

THE PERCEPTIONS AND ACTIONS OF SELECTED DISTANCE
EDUCATORS ON ACADEMIC PROCRASTINATION IN
TELECOMMUNICATIONS-BASED DISTANCE EDUCATION
PROGRAMS IN HIGHER EDUCATION

by

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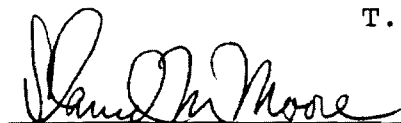
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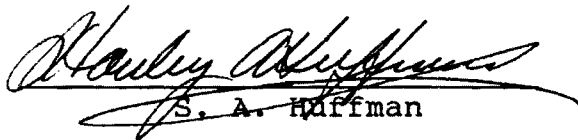
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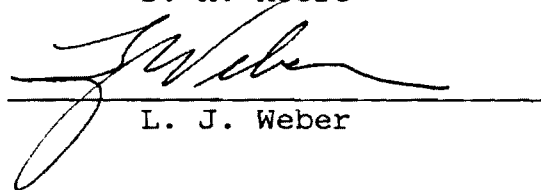
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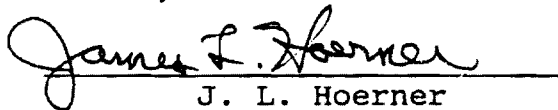
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(ABSTRACT)

This study investigated the perceptions and actions of selected distance educators on academic procrastination in telecommunications-based distance education programs in higher education. Data were collected via mail survey from a sample of 276 telecommunications-based distance education programs identified by two national data sources. Specifically, subjects were asked to provide information on: the extent to which they perceived academic procrastination to be a problem in their program, the data they collected on academic procrastination, and the strategies they used to combat academic procrastination.

Responses from 143 programs (135 program directors and 297 faculty) indicated that 95 percent of the distance educators believed student procrastination was a problem and 37.5 percent believed it was a serious problem. However, distance educators' data collecting efforts on academic procrastination were neither extensive nor systematic. The data that they reported collecting came from traditional sources and unsophisticated methods of data collection. The

sources and unsophisticated methods of data collection. The distance educators did report using a variety of strategies to combat academic procrastination. These strategies had little relationship to the distance educators' perception of academic procrastination or the data they collected on procrastination. Distance educators tended to add more structure and control to reduce procrastination as opposed to rewarding students for early completion of assignments.

This study indicated that distance educators were sufficiently concerned about academic procrastination to warrant further investigation. Focus should be placed on comparing programs with low procrastination against programs with high procrastination, perceptions and actions of distance learners on academic procrastination, and determining what data collecting techniques and strategies to reduce procrastination are most effective.

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DEDICATION

This study is dedicated to my family: my wife, Connie and daughters, Jennifer and Karen who gave me endless support, encouragement and understanding; my parents, Walter and Hallie who taught me long ago the importance of doing your best; and my brother, Rick who always set an example of scholarship and hard work.

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Chapter 1

INTRODUCTION

Background

Procrastination is often expressed as a concern by distance educators along with the problems of attrition or noncompletion. The phenomenon of academic procrastination - the act of needlessly postponing academic tasks (Bliss, 1983) - is particularly vexing because delaying academic work often leads to noncompletion or low quality performance. Surprisingly, there is relatively little research investigating procrastination and the research that is available deals with academic procrastination in traditional classroom or campus based self-instruction programs. For adults learning at a distance, little is known about the causes, effects and conditions which are associated with academic procrastination.

However, procrastination is known to be common among college students and a prevalent problem in education. According to some estimates, 95% of college students engage in procrastination (Ellis and Knaus, 1977). Similarly, procrastination is frequent among adults. For example, according to Burka and Yuen (1983) many adults procrastinate on work, family and personal items. When unchecked, Burka and Yuen (1983) found that procrastination by adults could lead to such severe consequences as loss of spouse and loss

of job.

Distance education is generally characterized by the separation of student and instructor during the primary modes of educational delivery and focuses on independent and self-directed learning (Evan, 1986; Holmberg, 1980; Feasley, 1983). By its very nature, distance education allows students to control much of their own learning, including decisions about when to study and to respond to academic assignments. If ever there was an opportunity to procrastinate on academic tasks, distance education offers that opportunity. Why then has the study of academic procrastination in distance education received only minimal attention? Is academic procrastination a problem, or is it something distance educators have decided to put off investigating?

Purpose of the Study

The purpose of this study was to chart the dimensions of academic procrastination in telecommunications-based distance education in higher education. To do this it was necessary to go to the source of this teaching and learning methodology - distance educators. For the purpose of this study, distance educators were identified as those individuals who direct or coordinate identified distance education programs, and faculty who teach in those programs.

While an argument can be made that the study of

academic procrastination should begin with the student, an equally valid argument is made that the perceptions of distance educators about this phenomenon is critical to the direction of future studies in this area. Distance educators possess an invaluable vantage point to study procrastination. They not only have at their disposal quantitative data as to the numbers of procrastinators in their program but, they also have a "feel" for what is going on in their program. An understanding of distance educators' perceptions of academic procrastination will provide guideposts to understand this issue, to conduct future research, provide information on the extent of procrastination in distance education and, suggest strategies to reduce it.

Research Questions

Specifically, this study investigated the impact selected distance educators perceived academic procrastination had on distance education by seeking answers to the following questions:

1. To what extent is academic procrastination perceived to be a problem in telecommunications-based distance education programs by these distance educators?
2. What data have these distance educators collected on academic procrastination?
3. What strategies are these distance educators using

to combat academic procrastination?

Definitions

The following definitions were employed to provide clarity of meaning for key terms used in this study:

Academic procrastination: the act of needlessly postponing beginning and/or completing academic tasks.

Attrition and noncompletion: students who do not complete a course for which they are involved for whatever reason.

Correspondence study: A method of distance education where the primary method of instructional delivery is print.

Data: information that is obtained through a variety of activities and techniques. In this study, data which have been collected that can be used to describe and analyze academic procrastination are of concern.

Distance education: the separation of student and instructor during the primary modes of educational delivery.

Distance educators: those individuals who direct or coordinate identified distance education programs and the

faculty who teach in those programs.

Distance learner: a student pursuing course work by means of distance education.

Faculty: individuals assigned to a specific distance education course who have responsibilities of delivering instruction and evaluating student performance.

Program director: an individual who directs or coordinates a distance education program.

Strategies: activities and interventions that are employed to change behavior. In this study, strategies to combat academic procrastination are of concern.

Telecommunications-based: those distance education programs which use audio, computer and video technology as the primary method to deliver instruction.

Limitations

This study charted the dimensions of academic procrastination in distance education by surveying selected distance educators. The study was restricted to distance educators in 276 telecommunications-based distance education programs in higher education identified in the two national

data sources: the Instructional Telecommunications Consortium's "Telecourse Utilization Survey" (Brey, 1989), and the 1989 National University Continuing Education Association's "Directory of Distance Education Through Telecommunications" (Willis, 1989). These documents appear to be the most complete sources available to identify distance education programs. This study provides a comprehensive national survey to the extent these two sources are complete and accurate.

The intent of the study was to provide a "state-of-the-art" picture of attempts to understand and control procrastination. Program directors were asked to select three faculty from their programs who were among the most effective distance education faculty. It was not intended that a representative or normative compilation of faculty views be produced. In this study the perceptions and actions of responding distance educators on academic procrastination in telecommunications-based distance education programs in higher education in the United States were surveyed and analyzed. It is not known the extent to which these results replicate the opinions of all distance educators.

Significance of the Study

According to some estimates 95% of college students engage in academic procrastination, the act of needlessly

postponing a task. Procrastination often leads to low quality performance and noncompletion. Despite its prevalence, there has been relatively little research which addresses this phenomenon. Distance education, where student and instructor are separated during the primary modes of educational delivery, often focuses on independent and self-directed learning. Opportunities for distance learners to procrastinate are abundant, explaining why procrastination is often expressed as a concern by distance educators. However, even less is known about academic procrastination in distance education, than academic procrastination in traditional on-campus course work.

The collection of data on procrastination in distance education will contribute to the understanding of this phenomenon. Obtaining and analyzing the perceptions and actions of distance educators (those individuals who teach and administer distance education programs) on academic procrastination in telecommunications-based distance education programs will provide a valuable perspective on the issue. As distance education grows in importance and complexity as suggested by Miller (1989), Garrison and Shale (1989) and Bruder (1989) data available on academic procrastination in distance education will provide course designers, program administrators, and faculty with more information on which to make critical decisions. A greater understanding of distance educators perceptions and actions

regarding academic procrastination will also provide new directions for future research and development in distance education.

Chapter 2

REVIEW OF LITERATURE

To support the study, a review of relevant research on procrastination, attrition and noncompletion in distance education has been conducted. Specifically, the following topics were considered germane to the study: the distance learner, reasons for noncompletion, models of completion and noncompletion, and the problem, causes and treatment of academic procrastination.

Attrition and Noncompletion in Distance Education

The study of attrition and noncompletion has received more attention than any other area of research in distance education (Garrison, 1987; Holmberg, 1987). Much of this research has produced a descriptive portrait of the distance learner, and reasons why some distance learners choose not to persist with their coursework.

The Distance Learner

Though a "typical" distance education student may not exist, a picture of a distance learner can be developed from the available literature. Medsker, Edelstein, Kreplin, Ruyle and Shea (1975) surveyed 18 nontraditional external degree or independent learning programs at the graduate and undergraduate level. Through interviews by staff members

and student self-ratings, distance education students appeared to possess above average persistence, self-motivation and drive for independence. Lewis (1983) found that most of the students in the 70 telecommunications based programs he surveyed were working adults, either full-time or part-time. In addition, many were simultaneously enrolled in on-campus and off-campus courses, most lived in urban areas, had some prior college experience, were in their late twenties and early thirties and approximately 60 to 65 percent were women.

Brown and Wall (1978) found that the average age of distance learners was 35 years old, and most had taken some college courses before. Wilkinson and Franklin (1988) in a survey of rural community college distance education students found the average student age to be 34 years old. In addition, they found that the majority were working women, two-thirds were part-time students, and 83% had some type of college education.

In a compilation of three surveys conducted for the "Annenberg/CPB Project Telecourses," Levine (1988) found that two thirds of the distance learners enrolled in telecourses were female; half were over 35; more than half were married with at least one dependent; between 75% and 80% were employed at the same time they were taking telecourses and half had taken an off-campus or distance learning course in the past.

Crane (1984) interviewed 200 students in 26 different institutions across the country and found that the main reason given by students for enrolling in telecourses was that telecourses were a convenient way to further their educational goals. Independence, self-pacing, decreased travel time to and from classes, reduction of work conflicts, and a non-threatening approach to learning were all examples of this convenient approach. These same reasons were given by Holmberg (1980) in his review of distance education students in Europe.

The various data on distance learners seems to suggest that these students are older, more mature, are employed, have taken college courses before, and are more self-motivated and directed than traditional students. Is it a paradox then that attrition rates of distance learners can range from 30% to 70% (Woodley and Parlett, 1983)?

Reasons for Noncompletion

One of the primary methods used to investigate attrition among distance learners is to ask them why they dropout. This usually involves sending questionnaires to students soliciting reasons for their noncompletion. Many of these studies have been plagued by poor return rates. There is also concern as to their accuracy because students who dropout may attribute reasons for their noncompletion to forces other than personal factors (Kennedy and Powell,

1978). However, these studies provide most of what is known about why students dropout.

Macken et al (1973) reviewed six studies of home-based education from 1933 to 1966 and found that the reasons students gave for noncompletion were consistently: (1) lack of time, (2) dislike for certain aspects of the course, and (3) change of plans. Donehower (1968) found that non-completers of correspondence courses were individuals who lived further from the institution, were not seeking a degree, male, and had started submitting lessons long after enrollment began.

Harter (1969) surveyed 364 noncompleters in the independent study program of the State University of New York. Of the 187 who responded, reasons for dropout in order of occurrence were: (1) academic procedures; (2) low motivation; (3) poor learning orientation; (4) outside demands; (5) change of plans; and (6) course content.

In a review of dropout research from several countries, Glatter and Wedell (1971) found that lack of persistence is related to the part-time study behavior of students. Distance learners found studying difficult when it was combined with pressures and increased demands from work, family responsibilities, and changed career plans because of work dissatisfaction.

Rekkedal (1982) found that the initial reasons given for student dropout tended to deal with students' personal

circumstances which were out of the institution's control. Upon further probing however, students complained about course materials, tutoring and assignment turn around time.

