaluation System. Since the rate of self-test submission was positively related to persistence, the university should first of all provide feedback and acknowledgement to students who submit them, and secondly, change the nature of submissions from suggestion to obligation. Self-tests could then be used as part of official scores contributing to students' final grades. The inclusion of self-test submissions as part of the official evaluation system would then expand the form of evaluation beyond simply the final examination. This would mean, however, that UT would have to ensure that students would have enough time to complete the self-tests and submit them before the deadline. This could be done by establishing the firm registration deadline suggested earlier.

For the long term, furthermore, UT might also want to consider other ways of evaluation and contact that can be

instituted to maintain greater interactions with students. For example, UT could administer monthly compulsory assignments that could be commented and marked by tutor-markers. These tutor-markers could be lecturers of the local universities employed by UT part-time. The comments and answers for the assignments could be developed, standardized and pre-produced by UT. To do this, of course, UT would have to establish and strengthen collaborations with both state and private local universities.

Examination Loads. UT needs to reduce the number of examinations written in any one day. UT currently holds all final examinations within a two-day block, Saturday and Sunday, regardless of the number of examinations students have to write. The interviews suggest that students thought there were too many examinations to take in one day, and the findings show that students obtained only low examination grades. Since grade point average was positively correlated to student persistence, UT should reduce the number of examinations per day by extending its examination days into three or four days or over two weekends, so that students will have more time to concentrate on individual courses. Or, UT could apply an "open exit" system that would allow students to write course examinations whenever they are ready. As with an open-entry system, however, this open-exit policy would also require UT to have stronger administration, evaluation and

student record systems than it does now, to accommodate variations in students' academic schedules.

Involvement with students. In the interest of enhancing collective affiliation, UT should establish a wider variety of support systems to allow students to actively interact with both their peers and the institution. Indonesian educational traditions have created a popular perception of learning as occurring best in an immediate, oral, and hierarchical relationship with a teacher (Dunbar, 1991). Further, although Indonesian students perceive learning as a passive but communal activity, teaching is seen as active. Therefore, the sole use of printed media without direct guidance is not congruent with what Indonesian learners are used to. UT should accommodate these characteristics as much as possible by establishing some communication channels to provide guidance and the sense of communal activity while gradually increasing their autonomy. For example, UT can publish a regular newspaper to facilitate students' information networking, set up a hot-line or toll-free number for students to seek basic information, or even assign a special tutor-counsellor. Tutor-counsellors would be freed from duties related to administrative matters, located in regional offices, and be accessible for student visits, telephone and written contacts.

Furthermore, in the interest of cost-effectiveness, if UT is to continue to rely primarily on written materials, the

university should consider written contacts such as the ones tested in this study. However, these letters should be written in a more directive way, yet should still be encouraging and motivating. It may be that "soft" encouragement and suggestions do not work very well for new students who have been all their lives, in teacher-directed learning situations with direct guidance and communication from the teacher. Therefore, UT should consider communicating expectations in a more obligating way. UT should, however, still use the principles of Guided Didactic Conversation as it was considered one of the most attractive features of the treatment letters by the students interviewed in this study. Furthermore, UT might also want to try using audio cassettes as an alternative medium for such contacts.

Overall, UT needs to re-assess both its administrative and academic policies. The policies should be more student-oriented rather than institution-oriented and should incorporate learning methodologies which have been proven efficient in other distance education settings. These policies should accelerate the development and improvement of the student support system, registration system, examination system and course delivery system. These are systems that recognize students' limitations and also recognize their needs to integrate their academic worlds into their family and work circumstances. In other words, UT's policies should allow students to pursue their study without imposing additional barriers and obstacles coming from the institution.

This will require UT to re-assess its resource allocations. Some recommended changes and actions (such as improvement of the instructional systems and establishment of a communication channel with students) will need a considerable investment. In the last ten years, it seems that UT has been concentrating on establishing its physical plant--an understandable goal for a new institution--by constructing office buildings, developing new study programs, hiring new employees, and installing hardware (computers). There has been little attention paid to the improvement of the quality of its functions, for example, course material revision, expansion of course delivery media and student support systems. Therefore, now that most of these physical necessities have been provided, it is time for UT to re-assess its resource allocations. The resources should now be devoted to the improvement of the quality of course materials, course delivery and student support systems.

Recommendations For Further Research

The findings of this study have raised questions and issues that will help distance educators extend ways of understanding and increasing student persistence in distance education. The following are further research efforts that warrant investigation.

1. This study tested only one type of intervention: pre-produced and personalized contact letters containing

encouragement, reminders, and information. Further investigation on the development of a more integrated package of interventions may give more favorable results in persistence. Moreover, understanding that Indonesian learners prefer oral communication, employing audio and video cassettes, or even telephone and personal contacts instead of written letters, may also be more successful in increasing student persistence levels.

2. As the study indicated, heavy course loads were related to less persistent behavior. Therefore, testing of the effectiveness of an intervention that combines lower study load with regular written and oral contacts seems to warrant investigation.
3. This study has analyzed the persistence problem as though it exists within a unified Indonesian context. In this study, Indonesian culture was considered to be a single unified main-stream culture which, in relation to the perception of the importance of education, is true. However, Indonesia is ethnically and culturally heterogeneous. Acknowledging the importance of internal cultural differences in understanding persistence problems, other researchers might want to explore the further relationship between different Indonesian religious, ethnic, and cultural groups and rates of persistence. In fact, this study revealed some statistical evidence that persistence rates differ from island to island and from regional office to regional office. Since this issue was

beyond the scope of this study, other researchers might wish to investigate this relationship in order to further explain differences in students' persistence behaviors.

4. Finally, this study followed an assumption that Indonesian learners are not as autonomous and independent as those western learners from which the distance education model was adapted. Western learners are raised within a culture which generally fosters individualistic behavior and independence. However, this assumption has also never been tested; western adults may not be as autonomous and independent in their distance learning process as they are in their non-academic daily lives. Again, since this issue was beyond the scope of this study, other researchers might wish to directly compare whether Indonesian learners and western learners approach the issues of independence and autonomy in distance education in similar ways.

Implications For Knowledge about and Practice of Distance Education

Distance education has been considered as an alternative method of education, designed to overcome economic, demographic, and time barriers. The claimed strengths of this method are openness, flexibility, and cost-effectiveness. This method gives a wider opportunity to people who, due to various reasons related to those barriers, cannot access conventional face-to-face education. Because of this, more

and more countries adopt and apply distance education methods to solve their educational provision problems. Distance education has become an important political as well as social choice of policy. As North America, Europe and Asia are now heading more toward distance education models, there is a need to look more closely for congruence between cultural and educational norms of the recipient countries and the nature of distance education.

Cultural and traditional contexts, and the educational model adaptation. The dropout models (Tinto, 1975; Boshier, 1973; Kennedy and Powell, 1976; and Kember, 1979) discussed in the Literature Review (Chapter 2) have shown that persistence as a phenomenon could be understood through an analysis of the interactions between individual participants and their respective environments. However, those dropout models which exist in the literature describe mostly the interaction of personal and institutional factors related to persistence.

This study suggests that the lack of persistence at UT may be as much the result of incomplete adaptation of the educational method and its inconsistency with the Indonesian culture and traditions, as of incongruence between individual participants and the educational method. Accordingly, it seems appropriate to review again the persistence model depicted in Figure 4.1 (Chapter 4) and to integrate it with the suggestions made by the findings of this study (Figure 8.1).

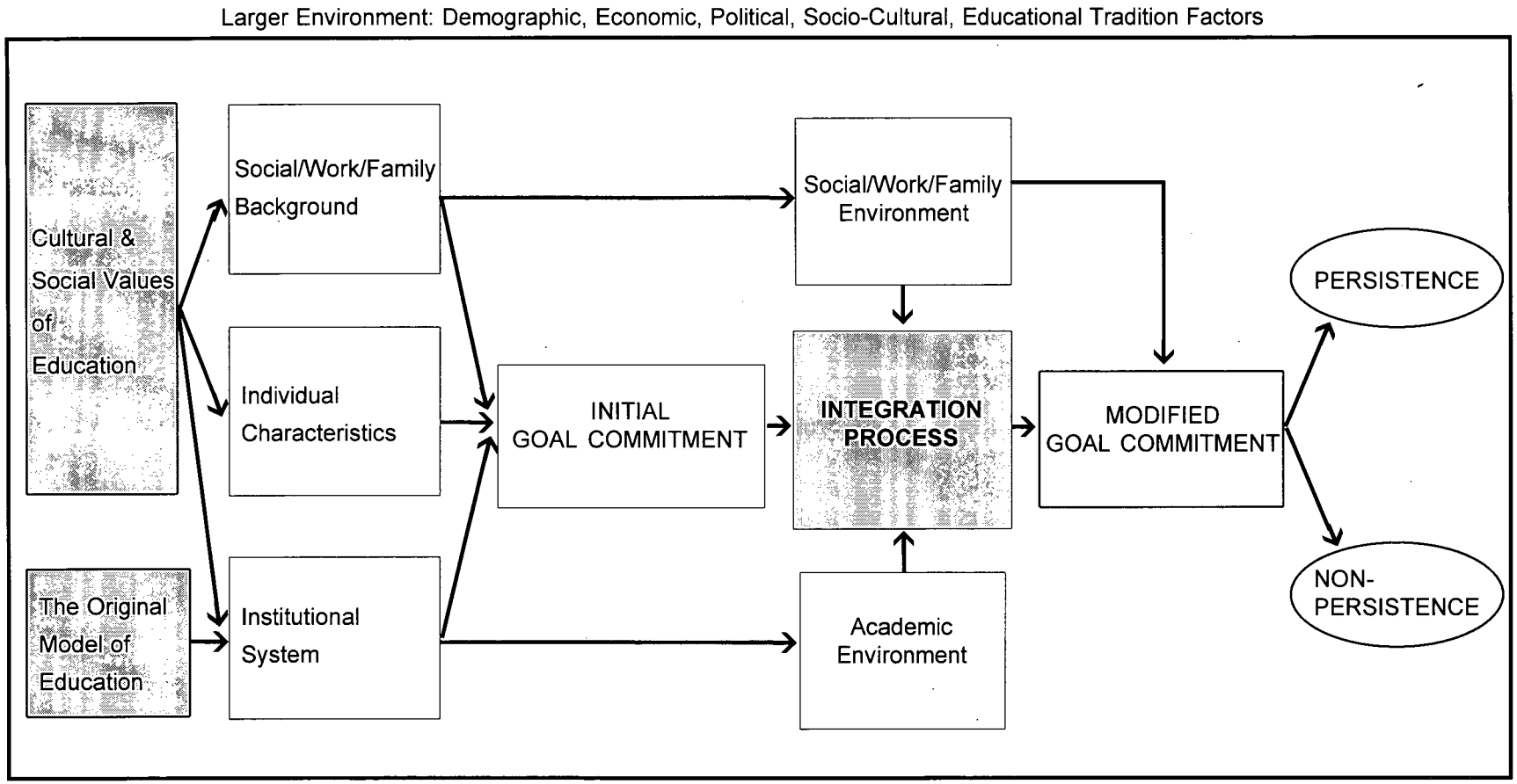


Figure 8.1. A re-conceptualized Kember's model for persistence in distance education.

Figure 8.1 shows a proposal for a persistence model that includes cultural and traditional context as the larger circumstances in which students were raised and live. The cultural and educational traditions within which students were raised and live develop and shape both social and individual norms. These norms influence both students' and their significant others' (i.e. family, employer and community in general) perceptions about education and their expectations from it. The diagram also identifies the importance of understanding the underlying assumptions as well as the completeness of the educational model adaptation. Poor or partial adaptation of the original model or system will lead to the development of inappropriate academic norms and standards which will possibly be incongruent with the norms in which students believe. In other words, this proposed model will push the analysis back into the development stage of the educational model and its compatibility with the cultures of the recipient of the education (students), before analyzing the normative congruence between the students and the institution.

The inclusion of these cultural and traditional contexts and the adaptation/development stage in the model will therefore compel educators to better understand the persistence phenomenon and thus design appropriate interventions for increasing student persistence levels. As postulated by Tinto's and Kember's dropout models, persistence is a result of the success or failure of students' integration

process; that is, the process of integrating the new academic circumstances into students' current non-academic circumstances. Both of these sets of circumstances are embraced in larger cultural circumstances. In the UT context, incomplete adaptation of the distance education model which disregarded the most crucial elements of the model, e.g. student support systems, has obviously ignored and not been sensitive to the culture and traditions within and to which students live and grow accustomed. UT's planners chose not to apply the support systems part of the model which, in fact, seemed to be the most needed elements by students.

Including cultural and traditional contexts into the model suggests that the adopted educational method should be placed within and adapted to the context and not the other way around. As in UT's case, the educational method adopted by UT assumed that beginning students were capable of autonomous learning behavior, and that on entry they were psychologically prepared for the personal demands imposed by a teacher-independent, self-study regime. However, Indonesian students were acclimatized to being told what to do and not to question anything that authorities, that is teachers, tell them. Yet, UT adopted a distance educational method which requires students to be independent and self-directed and expects beginning students to adapt to the new educational method with minimal assistance from the institution.

In short, poor or incomplete adaptation of an educational model may have contributed to normative incongruence between

individual students and the educational method. Therefore, it is important to carefully consider what aspects of an educational model are adopted, what aspects must be adopted, and what aspects cannot be adopted, and what must be altered to accommodate local conditions.

Accordingly, the key to the persistence model is to include both the cultural and traditional context together with personal and institutional factors including the learning system, as well as the history of the development of the educational model. The revised model increases understanding of the phenomenon within its context, and because of the inclusion of the cultural and traditional context in the model, it can be applied to analyze dropout phenomenon in other contexts. This study therefore offers a more appropriate model which helps explain some the missing pieces in the puzzle of persistence.

Re-conceptualization of dropout. In regard to conceptualizing the dropout phenomenon, this study has shown that measuring dropout in distance education is problematic. It is not as simple as calculating completers out of a total enrollment figure. Unlike students in traditional face-to-face education who would be studying within a scheduled time frame, UT students studied within different time frames. Indeed, some the recommendations for UT mentioned above would lead to even more individualized schedules. Currently, however, the UT educational system allows students to study

within shorter or longer time frames with some restrictions set by the institution such as tuition policy. Indeed, the findings of this study show that the three measured proxies of persistence (self-test submission, examination attendance, and re-registration) give different persistence rates. This indicates that measuring persistence in distance education should perhaps not be done at any one single point such as at the end of one particular time frame only, but rather be measured in various ways at various stages. In accordance with this suggestion, the dropout phenomenon in distance education should indeed be conceptualized as a persistence phenomenon that continuously changes as all factors related to it change in students' lives, rather than as "a one time measurement of dropout" that denies the possibility of continuation. Investigating persistence in distance education should therefore be a continuous process. In fact, the British Open University's experience shows that students do return to their suspended studies and complete their degree. At BOU, it was reported that over 40% of students graduated eight years after they initially enrolled (Open University, 1991).

These findings are congruent with the dimension of openness and the intentions of the distance education model. Distance education, as mentioned above, intends to remove barriers created by demographic, economic and time constraints and promotes a more flexible and accessible learning system. This, rationally, should therefore extend the notion of a less

definite time frame for students to begin and complete their learning process. It should not set a deadline when students should start and complete their studies, and then be labelled as either dropouts or completers. Such an attitude would hamper the success of removing time barrier from education, and the intentions to promote a model for more open and life-long learning.

Furthermore, previous research on student persistence has usually been conducted from the viewpoint of the institution, often for its financial accountability. Students are viewed as the product of the institution and therefore completion rates are viewed as the measurement of the institutions' efficiency--cost per successful completers--rather than as the monitoring tools of student behaviors. Although this may be appropriate from the point of view of improving the institutions' efficiency or cost-effectiveness, in the author's opinion, this view has to change if distance education is to become more open to the changing circumstances of learning across the life span. Students should be viewed more as the central interest and research should be more focused on the effectiveness of the institutions in addressing students' changing needs and intentions. Persistence rates could then be viewed as the measurement of students' progress and perseverance rather than an indication of success or failure. The purpose of research on persistence should therefore be focused on seeking recognition of potential non-persisters so that institutions can encourage student

persistence or continuation toward their own goals, whether that be a single course, cluster of courses, or an entire pre-packaged program.

Although it is beyond the scope of this study, in relation to the notion of openness, it is important to analyze the influence of today's communication technologies on the practice of distance education. For example, the emergence of the Internet and the wide use of its facilities for educational purposes have increased the accessibility of education. Through computer networking, people can now undertake courses and get credit from a variety of institutions around the world. This educational trend will expand the openness of education. Learning will soon become a more highly individualistic process. No one teacher nor institution will control the progress and process of such individual learning. Individual participants will be the only ones who know whether they are continuing or withdrawing from their learning process. With this possibility, the question then becomes: what is the role of distance educators in this new emerging educational technology? Will persistence rates still need to be monitored and evaluated? Why and by whom? Who should be accountable for the quality of learning? Will learners demand credit at their home institutions for learning acquired on the Internet? How will institutions accredit and value such learning? Answering these questions will be part of the new challenges for distance educators wanting to increase

their participation through emergent technologies and new social arrangements.

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Appendix 1

Statement of Informed Consent

Adult Education
Department of Administrative,
Adult and Higher Education
5760 Toronto Road
Vancouver, B.C. Canada V6T 1L2
Tel: (604) 822-5881
Fax: (604) 822-6679

LETTER OF CONSENT

I, ..., agree to participate in the research titled

REDUCING EARLY ATTRITION AT DISTANCE EDUCATION

and to be interviewed regarding my first semester experience as a Universitas Terbuka's student by the researcher, *Tian Belawati*, a doctoral student in Adult Education at the University of British Columbia (UBC), Canada.

I understand that my information will be treated confidentially, will not affect my grades, and will only be used for the purpose of the research (which is to improve the quality of UT's academic and support systems), as well as for the researcher's graduate thesis.

I also understand that the interview will take approximately one hour and that my participation is voluntary. I may withdraw any time during the interview if I change my decision of participation.

Further, I understand that if I had any inquiries regarding this research, I may contact the researher: *Tian Belawati* at (021) 799-9431, or the research supervisor: *Dr. Dan Pratt* at (604) 822-4552.

Finally, I believe that I will receive a copy of this consent letter.

Jakarta, , 1994

Note: Copy 1 for the researcher
Copy 2 for the interviewee

Adult Education
Department of Administrative,
Adult and Higher Education
5760 Toronto Road
Vancouver, B.C. Canada V6T 1L2
Tel: (604) 822-5881
Fax: (604) 822-6679

SURAT PERSETUJUAN

Saya, ..., setuju untuk berpartisipasi dalam penelitian yang berjudul:

MENURUNKAN TINGKAT "DROPOUT" DINI PADA UNIVERSITAS JARAK JAUH

dan untuk diwawancarai mengenai pengalaman belajar saya pada semester pertama di Universitas Terbuka oleh peneliti, Tian Belawati, yang merupakan mahasiswa tingkat doktoral pada bidang Pendidikan di University of British Columbia (UBC), Kanada.

Saya mengerti bahwa semua informasi yang saya berikan akan diperlakukan sebagai informasi rahasia, tidak akan mempengaruhi nilai-nilai saya, dan tidak akan dipergunakan untuk keperluan lain selain untuk keperluan penelitian (yaitu untuk memperbaiki kualitas akademik dan sistem UT), dan untuk keperluan penulisan disertasi doktor peneliti.

Saya tahu bahwa wawancara akan memakan waktu kurang lebih 1 jam dan partisipasi saya adalah sukarela (tidak dipaksa). Apabila saya berubah pikiran, Saya dapat mengundurkan diri dari partisipasi ini setiap saat.

Apabila saya mempunyai pertanyaan mengenai penelitian ini, saya dapat menghubungi peneliti, Tian Belawati pada nomor telepon (62-21) 749-0941, atau pembimbing peneliti, Dr. Dan Pratt pada nomor telepon (1-604) 822-4552.

Saya juga mengerti bahwa saya akan mendapatkan *copy* Surat Persetujuan ini.

Jakarta, 1994

Catatan: Lembar pertama untuk peneliti
Lembar kedua untuk yang diwawancarai

Appendix 2

Patterns of Re-registration of UT Students per Cohort per Semester

Cohort	Academic year/semester							
	1984		1985		1986		1987	
	84.1	84.2	85.1	85.2	86.1	86.2	87.1	87.2
84.1	54035	31294	28185	38479	8811	11669	6117	7408
%		**57.9**	52.2	71.21	16.3	21.6	11.3	13.7
85.1			46910	38105	9392	14969	5561	7272
%				**81.23**	20.0	31.9	11.9	15.5
86.1					8586	1011	2277	2280
%						**11.8**	26.5	26.6
86.2						11069	1006	2476
%							**9.1**	22.4
87.1							1174	149
%								**12.7**
87.2								2062

Continued on the next page...

Note :
84.1 means Semester 1 of 1984 and 84.2 means Semester 2 of 1984; etc.

% is the percentage of students from the year indicated by academic year in the rows who re-registered again in the academic year indicated in the columns

Table 1.2 continued.....

	ACADEMIC YEAR/SEMESTER							
	1987	1988		1989	1990		1991	
	87.3	88.1	88.2	89.2	90.1	90.2	91.1	91.2
84.1	10784	10624	9794	7603	6765	5842	4688	3988
%	20.0	19.7	18.1	14.1	12.5	10.8	8.7	7.4
85.1	8173	8173	7655	6058	5613	5048	4104	3471
%	17.4	17.4	16.3	12.9	12.0	10.8	8.8	7.4
86.1	2599	2599	2160	1630	1442	1369	1114	943
%	30.3	30.3	25.2	19.0	16.8	16.0	13.0	11.0
86.2	2869	2869	2242	1728	1490	1379	1142	952
%	25.9	25.9	20.3	15.6	13.5	2.5	10.3	8.6
87.1	602	602	484	343	283	251	219	200
%	28.9	28.9	23.2	16.5	13.6	12.1	10.1	9.6
87.2	922	922	699	507	435	386	329	265
%	**44.7**	44.7	33.9	24.6	21.1	18.7	16.0	12.9
87.3	4273	2085	1619	1199	889	792	663	569
%		**48.8**	37.9	28.1	20.8	18.5	15.5	13.3
88.1		3550	1588	1109	797	690	554	432
%			**44.7**	31.2	22.4	19.4	15.6	12.2
88.2			5491	2006	1428	1211	939	799
%				**36.5**	26.0	22.1	17.1	14.6
89.2				5739	2777	2246	1713	1412
%					**48.4**	39.1	29.8	24.6
90.1					4563	2597	2085	1651
%						**56.9**	45.7	36.2
90.2						9791	5333	4161
%							**54.5**	42.5
91.1							3903	2241
%								**57.4**
91.2								11072

Appendix 3

Examples of Treatment Letters

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Appendix 3.1 : Letter 1

Universitas Terbuka
The Indonesian Open Learning University Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, October 4, 1993

Dear Student,

Welcome to Universitas Terbuka (UT). You have made a good decision. By registering at UT, you have joined the top tenth percentile of the Indonesian population who go on to higher education. UT is a state university and therefore its certificate is equivalent to that of any other state university. To date, UT has graduated over 8500 students throughout the country. With a systematic study system, you too can obtain your degree.

It is very important for you to get the modules as soon as possible. You can either buy, borrow, or photo copy the modules. If you know someone who has the modules you need, borrow them or make a photo copy of them. However, if you do not know anyone who has the modules, I strongly suggest you buy them at the UPBJJ or bookstores as soon as you can. Get started with your study. The earlier you start, the more time you have to study and to prepare yourself for the final examination.

I would like to encourage you to look for other UT students in your local area and set up a study group with them. By having a study group, not only will you have friends to study with, but you can also share your modules and save yourself some money. Ask your local UPBJJ for information about other UT students near your residential area. Further, your local UPBJJ may also offer tutorial services that may interest you.

I realize that studying independently is not easy, especially for those of you who have not been at school or university for a long time. It is not a matter of whether you are "smart" or "stupid," but rather a matter of the time you have available. Since there will be no classes or teachers to remind you to study (as in a "face-to-face" university), studying at UT requires your discipline and commitment. You have to schedule your own regular study time, and be willing to follow it. Therefore, it is important for you to plan a reasonable schedule, which takes into account your other commitments as well as your study.

Although you may have your own "style" or method of studying effectively, I would like to provide you with some "strategies" that have helped many students in

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Telex: 47489 uter ia; Phone: (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

studying independently. I suggest you read the attached folder before you start studying, to see if they can be useful for you.

I would also like to remind you that your local UPBJJ may offer tutorial services. Check at your local UPBJJ for more detail information regarding schedules and courses tutoring. Prepare your questions for the tutors. Your local UPBJJ might also offer additional intensive tutorials for some courses. However, you have to remember that intensive tutorials require extra tuition fees. Get more information about this at your local UPBJJ.

I think my letter is enough for now. If you have any question regarding your study or any administrative matters, do not hesitate to contact your UPBJJ. Good luck!

Sincerely yours,

Dr. Atwi Suparman

Vice Rector III

Appendix 3.2 : Letter 2

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, October 4, 1993

Dear student,

Welcome to Universitas Terbuka (UT). You have made a good decision. By registering at UT, you have joined the top tenth percentile of the Indonesian population who go on to higher education. UT is a state university and therefore its certificate is equivalent to that of any other state university. To date, UT has graduated over 8500 students throughout the country. With a systematic study system, you too can obtain your degree.

It is very important for you to get the modules as soon as possible. You can either buy, borrow, or photo copy the modules. If you know someone who has the modules you need, borrow them or make a photo copy of them. However, if you do not know anyone who has the modules, I strongly suggest you buy them at the UPBJJ or bookstores as soon as you can. Get started with your study. The earlier you start, the more time you have to study and to prepare yourself for the final examination.

I have attached the name(s) and address(es) of other UT students who are in the same study program in your area. Although I know that you have a busy schedule, I encourage you to contact them and to set up a study group with them. By having a study group, not only will you have friends to study with, but you can also share your modules and save yourself some money. Ask your local UPBJJ for information about other UT students near your residential area. Further, your local UPBJJ may also offer tutorial services that may interest you.

I realize that studying independently is not easy, especially for those of you who have not been at school or university for a long time. It is not a matter of whether you are "smart" or "stupid," but rather a matter of the time you have available. Since there will be no classes, nor teachers to remind you to study (as in a "face-to-face" university), studying at UT needs your discipline and commitment. You have to schedule your own regular study time, and be willing to follow it. Therefore, it is important for you to plan a reasonable schedule, which takes into account your other commitments as well as your study.

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Telex: 47489 uter ia; Phone (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Although you may have your own "style" or method of studying effectively, I would like to provide you with some "strategies" that have helped many students in studying independently. I suggest you read the attached folder before you start studying, to see if they can be useful for you.

I would also like to remind you that you local UPBJJ may offer tutorial services. Check at your local UPBJJ for more detail information regarding schedules and courses tutoring. Prepare your questions for the tutors. Your local UPBJJ might also offer additional intensive tutorials for some courses. However, you have to remember that intensive tutorials require extra tuition fees. Get more information about this at your local UPBJJ.

I think my letter is enough for now. If you have any question regarding your study or any administrative matters, do not hesitate to contact your UPBJJ. Good luck!

Sincerely yours,

Dr. Atwi Suparman
Vice Rector III

Appendix 3.3 : Letter 3

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, November 1, 1993

Dear student,

How are you and your family? I hope you are all fine. You have been studying for more than a month now. How have you found it? I hope you have found your first month with UT very interesting and challenging.

How is your study going? Did you find friend(s) to study with? Don't be discouraged if you could not find anyone to study with. The most important thing is that you find your own study system that works best for you. As long as you study regularly, as suggested by the tips for "study strategies for independent study" I sent earlier, I'm sure you'll be doing well in your study.

As you are almost in mid-semester of your study, this is the time for you to finish your Self-tests. Working on the Self-tests is a good opportunity to prepare yourself for the final exam. Therefore, I strongly suggest that you seriously work on them as they are the actual exams. Once you have finished, send your answers to UT no later than November 15.

As you know, the examination will be held on the second and the third Sunday of December. Your local UPBJJ will have the examination schedule by December 6. Check the schedule as soon as possible. I'd also like to remind you that you have to pick up your examination seat number at the UPBJJ office. Don't forget to find out the location where the examination is going to be held. If you do not know the location of the school where the exams are to be held, it is a good idea to find the school before the exam day. That way, on the examination day, you do not have to worry about getting lost and wasting your time finding the location.

I would also like to encourage you to keep up studying even when you don't feel like it. I understand that studying, especially preparing for an exam, is very tiring and can be discouraging and frustrating. This kind of feeling occurs to everyone and is very normal. Just remember that in two weeks you'll finish your first semester. Then, you will be able to rest from your study for a while.

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Telex: 47489 uter ia; Phone: (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Finally, I would like to remind you that the registration period for the June 1994 examination (94.1) will start on January 2, 1994. The registration period is usually open for three months. Prepare yourself to re-register for your second semester. The sooner you re-register the more time you will have to study before the final examination.

Good luck with your exams!

Sincerely yours,

Dr. Zainul Asmawi
Vice Rector III

Appendix 3.4 : Letter 4

Universitas Terbuka
The Indonesian Open Learning University

Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, February 15, 1994

Dear student,

How are you? I hope you are enjoying your break from studying. How were the exams? I am sure you did very well.