Several studies have attempted to resolve some of the concern dealing with the questionnaire methodology. Through personal interviews with students, James and Wedemeyer (1959) in a study of correspondence education found that non-completers tended to have some sort of turmoil in their life, were changing career plans, or experienced family illness or death. In this same study when interviewing fifty students face-to-face, James and Wedemeyer found that completers possessed certain similarities including: (1) clarity of their goals; (2) motivation; and (3) an understanding of their own self-discipline.

In a comprehensive effort to gain insight into the personal, instructional, and environmental factors related to attrition in distance education, Gatz (1986) used in-depth telephone interviews from 300 correspondence study students from Ohio University, the University of Kentucky, and Indiana University, and over 50 distance education students from Northern Virginia Community College. Gatz found five areas that were important to understanding completion and attrition. These dimensions were: "(1) significance of the course to the student's goal; (2) appropriateness of the independent learning method; (3) feasibility of time; (4) integration of interests and

background; and (5) accommodation of learning styles" (Gatz, 1968, p. 229).

In still another effort to identify reasons for student noncompletion in distance education courses, Kennedy and Powell (1978) used case-study information recorded by counselors of the British Open University. The study involved data from 200 counselors on 684 students who withdrew from course work entirely, 291 who partially withdrew and 236 students identified as at risk of withdrawing. Data from counselors were used because "the counselor is charged with developing a picture of the 'whole' student through the establishment of a personal relationship" and therefore, "in a position to offer a professionally sound judgement in such matters" (Kennedy and Powell, 1978, p. 62). They concluded that the distance learner must maintain a balance of the pressures on their time, energies, and mental resources.

Learner cognitive style was also investigated as a potential reason for noncompletion. In a study of 102 correspondence course students, Knox (1987) found that while participation in correspondence study is associated with the cognitive style of field-independence, there was no significant differences between field-dependent and field-independent students with respect to student evaluation of the program or in student persistence. Apparently, field-independent learners tended to self-select distance

education courses, but their preferred cognitive style had no bearing on their persistence.

Two recent studies investigated the concept of student learning style as a determinate of successful completion of distance education courses. Coggins (1988) found no significant difference in terms of conditions for learning and preferred learning modality when 153 completers and noncompleters were administered the Canfield Learning Style Inventory. Significant differences were found between completers and noncompleters in the area of preferred content. Noncompleters had a higher preference for inanimate objects - related content and a lower preference for people content. Coggins also found that noncompleters had less formal education than completers; were more likely to have not taken a college course in five years; and had less intention of earning a degree.

In a separate study Vondrell and Sweeney (1989) administered Kolb's "Learning Style Inventory" to 130 students in an independent learning program. Their results found no differences between completers and noncompleters.

Attrition and noncompletion in distance education is a complex problem. Though research is available, the majority of studies have provided only insights into the extent of the problem. Distance educators are still searching for "why" many distance learners do not persist.

The causes of attrition and non completion in distance

education courses appear as complex as those in traditional higher education courses. Indeed, Sewart (1981) found that with older and part-time students enrolling in on-campus college level courses, attrition was similar regardless of whether the course was taken on-campus or from a distance. Rekkedal (1982) also suggests that attrition from distance education courses is no more of a problem than it is for other on-campus, part-time instruction. Why, then, do many distance educators continue to call for "an appreciation of the unique and crucial aspects of distance education" (Garrison, 1987, p. 95) in conceptual models or theories of student dropout, attrition and noncompletion?

Models of Completion and Noncompletion

Researchers concerned with attrition and noncompletion in higher education have constructed theoretical models to help explain the causes of dropout. Most notable of these are Boshier (1973), Tinto (1975), and Bean (1980, 1983).

Boshier's Model of Adult Education Participation and Dropout asserts that student participation and dropout comes from an interaction of psychological and environmental variables. The maintenance of inner harmony with oneself and with the environment are the two primary concerns of students according to Boshier. Congruence of these variables for the student determines dropout or persistence.

Tinto's model is rooted in Durkheim's theory of

suicide, where individuals are at suicide risk when they are insufficiently integrated into society (Tinto, 1975). A student, therefore, is at dropout risk when he or she has insufficient interactions with others in the institution, and their values towards the educational system are incongruent with the system.

Bean's model of noncompletion stems from his application of a model of turnover in work organizations to the student attrition process (Bean 1980, 1983). This model contains four classes of variables: background variables, organizational variables, environmental variables, and outcome/attitudinal variables. Student intention is used as an intervening variable.

Generally higher education models of attrition and dropout have been used by distance educators as frames of reference for study in this area. Gatz (1986) concluded in a review of these models that they "suggest a framework that should recognize: (1) the heterogeneity of students; (2) the unique characteristics of correspondence instruction; and (3) the diverse conditions of a student's learning environment" (Gatz, 1986, p. 37). Curiously however, in all the models reviewed, the phenomena of academic procrastination is not considered.

Recently, Billings (1988) attempted to adapt a particular higher education model to distance education. Using Bean's model, Billings constructed a model for

correspondence course completion based on the following premise:

"Attrition from correspondence courses, like dropout from IHE's (Institution of Higher Education) is hypothesized to be a causal relationship of the student's background, the organization in which the courses are offered, the distance education environment of the Independent Study Program (ISP) offering the correspondence course, the student's attitude about the course, as well as the student's intention to complete the course. The variables are causally ordered for background variables to precede organizational and environmental variables and for outcome/attitudinal variables to precede intent. Date of submission of the first lesson was added as a second intervening variable in this model" (Billings, 1988, p. 24-25).

Billings' model is a comprehensive attempt to conceptualize why students complete or do not complete distance education courses. It contains items such as SAT scores and college preparation as background variables to employment, and support of employer, family responsibility, family support, and distance from the course instructor as environmental variables.

While a major step toward conceptualizing why distance

learners do not persist, Billings admits that the model is tentative and that variables can be added or deleted. The idea of academic procrastination is noticeably missing from this model.

Summary

Research in attrition and noncompletion of distance learners provides a portrait of participants and their reasons for noncompletion. An examination of these reasons shows that attrition and noncompletion in distance education is as complex as it is in traditional higher education. Even the use of theoretical frameworks and models do not give answers to why students dropout. One area of the attrition and noncompletion problem that appears missing in the literature is the phenomena of academic procrastination.

Academic Procrastination

Procrastination, the act of needlessly putting off a task, is a common practice among students (Bliss, 1983; Burka and Yuen, 1983; Ottens, 1982). Despite its prevalence, there is relatively little research which deals with this phenomenon. What information is available comes from research in traditional classroom settings, self-instructional courses, study habits, and clinical observations.

The Problem of Academic Procrastination

Procrastination reduces the effectiveness of college students, some more so than others. It affects students in three basic ways: emotionally, in their achievement, and in their ability to complete course work.

Burka and Yuen (1982, 1983) found through clinical observations and anecdotal information from procrastinators, that procrastination caused anxiety, depression and feelings of low self-esteem. Similarly, in a study of 379 university students, Rothblum, Solomon and Murakami (1986) found that the procrastination behavior of students studying for midterm exams was accompanied by stress and anxiety. "More than 40% of the students reported always or nearly always procrastinating to the point of experiencing considerable anxiety" (Rothblum et al, 1986, p. 393). Anxiety associated with procrastination was often accompanied by feelings of depression, irrational cognitions and low self-esteem.

In an earlier, study Solomon and Rothblum (1984) found a high degree of procrastination on tasks that college students view as important, and which are likely to have the greatest impact on the student's grade. Of those students reporting continuous problems with procrastination, 46% procrastinated on writing term papers, 27.6% procrastinated on studying for exams, and 30.1% procrastinated on reading weekly assignments.

Papers, tests and reading assignments are three

critical measures in determining a student's academic performance regardless of whether the student is an 18 year old freshman in a college lecture course or a 35 year old adult enrolled in a telecourse delivered over cable television to their house. It could be argued that in the case of the distance learner, papers, tests, and reading assignments are even more critical to academic performance because classroom participation is generally not an option where one can gain points toward a final grade. Unfortunately, the lack of research on procrastination in the area of adult learners and distance education, provides little direct evidence of what effects procrastination has on distance learners' achievement.

The known effects of procrastination on academic achievement are equivocal although most research indicates that high procrastinators perform at lower levels than low procrastinators (Semb, Glick and Spencer, 1979). While Solomon and Rothblum (1984) found no significant difference in course grades between high and low procrastinators, they did find a correlation between procrastination and lower grades in a later study (Rothblum, Solomon and Murakami, 1986).

Rothblum et al account for the difference in findings between the two studies as a methodological artifact. In the first study their self-reported assessment of procrastination instrument asked students to report

tendencies to procrastinate on academic activities in general without focusing on the course in which they were enrolled. Rothblum et al's later study had students report their procrastination behavior on their current course.

Procrastination also appears to affect course completion. Among the students Donehower (1986) found who did not complete correspondence courses were those students who began turning in assignments long after their enrollment in the course. Conversely, Pfeiffer and Sabers (1970) found that students who turned their assignments in earlier were more likely to complete the class. Similarly, Wong and Wong (1978-79) in a study of 364 correspondence students found that course completion rates increased with the number of lessons submitted.

In the above studies academic procrastination is never mentioned, only inferred. However, the potential connection between procrastination and course completion along with Semb, Glick and Spencer's (1979) finding that procrastination resulted in increased course withdrawals in self-paced courses is of particular interest. Do distance educators often experience higher levels of non-starts and withdrawals due to procrastination?

Causes of Academic Procrastination

There are two views of the causes of academic procrastination. A simple perspective posits that

procrastination is caused by a time-management and organization problem. (Ziebat, Rosenthal & White, 1978; Miller, Weaver and Semb, 1974; and Ottens, 1982). Here procrastination can be overcome if tight schedules are maintained, time-management habits are developed, student contracts are written and students just do their work.

Burka and Yuen (1983) suggested a more complex view of the causes of procrastination based on data from and observation of procrastinators. Their possible causes of procrastination included: fear of failure, fear of success, difficulty in making decisions, rebellion against control, unobtainable perfection, lack of assertion, and dislike of the task. Bliss (1983) in an attempt to apply some structure to the causes of procrastination, grouped procrastination into four categories:

First there are the attitudinal factors, which include such things as unwillingness to tolerate discomfort or unpleasantness, fear of failure, fear of success, low self-esteem, depression, boredom, shyness, and feelings of guilt.

Second are the cognitive blocks, such as inadequate information, unclear priorities, indecision, uncertainty about how to attack the problem and failure to appreciate the importance of timely action.

Third are environmental conditions or external factors that encourage delay. They include clutter, disorganization, noise, unmanageable workloads, diversionary activities, lack of needed tools, and friends or relatives who lure one from the chosen task.

And finally, there are the physiological barriers to timely action, including fatigue, stress, and illness.

Each instance of procrastination involves one or more of these (Bliss, 1983, p. 6).

Solomon and Rothblum (1984) in a study of procrastination in university students, found that procrastinators tended to fall into one of two separate groups. The first group was a small homogeneous group which procrastinated primarily out of fear of failure. They were concerned about poor performance and living up to their own and other's expectations. The second group was a much larger and heterogeneous group which procrastinated because of an aversion to the task. They showed a "dislike of engaging in academic activities and a lack of energy" (Solomon and Rothblum, 1984, p. 508).

Thus, it appears that procrastination is more than a time-management and organization problem. Academic procrastination is a complex interaction of behavioral, cognitive and affective components (Solomon and Rothblum, 1984). Traditional methods used to reduce procrastination such as study skills training and the introduction of structure and pacing appear insufficient to combat the problem of procrastination. Are the approaches to reduce academic procrastination in distance education ample or more complex and, what results are achieved?

Reducing Procrastination

Because academic procrastination has primarily been portrayed as a time management and organization problem,

research has concentrated on interventions such as increased course involvement, pacing, scheduling, and rewards and punishments to reduce student procrastination (Green, 1982; Corbin & Feasley, 1980; DiSilvestro & Markowitz, 1982; and Wesp, 1986). The primary procrastination interventions come from research with the Personalized System of Instruction (PSI) courses made popular by Fred Keller. PSI is a teaching method that allows students to: (1) move at their own pace through successive units of a course, (2) be tested as often as necessary without penalty to assure mastery of each unit, and (3) be graded on each test by a well-prepared and well-guided student proctor (Keller & Sherman, 1974). Wesp (1986) found that by requiring 80% mastery on daily quizzes, students completed course requirements more rapidly and performed higher academically. In a comprehensive study of procrastination in a PSI course, Reiser (1984) reduced student procrastination by presenting students with a pacing schedule and penalizing them for failing to maintain that schedule. No adverse effects on student attitudes or performance on the final exam were found. In the same study, Reiser used a reward system in an effort to increase the rate at which students progressed through the course. However, no significant effects were found. Other studies have found rewards to be an effective means of reducing procrastination. In a study of minority students' self-control of procrastination, Green (1982) found that when

self-rewards such as watching selected television programs, or eating special foods were combined with self-monitoring, procrastination behaviors declined.