I would like to inform you that registration for the June 1994 examination has been opened since January 2. If you haven't re-registered for your second term, I encourage you to do so as soon as possible. The sooner you register and get the modules, the more study time you will have before the final exams in June.

I understand that you'd probably like to wait until you get the results of the last exams. These results will be available at your local UPBJJ about ten weeks after the exams. Therefore, if you waited until that time to register, you will only have about two months to study. However, if you register now, you will have three and half months to study. Therefore, I encourage you to register for your new courses as soon as possible so that you will have a longer study time before the next exam.

I would like to remind you, once again, to consider your time availability before you register for new courses. Think of the time that you will have for your study and then, based on your experience this semester, decide how many courses you will be able to manage successfully. Think also about the possibility of not passing one of the courses in the first semester, and of re-writing the exam for those courses in June as well. I suggest that you not take more than three courses.

If you find out later that you're not satisfied with one of your grades on the last exams, or if you failed in one of the courses you took, you can still apply to re-write the exams for those courses as long as the registration period is still open (usually until about 8 weeks before the exam). You do not have to apply for re-writing the exams at the same time as you register for the new courses. This way, you do not have to wait until you get your last exam's results to register for your new courses; and you can still re-write some exams in June, 1994.

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Telex: 47489 uter ia; Phone (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Once again, I'd like to encourage you to register for your new course(s) now, and not wait until later. The sooner the better. Good luck!

Sincerely yours,

Dr. Zainul Asmawi
Vice Rector III

Appendix 3.5 : Letter 5

Universitas Terbuka
The Indonesian Open Learning University

Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, March 10, 1994

Dear student,

How are you? I hope you are enjoying your break from studying.

Once again, I would like to inform you that registration for the June 1994 examination has been open since January 2. Have you registered for your new courses? If you haven't, I encourage you to do so as soon as possible.

I understand that you'd probably like to wait until you get the results of the last exams. These results are usually available at your local UPBJJ about ten weeks from the exam. Therefore, check with your local UPBJJ because it may have already had your grades. If not, I encourage you not to wait for those results to register for your new courses. Because, as I have mentioned in my previous letters, the sooner you register, the more time you have to study before the final exam.

If you find out later that you're not satisfied with one of your grades on the last exams, or if you failed in one of the courses you took, you can still apply to re-write those exams as long as the registration period is still open. You do not have to apply for re-writing the exams at the same time as you register for new courses. This way, you do not have to wait until you get your last exam's results to register for your new courses; you can still re-write some exams in June 1994.

I would like to remind you, once again, to consider your time availability before you register for new courses. Think of the time that you will have for your study and then, based on your experience this semester, decide how many courses you will be able to manage successfully. Think also about the possibility of not passing one of the courses in the first semester, and of re-writing the exam for that course in June as well. I suggest that you not take more than three courses.

Once again, I'd like to encourage you to register for your new course(s) now, and not to wait until later. The sooner the better. Good luck.

Sincerely yours,

Dr. Zainul Asmawi
Vice Rector III

Postal Address: Box 6666, Jakarta 10001, Indonesia
Telex: 47489 uter ia; Phone (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Appendix 3.6: Translated Letter 1

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, 4 Oktober, 1993

Salam sejahtera,

Selamat datang di Universitas Terbuka (UT). Saudara telah melakukan keputusan yang bijaksana dengan mendaftar di UT. Sebagai mahasiswa UT, Saudara telah menjadi bagian dari 10 persen teratas dari seluruh penduduk Indonesia yang berhasil menikmati pendidikan tinggi. UT merupakan ***universitas negeri*** *dan karena itu* ***ijazah UT sama dengan ijazah dari universitas negeri lainnya.*** *Hingga sekarang, UT telah meluluskan 8500 sarjana di seluruh Indonesia; dan, dengan cara belajar yang sistematik, Saudara pun dapat berhasil seperti mereka.*

Segeralah mendapatkan bahan belajar (modul). *Saudara tidak harus membeli modul; kalau memang Saudara tahu seseorang yang mempunyai modul yang Saudara butuhkan, Saudara boleh meminjam atau memfoto copy. Tetapi kalau tidak, Saya menganjurkan untuk membeli sesegera mungkin.* ***Mulailah belajar sesegera mungkin!*** *Lebih cepat Saudara mulai, lebih banyak waktu bagi Saudara untuk belajar dan mempersiapkan diri untuk ujian akhir semester.*

Saya juga ingin menganjurkan Saudara untuk mencari mahasiswa UT lainnya di daerah tempat Saudara tinggal, dan untuk ***membentuk kelompok belajar*** *dengan mereka. Dengan membentuk kelompok belajar, Saudara bukan saja bisa belajar bersama, tetapi juga bisa "patungan" membeli modul untuk mengurangi biaya pembelian modul. Tanyakanlah kepada UPBJJ tentang informasi/daftar mahasiswa UT lainnya yang tinggal di dekat tempat tinggal Saudara.*

Saya menyadari bahwa belajar mandiri tidaklah gampang, terutama bagi Saudara yang sudah lama meninggalkan sekolah. Hal ini bukan karena Saudara "bodoh" atau "tidak pintar", tetapi karena kesibukan Saudara dan kurangnya waktu untuk belajar. Belajar di UT memerlukan ***disiplin diri*** *yang kuat, karena tidak akan ada jadwal kuliah ataupun guru yang akan mengingatkan Saudara untuk belajar seperti di universitas tatap muka. Saudara harus* ***membuat jadwal belajar yang teratur sendiri*** *and Saudara harus berusaha untuk mentaati jadwal tersebut. Jadwal belajar tersebut, supaya dapat dijalankan, harus dibuat dengan memperhitungkan ketersediaan waktu untuk belajar disamping kesibukan Saudara lainnya.*

Saya ingin memberikan beberapa saran tentang cara atau ***strategi belajar mandiri*** *ini. Walaupun Saudara mungkin mempunyai cara belajar sendiri, saya*

menganjurkan Saudara untuk membaca strategi belajar yang saya lampirkan dengan surat ini. Bacalah, siapa tahu strategi belajar tersebut dapat berguna bagi Saudara.

Saya juga ingin mengingatkan Saudara bahwa ***ada kemungkinan UPBJJ Saudara memberikan pelayanan tutorial****. Dapatkanlah informasi tentang jadwal dan matakuliah yang akan ditutorialkan dari kantor UPBJJ Saudara. Untuk memanfaatkan tutotial ini sebaik-baiknya, siapkanlah pertanyaan-pertanyaan Saudara dari sekarang untuk ditanyakan kepada tutor pada waktu tutorial. Mungkin juga UPBJJ Saudara menawarkan tutorial intensif. Tanyakanlah informasi mengenai hal ini. Tetapi harus diingat bahwa tutorial intensif biasanya membutuhkan biaya ekstra.*

Saya kira surat saya sekarang cukup sekian. Apabila Saudara mempunyai pertanyaan, baik mengenai pelajaran maupun urusan-urusan administratif, ***jangan ragu-ragu untuk menghubungi kantor UPBJJ Saudara****. Selamat belajar!*

Salam saya,

Dr. Atwi Suparman
Pembantu Rektor III

Universitas Terbuka
The Indonesian Open Learning University

Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, 4 Oktober, 1993

Salam sejahtera,

Selamat datang di Universitas Terbuka (UT). Saudara telah melakukan keputusan yang bijaksana dengan mendaftar di UT. Sebagai mahasiswa UT, Saudara telah menjadi bagian dari 10 persen teratas dari seluruh penduduk Indonesia yang berhasil menikmati pendidikan tinggi. UT merupakan ***universitas negeri*** *dan karena itu* ***ijazah UT sama dengan ijazah dari universitas negeri lainnya.*** *Hingga sekarang, UT telah meluluskan 8500 sarjana di seluruh Indonesia; dan, dengan cara belajar yang sistematik, Saudara pun bisa mendapatkan gelar sarjana seperti mereka.*

Segeralah mendapatkan bahan belajar (modul). *Saudara tidak harus membeli modul; kalau memang Saudara tahu seseorang yang mempunyai modul yang Saudara butuhkan, Saudara boleh meminjam atau memfoto copy. Tetapi kalau tidak, Saya menganjurkan untuk membeli sesegera mungkin.* ***Mulailah belajar sesegera mungkin!*** *Lebih cepat Saudara mulai, lebih banyak waktu bagi Saudara untuk belajar dan mempersiapkan diri untuk ujian akhir semester.*

Bersama surat ini, Saya lampirkan beberapa nama dan alamat mahasiswa UT lainnya yang se-program studi dengan Saudara dan tinggal di daerah tempat Saudara tinggal. Kalau memungkinkan, Saya anjurkan Saudara untuk menghubungi mereka dan untuk ***membentuk kelompok belajar*** *dengan mereka. Dengan membentuk kelompok belajar, Saudara bukan saja bisa belajar bersama, tetapi juga bisa "patungan" membeli modul untuk mengurangi biaya pembelian modul.*

Saya menyadari bahwa belajar mandiri tidaklah gampang, terutama bagi Saudara yang sudah lama meninggalkan sekolah. Hal ini bukan karena Saudara "bodoh" atau "tidak pintar", tetapi karena kesibukan Saudara dan kurangnya waktu untuk belajar. Belajar di UT memerlukan ***disiplin diri*** *yang kuat, karena tidak akan ada jadwal kuliah ataupun guru yang akan mengingatkan Saudara untuk belajar seperti di universitas tatap muka. Saudara harus* ***membuat jadwal belajar yang teratur sendiri*** *and Saudara harus berusaha untuk mentaati jadwal tersebut. Jadwal belajar tersebut, supaya dapat dijalankan, harus dibuat dengan memperhitungkan ketersediaan waktu untuk belajar disamping kesibukan Saudara lainnya.*

Postal Address: Box 6666, Jakarta 10001, Indonesia
Telex: 47489 uter ia; Phone (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Saya ingin memberikan beberapa saran tentang cara atau ***strategi belajar mandiri*** *ini. Walaupun Saudara mungkin mempunyai cara belajar sendiri, saya menganjurkan Saudara untuk membaca strategi belajar yang saya lampirkan dengan surat ini. Bacalah, siapa tahu strategi belajar tersebut dapat berguna bagi Saudara.*

Saya juga ingin mengingatkan Saudara bahwa ***ada kemungkinan UPBJJ Saudara memberikan pelayanan tutorial****. Dapatkanlah informasi tentang jadwal dan matakuliah yang akan ditutorialkan dari kantor UPBJJ Saudara. Untuk memanfaatkan tutotial ini sebaik-baiknya, siapkanlah pertanyaan-pertanyaan Saudara dari sekarang untuk ditanyakan kepada tutor pada waktu tutorial. UPBJJ Saudara juga ada kemungkinan menawarkan tutorial intensif. Tanyakanlah informasi mengenai hal ini. Tetapi harus ingat bahwa tutorial intensif biasanya membutuhkan biaya ekstra.*

Saya kira surat saya sekarang cukup sekian. Apabila Saudara mempunyai pertanyaan, baik mengenai pelajaran maupun urusan-urusan administratif, ***jangan ragu-ragu untuk menghubungi kantor UPBJJ Saudara****. Selamat belajar!*

Salam saya,

Dr. Atwi Suparman
Pembantu Rektor III

Appendix 3.8: Translated Letter 3

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, 1 Nopember, 1993

Salam jumpa,

Bagaimana kabar Saudara dan keluarga? Saya harap semua dalam keadaan sehat sejahtera. Tidak terasa, Saudara telah belajar lebih dari sebulan sekarang. Bagaimana rasanya? Saya harap Saudara merasa semakin tertarik dan termotivasi untuk terus belajar.

Bagaimana belajar Saudara? Apakah Saudara menemukan teman untuk belajar bersama? Apakah teman-teman yang namanya saya kirimkan pada surat pertama dapat Saudara hubungi? Kalau tidak, jangan risau dan berkecil hati. Hal yang paling penting adalah bahwa Saudara dapat menemukan cara belajar yang paling efisien untuk Saudara. Selama Saudara belajar dengan teratur, seperti yang saya anjurkan dalam "Strategi Belajar Mandiri", saya yakin Saudara dapat belajar sendiri dengan baik.

Sekarang telah tiba saatnya bagi Saudara untuk menyelesaikan ***"Tugas Mandiri"****. Tugas Mandiri ini merupakan latihan bagi Saudara untuk menghadapi ujian akhir semester yang akan datang. Oleh karena itu, selesaikanlah Tugas-tugas Mandiri ini dengan sungguh-sugguh. Apabila telah selesai mengerjakan soal-soal Tugas Mandiri, kirimkanlah jawabannya secepat mungkin ke UT. Seperti yang tertera dalam kalender akademik dalam Katalog UT,* ***Tugas Mandiri ini harus dikirimkan selambat-lambatnya tanggal 15 Nopember****.*

Seperti juga Saudara ketahui, sebentar lagi waktu untuk ujian akhir tiba. Biasanya ***ujian akhir diselenggarakan pada hari Minggu kedua dan ketiga bulan Desember.*** *Jadwal ujian selengkapnya akan tersedia di Kantor UPBJJ paling lambat seminggu sebelum waktu ujian. Mintalah informasi selengkapnya ke sana secepat mungkin.* ***Jangan lupa mengambil nomor ujian dan mencari informasi tentang lokasi ujian.*** *Kalau Saudara belum mengetahui dengan pasti letak lokasi tersebut, ada baiknya Saudara mencari lokasi tersebut pada hari sebelum waktu ujian; sehingga pada hari ujian Saudara sudah tidak perlu mencari-cari lagi.*

Saya ingin mengingatkan Saudara untuk terus belajar dengan rajin dan teratur. Jangan mengikuti rasa "segan". Saya mengerti bahwa belajar sangat melelahkan dan kadang-kadang membuat frustrasi. Itu biasa, dan semua orang selalu merasakan hal

seperti itu bila sedang menghadapi ujian. Ingat saja bahwa setelah ujian berakhir, kurang lebih sebulan lagi, semester pertama akan berlalu. Setelah itu, Saudara akan bebas dari pekerjaan sekolah dan dapat beristirahat.

Saya juga ingin mengingatkan Saudara bahwa ***masa registrasi untuk masa ujian 94.1 (pada bulan Juni 1994) sudah akan dibuka pada awal bulan Januari 1994.*** *Masa registrasi ini biasanya dibuka selama tiga bulan. Bersiap-siaplah untuk mendaftarkan diri kembali (meregistrasi ulang) untuk semester kedua Saudara. Semakin cepat Saudara melakukan registrasi ulang, semakin banyak waktu Saudara untuk belajar dan mempersiapkan diri untuk ujian akhir pada bulan Juni yang akan datang.*

Saya harap surat ini dapat mengingatkan Saudara untuk tetap belajar dengan baik dan teratur. Selamat belajar dan selamat menempuh ujian!

Salam saya,

Dr. Asmawi Zainul
Pembantu Rektor III

Appendix 3.8: Translated Letter 4

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, 15 Pebruari, 1994

Salam jumpa,

Bagaimana kabar Saudara dan keluarga? Saya harap Saudara dapat menikmati liburan setelah ujian ini. Bagaimana ujian-ujian pada bulan Desember yang lalu? Saya yakin Saudara dapat menyelesaikan ujian-ujian Saudara dengan baik.

Saya ingin mengingatkan bahwa ***masa registrasi 94.1 untuk periode ujian bulan Juni 1994 sudah dibuka sejak tanggal 1 Januari.*** *Walaupun periode registrasi ini masih akan tetap dibuka sampai dengan akhir Maret yang akan datang, saya ingin menganjurkan Saudara untuk melakukan* ***registrasi ulang matakuliah-matakuliah baru sesegera mungkin.*** *Karena, semakin cepat Saudara meregistrasi ulang, semakin banyak waktu bagi Saudara untuk belajar sebelum waktu ujian di bulan Juni yang akan datang.*

Saya mengerti bahwa mungkin Saudara ingin menunggu hasil ujian dahulu. Hasil ujian biasanya dapat dilihat di kantor UPBJJ dalam waktu kurang lebih 10 minggu. Karena itu, bila Saudara menunggu hasil ujian, Saudara berarti akan kehilangan waktu belajar sekitar dua setengah bulan. ***Apabila Saudara mendaftar sekarang, Saudara mempunyai waktu kurang lebih empat bulan sebelum ujian pada bulan Juni.*** *Tetapi apabila menunggu sampai hasil ujian keluar, Saudara hanya akan mempunyai waktu selama kurang lebih dua bulan saja sebelum ujian akhir. Oleh karena itu,* ***saya menganjurkan Saudara untuk melakukan registrasi matakuliah-matakuliah baru secepat mungkin agar Saudara mempunyai waktu belajar yang lebih panjang.***

Satu hal yang ingin saya ingatkan sebelum Saudara meregistrasi ulang: ***pikirkan ketersediaan waktu belajar yang akan Saudara punyai.*** *Berdasarkan pengalamanan di semester pertama, pikirkanlah kira-kira berapa matakuliah yang akan sanggup Saudara pelajari dengan baik. Berdasarkan itu, registrasilah untuk matakuliah-matakuliah yang baru. Saya menganjurkan untuk meregistrasi tidak lebih dari tiga matakuliah.*

Kalau nanti setelah pengumuman ujian ternyata ada matakuliah dari semester kemarin yang nilai ujiannya tidak memuaskan atau tidak lulus, Saudara bisa melakukan registrasi ujian ulang untuk matakuliah-matakuliah tersebut kemudian, selama masa registrasi masih dibuka. Dengan demikian Saudara ***tidak perlu***

***menunggu hasil ujian yang lalu untuk meregistrasi matakuliah-matakuliah baru**, dan Saudara juga masih bisa melakukan ujian ulang untuk matakuliah-matakuliah yang lalu yang nilainya masih belum memuaskan pada bulan Juni 1994.*

Sekali lagi, Saya anjurkan Saudara untuk melakukan registrasi ulang untuk matakuliah-matakuliah baru sesegera mungkin, jangan menungggu sampai waktu registrasi hampir ditutup. Lebih cepat lebih baik. Selamat belajar dan sampai jumpa lagi di semester yang akan datang.

Salam saya,

Dr. Asmawi Zainul,
Pembantu Rektor III

Appendix 3.9: Translated Letter 5

Universitas Terbuka
The Indonesian Open Learning University
Jalan Cabe Raya, Ciputat, Tangerang 15418

Jakarta, 10 Maret, 1994

Salam jumpa,

Bagaimana kabar Saudara dan keluarga? Saya harap Saudara dapat menikmati liburan setelah ujian ini. Sekali lagi, saya ingin mengingatkan bahwa ***periode "registrasi" untuk periode ujian bulan Juni 1994 sudah dibuka sejak tanggal 1 Januari lalu.*** *Sudahkah Saudara melakukan registrasi ulang untuk matakuliah-matakuliah yang baru? Apabila belum, saya anjurkan Saudara untuk* ***meregistrasi ulang sesegera mungkin.*** *Karena, semakin cepat Saudara meregistrasi ulang, semakin banyak waktu bagi Saudara untuk belajar sebelum waktu ujian di bulan Juni yang akan datang.*

Saya mengerti bahwa mungkin Saudara ingin menunggu hasil ujian dahulu. ***Hasil ujian biasanya dapat dilihat di kantor UPBJJ dalam waktu kurang lebih 10 minggu.*** *Periksalah di UPBJJ Saudara tentang pengumuman hasil ujian ini. Apabila hasil ujian belum ada, saya anjurkan Saudara untuk tidak usah menunggunya. Karena, seperti saya sebutkan dalam surat terdahulu, semakin cepat Saudara melakukan registrasi semakin panjang waktu belajar Saudara.*

Kalau nanti setelah pengumuman ujian ternyata ada matakuliah dari semester kemarin yang nilai ujiannya tidak memuaskan atau tidak lulus, Saudara bisa melakukan registrasi ujian ulang untuk matakuliah-matakuliah tersebut kemudian, selama masa registrasi masih dibuka. Dengan demikian Saudara ***tidak perlu menunggu hasil ujian yang lalu untuk meregistrasi matakuliah-matakuliah baru****, dan Saudara juga masih bisa melakukan ujian ulang untuk matakuliah-matakuliah yang lalu yang nilainya masih belum memuaskan pada bulan Juni 1994.*

Satu hal yang ingin saya ingatkan sebelum Saudara merigstrasi ulang: ***pikirkan ketersediaan waktu belajar yang akan Saudara punya.*** *Berdasarkan pengalamanan di semester pertama, pikirkanlah kira-kira berapa matakuliah yang akan sanggup Saudara pelajari dengan baik. Berdasarkan itu, registrasilah untuk matakuliah-matakuliah yang baru. Saya menganjurkan untuk meregistrasi tidak lebih dari tiga matakuliah.*

Postal Address: Box 6666, Jakarta 10001, Indonesia
Telex: 47489 uter ia; Phone (21) 7490941; Facsimile: (21) 7490147; Cable: UTER JKT

Sekali lagi, Saya anjurkan Saudara untuk meregistrasi ulang sesegera mungkin, jangan menungggu sampai waktu registrasi hampir ditutup. Lebih cepat lebih baik. Selamat belajar dan sampai jumpa lagi di semester yang akan datang.

Salam saya,

Dr. Asmawi Zainul
Pembantu Rektor III

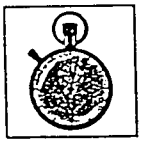
Appendix 4

Example of the Independent Learning Strategies

STRATEGI BELAJAR MANDIRI

STUDY STRATEGIES FOR INDEPENDENT STUDY

To be successful in independent study, you need to develop good study strategies. The following strategies have helped many other students and it is to your benefit to read and practice them. The benefits may be evident in the time you save and in your achievement.



Time Management

Time Management should be your first concern, especially if you are working, have a family, and/or have an active social life. Disorganization and procrastination can be detrimental to the student in an independent study program. You do not have as many reminders of the passage of time and the approach of deadlines as regular students on campus -you must rely on yourself. Colleagues, family and friends will place demands on your time. Be aware of this fact and set up your schedule accordingly.

The management of time cannot be done on the basis of "a few days here and a few days there." You will want to to develop a consistent pattern to maintain control of your time over the length of the course. Time also cannot be viewed with only your course in mind. You should make a plan which takes into account all of the time-consumers in your life.

Initially, you should begin with an overview of the whole course and the time frame you have for completing it. This will involve a schedule stretching over a number of monts. It is best to have it in a form that you can see at a glance and that can be displayed prominently in your study place. A large wall calendar with roomy squares is ideal.

On this long-term schedule you write in the projected dates for the take-home and the final examinations. As you identify additional course activities (such as study group and tutorial sessions) and set appropriate completion dates, you will want to enter them immediately on your schedule. Other personal activities in which you are involved, regular and

occasional, should also be added to this schedule. These could include events with clubs, organizations, friends and family. A schedule of this type becomes your master plan for completing your course and meeting your other commitments at the same time.

Set up a weekly schedule of times that can be put aside for your course work. We suggest that you begin by setting aside 3 hours per week for each credit of the courses and then adjusting the time as you feel the need. Try to maintain the same regular hours each week. This will help you to become "conditioned." It works well to make a written schedule of a typical week and then block in hours of study.

Essential factors in a weekly schedule are flexibility and disciple. There are many times when unexpected events will take you away from your plans. You have to be flexible and occasionally shelve your studies, but you must also have the discipline to make up for that lost time by borrowing from another time slot. If those who live around you realize you have a schedule, and if they're supportive, they can encourage you when you need motivation to get to work, and cooperate by keeping distractions to a minimum.

Once you have established a fairly routine set of study hours each week, you will be well on your way to organizing your time. The next step is to make up a list each week of items that need completion -these could be readings or doing the self-tests. This list can be compiled by taking larger tasks and breaking them into manageable chunks. There are a number of reasons for doing this assignment dissection. First of all, it will help to identify the tasks which require only one or two hours, and you will be able to see your progress more clearly. The completion of each task will provide satisfaction and motivation to spur you on to further accomplishments. The larger the task the harder it to see your progress and the easier it is to be discouraged.

Put your overall schedule, your weekly schedule, and your weekly "to do" list in a prominent place where you study. Make sure to cross off each item from your list as it is completed.

Study Environment and Concentration

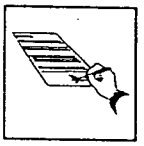
A proper study environment is important if you are to be successful with your

course work. You will want to find an area free from distractions such as TV, radio, family, and friends. Concentration is the key to productive work.

Absolute concentration is "losing yourself in a task which consumes 100% of your attention." It is a vital ingredient for getting maximum benefit out of a minimum number of study hours. There are two basic kinds of distractions that undermine concentration: external and internal ones.

External distractions include people interruptions, noise, music, poor lighting and an uncomfortable work place. Try to lay claim to a well lit study area that has a comfortable chair and is located in a quiet area away from others in the household. Ideally, it should be a place that you use only to study. Psychologists have shown that there is a conditioning effect which can take place when a certain area is used for only one activity - your mind and body know what to expect and therefore it is easier for you to get into gear. For this reason, it's a good idea to avoid using your study area for napping or snacking.

Internal distractins such as daydreams, fatigue, and personal problems can also interfere with a study session. Try and set aside any thoughts that don't further achievement of your study goals. Careful planning can help with this problem. If you have precisely determined your goals, you can more easily focus on them. If you find your mind wandering, force it to return. If you feel fatigue or staleness setting in, a ten-to fifteen-minute break may be called for. Get a cup of tea or coffee or jog around the block. If you find other thoughts persistently intruding, you should stop work and attempt to deal with them. One course of action is to make note of your concerns as they come up by writing them on a "to do" list. Once you have them written down, you no longer need to maintain them on your mental treadmill. At your earliest convenience, plan to do something about your concerns. Be decisive because if you're not, you'll be wasting precious study time.



Reading and Notetaking

Reading will undoubtedly take up much of your study time. The more efficient you are at reading, the greater will be your command over time. Study reading requires a different approach than other reading. You are reading to get information. You should attack your

reading with a planned strategy. One particularly successful strategy which leads into notetaking is an S.Q.R. (skimming, questioning, and reading) approach. You start into the material asking several questions. "Who or what is the chapter about?" and "What are the main points made?" You don't read every word -instead you exercise a skimming procedure. This will organize the material like a map in your mind. The key is to keep active and push yourself -don't dawdle.

Read the title, then the first paragraph completely. Next, read the first and last sentences in each paragraph. Scan the remaining parts of each paragraph, noting key words, names and dates. Carefully read the headings and glance over diagrams, pictures and graphs if present -read the captions. Finally, complete your skim by reading the final paragraph carefully.

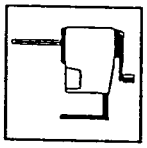
After skimming the material, you need to stop for a moment and compile the information you have obtained. You can do this by thinking about it, but it is better to get something written down. Any kind of outline format is helpful, but one that is particularly useful is a diagram approach. The main idea is placed in the middle to the page and the subordinate ideas are placed out from the center, connected with spokes in a star pattern. If you leave ample room between subordinate ideas, you can add details in the appropriate spots. This is a flexible outlining format which allows you to adapt, add, and delete with ease.

Once you have done the skim and constructed the outline diagram, you've completed a quick gathering of the main points. For some readings, this may be all you need. If so, you're finished and you have an easy-to-use set of notes. If not, you have a good idea of what you still need to glean from the reading material.

Now you can go through the chapter or the "learning activity" and read for the details you require -you should know precisely what information is needed to complete your diagram. Do the exercises and examine yourself whether or not you have achieved the stated course objectives. You can then actively read to answer those questions and meet those objectives. If there are difficult portions that need intensive study, take extra time to ensure that you have mastered the concepts. This system of reading leaves you with a well-organized understanding of a selection, as well as a set of notes. If you later have need to refer back to the text, you can use this set of notes to clue you in. If you follow this procedure, you should never have to read the same material, the same way,

more than once. You can further assure that this will be the case by doing some constructive marking of the material you are reading (if you own the module!).

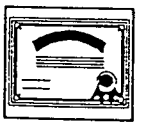
When marking a selection, make sure that you only underline or highlight the key points -do not highlight examples or definitions in the same manner- this ensures that you will be able to pick up the main points rapidly at a future date. Use an abbreviation system in the margin to mark other important information -"ex" for example; "def" for definition; "1, 2, 3 ..." for enumerations; and "sum" for summaries. Review is easy with a well-marked text.



Preparing for Exams

If you have kept careful notes of all your readings, using the method associated with S.Q.R. or others, you will be fairly well prepared for the exams. You will have the material organized in a useable format and you will be able to start committing the material to memory.