Research on PSI has indicated that students who procrastinate are more likely to withdraw from those courses (Glick & Semb, 1978; Born and Whelan, 1973). However, Reiser (1984) found limited support for this hypothesis. In a study of 100 PSI students, all of the students who withdrew from the course had failed to meet any of the pacing schedule deadlines. However, one-third of those students who did complete the course also failed to meet any of the deadlines. Little understanding of procrastination can be gained from these results, probably because of the low number of withdrawals. As Reiser (1984, p. 47) explained, "In previous studies, significant differences in withdrawal rates were found only in those instances where at least 20% of the students in the self-paced class withdrew.

There appears to be agreement that some type of pacing or increased structure will reduce academic procrastination and increase student performance. While research generally points in that direction, there are some contradictions. Shale (1987, p.27) concluded that "there is no substantive data base to support the belief that the presence of rigid pacing methods results in significant improvements in the drop-out rate." Born and Moore (1978, p. 35) suggested that, "Procrastination and self-pacing may be related only

because the self-pacing feature of PSI provides the data necessary to suggest the word procrastinator as a descriptor for some people." Shale (1987) summed it up nicely in response to arguments to place rigid schedules, through examinations and other methods, on students to reduce academic procrastination:

Such points of view are seemingly based on a belief that students will naturally tend to procrastinate in their studies and the road of procrastination leads to dropping out if students get too far behind. Although this belief is intuitively compelling, one ought to remain aware that it is essentially a belief (Shale, 1987, p. 27).

Even Keller (1974) suggested that procrastination may be related to one or more of several factors which can be addressed by educators.

(1) The units of our course may be too large, especially at its beginning. An assignment that can be mastered in two hours will fit within a student's daily activities better than one that asks for four. It may arouse less fear and less avoidance of the task, and it can more easily compete with other time-consuming and equally rewarding matters. (2) The unit or units may be too difficult in content, producing successive failure and lengthening the time required to pass. (3) The material to be studied may lack intrinsic interest (may have too few built-in reinforcements) and be unable to compete with more absorbing matters in the academic sphere or elsewhere (Keller, 1974, p. 90).

Keller made a further point that should not be lost on educators seeking to control academic procrastination by rigid pacing and tight structures.

These are not the only reasons for delay in taking or passing tests, but they are fairly common ones and should be considered by the teacher before he

looks for some inherent weakness in the student and begins to think of "taking steps" (Keller, 1974, p. 90).

Summary

Academic procrastination is a widespread complex phenomenon. It appears to be a result of an interaction between behavioral, cognitive and affective components and is associated with anxiety, lower academic performance and potentially attrition among students. Most of the literature on reducing academic procrastination comes from the PSI course research and involves establishing pacing schedules and other structures to limit the students' ability to move freely throughout the course. The common strategy to control procrastination in PSI courses has been to reduce the major feature of the course that makes it appealing - self-pacing.

The very nature of distance education allows students to control much of their own learning, including decisions when to study and to respond to academic assignments. It seems reasonable that academic procrastination would have an effect on student learning and retention in distance education. However, the role of procrastination in attrition and noncompletion while substantial, is largely circumstantial. Though studies of attrition in distance education courses point to a variety of reasons for student noncompletion, rarely is procrastination mentioned.

Distance educators need to look carefully at procrastination in their course offerings to determine if procrastination is a problem and to identify what is being done about it. PSI research has been suggested as a model to modify distance education course structures and regulations. However, if distance educators respond to academic procrastination in the same manner as the PSI educators, the nature of distance education will surely be changed. For example, certain movements toward requiring regularly scheduled two-way communication via telephone and/or computer in distance education classes may be perceived as the equivalent to requiring daily quizzes in a PSI course. And, distance education could become a method of learning for only those students who could afford the required electronic equipment. Considering such drastic logistical and conceptual modifications may be unwise without a clear picture of the extent to which procrastination is actually a problem. Educators need to understand academic procrastination and the extent of its effect on the teaching and learning process at a distance.

Chapter 3

METHODOLOGY

The purpose of this study was to investigate academic procrastination in distance education. This chapter describes the methodological procedures for the study including the research questions, the selection and characteristics of the subjects, the development and design of the data gathering instrument, the data gathering procedures and the data analysis treatments.

Research Questions

This study investigated selected distance educators' perceptions of academic procrastination in distance education. The following questions were the focal points of the study:

1. To what extent is academic procrastination perceived to be a problem in telecommunications-based distance education programs by these distance educators?
2. What data have these distance educators collected on academic procrastination?
3. What strategies are these distance educators using to combat academic procrastination?

Subjects

The population for this study consists of two groups of distance educators: (1) directors or coordinators of distance education programs and (2) faculty who teach in distance education programs. Distance educators were selected for this study because of their access to data and their leadership and decision making roles in distance education programs. Distance educators should have access to quantitative data on procrastination in their programs, what actions have been implemented to combat procrastination, and they also have a "feel" for less quantitative effects and efforts in their programs.

Distance educators selected for this study were identified from two national data sources (See Appendix A). The first is the comprehensive listing of programs which participated in the Instructional Telecommunications Consortium three year research project funded by the Annenberg/CPB Project entitled, "Telecourse Utilization Survey" (Brey, 1989). The Instructional Telecommunications Consortium is a council member of the American Association of Community and Junior Colleges and represents major users of telecourses for college credit instruction for learners in both community colleges and four year colleges and universities. The 197 listings represented institutions that participated in telecourses delivery of instruction from Fall 1986 through Summer 1988. This was the most

comprehensive listing available of telecommunications-based distance education programs in the United States.

The second source of distance education programs was the 1989 National University Continuing Education Association's (NUCEA) "Directory of Distance Education Through Telecommunications" (Willis, 1989). The 86 institutions listed in the NUCEA Directory include those members of NUCEA who use telecommunications to serve adult students in distance education programs using video, audio and computer technology. Distance education programs appearing on both lists were counted only once. Distance educators from a total of 276 different programs comprised the subject group.

Data Gathering Instrument

A questionnaire was mailed to all members of the two groups of distance educators described above. Babbie (1979) suggested survey research methodology be used to accomplish three general objectives: (1) to describe a population, (2) to explain differences between subsets and, (3) to explore a topic of which little is known in order to generate additional possibilities for future investigation. The objectives of this study were to describe distance educators' views, data collection efforts and actions to combat academic procrastination. This exploratory study described academic procrastination in distance education to

generate future research questions and programming strategies.

A mailed questionnaire was selected as the data collecting strategy for several reasons (see Fowler 1988). First, the respondent does not have to report answers directly with an interviewer. Second, mailed questionnaires provide access to widely dispersed respondents. Third, respondents have time to give thoughtful answers and to look up records or to consult with others. Increased accuracy in reporting may have been possible because respondents had the opportunity to consult their distance education program or course records.

Identification of categories of information and development of questions to be asked were the result of a review of the literature and an exploratory study on academic procrastination and distance education in two diverse distance education programs (Wilkinson and Sherman, 1989). Wilkinson and Sherman (1989) interviewed the distance education program directors and selected faculty of two programs regarding academic procrastination in their respective distance education programs. Information gained from this exploratory study and the literature review yielded three categories of data as the focus of this study: (1) institutional and program information, (2) student noncompletion information and, (3) information on academic procrastination.

Data regarding institution and program information was obtained through questions about (1) the type of institution, (2) the size of institution by headcount and full-time equivalent (FTE) student status, (3) the type and age of distance education program, (4) the size of distance education program by headcount, FTE, number of course offerings, budget and number of staff, and (5) the methods of instructional delivery and student/faculty interaction. Respondents were asked to select the most appropriate of several demographic choices which best described their particular institution and distance education program. Seeking demographic information on distance education programs was important for two reasons. First, it provided additional data which could be used to help define the field of distance education. Distance education while growing in acceptance and use is struggling to define itself (Shale, 1988; Coldeway, 1988; Keegan, 1989). Second, demographic information provided data upon which comparisons between programs could be made. For example, the manner in which distance education programs of varying ages and sizes perceive and respond to academic procrastination could differ.

Data regarding student noncompletion was obtained through questions about student nonstarts, dropouts and withdrawals, and through distance educators' perceptions of the cause(s) of student noncompletion. Noncompletion of

distance education courses has received more attention than any other area of study in distance education (Garrison, 1987). However, most of this research has involved tabulating the number of noncompleters or dropouts and asking distant learners why they drop out (Kennedy and Powell, 1978; Gatz, 1986). Asking distance educators why students do not complete distance education courses could provide a valuable perspective from the vantage point of distance educators to this problem. Distance educators have at their disposal quantitative data as to the number of procrastinators in their program as well as a "feel" for what is going on in their program. Questions regarding student noncompletion of distance education courses were generated from results of existing studies on noncompletion in distance education. Subjects were asked to choose, from several ranges of percentages, the range that best indicates their program's percentage of nonstarts, noncompleters and withdrawers. Subjects will also be asked to respond to a Likert-type scale regarding their opinion as to the cause(s) of noncompletion.

Data regarding academic procrastination was obtained through questions about: (1) distance educators' perceptions of the causes and extent to which academic procrastination was a problem, (2) techniques used to gather data on academic procrastination and, (3) actions implemented by distance educators to reduce academic

procrastination. Questions regarding causes of academic procrastination were generated from Bliss (1983) and Burka and Yuen (1983). Questions regarding study actions and academic procrastination were adapted from or based on Solomon and Rothblum's (1984) "Procrastination Assessment Scale". Questions regarding procrastination data collection methods and actions to combat academic procrastination were generated from a synthesis of the literature on attrition and noncompletion in distance education, academic procrastination, and from Wilkinson and Sherman (1989). Subjects were asked to respond to the Likert-type scales to determine the extent to which distance educators perceived academic procrastination was a problem and what may cause academic procrastination. Subjects were also asked to respond to a series of questions on academic procrastination data collecting techniques and actions to combat procrastination by identifying those techniques and actions they employ with five basic distance education study actions.

The data gathering process employed two separate surveys. (See Appendices B and C) The first survey consisted of eighty (80) questions and was administered to distance education program directors. The second consisted of fifty-seven (57) questions and was administered to distance education faculty. Twenty-three of the questions dealing with institution and program information included on

the program directors' survey were not asked of faculty. Otherwise both surveys were the same. Program directors were asked to respond concerning their programs, while faculty were asked to respond concerning their distance education courses. With this distinction, the surveys were identical.

Instrument Review and Pilot Test

As part of the development of the data gathering instruments used in this study and prior to its dissemination, a panel of experts was identified to review the survey instruments. This panel consisted of distance education faculty, distance education program directors and a survey research specialist. Panel members were excluded from participating as respondents in the study. Panel members were asked to review the survey instruments with respect to the following: (1) clear directions, (2) questions which sought answers to the research questions, and (3) properly worded and relevant questions. The responses of the panel of experts were analyzed and the survey questions were revised based on this analysis.

The survey instruments were pilot tested with a select group of distance educators not included in the study. Subjects of the pilot test were asked to complete the survey instruments and provide reactions and suggestions for revision. All pilot test subjects were interviewed.

Data Gathering Procedures

The surveys were mailed first class directly to the distance education program directors identified from the distance education program listings. A cover letter explained the purpose of the study and described the procedure for distributing the three faculty surveys (see Appendix D). Selection of participating faculty subjects was made by each institution's distance education program director. Program directors were encouraged to select three distance education faculty who: (1) are among the best faculty in their program and, (2) would be willing to participate in this study. The intent was to ensure a high response rate from faculty who were recognized as the most effective distance education faculty. This, it was felt, would provide a "state-of-the-art" picture of attempts to understand and deal with procrastination. It was not intended that a representative or normative compilation of faculty view be obtained.

Upon completion of the survey, distance education faculty were asked to return the survey to the distance education program director who was asked to mail all surveys back to the researcher in a self-addressed postage paid envelope. Program directors were asked to remind faculty to complete the survey if faculty had not returned the survey in three days after receipt.

A mailing sequence was established and used in

accordance with Fowler's (1989) general recommendations. In an effort to promote returns, all subjects were advised in the cover letter that the survey was coded so that the researcher could undertake follow-up mailings to nonrespondents. A coding system was devised to allow the researcher to match distance education faculty with their respective distance education programs.

Two weeks after the initial mailing, 121 distance educators from 53 different programs (19.2%) had responded. A postcard (see Appendix D) was mailed to each of the program directors who had not responded reminding them to complete the survey and to have three faculty complete the survey as well.