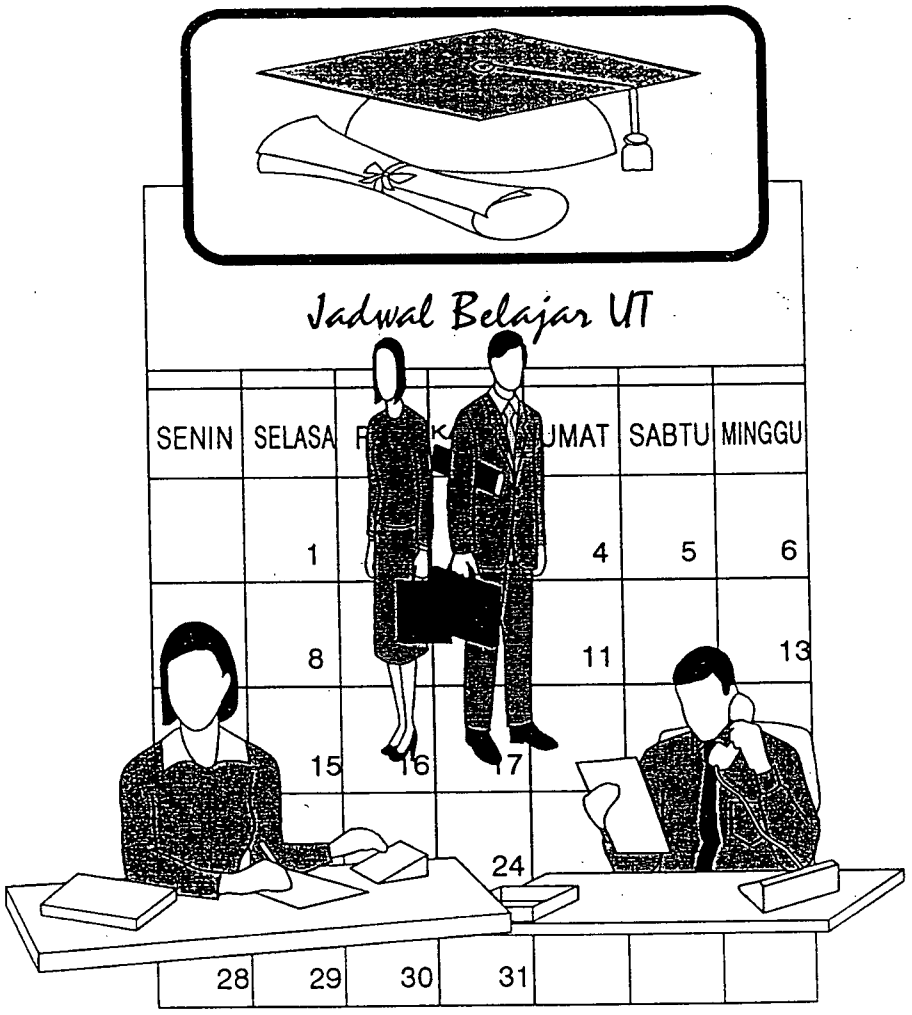
Schedule review for exams over several weeks. Do not try to review an entire course in one sitting. You should space out review sessions and test yourself repeatedly on the important material so that you can master it. Concentrate initially on the overall structure of the material. You will then find it easier to learn the details. Use the time immediately before sleep for memorizing material. Your mind then seems to process the information during the night by helping to fix it in your memory.



Conclusion

You have made a commitment to the university and to yourself by signing up for the courses. This commitment to self-improvement is commendable. However, the skills that you need in order to be successful will not automatically fall into place. You will need to work at them. It is important that you approach your course work and each task in a systematic, orderly way, using the most suitable strategies for yourself, or using the ones suggested here. These strategies for efficient study will enable you to be successful and to attain your educational objectives.

STRATEGI BELAJAR MANDIRI



STRATEGI BELAJAR MANDIRI UNTUK MAHASISWA UNIVERSITAS TERBUKA

Untuk mencapai sukses dalam belajar mandiri, Saudara perlu membina cara belajar yang baik. Strategi belajar berikut ini telah terbukti berhasil membantu mahasiswa-mahasiswa yang lain. Untuk kepentingan Saudara sendiri, bacalah dan cobalah strategi-strategi berikut ini. Manfaatnya bisa dirasakan melalui "penghematan" waktu belajar dan melalui hasil belajar yang diharapkan.

Pengelolaan/ Manajemen Waktu

Pengelolaan waktu merupakan hal pertama yang harus Saudara pikirkan, terutama apabila Saudara telah berkeluarga, bekerja, dan mempunyai banyak aktivitas sosial lainnya. Pengelolaan waktu yang tidak efisien bisa menjadikan halangan bagi mahasiswa mandiri seperti Saudara. Saudara tidak punya dosen ataupun jadwal kuliah yang akan mengingatkan Saudara tentang "keharusan" dan "batas waktu" belajar seperti umumnya mahasiswa di universitas tatap muka. Saudara harus mempunyai disiplin diri yang kuat. Saudara harus bersedia menyisakan waktu untuk belajar disamping keperluan keluarga, pekerjaan, dan aktivitas sosial Saudara yang juga akan menyita waktu Saudara. Sadarilah akan hal tersebut dan buatlah jadwal belajar dengan memperhitungkan keperluan waktu untuk kegiatan-kegiatan diluar belajar tersebut.

Pengelolaan waktu belajar tidak bisa dibuat berdasarkan "beberapa hari di sini dan beberapa hari di sana". Saudara harus membuat jadwal yang

teratur untuk mengontrol ketersediaan waktu belajar Saudara selama satu semester. Jadwal belajar ini, sekali lagi, harus dibuat dengan memperhitungkan semua kegiatan yang akan menyita waktu Saudara.

Pertama, Saudara harus memulai dengan menghitung keseluruhan waktu yang Saudara butuhkan untuk menyelesaikan matakuliah-matakuliah Saudara (1 semester). Cara yang paling ideal adalah dengan meletakkan jadwal ini pada sesuatu yang dapat "dipajang" dan dilihat dengan selintas, misalnya pada kalender besar (atau kertas karton bertanggal) yang dapat digantungkan di tempat belajar Saudara.

Pada jadwal ini, catatlah tanggal-tanggal penting seperti tanggal tutotial, batas waktu pengumpulan tugas mandiri, dan ujian akhir semester. Bila Saudara punya kelompok belajar, catatkan juga waktu belajar bersama Saudara. Kemudian, catatkan pula kegiatan-kegiatan lainnya (seperti untuk olah raga, perjalanan ke luar kota/dinas, dll.) yang akan harus Saudara lakukan selama semester tersebut. Jadwal inilah yang akan menjadi "jadwal pokok" atau patokan Saudara untuk menyelesaikan belajar selama satu semester; dan, pada waktu yang sama, juga untuk tetap menjalankan kewajiban-kewajiban Saudara lainnya.

Setelah itu, buatlah jadwal belajar mingguan. Saya menganjurkan untuk memulai dengan menyediakan waktu paling tidak 3 jam per minggu untuk setiap satu kredit matakuliah. Jadi, bila Saudara mempunyai 4 matakuliah masing-masing 3 kredit, berarti Saudara harus menyediakan waktu kurang lebih 36 jam (3 jam x 3 kredit x 4 matakuliah) seminggu untuk belajar. Aturlah kebutuhan waktu belajar tersebut dalam jadwal mingguan ini sesuai dengan ketersediaan waktu yang tercantum dalam "jadwal pokok" Saudara. Berusahalah untuk membuat jadwal belajar pada jam-jam yang sama setiap hari dan minggunya. Hal ini akan membantu Saudara untuk "membiasakan diri" pada jam-jam belajar tersebut.

Hal yang pokok dalam menjalankan

jadwal mingguan ini adalah "disiplin" dan "keluwesan waktu". Dalam kenyataannya, banyak kejadian yang tidak direncanakan akan muncul. Saudara harus luwes dalam hal ini, tetapi juga harus disiplin untuk mengganti waktu belajar yang terpakai ini pada waktu yang lain. Apabila keluarga Saudara menyadari bahwa Saudara mempunyai jadwal belajar yang teratur, mereka dapat membantu Saudara untuk selalu mengingatkan Saudara untuk belajar; dan mereka juga akan mengurangi gangguan pada batas minimal pada waktu-waktu belajar tersebut.

Apabila Saudara telah mempunyai jadwal mingguan yang rutin, Saudara akan dapat membagi dan menggungakan waktu dengan baik. Langkah selanjutnya adalah membuat daftar kegiatan yang harus diselesainya pada tiap minggunya. Misalnya, daftar bacaan yang harus atau ingin Saudara selesaikan, latihan yang harus dibuat, dan tugas mandiri yang harus diselesaikan serta dikumpulkan. Daftar ini kemudian dibagi-bagi ke dalam beberapa waktu belajar dalam jadwal mingguan. Dengan pembagian tugas pada waktu-waktu belajar seperti ini, Saudara dapat mengidentifikasi dengan jelas kebutuhan waktu untuk menyelesaikan setiap tugas atau kegiatan Saudara. Percayalah, penyelesaian setiap tugas yang Saudara jadwalkan pada setiap waktu belajar tersebut dapat memberikan kepuasan bagi Saudara, dan dapat menambah semangat belajar Saudara.

Letakkanlah "jadwal pokok", jadwal mingguan, dan daftar kegiatan mingguan Saudara di tempat yang mudah dilihat. Jangan lupa mencoret setiap kegiatan yang telah berhasil Saudara lakukan dari jadwal/daftar tersebut.

Lingkungan Belajar dan Konsentrasi Belajar

Lingkungan belajar yang memadai sangat penting untuk mencapai sukses belajar Saudara. Saudara perlu mencari tempat belajar yang jauh dari gangguan seperti suara televisi, radio, dan "keributan" lainnya. Konsentrasi adalah kunci

bagi belajar yang produktif.

Konsentrasi penuh adalah melupakan segala sesuatu diluar tugas/kegiatan belajar yang sedang Saudara lakukan dan mencurahkan 100 persen perhatian Saudara kepada kegiatan belajar tersebut. Konsentrasi penuh merupakan unsur pokok untuk mendapatkan hasil belajar maksimal dari waktu belajar yang minimal. Ada dua macam gangguan yang dapat mengurangi konsentrasi belajar: dari luar dan dari dalam diri sendiri.

Gangguan dari luar termasuk interupsi, suara-suara, musik, cahaya yang kurang, dan tempat belajar yang tidak nyaman. Berusahalah untuk belajar dengan cahaya yang cukup, dan di ruang yang jauh dari gangguan keluarga.

Gangguan dari dalam termasuk melamun, kelelahan, dan masalah-masalah pribadi lainnya. Berusahalah untuk mengesampingkan hal-hal lain dari pikiran Saudara selama belajar. Suatu "tujuan" atau "target belajar" yang jelas dapat membantu Saudara untuk memusatkan perhatian pada pencapaian tujuan tersebut. Apabila Saudara tidak dapat menghilangkan pikiran pada sesuatu hal/masalah lain diluar pelajaran, berhentilah belajar sebentar dan cobalah untuk menyelesaikan masalah tersebut dahulu. Salah satu cara untuk hal seperti ini ialah dengan menuliskan masalah yang mengganggu pikiran tersebut pada selembar kertas dan memasukkannya ke dalam daftar kegiatan mingguan Saudara untuk dilakukan kemudian. Dengan demikian, secara psikilogis Saudara telah menyelesaikan hal tersebut dan dapat belajar kembali. Jangan menyia-nyiakan waktu belajar yang telah dijadwalkan Saudara!.

Membaca dan Membuat Catatan

Membaca modul akan memakan banyak waktu belajar Saudara. Semakin efisien Saudara membaca, semakin banyak waktu belajar yang dapat dihemat. Membaca untuk "belajar" berbeda dengan, misalnya, membaca koran atau majalah. Membaca untuk belajar memerlukan

cara yang berbeda karena Saudara ingin mendapatkan dan menyimpan informasi dari bacaan tersebut. Saudara harus membaca dengan menggunakan "strategi". Salah satu strategi membaca yang dianggap "berhasil" adalah metode "SQR". Dengan strategi ini, Saudara memulai dengan membuat beberapa pertanyaan. "Tentang apa atau siapa bab/bacaan tersebut?" dan "Hal-hal pokok apa yang terkandung di dalamnya?" Jangan membaca setiap kata dahulu, tetapi bacalah keseluruhan materi bacaan secara sekilas. Hal ini akan membantu menyusun bahan bacaan seperti peta dalam benak Saudara. Kuncinya adalah mendorong diri sendiri untuk tetap membaca.

Bacalah dengan cermat judul dan seluruh isi alenia pertama dari bacaan. Kemudian, baca kalimat-kalimat pertama dan terakhir dari setiap alinea lainnya. Baca secara selintas saja isi keseluruhan alinea-alinea lainnya, perhatikan nama-nama dan tanggal-tanggal. Lalu baca judul-judul gambar dan tabel, lihat gambar dan tabelnya secara selintas. Terakhir, bacalah keseluruhan alinea terakhir dari bacaan Saudara secara cermat.

Setelah itu, berhentilah sebentar dan cernalah informasi yang sudah Saudara peroleh. Saudara dapat melakukan hal ini dengan cara mencatat/menuliskan informasi-informasi tersebut. Tulislah menjadi semacam "daftar isi" atau diagram. Dengan mempunyai catatan ringkas tersebut, berarti Saudara telah mempunyai informasi mengenai isi-isi pokok bacaan. Sekarang, Saudara dapat membaca keseluruhan isi bacaan pada setiap alinea dengan cermat. Dengan menggunakan catatan Saudara terdahulu, Saudara akan tahu dengan persis informasi-informasi apa saja yang masih Saudara perlukan untuk melengkapi catatan ringkas Saudara tadi.

Cara ini akan menghasilkan "catatan" yang sistematik. Apabila Saudara mengikuti cara membaca dan membuat catatan seperti ini, Saudara tidak akan perlu membaca ulang modul secara keseluruhan. Untuk meyakinkan, Saudara bisa membuat tanda-tanda pada bagian-

bagian yang telah Saudara catat tersebut dalam modul Saudara.

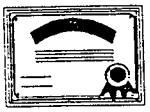
Apabila Saudara bermaksud membuat tanda-tanda atau garis bawah dalam modul Saudara, jangan menggarisbawahi seluruh k a l i m a t / a l i n e a . Tandailah/garisbawahilah pada bagian-bagian yang penting saja, sehingga Saudara dapat membaca isi-isi pokok bacaan dengan cepat di waktu yang akan datang. Gunakan singkatan-singkatan untuk menandai bagian-bagian bacaan, seperti: "con" untuk contoh, "def" untuk definisi, "ring" untuk ringkasan, dll. Belajar ulang akan menjadi mudah dilakukan apabila modul Saudara telah ditandai seperti itu.

Setelah selesai membaca dan melengkapi catatan Saudara, tutuplah modul dan catatan Saudara. Kemudian, kerjakanlah latihan-latihan dalam modul untuk menguji diri sendiri tentang pemahaman isi bacaan. Apabila masih ada bagian dari bacaan yang belum dipahami, bacalah kembali catatan Saudara maupun bagian-bagian modul yang telah ditandai sekali lagi.

Persiapan Ujian Akhir

Apabila Saudara mengikuti cara membaca dan membuat catatan seperti yang dijelaskan di atas, Saudara telah cukup siap untuk mengikuti ujian. Saudara telah mempunyai catatan yang sistematik dan mudah digunakan.

Jadwalkan belajar untuk persiapan ujian dari beberapa minggu sebelum waktunya. Jangan belajar seluruh bahan ujian dalam satu kali waktu belajar. Saudara harus membaca ulang catatan dan menguji diri sendiri berulang kali. Mulai dari keseluruhan topik yang akan diujikan, kemudian lanjutkan dengan informasi lengkap dari setiap topik. Gunakan waktu sebelum tidur untuk menghafalkan bahan yang telah Saudara pelajari. Materi-materi tersebut tampaknya akan disimpan dan diproses dalam benak Saudara selama tidur.



Kesimpulan

Saudara telah membuat komitmen kepada UT dan kepada diri Saudara sendiri untuk belajar. Komitmen ini harus dicoba untuk dijalankan.

Walaupun demikian, cara belajar yang dibutuhkan tidak akan datang dengan sendirinya. Cara belajar yang baik harus dibina. Bagi mahasiswa mandiri seperti Saudara, sangatlah penting untuk membina dan menjalankan suatu cara belajar yang teratur dan sistematik, yaitu cara yang paling sesuai dengan kebiasaan Saudara, atau cara seperti yang saya anjurkan tadi. Strategi belajar yang efisien dapat membantu Saudara untuk mencapai tujuan belajar Saudara.

SELAMAT BELAJAR

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Appendix 5

Example of Letters for Dummy Respondents:

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5.5 Letter 4 for dummy respondents (March 10, 1994)..... 310

Letter 5.2

Jakarta, October 4, 1993

Dir Sir/madame,

Thank you for your agreement to participate as a dummy respondent in my research.

As I've described it to the Head of your UPBJJ, you will receive four (4) letters during this research. These letters will be sent to you on the following dates: October 4 (this one), November 8, 1993; February 15, 1994; and March 10, 1994.

These letters are sent to you at the same time I send the treatment letters to the student sample throughout Indonesia. The purpose of sending these letters to you is to approximate the mailing time of treatment letters from Jakarta to your local area. For the sake of research validity, it is very important that you not inform the students in your area about these letters.

Attached to this letter is the recording form of the date you receive this letter. Please complete and return this form to the researcher.

Thank you for your cooperation.

Sincerely yours,

Tian Belawati

Letter 5.3

Jakarta, November 1, 1993

Dear Sir/Madame,

Thank you for returning the recording form of the first letter. This is the second letter which was first scheduled to be sent on November 8.

As in the first letter, please record the date when you receive this letter on the attached form and return it to the printed address.

Based on the experience of the first letter, it seems that the mailing time from you area to Jakarta is about 3 to 8 days. Therefore, since timing is very critical in my study, I will appreciate it if you could mail this recording time immediately after receiving this letter.

Thank you for your cooperation.

Sincerely yours,

Tian Belawati

Letter 5.4

Jakarta, February 15, 1994

Dear Sir/Madame,

It is very nice to write to you again.

This is the third letter out of the four. I have received notice from you for the previous two letters in October and November.

As for the previous letters, please record the date when you receive this letter on the attached recording form and mail it back to the preprinted address as soon as possible.

Thank you for your cooperation.

Sincerely yours,

Tian Belawati

Letter 5.5

Jakarta, March 10, 1994

Dear Sir/Madame,

How is everything going with you? I hope everything is going very well.

This is the fourth and last letter you will receive. As with the previous letters, please record the date when you receive this letter, fold and staple the form and mail it back to the pre-printed address as soon as possible.

Thank you for your cooperation and, once again, for your willingness to participate in my research. I really appreciate it.

Sincerely your,

Tian Belawati

Translated Letter 5.2

Jakarta, 4 Oktober 1993

Dengan hormat,
Terima kasih atas kesediaan Bapak/Ibu untuk berpartisipasi sebagai responden bayangan dalam penelitian saya.

Seperti telah saya sebutkan didalam surat terdahulu kepada Kepala UPBJJ, Saudara akan menerima 4 (empat) buah surat pada tanggal-tanggal sebagai berikut: 4 Oktober 1993, 8 Nopember 1993, 15 Pebruari 1994, dan 10 Maret 1994.

Bersamaan dengan pengiriman surat pertama ini kepada Saudara, saya juga mengirimkan surat kepada beberapa mahasiswa UT di wilayah UPBJJ Bapak/Ibu. Maksud pengiriman surat ini ke alamat rumah Bapak/Ibu adalah untuk memantau lamanya waktu pengiriman surat ke alamat rumah mahasiswa-mahasiswa tersebut. Sehubungan dengan kepentingan "keabsahan" data penelitian, dimohon Bapak/Ibu tidak memberikan informasi tentang pengiriman surat-surat ini kepada mahasiswa.

Bersama surat ini terlampir formulir pencatatan penerimaan surat yang harus diisi oleh Bapak/Ibu dengan tanggal penerimaan surat ini di rumah Bapak/Ibu. Setelah diisi tanggal penerimaan surat ini, mohon formulir tersebut dilipat tiga dengan meletakkan bagian yang ada perangkonya di bagian muka dan mohon untuk mem"pos"kannya ke alamat yang sudah tercetak.

Sekian dahulu dan terima kasih atas kerjasama dan bantuan Bapak/Ibu.

Hormat saya,

Tian Belawati

Translated Letter 5.3

Jakarta, 1 Nopember 1993

Dengan hormat,
Terima kasih atas kerjasama Bapak/Ibu dan atas pengembalian "Surat Tanda Terima" yang lalu.

Surat ini merupakan surat kedua dari 4 buah surat yang akan Bapak/Ibu terima. Surat kedua ini sedianya akan dikirimkan pada tanggal 8 Nopember 1993. Akan tetapi karena ada sedikit perubahan, surat ini dikirim dari Jakarta pada tanggal 1 Nopember 1993.

Seperti pada surat yang pertama, terlampir adalah Surat Tanda Terima yang mohon diisi oleh Bapak/Ibu dengan tanggal penerimaan surat ini di alamat rumah Bapak/Ibu. Kemudian, seperti yang lalu pula, mohon surat tanda terima tersebut dilipat tiga, di-*staple* (di"jegrek"), dan segera dikirimkan ke alamat tercetak.

Berdasarkan pengalaman surat yang pertama, pengiriman Surat Tanda Terima tersebut dari tempat/kota Bapak/Ibu ke Kotak Pos UT memakan waktu antara 3-8 hari. Oleh sebab sangat pentingnya ketepatan waktu bagi penelitian saya, bersama ini **saya mohon Bapak/Ibu dapat mengirimkan kembali Surat Tanda Terima ini sesegera mungkin setelah menerima surat ini.**

Demikian, terima kasih atas kerja sama dan bantuan Bapak/Ibu.

Hormat saya,

Tian Belawati

Translated Letter 5.4

Jakarta, 15 Pebruari 1994.

Dengan hormat,
Sampai jumpa kembali dan semoga Bapak/Ibu dalam keadaan sehat walafiat.

Surat ini merupakan surat ketiga dari empat (4) buah surat yang sudah dan akan saya kirimkan. Surat pertama dan kedua telah diterima oleh Bapak/Ibu pada bulan Oktober dan Nopember yang lalu.

Seperti surat-surat yang terdahulu, terlampir adalah Surat Tanda Terima yang mohon diisi oleh Bapak/Ibu dengan tanggal penerimaan surat ini di alamat rumah Bapak/Ibu. Setelah diisi tanggal penerimaannya, mohon Surat Tanda Terima ini dilipat tiga, di-staple (di"jegrek"), dan dikirimkan kembali dengan segera ke alamat tercetak.

Oleh karena sensitifnya faktor waktu dalam penelitian saya ini, **saya mohon dengan sangat agar Bapak/Ibu dapat mengirimkan kembali Surat Tanda Terima terlampir sesegera mungkin.**

Demikian dan terima kasih atas kerjasama Bapak/Ibu.

Hormat saya,

Tian Belawati

Translated Letter 5.5

Jakarta, 10 Maret 1994.

Dengan hormat,
Bagaimana kabar Bapak/Ibu saat ini? Mudah-mudahan semua dalam keadaan sehat walafiat.

Surat ini merupakan surat keempat atau surat terakhir dari empat (4) surat yang saya kirimkan.

Seperti pada surat yang terdahulu, terlampir adalah Surat Tanda Terima yang mohon diisi dengan tanggal penerimaan surat ini di alamat Bapak/Ibu. Setelah diisi, mohon dilipat tiga, di-staple (di"jegrek"), dan kemudian segera dikirimkan kembali ke alamat tercetak.

Sehubungan dengan sensitifnya faktor waktu dalam penelitian saya, **saya mohon dengan sangat pada Bapak/Ibu untuk memposkan kembali Surat Tanda Terima terlampir dengan segera.**

Bersama ini pula saya ingin menyampaikan rasa terima kasih saya atas bantuan dan partisipasi Bapak/Ibu dalam penelitian saya.

Demikian, sekali lagi terima kasih atas kerjasama yang baik dari Bapak/Ibu.

Hormat saya,

Tian Belawati

Appendix 6

Form of Confirmation Letter from Dummy Respondents

Tian Belawati
Fakultas Ekonomi
Universitas Terbuka
P.O. BOX 6666
Jakarta 10001

CONFIRMATION LETTER

The letter dated..... ..... has been received on:

at the address:

Note:
* Please fold in the lines, staple it and return it to the above address as soon as possible

Translated version of the form:

Tian Belawati
Fakultas Ekonomi
Universitas Terbuka
P.O. BOX 6666
Jakarta 10001

SURAT TANDA TERIMA

Surat keempat tertanggal ..... telah diterima pada tanggal :

pada alamat :

Keterangan:
* mohon dilipat tiga, di-staple dan **segera** diposkan kembali ke alamat tercetak

Appendix 7

Interview Guidelines

PERSONAL DATA

Name :
Student Number :
Study Program :
Address :

Sex :
Age :
Graduation Year:
Type of occupation?
a. civil servant
b. army
c. government owned company employee
d. entrepreneur
e. private company employee
f. other
g. not employed
Previous highest education?
a. high school/ equivalent to high school
b. diploma program (D1/D2/D3)
c. university
d. graduate program (master/doctorate)

---

1. What was your main goal in attending a university (UT)?
   a. to get a university degree
   b. to find some activity to do
   c. to improve my knowledge

2. What was your main reason for choosing UT?
   a. could not get in to other universities
   b. could not get in to any conventional state universities
   c. can study while working (part time)
   d. the tuition fee is relatively cheap

3. Did you feel lonely and isolated during your study?
   ... yes ... no

4. Did you find a friend or friends to study with?
   ... yes ... no

5. Did you and your friend(s) study together regularly?
   ... yes ... no

6. If no, why? Please specify (for example, it was hard to find the time for study together, prefer to study alone, etc.)

   .....

   .....

   .....

7. Did you study alone regularly?
   ... yes ... no

8. Did you make a study plan or schedule?
   ... yes ... no

9. If yes, did you follow your schedule?
   ... yes ... no

10. If you did not follow your schedule, why? Please specify.

    .....

    .....

    .....

11. Did you ever contact or go to the UPBJJ office?
    ... yes ... no

12. If yes, what was your purpose(s) of contacting/going to the UPBJJ? Please specify.

    .....

    .....

    .....

13. Did you find the UPBJJ personnel helpful?
    ... yes ... no

14. After experiencing the operating system of UT (such as its support system, tutorial system, etc.), how you feel about your affiliation with the institution. Are you now
    ... more affiliated to the institution than
    ... less affiliated to the institution than
    ... affiliated to UT as much as

    when you started your program

Why? Please specify.

.....

.....

.....

15. After going through your first semester, do you think you are now: (check one)
... more motivated
... still motivated (about the same)
... less motivated

to continue studying at UT.

16. If you are more or still motivated to continue studying at UT, do you think it is the same kind of motivation that you had when you first started? (check one)
... yes ... no

17. If no, why it is changed? Please specify.

.....

.....

.....

18. And, what are your motivation or goals now?

.....

.....

.....

19. After going through your first semester at UT, do you feel that you are now
... more confident than
... less confident than
... about as confident as
when you first started

20. With your first semester experience, do you think your ability to study independently has improved?
... yes ... no

21. If yes, in what way? If no, why not? Please specify.

.....

.....

.....

22. Do you intend to re-register at UT?
... yes ... no

23. If yes, are you going to re-register:
... in the next semester (for June Exam period)
... within one year
... within two years
... some time in the future

24. If no, why? Please specify.

.....

.....

.....

General comments/complaints:
Do you have any general comments or concerns? The concerns may include academic matters such as course materials (content and designs), tutorials, exams, etc.; and administrative matters such as registration, tuition fee, module's price, communication with UT, supports and encouragements, information, etc.

Thank you for participating in this interview.

Appendix 8

INTERVIEW NOTES

CONTROL GROUP : students A and B
WELCOME + GUIDE : students C and D
PEER : students E, F and G
ENCOURAGE 1 : students H and I
ENCOURAGE 2 : students J, K, L and M
ENCOURAGE 3 : students N, O and P

* Questions asked only to students in Treatment Groups.
** Questions asked only to students in Groups PEER, ENCOURAGE 1, 2 AND 3.
These * and ** Questions were not in the initial interview guideline.
*** Questions not asked because it was no longer relevant as students interviewed already had re-registered in the interview time.

Sex :

A : Female.
B : Male (in wheel chair).
C : Female.
D : Male.
E : Male.
F : Male.
G : Female.
H : Male.
I : Male.
J : Male.
K : Female.
L : Male.
M : Female.
N : Male.
O : Male.
P : Male.

Age or Date of Birth :

A : November 13, 1963.
B : October 8, 1962.
C : June 16, 1955.
D : February 10, 1967.
E : December 2, 1958.
F : June 12, 1974.
G : April 14, 1967.
H : October 14, 1965.
I : June 22, 1972.
J : May 17, 1972.
K : October 11, 1959.

L : December 22, 1955.
M : April 27, 1970.
N : May 25, 1959.
O : June 17, 1975.
P : May 31, 1976.

Year of High School Graduation :

A : 1984.
B : 1986.
C : 1977.
D : 1987.
E : 1977.
F : 1993.
G : 1986.
H : 1984.
I : 1992.
J : 1991.
K : 1979.
L : 1974.
M : 1990.
N : 1979
O : 1993.
P : 1989.

What is your type of occupation?

A : Civil Servant (working for provincial government).
B : Civil Servant (computer operator).
C : Civil Servant (Ministry of Health).
D : Private company employee (insurance business company).
E : Journalist.
F : Private company employee (in a garage).
G : Private company employee (a supplier company).
H : Private company employee ("NIKE" shoes factory).
I : Private company employee (cashier in a supermarket).
J : Private company employee (a direct marketing company).
K : Private company employee (computer programmer)
L : Civil Servant (Ministry of Education and Culture)
M : Private company employee (Quality control of final product in SANYO)
N : Civil Servant (Indonesian Open University).
O : Private company employee (server at MacDonald).
P : Not employed.

What is your previous highest education?

A : High School.
B : Three Year Diploma Program.
C : Second year of university.
D : High School.
E : Second year of university.
F : High School.
G : High School.

H : High School.
I : High School.
J : High School.
K : Diploma.
L : Second year of university.
M : High School.
N : High School.
O : High School.
P : Diploma (Computer).

What was your main goal in attending a university (UT)?