Twelve days after the reminder postcard was mailed, 247 distance educators from 96 different programs (34.8%) had responded. A second postcard was mailed to each of the program directors who had not responded again reminding them to complete the survey and to have three faculty complete the survey.

Ten days after the second postcard was mailed, 290 distance educators from 110 different programs (39.9%) had responded. A second mailing of the survey was sent to the 166 distance education program directors who had not responded to the survey.

Two weeks after this mailing, 363 distance educators from 139 (50.3%) different programs had responded. A third

reminder postcard was mailed to the 168 program directors who had not responded reminding them to complete the survey and to have three faculty complete the survey as well.

Twelve days after the third reminder postcard was mailed, 426 distance educators from 164 different programs (59.4%) had responded to the survey. A fourth postcard was mailed to the non-respondents ten days later. Returns from this final mailing resulted in a total of 481 distance educators from 180 different programs (65.2%) had responded to the survey. Of the questionnaires obtained from this survey 51.8 percent (143 programs, 135 program directors, 297 faculty) were considered usable for this study.

Data Analysis Treatment

All returned surveys were examined for correctness and completeness. All surveys which were substantially incomplete were not tabulated. The data were entered and checked for accuracy. Descriptive measures were used to compute and analyze the results. Frequencies, percentages, means and standard deviations were calculated to provide data on the three research questions. Pearson Correlation Coefficients were calculated to determine the interrelationships between distance educators' perceptions of academic procrastination as a problem, the data they gather on academic procrastination, and the strategies they use to combat academic procrastination. Relationships were

considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74), and strong (.75 and above). T-tests were also calculated to test for significant differences between program directors' and faculty perceptions and actions regarding academic procrastination.

Chapter 4

RESULTS

Introduction

The purpose of this study was to chart the dimensions of academic procrastination in distance education. This chapter presents an analysis of data obtained from surveying selected distance educators in 276 higher education telecommunications-based distance education programs in the United States regarding their perceptions and actions on academic procrastination and distance education. Data were solicited to answer the following questions:

1. To what extent is academic procrastination perceived to be a problem in telecommunications-based distance education programs by these distance educators?
2. What data have these distance educators collected on academic procrastination?
3. What strategies are these distance educators using to combat academic procrastination?

A packet of four questionnaires was mailed to each of 276 distance education programs identified from two national data sources (see Appendix A). One questionnaire was designated to be completed by the institution's distance education program director. The "Distance Education Program Director Survey" solicited three categories of data: (1)

institutional and program information, (2) student noncompletion information and, (3) information on academic procrastination.

The remaining three questionnaires were designated to be completed by distance education faculty selected by their respective distance education program directors. Directors were asked to select faculty who: (1) were among the best faculty in the program and, (2) would be willing to participate in the study. The "Distance Education Faculty Survey" solicited two categories of data identical to the program director survey: (1) student noncompletion information, and (2) information on academic procrastination.

Of the 276 distance education programs surveyed, responses from 180 programs (65.2%) were received. Of these 25 or 9.1 percent indicated the institution no longer offered a distance education program or did not offer a program which met the definition of distance education as described in the questionnaire: "the separation of student and instructor during the primary modes of educational delivery." Two and one half percent or seven program directors indicated they did not want to participate in the study. Responses from six programs were unusable. The remaining 143 program responses were determined usable. These responses consisted of completed questionnaires from 135 program directors and 297 faculty (51.8% of the total

surveys mailed).

Presentation of data will consist of: (1) Profile of participating distance education programs, (2) Distance educators' perceptions of student noncompletion, (3) Distance educators' perceptions of academic procrastination, (4) Data collected by distance educators on academic procrastination and (5) Strategies used by distance educators to combat academic procrastination.

Profile of Participating Distance Education Programs

Demographic data were received from 135 distance education programs and their respective institutions through data obtained from the program director's survey. The following is a presentation of the findings and an analysis of these data.

Type of Institution Responding. Two thirds (67.7%) of the institutions responding classified themselves as either a technical college, junior college or community college with 60 percent classifying themselves as community college. Response frequencies are shown in Table 1.

Size of institution by headcount and FTE - Fall, 1988. Data presented in Table 2 show that the most frequently reported size of the responding institutions was 10,001 to 20,000 headcount and 1,000 to 3,000 FTE. Over one half (56.4%) of the institutions had a headcount enrollment larger than 10,001 while 53.5 percent of the institutions

Table 1

TYPE OF INSTITUTION RESPONDING

Type	Number	Percentage
Technical School	5	3.7
Junior College	4	3.0
Community College	81	60.0
College/University (4 years only)	3	2.2
College/University (4 years plus Masters)	12	8.9
College/University (4 years through Doctorate or Professional Degree)	30	22.2
TOTAL	135	100.0

Table 2

SIZE OF INSTITUTION BY HEADCOUNT AND FTE - FALL 1988

Headcount	N	%	FTE	N	%
Under 3,000	19	14.3	Under 1,000	9	6.9
3,000 to 5,000	20	15.0	1,000 to 3,000	39	29.8
5,001 to 10,000	19	14.3	3,001 to 5,000	13	9.9
10,001 to 20,000	40	30.1	5,001 to 10,000	33	25.2
Over 20,000	35	26.3	Over 10,000	37	28.3
TOTAL	133	100.0	TOTAL	131	100.0

had a FTE enrollment larger than 5,001.

Type of distance education program. Nearly three fourths (see Table 3) of the institutions responding described their institution's distance education program as a "department coordinating distance education offerings of the various colleges/divisions within the institution." Only one institution indicated that the distance education program was the institution's primary instructional delivery method. It appears that the vast majority of the distance education programs selected for this study work with their institution's colleges or divisions to deliver distance education.

Primary geographic area served by distance education program. Nearly 61 percent (60.9%) of the programs reported serving either urban or rural communities. This is to be expected with 60 percent of the institutions classifying themselves as community colleges. While distance education is often viewed as being of particular advantage to rural areas, the most frequent response for primary geographic area served was urban community (37.6%). (See Table 4 for a breakdown of distance education program by area served.) Seven programs (5.3%) reported that they served students nationally while 15 programs (11.3%) reported their service area in a variety of other terms. Four programs (3%) reported an international or worldwide service region, five programs (3.8%) reported a suburban service area, and four

Table 3

TYPE OF DISTANCE EDUCATION PROGRAM

Type	Number	Percentage
Institution's primary instructional delivery method	1	.8
Separate college/division within the institution	17	13.0
Dept. coordinating distance education offerings of the various colleges/divisions within the institution	95	72.5
Part of a consortium which provides distance education to member institutions	18	13.7
TOTAL	131	100.0

Table 4

PRIMARY GEOGRAPHIC AREA SERVED BY DISTANCE EDUCATION
PROGRAM

Area	Number	Percentage
Urban community	50	37.6
Rural community	31	23.3
State	13	9.8
Regional	17	12.8
National	7	5.3
Other *	15	11.3
TOTAL	133	100.0

- * 5 (3.8%) programs reported a suburban service area
 4 (3.0%) programs reported a combination urban,
 suburban, rural service area
 4 (3.0%) programs reported an international program
 service area

programs (3%) reported a combination of urban, suburban or rural area.

Size of distance education program by headcount and FTE - Fall 1988. One-half (51.6%) of the distance education programs had a student headcount of less than three hundred students for the fall semester 1988 (See Table 5). Student FTE generated by the responding distance education programs ranged from less than 10 FTE (17.4%) to more than 500 FTE (10.7%).

Age of distance education program. 63.2 percent of the distance education programs responding were less than eleven years old while 30.1 percent were less than six years old. These data indicate a fairly young history for these distance education programs, although 10.5 percent of the programs reported being in existence for more than 20 years. (The data describing program age are presented in Table 6.)

Number of different distance education course offerings in Fall, 1988. Thirty-eight programs (28.8%) reported offering one to five courses while 14 programs (10.6%) reported offering more than 50 programs (see Table 7). Nearly one-half of the programs (47.7%) reported offering fewer than eleven courses in the Fall, 1988.

Number of FTE staff involved in delivering distance education courses. Two-thirds of the programs (67.1%) reported that up to three full-time equivalent (FTE) staff, excluding faculty, were involved in delivering distance

Table 5

SIZE OF DISTANCE EDUCATION PROGRAM BY HEADCOUNT AND FTE -
FALL 1988

Headcount	N	%	FTE	N	%
Less than 100	34	25.8	Less than 10	21	17.4
101 to 300	34	25.8	11 to 25	29	24.0
301 to 500	15	11.4	26 to 50	20	16.5
501 to 1,000	28	21.2	51 to 100	14	11.6
1,001 to 2,500	8	6.1	101 to 250	13	10.7
2,501 to 5,000	10	7.6	251 to 500	11	9.1
More than 5,000	3	2.3	More than 500	13	10.7
TOTAL	132	100.0	TOTAL	121	100.0

Table 6

AGE OF DISTANCE EDUCATION PROGRAM

Years	Number	Percentage
1 - 5	40	30.1
6 - 10	44	33.1
11 - 15	23	17.3
16 - 20	12	9.0
More than 20 years	14	10.5
TOTAL	133	100.0

Table 7

NUMBER OF DIFFERENT DISTANCE EDUCATION COURSE OFFERINGS
IN FALL 1988

Different Course Offerings	Number	Percentage
1 to 5	38	28.8
6 to 10	25	18.9
11 to 20	33	25.0
21 to 50	22	16.7
More than 50	14	10.6
TOTAL	132	100.0

education courses (see Table 8). Nearly one-third of the program directors (31.3%) reported that they delivered distance education courses with less than one FTE staff. These data suggest that for many distance education program directors, coordinating and delivering distance education courses is only part of their duties.

Yearly budget for distance education program. Almost one half (46.8%) of the programs were budgeted less than \$25,000 excluding salaries while five programs or 4 percent of the programs were budgeting more than \$500,000 per year. (The data describing distance education program budgets are presented in Table 9.)

Level of instruction offered by distance education program. Nearly three-fourths of the distance education program directors (73.3%) reported that their programs offered only undergraduate instruction (see Table 10). Data reported previously on type of institution indicated that 66.7% of the programs were from technical schools, junior colleges or community colleges. This indicates that 6.6 percent of the four year colleges and universities reporting offer distance education only at the undergraduate level. Indeed, undergraduate instruction appears to make up the largest level of instruction delivered by the distance education programs with 82.9% of the programs offering undergraduate only or predominately undergraduate course offerings. Of the 42 programs (31.1%) identified in Table 1

Table 8

NUMBER OF FTE STAFF INVOLVED IN DELIVERING
DISTANCE EDUCATION COURSES

Number of Staff	Number	Percentage
Less than 1	42	31.3
1 to 3	48	35.8
4 to 9	27	20.1
10 to 15	7	5.2
16 to 25	6	4.5
More than 25	4	3.0
TOTAL	134	100.0

Table 9

YEARLY BUDGET FOR DISTANCE EDUCATION PROGRAM

Amount Budgeted per Year	Number	Percentage
Less than \$25,000	59	46.8
\$25,001 to \$50,000	25	19.8
\$50,001 to \$100,000	22	17.5
\$100,001 to \$200,000	8	6.3
\$200,001 to \$500,000	7	5.6
More than \$500,000	5	4.0
TOTAL	126	100.0

Table 10

LEVEL OF INSTRUCTION OFFERED BY
DISTANCE EDUCATION PROGRAM

Level	Number	Percentage
Undergraduate only	99	73.3
Predominately undergraduate, some graduate	13	9.6
Predominately graduate, some undergraduate	8	5.9
Graduate only	3	2.2
Combination	11	8.1
Other	1	.7
TOTAL	135	100.0

as college/university offering undergraduate and graduate instruction, 11 programs (8.1%) reported offering predominately graduate or only graduate courses.

Amount of time given to students to complete a distance education course. Nearly three-fourths of the distance education program directors (73.9%) reported that students were given the term in which they were enrolled to complete their distance education course (see Table 11).

Primary method of instructional delivery in distance education courses. Video-based technology was the most frequently reported primary method of instructional delivery according to program directors (see Table 12). Three-fourths of the programs used video-based technology as the primary method in more than half of their courses with 47.7 percent using it as the primary method in every course. Computer-based technology was reported as the least used method with 69.7 percent of the programs not using it at all.

Primary method of student/faculty interaction in distance education. Print was reported as the primary method of student/faculty interaction with 50.8 percent of the programs using it as the primary method in over 75 percent of their courses (see Table 13). Program directors reported that 28.3 percent used group meetings as the primary method of student/faculty interaction in every course. Group orientation to the course, required group

Table 11

AMOUNT OF TIME GIVEN TO STUDENTS TO COMPLETE A
DISTANCE EDUCATION COURSE

Time allowed to student	Number	Percentage
Within the term for which they are enrolled	99	73.9
Within an academic year	8	6.0
Within 6 months	4	3.0
Within a calendar year	13	9.7
Within 2 calendar years	1	.7
Other	9	6.7
TOTAL	134	100.0

Table 12

PRIMARY METHOD OF INSTRUCTIONAL DELIVERY IN DISTANCE
EDUCATION COURSES

Method of Delivery	Percentage of Distance Education Courses in Program					
	Not at all N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)	Every Course N (%)
Print-based (N = 120)	52 (43.3)	18 (15.0)	15 (12.5)	6 (5.0)	11 (9.2)	18 (15.0)
Video-based technology (N = 130)	5 (3.8)	16 (12.3)	9 (6.9)	10 (7.7)	28 (21.5)	62 (47.7)
Audio-based technology (N = 121)	67 (55.4)	43 (35.5)	5 (4.1)	2 (1.7)	--	4 (3.3)
Computer-based technology (N = 119)	83 (69.7)	31 (26.1)	3 (2.5)	2 (1.7)	--	--

Table 13

PRIMARY METHOD OF STUDENT/FACULTY INTERACTION IN DISTANCE
EDUCATION COURSES

Method of Interaction	Percentage of Distance Education Courses in Program					
	Not at all N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)	Every Course N (%)
Print (N = 124)	17 (13.7)	22 (17.7)	15 (12.1)	7 (5.6)	20 (16.1)	43 (34.7)
Video Technology (N = 120)	69 (57.5)	13 (10.8)	7 (5.8)	8 (6.7)	9 (7.5)	14 (11.7)
Audio Technology (N = 123)	36 (29.3)	36 (29.3)	9 (7.3)	7 (5.7)	15 (12.2)	20 (16.3)
Computer Technology (N = 120)	79 (65.8)	35 (29.2)	4 (3.3)	2 (1.7)	--	--
Individual Meetings (N = 122)	18 (14.8)	40 (32.8)	17 (13.9)	11 (9.0)	14 (11.5)	22 (18.0)
Group Meetings (N = 127)	22 (17.3)	31 (24.4)	15 (11.8)	9 (7.1)	14 (11.0)	36 (28.3)

meetings and group testing may account for these data. The data indicate that computer technology is not used at all in 65.8 percent of the programs as the main method of student/faculty interaction.

Relationships Between Variables

Pearson Correlation Coefficients were calculated to determine interrelationships between institution and distance education program variables. Relationships were considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74) and strong (.75 and above). Several important relationships were found between institution and program variables. The institution's size by headcount had a strong positive relationship (.85) with institution size by FTE and moderate positive relationships with distance education program size by headcount (.56), program size by FTE (.54), program age (.46), number of different distance education courses offered (.47) and program budget (.49) (see Table 14). These data indicate that the larger the institution, the larger the distance education program in student headcount, student FTE, number of different courses offered and program budget. In addition, the larger the institution the older the distance education program tends to be. Institution size by student FTE had a moderate positive relationship with distance

Table 14

INTERCORRELATIONS BETWEEN DISTANCE EDUCATION PROGRAM
DEMOGRAPHIC VARIABLES EQUAL TO OR GREATER THAN .45

Variable	Correlation	Variable
Institution size (headcount)	.85	Institution size (FTE)
	.56	Program size (headcount)
	.54	Program size (FTE)
	.46	Program age
	.47	Number of courses offered
	.49	Program budget
Institution size (FTE)	.52	Program size (FTE)
Program size (headcount)	.86	Program size (FTE)
	.61	Program age
	.80	Number of courses offered
	.72	Size of program staff
	.69	Program budget
Program size (FTE)	.58	Program age
	.79	Number of courses offered
	.65	Size of program staff
	.63	Program budget
Program age	.50	Number of courses offered
	.50	Size of program staff
	.52	Program budget
Number of different course offered	.69	Size of program staff
	.62	Program budget
Size of program staff	.71	Program budget
Video-based technology as primary method of instructional delivery	- .45	Print-based technology as primary method of instructional delivery
	- .45	Program size (headcount)
	- .46	Number of different course offerings
Computer-based technology as primary method of instructional technology	.60	Computer-based technology as primary method of student/ faculty interaction
Individual meetings as primary method of student/faculty interaction	.52	Group meetings as primary method of student/faculty interaction

education program size by student FTE (.51).

The size of the distance education program by student headcount had strong positive relationships to the program size by student FTE (.86) and the number of different courses offered (.80). Moderately strong positive relationships were found between program size by student headcount and the size of the program staff (.72) and the program budget (.69). A moderate positive relationship was found with program age (.61).

Program size by student FTE had a strong positive relationship with the number of different courses offered (.79) and moderately strong positive relationships with size of program (.65) and program budget (.63). A moderate positive relationship was found between program size and program age (.58).

The age of the distance education program had moderate positive relationships with the number of courses offered (.50), the size of the program staff (.50) and the program budget (.52). The number of different courses offered by a distance education program had a moderately strong positive relationship with the size of the program staff (.69) and a moderately strong positive relationship with the program's budget (.62). The size of the distance education program staff had a moderately strong positive relationship with the program budget (.71).

Moderate negative relationships were found between

video-based technology delivery as the primary method of instructional delivery and print-based technology as the primary method of instructional delivery (-.45), program size by headcount (-.45) and the number of different courses offered (-.46). Apparently, as more video-based technology is used as the primary method of delivering instruction, less print-based materials are used as the primary instructional vehicle, the smaller the program and the fewer different courses were offered.

One method of instructional delivery was found to have a positive relationship with a corresponding method of student/faculty interaction. While 65.8 percent of the programs do not use computer-based technology as the primary method of instructional delivery at all and 69.7 percent do not use computers as the primary method of student/faculty interaction, there was a positive moderately strong relationship of .60 between the two methods. Programs using meetings as a primary method of student/faculty interaction accounted for a moderate positive relationship between individual meeting and group meetings (.52). These data indicate a tendency to use similar methods of communication in the distance education process. Programs using computer-based technology use these methods for delivery as well as for student/faculty interaction. Programs using one type of face-to-face meeting as the primary method of student/faculty interaction tend to use the other types of

face-to-face meetings as well. Positive relationships were also found between print-based delivery and print-based interaction, and between video-based delivery and video-based interaction. These relationships, however, were less than .45.

Summary

Data were collected from 135 distance education program directors regarding institution and program information. Using modal responses as the measure of central tendency, the "average" distance education program from the selected population can be described as: located in a community college with a student headcount of between 10,001 and 20,000 students, resulting in 1,000 to 3,000 FTE during Fall, 1988. The distance education program coordinates distance education offerings of the various colleges or divisions within the institution and primarily serves an urban community. The program accounted for 101 to 300 students and 11 to 25 FTE in Fall term 1988. The program is six to ten years old, offered one to five courses in Fall term, 1988 and has one to three FTE staff members working in the program with an annual budget of less than \$25,000 excluding salaries. The program offers undergraduate courses only and students are given the term for which they are enrolled to complete the course. The program uses video-based technology as the primary method of delivering

instruction to the majority of the students and print is used as the primary method of student/faculty interaction.

Pearson Correlation Coefficients were calculated on the institution and distance education program data to determine the strength of relationships between variables such as age of program and number of courses offered. With the exception of the strong positive correlations between institutional headcount and FTE (.85), distance education program headcount and FTE (.86), and distance education program headcount and number of different courses offered (.80), there were no correlations at or above the .8 level.

Strong relationships (.75 and above) were found between: institution size by headcount and institution size by student FTE; program size by headcount and FTE and the number of different courses offered. Moderately strong positive relationships (.60 to .74) were found between: program size by headcount and size of program staff and program budget; program size by student FTE and the size of the program staff and program budget; the program budget and the number of different courses offered and the size of the program staff; computer-based technology as the primary method for instructional delivery and student/faculty interaction. The data indicate that the larger the institution the larger the distance education program. However, it appears that when video-technology is used as the primary method of instructional delivery, print-based

technology was used less as a primary method of instructional delivery, the distance education program was smaller in size as measured by headcount and, less distance education courses were offered.

Distance Educators' Perceptions of Student Noncompletion

Data were collected from 419 distance educators (127 program directors and 292 faculty) regarding their perceptions of student noncompletion of distance education courses. Frequencies, means and percentages were calculated. Pearson Correlation Coefficients and T-tests were also administered. The following is a presentation of the findings and an analysis of these data.

Student noncompletion. Thirty percent of the 418 distance educators responding indicated that over 10 percent of their distance learners are non-starts and do not complete any assignments. Nearly 10 percent (9.8%) reported non-start rates of between 26 percent and 50 percent. One program director reported a greater than 50% non-start rate of distance learners (see Table 15). Faculty and program directors' reports of noncompletion differed significantly ($t = -2.452$; $p < .05$) as faculty reported higher non-start rates (see Table 16). Program directors were more likely not to know the percentage of distance learners which do not

Table 15

PERCENT OF DISTANCE LEARNERS WHICH DO NOT COMPLETE
ANY ASSIGNMENTS

% Not Completing Assignments	Total N (%)	Pgrm Dir N (%)	Faculty N (%)
Less than 5%	139 (33.2)	48 (37.8)	91 (31.3)
5% to 10%	116 (27.7)	32 (25.2)	84 (28.9)
11% to 25%	85 (20.3)	19 (15.0)	66 (22.7)
26% to 50%	41 (9.8)	7 (5.5)	34 (11.7)
Greater than 50%	4 (0.7)	1 (0.8)	2 (0.7)
Don't Know	34 (8.1)	20 (15.7)	14 (4.8)
TOTAL	418 (100.0)	127 (100.0)	291 (100.0)

Table 16

COMPARISON OF DISTANCE EDUCATION PROGRAM DIRECTORS AND
FACULTY REGARDING PERCEPTIONS OF STUDENT NONCOMPLETION IN
DISTANCE EDUCATION

Contribution	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Percent of non-starts	106	1.90	0.98	277	2.18	2.18	- 2.420 *
Percent withdrawn/dropped	105	2.18	1.07	268	2.34	1.14	- 1.196
Students reasons for taking courses change	117	2.55	.759	276	2.53	.828	.202
Distance education does not fit student's learning styles	121	3.16	.741	279	3.06	.879	1.089
Students do not manage their time well, get behind and cannot recover	119	3.61	.726	282	3.55	.812	.732
Problems with course design implementation	121	2.35	.679	278	2.26	.715	1.123
Course materials are boring or poorly produced	121	2.26	.680	275	2.10	.771	2.101 *
Unexpected illness/family responsibilities (personal)	120	2.85	.795	279	2.86	.824	- .157
Unexpected/new work responsibilities (business/professional)	121	3.10	.728	281	2.99	.753	1.476
Students have unrealistic expectations of what can be accomplished; they become over committed	120	3.58	.753	278	3.28	.884	.801
Students are unprepared for the course content	121	2.74	.736	281	2.83	.855	-1.183

* significant at the .05 level

complete any assignments (15.7%) than faculty (4.8%) (see Table 15).

Faculty and program directors' reports were similar regarding the percentage of distance learners which withdraw or are dropped from courses because they are not completing assignments. However, faculty reported slightly higher levels of withdrawal and drops due to noncompletion of assignments. Sixteen percent of the distance educators reported that more than 26 percent of their distance learners withdraw or are dropped (see Table 17).

Distribution of time by distance learners. One half of the 416 distance educators responding reported that the majority of the students in their programs distribute efforts over the time allowed to complete the assignments. Data in Table 18 indicate that faculty believe more students wait until the last minute to complete their assignments (17.1%) than program directors (10.5%). Over one-third (33.9%) of the program directors reported not knowing how students distribute their time compared to 16.1 percent of the faculty.