A : To get a degree.
B : To get a degree.
C : To give example to my children.
D : To get a degree.
E : To get a degree.
F : To get a degree.
G : To get a degree so that I can get promotion.
H : To get a degree.
I : To get a degree.
J : To get a degree.
K : To improve my knowledge, hopefully get a degree, too eventually.
L : To improve my knowledge. Hopefully sometime, I can get a degree.
M : To get a degree so that I can get promotion.
N : To get a degree for promotion, and gain knowledge in the way.
O : To get a degree.
P : To improve my knowledge in Management.

What was your main reason for choosing UT:

A : Can study while working.
B : Can study while working.
C : Can study while working.
D : Can study while working, and the fee is relatively low.
E : Can study while working, the fee is relatively low, no age limitation, and it is a state university.
F : Can study while working.
G : Can study while working.
H : Can study while working.
I : The tuition fee is relatively cheap and no entry test.
J : The tuition fee is relatively cheap and can still work while studying.
K : Could not get in the other universities. Graduated from high school too long ago.
L : The tuition is relatively cheap and the time is flexible.
M : Can study while working and the tuition is also relatively cheap.
N : Can study while working and the tuition fee is relatively cheap.

O : Can study while working.
P : The tuition fee is relatively cheap.

Did you feel lonely and isolated during your study?

A : Yes.
B : No, because I prefer to be in a quiet place.
C : Yes.
D : Yes.
E : Yes.
F : Yes.
G : Yes.
H : Yes.
I : Yes.
J : Yes.
K : No.
L : No, but get bored sometimes.
M : Yes.
N : Yes, makes me less motivated to study.
O : No.
P : Yes.

***Did you receive any letters from UT?**

C : Yes, one.
D : No. I did not receive a letter.
E : Yes.
F : No.
G : Yes. A letter, a list of other students and a study guide.
H : Yes, two. One in October and one in November, I think.
I : Yes, one in October. (supposed to receive two letters)
J : Yes, three.
K : Yes, three.
L : Yes, three.
M : Yes, three.
N : Yes, four.
O : Yes, four.
P : Yes, four.

***How do you feel when you received those letters? Which one do you think was the most important one for you?**

C : I was very touched when I received the letter. I felt like the Vice Rector had written me that letter personally. That letter made me realize that I am now a real university student and that I have responsibilities to carry on by signing up for UT. When I submitted the application, I was just doing it because one of my close friend at the office did it too. But I was not sure if I would really do the study. But, in my opinion, the letter was kind of too late. I registered in the middle of August and I received a welcoming letter in October.

I think it would be more helpful if the letter was received right after my registration.

D : (not relevant)

E : Touched and felt that the university pays attention to its students.

F : (not relevant)

G : Glad, but I did not contact the listed other students. I already have my own study group.

H : The letter was nice because it was welcoming and giving me a sense of pride to be a UT student. The second letter, especially, really reminded me to get back to the "reading and studying". I was very busy at work and had only read the first few pages of the modules. So, when I received the second letter, I felt like being woken up.

I : I felt recognized.

J : The letters were encouraging and reminded me of the responsibility to study. I don't know if, without the letters, I would still be as motivated as I am now. Every time I felt like giving up, I received a letter that boosted up my motivation again. The third letter was the most crucial one, I think, because it gave me information regarding the re-registration period. That letter also made me aware that I can re-register before getting my examination grades.

K : The letters were very encouraging and friendly; but the invitation to the interview made me really feel valuable. It shows that UT really cares about students' feelings and opinions.

L : The letters reminded me to get back to my study. They were encouraging and motivating. I feel that the university pays attention to its students.

M : Very glad and touched. The second letter reminded and encouraged me to increase the frequency of my study. The first letter was nice because it had a Study Guide too. I think letter three should be sent earlier so that I could re-register earlier as it was suggested by the letter. I receive the letter about one week before the announcement of the examination grades. In my opinion, it was kind of too late.

N : Letters were very helpful in maintaining the motivation to keep studying (regularly), because sometimes I forgot and was lazy about the reading, etc. I didn't know (before becoming a student myself) that UT send such letters to students. It is a good thing, this service should be maintained. The language, especially, is relaxing, like a father talking to his son, not dictating. The letters also show that UT cares about its students.

O : Glad for the attention given by UT. I felt reminded and the letters increased my motivation. The third letter, I think, convinced me to re-register. I wasn't sure about it before that, because the exam grades hadn't been announced yet.

P : I felt encouraged and touched. I liked especially the way the letters were written. It made me feel like having a father/teacher who always reminded me to get back to my study.

***What about the Study guide, what did you think about it?**

C : I read it. I was helpful because it has been a while since I had to study regularly. The guide showed and reminded me of how to study efficiently. It gave foundation for planning my own study. It also shows that study can be scheduled, and should not cramped before the exams.
D : (not relevant)
E : I read it, but did not really apply it. Difficult. But, I followed the suggestion to read with the "SQR" method.
F : (not relevant)
G : I don't remember about it.
H : I read it. I liked it. I followed the reading strategy, it was helpful.
I : I don't remember reading it.
J : The study guide was read and applied. The Study Guide also gave me simple examples which showed that independent study can be systemized and did not have to be "as it flows". I followed the suggestion regarding setting up my own study schedule. But it was hard to stick to the scheduled time.
K : It's very helpful. I read it and applied for everything except the time management. It's difficult, but I tried. I didn't know how to study independently before, but the Study Guide was very helpful. The language wwas easy to understand.
L : The best one, especially about taking notes. I applied it. Time management is difficult to apply.
M : I read it. I followed the SQR reading method. I used to memorize everything before that. Time management is still difficult though.
N : The suggestions in the Study Guide worked for me. I helped me to start studying. It also showed that independent study should not be difficult, and can be done if it is well organized.
O : I was really glad to receive it because it has been a long time since I had to study regularly. That guide gave me a foundation to set up my own study schedule and to find my own strategies of reading and taking notes.
P : I forgot about it.

Did you find a friend of friends to study with?

A : Yes, a colleague at my office.
B : No.
C : Yes, my friend at the office. I also attended tutorials for two of the courses (Introduction to Economics and State Administration), each once a week for 10 weeks.

[Intensive Tutorials, fee : Rp.15000,- per course, 6-8 PM].
D : Yes, my roommate.
E : Yes, in the UPBJJ office. We just started having a discussion while we were there.
F : No.
G : Yes, I have a study group. We met in the UPBJJ office.
H : No.
I : Yes.
J : Yes.
K : No.
L : Yes.
M : Yes, I have a study group.
N : Yes, my friends from my CB (citizen band) radio club.
O : Yes.
P : Yes.

****Did names and addresses of other students sent to you helpful in finding you friend(s)?**

E : The peer list, I think, is a very good idea. It made me feel I was part of a group, like having classmates. However, I did not contact any of the names listed because I was too busy. Besides, I am a journalist. So, I did not think I would have common schedules with other students who, I am sure, would be "regular hour" students. But I liked receiving it.
F : (not relevant)
G : I did not contact them because I already have a study group. Three friends and I set up this group about a week before I received the letter. We met in the Regional office (UPBJJ).
H : I did not contact them.
I : No. I tried to contact one student, but they weren't home. I did not try again and he/she did not return my call.
J : They were not contacted because I was too busy, no time.
K : No, they are too far.
L : No. I contacted one, but the person did not contact me back. They are difficult to find.
M : No. Everyone I contacted was too busy to return my call. Or maybe they already have friends to study with. I don't know why.
N : I did not contact them, too far.
O : I did not use it.
P : No. I tried to contact one of them, but he/she was not interested.

Did you and your friend(s) study together regularly?

A : No.
B : (not relevant)
C : No.

D : Yes, 2 hours per week. I am also in an upgrading training at my office, every day, from 5 until 9 PM.
E : No.
F : (not relevant)
G : No.
H : (not relevant)
I : No.
J : No, just sometimes.
K : (not relevant)
L : No.
M : Yes, every Sunday from 10 to 3 PM in the afternoon.
N : No.
O : No.
P : Yes, every Sunday, to do the self-tests only, not discussing the content/materials in the modules..

If no, why? Please specify (for example, it was hard to find the time to study together, prefer to study alone, etc.)

A : Because we were too busy taking care of other things.
B : (not relevant)
C : Too busy. It is hard to find a common time. So, we only studied together when there is a problem (like things that are difficult to understand) at the office after office hour.
D : (not relevant).
E : Too busy, Besides, as a journalist, I don't think I will have common times with other regular students.
F : (not relevant)
G : Because it's difficult to find the common times. Everybody always has excuses to not come to the time scheduled.
H : (not relevant)
I : Because my friend is not a UT student, but a friend from high school. There is not much in common to study with.
J : Busy.
K : (not relevant)
L : Difficult to find common times. Too busy.
M : (not relevant)
N : Because everybody is working, we study when we have time.
O : They are not UT students.
P : (not relevant)

Did you study alone regularly?

A : No.
B : No.
C : Yes, every day at midnight. I do midnight praying every night, so I usually studied for 2 to 3 hours after that.
D : Yes.
E : No.
F : Yes.
G : Yes, kind of. At least, one hour a week.

H : Yes, one to one and half hours every day, after work.
I : No. Only studied about 10 times in one month.
J : Yes.
K : Yes.
L : Yes, four hours a day.
M : No.
N : Yes, I forced myself to.
O : Yes, two to three hours every night.
P : No.

Did you make a study plan or schedule?

A : Yes, I was planning to read 2 chapters per day.
B : No. I studied any time when I was in the mood to study. Usually, I studied at night, or after an afternoon nap.
C : Yes.
D : Yes.
E : No. I make targets. For example, I have to finish this chapter by a certain date.
F : Yes.
G : Yes.
H : Yes.
I : No.
J : Yes, following the Study Guide.
K : Yes.
L : Yes.
M : No, only schedule for the group studying.
N : Yes, every Saturday and Sunday afternoon, 3 hours a day.
O : Yes.
P : No, I just studied when I could.

If yes, did you follow your schedule?

A : No.
B : (not relevant)
C : Yes.
D : No.
E : (not relevant)
F : Sometimes.
G : No.
H : Yes, that was my plan.
I : (not relevant)
J : Yes, although sometimes I couldn't make it due to various reasons.
K : About 80 percent, yes.
L : No.
M : With the group, yes.
N : Yes, as much as I could.
O : Yes.
P : (not relevant)

If you did not follow your schedule, why? Please specify.

A : Usually because something came up at the scheduled/planned study time. I tried to substitute those times if I could.
B : (not relevant)
C : (not relevant)
D : Too tired and no time.
E : (not relevant)
F : Too lazy or tired.
G : Usually I was too tired to study in the scheduled times. I usually studied on Sunday or other holidays.
H : (not relevant)
I : (not relevant)
J : Usually, too busy working.
K : Sometimes too tired to study.
L : Not discipline enough.
M : Limited time because I am active in other activities and sports.
N : (not relevant)
O : (not relevant)
P : (not relevant)

Did you ever contact or go to the UPBJJ office?

A : Yes.
B : Yes.
C : Yes.
D : Yes.
E : Yes.
F : Yes.
G : Yes.
H : Yes.
I : Yes.
J : Yes.
K : Yes.
L : Yes.
M : Yes.
N : Yes.
O : Yes.
P : Yes.

If yes, what was your purpose(s) of contacting/going to the UPBJJ? Please specify.

A : To require information regarding tutorials, where to buy modules, and examination location.
B : To get the student card, asking administrative information through the phone, about 5 times.
C : To get the student card.
D : To submit the self test and ask some information regarding administration.
E : For administration matters such as submitting the self test and picking up the examination seat number.
F : Once a week just to check on information that may be relevant to know.

G : Checking on information.
H : Information, general information.
I : Bought the modules (study materials).
J : Looking for information, buying modules, and submitting the self-test.
K : Submitting registration form, submitting self-tests, picking up examination seat number, and checking the examination results.
L : For registration and examination grades.
M : Looking for information and other more senior students because they are usually hanging in the UPBJJ office every Saturday.
N : I went there for necessary things like picking up the exam seat number.
O : Picking up the student card and re-registration form.
P : Registration and information in general.

Did you find the UPBJJ personnel helpful?

A : Yes.
B : Yes.
C : Yes.
D : No. They don't care.
E : No, they looked too busy to help students individually.
F : Sometimes yes, sometimes no.
G : Yes.
H : Sometimes yes and sometimes no.
I : Some of them, no.
J : Yes.
K : Yes, if they were not busy.
L : Yes.
M : Some, yes.
N : Yes.
O : Yes.
P : Yes and No, sometimes.

After experiencing the operating system of UT (such as its support system, tutorial system, etc.), how you feel about your affiliation with the institution? Are you now more, less, or about the same as than when you started your program?

A : More affiliated.
B : About the same.
C : More.
D : More.
E : More.
F : More.
G : More.
H : About the same.
I : More.
J : More.
K : More.
L : More.

M : About the same.
N : More.
O : More.
P : More.

Why? Please specify.

A : Because as a student, I feel a part of it.
B : Because there is a lack of communication to increase this sense of affiliation.
C : Because I feel more committed.
D : Because I feel responsible as a student.
E : Because it make me proud of myself.
F : Because the UPBJJ gives sufficient information.
G : Don't know, just feel it.
H : I rarely communicate with the institution and other students. Too busy.
I : Because I'm now its student.
J : I know UT better, know that UT is a good university and a state university. That makes me proud. The letters, especially the first one, made me feel recognized as a student and that UT knows of my existence.
K : Because of the letters. I thought I would only get the modules, but I also received letters. And, because I have met other students during the exam.
L : Because I feel the commitment.
M : I am already committed, so nothing changed because of what happened.
N : Now I can see UT from students' point of view, not only as its employee. I want to invite my other friends to also study at UT.
O : I did well in the exam, that made me feel good and connected.
P : Not sure, just feel it.

After going through your first semester, do you think you are now more, still, or less motivated to continue studying at UT?

A : More motivated, especially after knowing of my low grades. I feel more motivated to upgrade those grades.
B : Still motivated.
C : More, because I like the subject matter that I study.
D : More. Because my grades are not good. I want to upgrade them.
E : Yes. In fact I regret that I did not start earlier.
F : Yes. Because my grades are not satisfactory, I want to upgrade them.
G : More, because I am already 27. I want to graduate as soon as possible.
H : Still motivated.
I : Still motivated.

J : More motivated for the same reason. I feel recognized by the letters. I was motivated when I started, but the letters increase my motivation.
K : More. Because I feel capable of doing it.
L : More. Because I feel capable doing independent learning.
M : More. Because I know better about the system and because I have other UT student friends. I also see that there are blind and old students who are still studying at UT. They made me more motivated.
N : More motivated because it is challenging.
O : More motivated.
P : More motivated because I like the subject matter more.

If you are more or still motivated to continue studying at UT, do you think it is the same kind of motivation that you had when you first started?