Contributions to student noncompletion. Distance educators perceived that the greatest contributor to student noncompletion was that students do not manage their time well, get behind and cannot recover. Nearly 59 percent (58.8%) indicated that this was frequently or always a cause for student noncompletion (see Table 19). Forty-three

Table 17

PERCENTAGE OF DISTANCE LEARNERS WHICH WITHDRAW OR ARE
DROPPED FROM COURSES BECAUSE THEY ARE NOT
COMPLETING ASSIGNMENTS

% Withdraw or Dropped from Courses	Total		Pgrm Dir		Faculty	
	N	(%)	N	(%)	N	(%)
Less than 5%	24	(30.0)	36	(28.8)	88	(30.4)
5% to 10%	89	(21.5)	32	(25.6)	57	(19.7)
11% to 25%	93	(22.5)	23	(18.4)	70	(24.2)
26% to 50%	65	(15.7)	14	(11.2)	51	(17.6)
Greater than 50%	3	(0.7)	1	(0.8)	2	(0.7)
Don't know	40	(9.6)	19	(15.2)	21	(7.3)
TOTAL	414	(100.0)	125	(100.0)	289	(100.0)

Table 18

HOW DISTANCE LEARNERS DISTRIBUTE TIME TO COMPLETE
ASSIGNMENTS

Distribution of Time	Total N (%)	Pgm Div N (%)	Fac N (%)
Completes as soon as possible	34 (8.1)	7 (5.6)	27 (9.2)
Distributes efforts over time allowed to complete assignments	207 (49.8)	58 (46.8)	149 (51.0)
Waits until last minute	63 (15.1)	13 (10.5)	50 (17.1)
Turns in assignments late	10 (2.4)	3 (2.4)	7 (2.4)
Submits several assignments at one time not allowing for feedback between assignments	13 (3.1)	1 (0.8)	12 (4.1)
Don't know	89 (21.4)	42 (33.9)	47 (16.1)
TOTAL	416 (100.0)	124 (100.0)	292 (100.0)

Table 19

DISTANCE EDUCATORS' PERCEPTIONS OF CONTRIBUTIONS TO
STUDENT NONCOMPLETION IN DISTANCE EDUCATION

Cause	Never N (%)	Rarely N (%)	Occasionally N (%)	Frequently N (%)	All the Time N (%)
Students reasons for taking courses change					
Pgrm Dir (N = 118)	5 (4.2)	57 (48.3)	44 (37.3)	11 (9.3)	1 (0.8)
Faculty (N = 276)	17 (6.2)	136 (49.3)	86 (31.2)	34 (12.3)	3 (1.1)
TOTAL (N = 394)	22 (5.6)	193 (49.0)	130 (33.0)	45 (11.4)	4 (1.0)
Distance education does not fit students' learning styles					
Pgrm Dir (N = 122)	1 (0.8)	21 (17.2)	58 (47.5)	41 (33.6)	1 (0.8)
Faculty (N = 279)	12 (4.3)	59 (21.1)	114 (40.9)	89 (31.9)	5 (1.8)
TOTAL (N = 401)	13 (3.2)	80 (20.0)	172 (42.9)	130 (32.4)	6 (1.5)
Students do not manage their time well, get behind and cannot recover					
Pgrm Dir (N = 120)	1 (0.8)	6 (5.0)	40 (33.3)	65 (54.2)	8 (6.7)
Faculty (N = 281)	3 (1.1)	25 (8.9)	90 (32.0)	142 (50.5)	21 (7.5)
TOTAL (N = 401)	4 (0.1)	31 (6.2)	130 (32.4)	207 (51.6)	29 (7.2)
Problems with course design and implementation					
Pgrm Dir (N = 122)	9 (7.4)	67 (54.9)	41 (33.6)	5 (4.1)	0 (0.0)
Faculty (N = 277)	27 (9.7)	162 (58.5)	81 (29.2)	7 (2.5)	0 (0.0)
TOTAL (N = 399)	36 (9.1)	229 (57.3)	122 (30.5)	12 (3.1)	0 (0.0)
Course materials are boring and poorly produced					
Pgrm Dir (N = 122)	13 (10.7)	67 (54.9)	39 (32.0)	3 (2.5)	0 (0.0)
Faculty (N = 274)	49 (17.9)	159 (58.0)	61 (22.3)	5 (1.8)	0 (0.0)
TOTAL (N = 396)	62 (15.7)	226 (57.0)	100 (25.3)	8 (2.0)	0 (0.0)

Table 19 (Continued)

DISTANCE EDUCATORS' PERCEPTIONS OF CONTRIBUTIONS TO
STUDENT NONCOMPLETION IN DISTANCE EDUCATION

Cause	Never N (%)	Rarely N (%)	Occasionally N (%)	Frequently N (%)	All the Time N (%)
Unexpected illness/ family responsibilities					
Pgrm Dir (N = 121)	3 (2.5)	38 (31.4)	55 (45.5)	24 (19.8)	1 (0.8)
Faculty (N = 278)	3 (1.1)	87 (31.3)	144 (51.8)	39 (14.0)	5 (1.8)
TOTAL (N = 399)	6 (1.5)	125 (31.3)	199 (49.9)	63 (15.8)	6 (1.5)
Unexpected/new work responsibilities					
Pgrm Dir (N = 122)	1 (0.8)	23 (18.9)	62 (50.8)	35 (28.7)	1 (0.8)
Faculty (N = 280)	4 (1.4)	60 (21.4)	151 (53.9)	62 (22.1)	3 (1.1)
TOTAL (N = 402)	5 (1.2)	83 (20.6)	213 (53.0)	97 (24.1)	4 (1.0)
Students have unrealistic expectations of what can be accomplished, they become over committed					
Pgrm Dir (N = 120)	2 (1.7)	10 (8.3)	55 (45.8)	49 (40.8)	4 (3.3)
Faculty (N = 278)	8 (2.9)	40 (14.4)	111 (39.9)	103 (37.1)	16 (5.8)
TOTAL (N = 398)	10 (2.5)	50 (12.6)	166 (41.7)	152 (38.2)	20 (5.0)
Students are unprepared for the course content					
Pgrm Dir (N = 122)	5 (4.1)	36 (29.5)	67 (54.9)	13 (10.7)	1 (0.8)
Faculty (N = 281)	11 (3.9)	86 (30.6)	129 (45.9)	46 (16.4)	9 (3.2)
TOTAL (N = 403)	16 (4.0)	122 (30.3)	196 (48.6)	59 (14.6)	10 (2.5)

percent of the distance educators believed that students having unrealistic expectations of what can be accomplished and becoming over committed were frequently or always causes for student noncompletion. One third of the distance educators (33.9%) indicated they believed that frequently or always student noncompletion was the result of distance education not fitting the students' learning styles. Twenty-five percent of the distance educators believed that unexpected or new work responsibilities of students frequently or always was a cause of noncompletion. Seventeen percent believed that unexpected illness or family responsibilities were the major causes. Seventeen percent of the distance educators also believed that students being unprepared for the course content was frequently or always a cause of student noncompletion. Twelve percent (12.4%) indicated they believed changes in students' reasons for taking the course was the main reason. Few distance educators believed that student noncompletion was the result of problems with course design and implementation or because course materials were boring or poorly produced.

Faculty and program directors' opinions were similar about possible causes for student noncompletion in distance education with one exception. Program directors believed that boring and poorly produced course materials were more of a cause for student noncompletion than did faculty ($t = 2.101, p < .05$) (see Table 16).

Relationships Between Variables

Pearson Correlation Coefficients were calculated to determine interrelationships between distance educators' perceptions of noncompletion. Intercorrelations for both faculty and program directors were calculated. Relationships were considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74) and strong (.75 and above). Several important relationships were identified between distance educators' perceptions of noncompletion. A moderately strong (.67) positive relationship was found between the reported percent of student non-starts in the program and the reported percent of students that withdraw or are dropped because they do not complete assignments by faculty. A moderate positive relationship (.46) was found in program directors' responses to the same items. Moderate positive relationships were found in faculty responses between the reported percent of students who withdraw or are dropped because they do not complete assignments and the degree to which faculty believe that distance education does not fit students' learning styles (.47) and the degree to which faculty believe students do not manage their time well, get behind and cannot recover (.46). A moderate positive relationship (.45) was also found between the program directors reported percent of students who withdraw or are dropped because they

do not complete assignments and the degree to which they viewed students having unrealistic expectations of what can be accomplished as a frequent cause of procrastination. Moderate positive relationships were found in faculty (.53) and program directors (.58) responses between the degree to which problems with course design and implementation were viewed as frequent causes of student noncompletion and the degree to which course materials being boring and poorly produced were viewed as a frequent cause of noncompletion. Moderate positive relationships (.45 to .59) were also found between the degree to which distance educators believed students having unrealistic expectations of what can be accomplished was a frequent cause of noncompletion and the degree to which they believed students not managing their time well, and students not being prepared for course content were frequent causes of noncompletion. A moderate positive relationship was found with program directors (.58) between their views of the frequency of students' unexpected illness/family responsibilities as being a cause for student noncompletion and their views of the frequency of students' unexpected/new work responsibilities as being a cause for student noncompletion, while a moderately strong positive relationship (.65) was found between the same two variables with faculty. The only important relationship not consistent between faculty and program directors regarding their perception of the causes of noncompletion was the

relationship between their view of the frequency of distance education not fitting students' learning styles as a cause for noncompletion and their view of the frequency of students not managing their time well as a cause for noncompletion. A moderate relationship was found with faculty (.45) but not with program directors. (See Table 20 for a presentation of these data.)

Summary

Data were collected from 419 distance educators regarding their perceptions of student noncompletion. Student noncompletion rates appeared to be less than expected from the literature. One third of the distance educators indicated that less than five percent of their students did not complete any assignments, while 60.9 percent indicated that less than 11 percent did not complete any assignments. Only 16.4 percent of the distance educators reported student dropouts or withdrawals of more than 25 percent due to student noncompletion.

Nearly one half (49.8%) of the distance educators reported that students distributed their efforts over the time allowed to complete course assignments. Fifteen percent reported that students turn in assignments late. One-third of the program directors did not know how students distribute time to complete assignments.

The majority of distance educators believed that

Table 20

INTERCORRELATIONS OF DISTANCE EDUCATORS'
PERCEPTIONS OF STUDENT NONCOMPLETION
EQUAL TO OR GREATER THAN .45

Variable	Correlation		Variable
	Pgrm Dir	Faculty	
% of withdrawn/dropped students due to noncompletion of assignments	.46	.67	% of non-starts in program
	--	.47	Distance education does not fit students' learning styles
	--	.46	Students do not manage their time well, get behind and cannot recover
	.45	--	Students have unrealistic expectations of what can be accomplished, they become over committed
Perceived cause of noncompletion	Correlation		Perceived cause of noncompletion
	Pgrm Dir	Faculty	
Problems with course design and implementation	.58	.53	Course materials are boring and poorly produced
Unexpected illness/family responsibilities (personal)	.58	.65	Unexpected/new work responsibilities (business/professional)
Students have unrealistic expectations of what can be accomplished; they become over committed	.53	.47	Students are unprepared for the course content
	.49	.55	Students do not manage their time well, get behind and cannot recover
Distance education does not fit students learning style	--	.45	Students do not manage their time well, get behind and cannot recover

student noncompletion was primarily the result of students not being able to manage their time well with 58.8 percent believing this frequently or always contributed to student noncompletion. In addition, 43 percent of the distance educators believed that students having unrealistic expectations of what can be accomplished and becoming over committed also frequently or always contributed to their noncompletion. These data were consistent with much of the earlier research which indicates educators believe poor time management skills of students contribute to attrition. Few distance educators believed course design, poor implementation and boring or poorly produced materials contributed to student noncompletion, although program directors and faculty differed significantly on their perception that boring and poorly produced materials contribute to student noncompletion.

Program directors and faculty were fairly consistent in their perceptions of student noncompletion. Moderately strong positive relationships were found by directors and faculty between their reports of the percent of student non-starts and the percent of student withdrawals and drops. These distance educators believed that the greater the frequency of students not starting distance education courses, the greater the frequency they will withdraw or be dropped. Moderate positive relationships were found by faculty and directors between their view of the frequency of

causes of noncompletion with respect to: problems with course design and implementation and course materials being boring and poorly produced; and students having unrealistic expectations of what can be accomplished and students not managing their time well and being unprepared for course content. These data suggest that distance educators see a connection between poorly designed and implemented courses and boring and poorly produced course materials as contributors to student noncompletion. These distance educators believed that as students' expectations become more unrealistic their ability to manage time is lessened and they are more unprepared for course content. A moderate positive relationship and a moderately strong positive relationship were found by program directors and faculty respectfully between their views of the frequency of cause of noncompletion with respect to: students' unexpected illness/family responsibilities and students' unexpected/new work responsibilities. These data indicate that distance educators believed that as unexpected personal occurrences increase student noncompletion so do unexpected work occurrences. Only faculty reported a moderate relationship between their view of frequency of cause of noncompletion with respect to distance education not fitting students' learning styles and students not managing time well.

Distance Educators' Perceptions of Academic
Procrastination

Data were collected from 402 distance educators (120 program directors and 282 faculty) regarding their perceptions of academic procrastination as a problem among distance learners and the perceived causes of procrastination. Frequencies, means and percentages were calculated. Pearson Correlation Coefficients and T-tests were also administered. The following is a presentation of the findings and an analysis of the data.

Academic procrastination as a problem

Over one-third (37.5%) of the distance educators believed academic procrastination in general was frequently or always a problem among distance learners in their courses. Less than five percent (4.7%) indicated that procrastination was not a problem. Distance educators believed that procrastination on reading assignments (42.0%) and procrastination on seeking assistance (40.2%) were the student behaviors which were most frequently or always a problem (see Table 21).

Program directors and faculty differed significantly ($t = 3.023$, $p < .01$) on their beliefs as to the degree to which student procrastination on writing assignments and student procrastination on submitting assignments for evaluation was a problem (see Table 22). Program directors

Table 21

DISTANCE EDUCATORS' PERCEPTIONS OF ACADEMIC
PROCRASTINATION AS A PROBLEM AMONG DISTANT LEARNERS

Behavior	Dist Ed	No.	Not a	Rarely	Occasionally	Frequently	Always
			Problem	a Problem	a Problem	a Problem	a Problem
			N (%)	N (%)	N (%)	N (%)	N (%)
Academic Procrastination in General	PD	(120)	5 (4.2)	6 (5.0)	68 (56.7)	37 (30.8)	4 (3.3)
	FAC	(282)	14 (5.0)	34 (12.1)	124 (44.0)	97 (34.4)	13 (4.6)
	TOTAL	(402)	19 (4.7)	40 (10.0)	192 (47.8)	134 (33.3)	17 (4.2)
Procrastination on viewing or listening to instructional materials	PD	(118)	7 (5.9)	18 (15.3)	63 (53.4)	30 (25.4)	0 (0.0)
	FAC	(279)	24 (8.6)	61 (21.9)	118 (42.3)	70 (25.1)	6 (2.2)
	TOTAL	(397)	31 (7.8)	79 (19.9)	181 (45.6)	100 (25.2)	6 (1.5)
Procrastination on reading assignments	PD	(119)	0 (0.0)	8 (6.7)	57 (47.9)	51 (42.9)	3 (2.5)
	FAC	(282)	11 (3.9)	39 (13.8)	114 (40.4)	109 (38.7)	9 (3.2)
	TOTAL	(401)	11 (2.7)	47 (11.7)	171 (42.6)	160 (39.9)	12 (3.0)
Procrastination on writing assignments	PD	(119)	0 (0.0)	11 (9.2)	47 (47.9)	46 (38.7)	5 (4.2)
	FAC	(273)	26 (9.5)	45 (16.5)	101 (37.0)	90 (33.0)	11 (4.0)
	TOTAL	(392)	26 (6.6)	56 (14.3)	158 (40.3)	136 (34.7)	16 (4.1)
Procrastination on studying for tests and exams	PD	(118)	0 (0.0)	17 (14.4)	54 (45.8)	45 (38.1)	2 (1.7)
	FAC	(276)	15 (5.4)	42 (15.2)	116 (42.0)	94 (34.1)	9 (3.3)
	TOTAL	(394)	15 (3.8)	59 (15.0)	170 (43.1)	139 (35.3)	11 (2.8)
Procrastination on seeking assistance	PD	(119)	1 (0.8)	20 (16.8)	53 (44.5)	42 (35.3)	3 (2.5)
	FAC	(279)	12 (4.3)	61 (21.9)	91 (32.6)	95 (34.1)	20 (7.2)
	TOTAL	(398)	13 (3.3)	81 (20.4)	144 (36.2)	137 (34.4)	23 (5.8)
Procrastination on submitting assignments for evaluation	PD	(119)	1 (0.8)	20 (16.8)	65 (54.6)	31 (26.1)	2 (1.7)
	FAC	(275)	19 (6.9)	72 (26.2)	125 (45.5)	53 (19.3)	6 (2.2)
	TOTAL	(394)	20 (5.1)	92 (23.4)	190 (48.2)	84 (21.3)	8 (2.0)

Table 22

COMPARISON OF DISTANCE EDUCATORS' PERCEPTIONS
OF ACADEMIC PROCRASTINATION AS A PROBLEM

Problem	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Academic procrastination in general	119	3.24	.780	282	3.22	.896	.306
Procrastination on viewing or listeing to instructional materials	117	2.98	.809	279	2.90	.945	.849
Procrastination on reading assignments	118	3.40	.657	282	3.23	.870	1.938
Procrastination on writing assignments	118	3.38	.715	274	3.06	1.032	3.023 **
Procrastination on studying for tests and exams	117	3.27	.726	277	3.15	.934	1.184
Procrastination on seeking assistance	118	3.21	.782	280	3.19	1.034	.145
Procrastination on submitting assignments for evaluation	118	3.10	.721	276	2.58	.964	2.459 *

* Significant at the .05 level

** Significant at the .01 level

reported that both behaviors were more of a problem than believed to be by faculty. Every program director believed that procrastination on reading assignments, procrastination on writing assignments and procrastination on studying for tests and exams was a problem. All but one program director believed that procrastination on seeking assistance and procrastination on submitting assignments for evaluation was a problem.

Perceived Causes of Procrastination

The most frequently cited factors among distance educators as causes for academic procrastination were cognitive "blocks" such as inadequate information, unclear priorities and failure to appreciate the need for timely action, and environmental conditions such as clutter, disorganization, noise, unmanageable workloads, and friends and relatives who distract students from their academic tasks. Over one-third (35.4%) of the distance educators believed that cognitive blocks were frequently or always a cause of procrastination among distance learners while 32.4 percent believed that environment conditions were frequently or always a cause of procrastination (see Table 23). Fifty-eight distance educators identified causes they believed did not fit into the four major causes identified in the questionnaire. Examination of these responses indicated that most could be placed within one of the four categories.

Table 23

DISTANCE EDUCATORS' PERCEIVED CAUSES OF PROCRASTINATION
AMONG DISTANT LEARNERS

Cause	Type	No.	Not a	Rarely a	Occasionally	Frequently	Always a
			Cause	Cause	a Cause	a Cause	Cause
			N (%)	N (%)	N (%)	N (%)	N (%)
Attitudinal Factors	PD	(117)	11 (9.4)	48 (41.0)	45 (38.5)	12 (10.3)	1 (0.9)
	FAC	(271)	30 (11.1)	107 (39.5)	99 (36.5)	30 (11.1)	5 (1.8)
	TOTAL	(388)	41 (10.6)	155 (39.9)	144 (37.1)	42 (10.8)	6 (1.5)
Cognitive Blocks	PD	(117)	3 (15.4)	18 (15.4)	52 (44.4)	42 (35.9)	2 (1.7)
	FAC	(224)	12 (4.4)	73 (26.6)	112 (40.9)	71 (25.9)	6 (2.2)
	TOTAL	(341)	15 (4.4)	91 (26.7)	164 (48.1)	113 (33.1)	8 (2.3)
Environmental Conditions	PD	(114)	3 (2.6)	22 (19.3)	47 (41.2)	37 (32.5)	5 (4.4)
	FAC	(265)	14 (5.3)	43 (16.2)	127 (47.9)	76 (28.7)	5 (1.9)
	TOTAL	(379)	17 (4.5)	65 (17.2)	174 (45.9)	113 (29.8)	10 (2.6)
Physiological Barriers	PD	(115)	1 (0.9)	40 (34.8)	49 (42.6)	24 (20.9)	1 (0.9)
	FAC	(269)	11 (4.1)	71 (26.4)	143 (53.2)	42 (15.6)	2 (0.7)
	TOTAL	(384)	12 (3.1)	111 (28.9)	192 (50.0)	66 (17.2)	3 (0.8)

Therefore, data regarding "other" causes were not analyzed. Program directors and faculty differed significantly ($t = 2.516$, $p < .05$) between their belief on the extent of cognitive blocks as a cause for procrastination. Program directors believed that it was more frequently a cause than did faculty (see Table 24). Faculty tended to believe that environmental conditions were a greater cause of student procrastination.

Relationships of Variables

Pearson Correlation Coefficients were calculated for both program directors and faculty to determine interrelationships between distance educators' perceptions of academic procrastination. Relationships were considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74), and strong (.75 and above). Several important relationships were similar between faculty and program directors (see Table 25). Moderate positive relationships (.45 to .59) were found between the degree to which distance educators believed academic procrastination in general was a problem and the degree to which they believed students not managing their time well contributed to noncompletion. Moderate positive relationships were also found between the extent to which distance educators believed academic procrastination in

Table 24

COMPARISON OF DISTANCE EDUCATORS' PERCEPTIONS
AS TO CAUSES OF PROCRASTINATION

Causes	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Attitudinal factors	116	2.52	.838	272	2.52	.908	.039
Cognitive blocks	116	3.18	.809	274	2.95	.888	2.515 *
Environmental conditions	113	3.16	.882	265	3.06	.857	1.044
Physiological barriers	114	2.86	.785	269	2.83	.765	.394

* Significant at the .05 level

Table 25

SIMILAR INTERCORRELATIONS OF DISTANCE EDUCATORS'
PERCEPTIONS OF ACADEMIC PROCRASTINATION
EQUAL TO OR GREATER THAN .45

Perception	Correlation		Perception
	Pgrm Dir	Faculty	
Academic Procrastination in general	.48	.52	Students do not manage their time well, get behind and cannot recover
	.53	.59	Procrastination in writing assignments
	.48	.66	Procrastination on reading assignments
	.51	.55	Procrastination in submitting assignments for evaluation
	.45	.64	Procrastination on studying for tests and exams
Procrastination on viewing or listening to instructional materials	.46	.55	Procrastination on reading assignments
	.45	.55	Procrastination on studying for tests and exams
Procrastination on reading assignments	.63	.52	Procrastination on writing assignments
	.62	.63	Procrastination on studying for tests and exams
	.46	.48	Procrastination on submitting assignments for evaluation
Procrastination on writing assignments	.67	.56	Procrastination on studying for tests and exams
	.64	.67	Procrastination on submitting assignments for evaluation
Procrastination on studying for tests and exams	.61	.53	Procrastination on submitting assignments for evaluation
Cognitive "blocks" as a cause of procrastination	.50	.45	Academic procrastination in general

Table 25 (Continued)

SIMILAR INTERCORRELATIONS OF DISTANCE EDUCATORS'
PERCEPTIONS OF ACADEMIC PROCRASTINATION
EQUAL TO OR GREATER THAN .45

Perception	Correlation		Perception
	Pgrm Dir	Faculty	
	.47	.45	Procrastination on studying for tests and exams
Cognitive "blocks" as a cause of procrastination	.50	.46	Environmental conditions as a cause of procrastination

general was a problem and the extent to which they believed procrastination on writing assignments and procrastination on submitting assignments for evaluation were problems. Moderate positive relationships were found in program directors' responses between the extent to which they believed academic procrastination in general was a problem and the extent to which they believed procrastination in submitting assignments for evaluation and procrastination on studying for tests and exams were problems. Moderately strong positive relationships were found between faculty perceptions of these same variables. Moderate positive relationships (.45 to .59) were also found between the extent to which distance educators believed procrastination on viewing or listening to instructional materials was a problem and the extent to which they believed procrastination on reading assignments and procrastination on studying for tests and exams were problems. Program directors indicated a moderately strong positive relationship (.60 to .74) between the extent to which they believed procrastination on reading assignments was a problem and the extent to which they believed procrastination on writing assignments and studying for tests and exams were problems, while faculty indicated an equally strong relationship between the extent to which they believed procrastination on reading and studying was a problem, but a moderate positive relationships (.45 to .59)

on the extent to which they believed procrastination on reading and writing were problems. Similarly, program directors indicated a moderately strong relationship (.60 to .74) between the extent to which they believed procrastination on writing assignments was a problem and the extent to which they believed procrastination on studying for tests and exams and on submitting assignments for evaluation were problems. Faculty indicated a moderately strong relationship (.67) between the extent to which they believed procrastination on writing was a problem and the extent to which they believed procrastination on submitting assignments was a problem but a moderate relationship (.59) between the extent to which they believed procrastination on writing was a problem and the extent to which they believed procrastination on studying for tests and exams was a problem. A moderately strong positive correlation (.61) was found in program directors' responses between the extent to which they believed procrastination on studying for tests and exams was a problem and the extent to which they believed procrastination on submitting assignments for evaluation was a problem. Faculty indicated a moderate positive relationship (.53) between the same two variables. Moderate positive relationships (.45 to .59) were found in both groups of distance educators' responses between the extent to which they believed cognitive "blocks" were causes of procrastination and the extent to which they believed

academic procrastination in general and procrastination on studying for tests and exams were problems, and the extent to which they believed environmental conditions were causes of procrastination.

Moderate positive relationships (.45 to .59) were found in program directors' responses between the extent to which they believed students not managing their time well was a cause for course noncompletion and the extent to which they believed student procrastination on writing assignments and on studying for tests and exams were problems. Program directors also indicated a moderate positive relationship (.48) between the extent to which they believed procrastination in general was a problem and the extent to which they believed attitudinal factors were causes for procrastination. Moderate positive relationship were also found between the extent to which program directors believed cognitive "blocks" were causes of procrastination and the extent to which they believed procrastination on seeking assistance and procrastination on submitting assignments were problems. Data regarding interrelationships of program directors' perception of academic procrastination which were not similar to faculty perceptions are presented in Table 26.