A : Yes.
B : Yes, I want to get a degree.
C : Yes.
D : Yes. But now also want to learn the knowledge.
E : No.
F : Yes.
G : Yes.
H : Yes.
I : Yes.
J : Yes.
K : Yes.
L : Yes.
M : Yes, to get a degree and a nicer job.
N : No.
O : Yes.
P : No.

If no, why it is changed? Please specify.

A : (not relevant)
B : (not relevant)
C : (not relevant)
D : (not relevant)
E : Now I am also motivated to apply my knowledge to make my own business, like opening a small convenience store.
F : (not relevant)
G : (not relevant)
H : (not relevant)
I : (not relevant)
J : (not relevant)
K : (not relevant)
L : (not relevant)
M : (not relevant)
N : After knowing more about the subject matter, I'm now more interested in the knowledge itself.
O : (not relevant)
P : The subject matter is even more interesting.

And, what are your motivation or goals now?

A : (not relevant)
B : (not relevant)
C : (not relevant)
D : (not relevant)
E : To get a degree and to expand my store. Maybe later open a garage too.
F : (not relevant)
G : (not relevant)
H : (not relevant)
I : (not relevant)
J : (not relevant)
K : (not relevant)
L : (not relevant)
M : (not relevant)
N : More to improve my knowledge.
O : (not relevant)
P : More knowledge about the matter.

After going through your first semester at UT, do you feel that you are now more, less or as confident as when you first started?

A : About the same.
B : More confident.
C : About the same.
D : More, because now I am a university student. And because I study independently, I feel smarter than regular students.
E : More. I used to feel not competent enough to interview people who have degree (university degree). Now, that I am a university student and will get a degree too, I feel equal and more confident in doing my job as a journalist.
F : More confident. Because I feel more capable of handling the independent study.
G : More, because I used to feel incompatible with my colleagues who have university degrees at the office. Now, I feel equal because I am not just a high school graduate, I will be a "sarjana" (bachelor) too.
H : More confident. Because I am studying alone. I am proud to be able to do that.
I : About the same, because I failed in all the courses taken in the first semester.
J : More confident because I am now a candidate university graduate, by learning independently.
K : More confident. Because I found out that I can still study/learn after leaving school for about 10 years.
L : More confident. I feel more educated with more knowledge.
M : More confident. Because I know I one day will become a university graduate.

N : More confident because I feel more educated.
O : More confident because I feel capable of doing study and working at the same time.
P : About the same.

With your first semester experience, do you think your ability to study independently has improved?

A : No.
B : No, it's about the same.
C : Yes.
D : Yes, a little bit.
E : Yes.
F : Yes.
G : Yes.
H : Yes.
I : No. The same.
J : Yes.
K : Yes.
L : Yes.
M : Yes.
N : Yes.
O : Yes.
P : No.

If yes, in what way? If no, why not? Please specify.

A : I don't know.
B : I don't know.
C : In reading. Because I've found a strategy to read more efficiently in finding the key elements. I've recognized my own habits and moods for studying, so I know when to study, where to start and how to start. I tried to follow the Study Guide, finding the key points and then highlighting them. It did not work. I found that for me it's better to read the whole [chapter], draw the key points in my own notes, and put/write short explanations in my own words.
D : In managing my time. I am now not studying only for the exam. In my reading ability, because in my training at the office, I learn how to study. And I applied it when I study for UT.
E : From my experience, I have found my own tricks to study.
F : More discipline and committed. From trial and error, I found the best way to study for myself.
G : More discipline in terms of time.
H : In reading, now I know what part to read first, and then highlight it. I've found my tricks.
I : I don't know.
J : More systematic and regular in studying. Manage my time better. The Study Guide helped me in finding my own study strategy, in reading strategy.
K : In answering questions and in reading the modules. In reading, I now know where to start to understand faster.

L : I now manage my time more efficiently.
M : In dividing my time and in reading, in comprehending the materials: not memorizing but understanding it.
N : Having the experience of studying independently, I've found the strategy to obtain the objective stated in the modules. My enthusiasm to study has increased; the Study Guide shows that independent study can be done "efficiently". If I didn't get the Guide, I would be reading over and over again without getting the main points.
O : After finding my own study style, I became more disciplined and committed to my independent study.
P : I haven't found the right way to study more effectively. I also have other things in my mind that easily distract me from my study.

Do you intend to re-register at UT?

A : Yes, for the next semester.
A : Yes, for June 1994's exam.
C : Yes.
D : Yes.
E : Yes, for next semester.
F : Yes.
G : Yes.
H : Yes.
I : Yes.
J : Yes, but I will change my study program.
K : Yes.
L : Yes.
M : Yes.
N : Yes.
O : Yes.
P : Yes, right after I receive the letter in February.

*****If yes, are you going to re-register in the next semester (for June Exam period), within one year, within two years, or some time in the future?**

*****If no, why? Please specify.**

General comments/complaints:
Do you have any general comments or concerns? The concerns may include academic matters such as course materials (content and designs), tutorials, exams, etc.; and administrative matters such as registration, tuition fee, module's price, communication with UT, supports and encouragements, information, etc.

A : Examination: There are too many exams to write within one day. I thing it should not be more than 2 exams per day. I also wish that the examination set (items) could be taken home.

Communication: Lack of communication with UT. There should be some kind of meetings with UT outside tutorials, and other channels for communicating with the instructors.

B : Communication: It is lacking. I don't know where to go when I have questions about the subject matter. UT should provide information about or list of names and addresses of other students who registered for the same study program and live in the same/close area (district). UT can also publish a regular "newsletter" than has that kind of information. This newsletter will become a reminder so that students will not feel like a lost child. I don't mind if I have to pay for this newsletter. Or UT can also establish a "voice mail" or "hot line" for every course.
Registration: Students need confirmation about registration.
Course Materials: The language and presentation in the modules are boring. Sentences are too long. UT should use more "popular" style, more examples rather than description. The content is also sometimes out-dated (obsolete), such as things like National Election. I don't mind if the price is increased for that.

C : Suggestions: I think the letter such as the one I received in the beginning of the semester should be given in the beginning or at the end of every semester to remind students to re-register.
Registration: Too many courses to take for new students.

D : UT needs a communication channel for students.

E : Communication: there should be a communication channel among students, some kind of bulletin board, in a study center maybe. And students can also write.
Radio and television programs: should be announced to students in advance.
Study load: maybe should be limited to a lower number of courses to be registered.

F : There should be some kind of information channel.

G : UT is lacking in communication with students.

H : Examination: Too difficult and the announcement of the grades were too late.
Communication: No channel for two-way communication.

I : No comment.

J : The first letter and the Study Guide should be included in the registration form package because it would encourage the students to study immediately after registering. Or, it could be sent right after

registration, and as late as October. The third letter is very important because it contained the information about re-registration: that we can re-register before the announcement of the examination results. UT should give some kind of orientation programs for each study program for new students, especially regarding information specifically related to each individual program.

K : UT should publish "Past Examination Items" (as a booklet) and sell it so that students can practice. Or, just some kind of exercise book. The number of courses should also be reduced, too many.

L : No comment.

M : Self-test results should contribute to the final grades. In the exercise test in the modules, sometimes there is no correct answer in the given multiple choice answers. This make us unsure. The questions in the final examination are not equally taken from all topics, there is too much focus on certain topics. And, there are to many courses to study at the same time.

N : UT is a good university, people should see that.

O : No comment.

P : The table of contents of modules is not complete in describing the content inside. The modules' pages easily came loose, and this made it hard to keep them intact.

Appendix 9

Frequency Table of Individual Dependent and Independent Variables

Value Label	Value	Frequency	Percent	Cum Percent
TREATMENT GROUP (TREATMENT):				
CONTROL	0	200	18.1	18.1
WELCOME	1	183	16.6	34.8
PEER	2	183	16.6	51.4
ENCOURAGE 1	3	187	17.0	68.3
ENCOURAGE 2	4	173	15.7	84.0
ENCOURAGE 3	5	176	16.0	100.0
Valid cases		1102		
Missing cases		0		
NUMBER OF REGISTERED COURSES:				
	4	8	.7	.7
	5	841	76.3	77.5
	6	68	6.2	83.7
	7	76	6.9	90.6
	8	55	5.0	95.6
	9	48	4.4	100.0
	0	6	.5	
Valid cases		1096		
Missing cases		6		
NUMBER OF SUBMITTED SELF-TEST:				
	0	254	23.0	23.0
	1	5	.5	23.5
	2	21	1.9	25.4
	3	67	6.1	31.5
	4	202	18.3	49.8
	5	435	39.5	89.3
	6	45	4.1	93.4
	7	42	3.8	97.2
	8	21	1.9	99.1
	9	10	.9	100.0
Valid cases		1102		
Missing cases		0		

Table continues on the next page.

Value Label	Value	Frequency	Percent	Cum Percent
PERCENTAGE OF SUBMITTED SELF-TESTS (TEST):				
	0	254	23.0	23.0
	11	1	.1	23.1
	14	1	.1	23.2
	20	2	.2	23.4
	22	1	.1	23.5
	25	1	.1	23.6
	29	2	.2	23.8
	33	3	.3	24.0
	38	1	.1	24.1
	40	13	1.2	25.3
	43	2	.2	25.5
	50	8	.7	26.2
	56	2	.2	26.4
	57	5	.5	26.9
	60	58	5.3	32.1
	63	4	.4	32.5
	67	12	1.1	33.6
	71	13	1.2	34.8
	75	4	.4	35.1
	78	5	.5	35.6
	80	187	17.0	52.5
	83	22	2.0	54.5
	86	16	1.5	56.0
	88	14	1.3	57.3
	89	8	.7	58.0
	100	463	42.0	100.0
Valid cases		1102		
Missing cases		0		
NUMBER OF WRITTEN EXAMINATIONS:				
	0	135	12.3	12.3
	1	5	.5	12.7
	2	13	1.2	13.9
	3	7	.6	14.5
	4	37	3.4	17.9
	5	712	64.6	82.5
	6	64	5.8	88.3
	7	60	5.4	93.7
	8	37	3.4	97.1
	9	32	2.9	100.0
Valid cases		1102		
Missing cases		0		

Table continues on the next page.

Value Label	Value	Frequency	Percent	Cum Percent
PERCENTAGE OF WRITTEN EXAMINATIONS (EXAM):				
	0	135	12.3	12.3
	13	1	.1	12.3
	20	4	.4	12.7
	29	1	.1	12.8
	33	2	.2	13.0
	40	12	1.1	14.1
	44	1	.1	14.2
	50	1	.1	14.2
	57	2	.2	14.4
	60	5	.5	14.9
	67	3	.3	15.2
	71	2	.2	15.3
	75	1	.1	15.4
	78	2	.2	15.6
	80	25	2.3	17.9
	83	4	.4	18.2
	86	5	.5	18.7
	88	3	.3	19.0
	89	2	.2	19.1
	100	891	80.9	100.0
Valid cases		1102		
Missing cases		0		
RE-REGISTRATION (REREG):				
	0	357	32.4	32.4
	1	745	67.6	100.0
Valid cases		1102		
Missing cases		0		
EMPLOYMENT STATUS (EMPLOYMENT):				
NOT WORKING	0	288	26.1	26.1
WORKING	1	814	73.9	100.0
Valid cases		1102		
Missing cases		0		
MARITAL STATUS (MARRIED?):				
NOT MARRIED	0	738	67.0	67.6
MARRIED	1	354	32.1	100.0
Valid cases		1092		
Missing cases		10		
GENDER:				
MALE	1	837	76.0	76.0
FEMALE	2	264	24.0	100.0
Valid cases		1101		
Missing cases		1		

Table continues on the next page.

Value Label	Value	Frequency	Percent	Cum Percent
NUMBER OF CHILDREN (# OF CHILDREN):				
	0	912	82.8	82.8
	1	70	6.4	89.1
	2	67	6.1	95.2
	3	36	3.3	98.5
	4	12	1.1	99.5
	5	4	.4	99.9
	6	1	.1	100.0
Valid cases		1102		
Missing cases		0		
HIGHEST PREVIOUS EDUCATION (PREVIOUS EDUCATION):				
HIGH SCHOOL	1	1010	91.7	92.3
DIPLOMA I	2	13	1.2	93.5
DIPLOMA II	3	6	.5	94.1
DIPLOMA III	4	39	3.5	97.6
UNIVERSITY	5	26	2.4	100.0
Valid cases		1094		
Missing cases		8		
TIMELAG BETWEEN HIGH SCHOOL GRADUATION AND UT'S REGISTRATION (TIMELAG):				
	.00	78	7.1	7.1
	1.00	102	9.3	16.3
	2.00	148	13.4	29.8
	3.00	132	12.0	41.8
	4.00	83	7.5	49.3
	5.00	81	7.4	56.7
	6.00	59	5.4	62.0
	7.00	67	6.1	68.1
	8.00	43	3.9	72.0
	9.00	46	4.2	76.2
	10.00	42	3.8	80.0
	11.00	42	3.8	83.8
	12.00	27	2.5	86.3
	13.00	30	2.7	89.0
	14.00	16	1.5	90.5
	16.00	21	1.9	92.4
	17.00	13	1.2	93.6
	18.00	9	.8	94.4
	19.00	15	1.4	95.7
	20.00	13	1.2	96.9
	21.00	7	.6	97.5
	22.00	6	.5	98.1
	23.00	8	.7	98.8
	24.00	4	.4	99.2
	25.00	2	.2	99.4

Table continues on the next page.

Value Label	Value	Frequency	Percent	Cum Percent
TIMELAG BETWEEN HIGH SCHOOL GRADUATION AND UT'S REGISTRATION (TIMELAG):				
	26.00	2	.2	99.5
	27.00	1	.1	99.6
	28.00	1	.1	99.7
	29.00	2	.2	99.9
	30.00	1	.1	100.0
	93.00	1	.1	
Valid cases		1101		
Missing cases		1		
AGE:				
	17	2	.2	.2
	18	20	1.8	2.0
	19	55	5.0	7.0
	20	70	6.4	13.3
	21	102	9.3	22.6
	22	111	10.1	32.7
	23	101	9.2	41.8
	24	77	7.0	48.8
	25	65	5.9	54.7
	26	78	7.1	61.8
	27	7	.6	62.4
	27	44	4.0	66.4
	28	42	3.8	70.2
	29	38	3.4	73.7
	30	44	4.0	77.7
	31	33	3.0	80.7
	32	22	2.0	82.7
	33	31	2.8	85.5
	34	26	2.4	87.8
	35	15	1.4	89.2
	36	19	1.7	90.9
	37	24	2.2	93.1
	38	16	1.5	94.6
	39	19	1.7	96.3
	40	8	.7	97.0
	41	9	.8	97.8
	42	8	.7	98.5
	43	5	.5	99.0
	44	4	.4	99.4
	47	5	.5	99.8
	49	2	.2	100.0
Valid cases		1102		
Missing cases		0		