Interrelationships of faculty perceptions of academic procrastination not similar to program directors perceptions are presented in Table 27. Faculty indicated moderate

Table 26

INTERCORRELATIONS OF DISTANCE EDUCATION PROGRAM DIRECTORS'
 PERCEPTIONS OF ACADEMIC PROCRASTINATION NOT SIMILAR TO
 FACULTY PERCEPTIONS EQUAL TO OR GREATER THAN .45

Perception	Correlation	Perception
Procrastination in general	.45	Attitudinal factors as a cause for procrastination
Students do not manage their time well	.48	Procrastination on writing assignments
	.53	Procrastination on studying for tests and exams
Cognitive "blocks" as a cause of procrastination	.45	Procrastination on seeking assistance
	.49	Procrastination on submitting assignments

Table 27

INTERCORRELATIONS OF DISTANCE EDUCATION FACULTY
PERCEPTIONS OF ACADEMIC PROCRASTINATION NOT SIMILAR TO
PROGRAM DIRECTOR PERCEPTIONS EQUAL TO OR GREATER THAN .45

Perception	Correlation	Perception
Academic procrastination in general	.45	Percent of distance learners who withdrew or are dropped for not completing assignments
	.46	Students have unrealistic expectations of what can be accomplished
	.56	Procrastination on viewing or listening to instructional materials
	.58	Procrastination on submitting assignments for evaluation
Procrastination on viewing or listening to instructional materials	.55	Procrastination in submitting assignments for evaluation
	.47	Procrastination on seeking assistance
Procrastination on reading assignments	.50	Procrastination on seeking assistance
Procrastination on studying for tests and exams	.51	Procrastination on seeking assistance
Procrastination on seeking assistance	.58	Procrastination submitting assignments for evaluation
Cognitive "blocks" as a cause of procrastination	.45	Attitudinal factors as a cause of procrastination

positive relationships (.45 to .59) between the extent to which they believed academic procrastination in general was a problem and the extent to which they reported the percent of distance learners who withdrew or were dropped for not completing assignments, the extent to which they believe students have unrealistic expectations of what can be accomplished, the extent to which they believe procrastination on viewing or listening to instructional materials were causes of noncompletion and, the extent to which they believed procrastination on submitting assignments for evaluation was a problem. A moderate positive relationship was found between the extent to which faculty perceived procrastination on viewing and listening to instructional materials was a problem and the extent to which they believed procrastination on seeking assistance was a problem. Other moderate positive relationships (.45 to .59) were found between the extent to which faculty believed procrastination on reading assignments and procrastination on seeking assistance were problems, the extent to which they believed procrastination on studying for tests and exams and procrastination on seeking assistance were problems, the extent to which they believed procrastination and seeking assistance and procrastination on submitting assignments for evaluation were problems and, the extent to which they believed cognitive "blocks" and attitudinal factors were causes of procrastination.

Summary

Academic procrastination in general was seen as a problem by distance educators responding to the survey. Less than five percent (4.7%) of the distance educators indicated that procrastination was not a problem with their distance learners. This is consistent with the research by Ellis and Kraus (1977) which estimated that 95 percent of college students engage in procrastination. However, only 37.5 percent of the distance educators indicated that student procrastination was frequently or always a problem. This was less than expected. Procrastination by distance learners on reading assignments and studying for tests and exams was reported slightly greater by distance educators than procrastination as reported by traditional college students on the same items. 39.9 percent of the distance educators reported procrastination on reading assignments as frequently or always a problem while 30.1 percent of traditional college students in a study by Rothblum and Solomon (1984) reported it as a continuous problem. 35.3 percent of the distance educators reported procrastination or studying for exams and tests as frequently or always a problem while 27.6 percent of the traditional college students in Rothblum and Solomon's study reported it as a continuous problem. Forty-six percent of the traditional college students reported procrastination on writing assignments as a continuous problem while only 34.7 percent

of the distance educators reported it as frequently or always a problem. Program directors responded that they believed academic procrastination was more of a problem in their programs than did faculty. Because faculty deal directly with the distance learners these data suggest that faculty may have greater insight into the extent of academic procrastination in distance education. Distance education faculty and program directors differed significantly on their perceptions of procrastination on writing assignments and procrastination on submitting assignments for evaluation with program directors believing it was more of a problem.

Several moderate (.45 to .59) and moderately strong (.60 to .74) positive relationships were found between program directors' perceptions of academic procrastination and between faculty's perception of academic procrastination. No strong relationships were found. Generally, relationships were found between perceptions of the various student procrastination behaviors. For example, a moderately strong relationship was found by both directors and faculty between the extent to which they believed academic procrastination in general was a problem and the extent to which they believed procrastination on writing assignments and on submitting assignments for evaluation were problems.

Moderate positive relationships were found in faculty responses between the extent to which they believed academic

procrastination in general was a problem and their belief that students have unrealistic expectations of what can be accomplished and the percent of distance learners who withdraw or are dropped for not completing assignments. Moderate positive relationships were found in program directors' responses between the extent of their beliefs that students do not manage their time well and the extent to which they believe procrastination on writing assignments and on studying for tests and exams are problems.

Moderate positive relationships in faculty and program director responses were found between the extent to which they viewed cognitive "blocks" as a cause of procrastination and the extent to which they viewed procrastination in general and on studying for tests and exams were problems, and the extent to which they believed environmental conditions were causes of procrastination. Similarly, a moderate positive relationship between the extent to which program directors viewed cognitive "blocks" as a cause of procrastination and the extent to which they believed procrastination on seeking assistance and submitting assignments were problems. A moderate positive relationship was also found between the extent to which faculty perceived cognitive "blocks" and attitudinal factors were causes of procrastination. No important relationships were found between distance educators' perception of academic procrastination and demographic data.

These results indicate that while academic procrastination is perceived to be a problem by 95 percent of the distance educators only 37.5 percent believe it is frequently or always a problem. Procrastination by distance learners appears to be similar to procrastination by traditional college students in terms of frequency and types as reported in other research. Procrastination on reading assignments and studying for tests and exams was reported most frequently as procrastination behaviors of distance learners while procrastination on writing assignments was reported less frequently than traditional college student self-reports from other research. Distance educators indicated that cognitive "blocks" such as inadequate information, unclear priorities and failure to appreciate the need for timely action were the major causes of procrastination. Cognitive "blocks" as a cause of procrastination was moderately related to distance educators' perceptions of academic procrastination in general as a problem. These data are consistent with the simplistic view of procrastination found in the literature that portrays procrastination as the result of poor time management skills. However moderate positive relationships were also found in distance educators' responses between their view of cognitive "blocks" as a cause of procrastination and their view of attitudinal factors and environmental conditions as causes of procrastination. This

indicates that distance educators tended to believe procrastination was caused by a variety of complex factors as suggested by Bliss (1983) and Burka and Yuen (1983). Distribution of distance educators' responses indicate that they believed procrastination is caused by attitudinal factors, cognitive blocks, environmental conditions and physiological barriers. Age, size and methods of instructional delivery and student/faculty interaction of distance education programs appear to have no important relationship to how the selected distance educators perceived academic procrastination.

Data Collected by Distance Educators on Academic Procrastination

Data were collected from 399 distance educators (120 program directors and 279 faculty) regarding the data they collected on academic procrastination. Frequencies, means and percentages were calculated and Pearson Correlation Coefficients and T-tests were also administered. The following is a presentation of the findings and an analysis of the data.

Data Gathering Techniques

Results revealed that distance educators do not collect much data on academic procrastination. The majority of distance educators do not collect any data by any of the

following techniques: personal journals of students, structured interviews with students who completed the course, structured interviews with students who did not start or who dropped the course, calculating the time between when assignments are given and when work begins, personal journals of instructors, and comparison of final grades with dates of first completed assignments. More than 40 percent of the distance educators did not collect any data by calculating the frequency of late assignments, calculating the frequencies of non-starts or through periodic course surveys of students (see Table 28).

The most popular method of collecting data on academic procrastination was through post-course evaluations, a fairly traditional method of gathering information. 53.3 percent of the distance educators used this technique in more than 50 percent of their courses with one-third (33.0%) using it in every course.

Informal discussions with students was the second most popular method of collecting data on academic procrastination. 48.8 percent of the distance educators used this technique in more than 50 percent of their courses with 20 percent using it in every course. A significant difference ($t = -4.937$, $p < .01$) was found between program directors' responses and those of faculty (see Table 29) on this item. Faculty indicated using informal discussions with students substantially more than did program directors

Table 28

DATA COLLECTED BY DISTANCE EDUCATORS ON ACADEMIC
PROCRASTINATION

Type of Data	Dist Ed	(No)	Percentage of Courses in Which Data are Collected					
			Not at All N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)	Every Course N (%)
Personal journals of students	PD	(119)	80 (67.2)	32 (26.9)	4 (3.4)	2 (1.7)	0 (0.8)	1 (0.8)
	FAC	(274)	229 (83.6)	11 (4.0)	11 (4.0)	8 (2.9)	4 (1.5)	11 (4.0)
	TOTAL	(393)	309 (78.6)	43 (10.9)	15 (3.8)	10 (2.5)	4 (1.0)	12 (3.1)
Structured interviews with students who completed the course	PD	(117)	79 (67.5)	26 (22.2)	8 (6.8)	1 (0.9)	1 (0.9)	2 (1.7)
	FAC	(270)	186 (68.9)	51 (18.9)	11 (4.1)	4 (1.5)	8 (3.0)	10 (3.7)
	TOTAL	(387)	265 (68.5)	77 (19.9)	19 (4.9)	5 (1.3)	9 (2.3)	12 (3.1)
Structured interviews with students who did not start or who dropped the course	PD	(118)	87 (73.7)	17 (14.4)	9 (7.6)	1 (0.8)	3 (2.5)	1 (0.8)
	FAC	(269)	207 (77.0)	46 (17.1)	7 (2.6)	4 (1.5)	1 (0.4)	4 (1.5)
	TOTAL	(387)	294 (75.9)	63 (16.3)	16 (4.1)	5 (1.3)	4 (1.0)	5 (1.3)
Informal discussions with students	PD	(120)	13 (10.8)	32 (26.7)	34 (28.3)	19 (15.8)	16 (13.3)	6 (5.0)
	FAC	(279)	21 (7.5)	49 (17.6)	54 (19.4)	36 (12.9)	44 (15.8)	75 (26.9)
	TOTAL	(399)	34 (8.5)	81 (20.3)	88 (22.1)	55 (13.8)	60 (15.0)	81 (20.0)
Calculating the frequency of late assignments	PD	(118)	55 (46.6)	33 (28.0)	16 (13.6)	7 (5.9)	2 (1.7)	5 (4.2)
	FAC	(274)	111 (40.5)	50 (18.2)	35 (12.8)	22 (8.0)	24 (8.8)	32 (11.7)
	TOTAL	(392)	166 (42.3)	83 (21.2)	51 (13.0)	29 (7.4)	26 (6.6)	37 (9.4)
Calculating the time between when assignments are given and when work begins	PD	(117)	70 (59.8)	21 (17.9)	15 (12.8)	5 (4.3)	3 (2.6)	3 (2.6)
	FAC	(264)	148 (56.1)	37 (14.0)	25 (9.5)	19 (7.2)	12 (4.5)	23 (8.7)
	TOTAL	(381)	218 (57.2)	58 (15.2)	40 (10.5)	24 (6.3)	15 (3.9)	26 (6.8)
Calculating the frequency of non-starts	PD	(119)	50 (42.0)	24 (20.2)	14 (11.8)	9 (7.6)	4 (3.4)	18 (15.1)
	FAC	(270)	114 (42.2)	47 (17.4)	21 (7.8)	14 (5.2)	19 (7.0)	55 (20.4)
	TOTAL	(389)	164 (42.1)	71 (18.3)	35 (9.0)	23 (6.0)	23 (6.0)	73 (18.8)

Table 28 (Continued)

DATA COLLECTED BY DISTANCE EDUCATORS ON ACADEMIC
PROCRASTINATION

Type of Data	Dist Ed	(No)	Percentage of Courses in Which Data are Collected					
			Not at All	1%-24%	25%-50%	51%-75%	76%-99%	Every Course
			N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Calculating the frequency of withdrawals	PD	(120)	31 (25.8)	16 (13.3)	13 (10.8)	18 (15.0)	11 (9.2)	31 (25.8)
	FAC	(270)	82 (30.4)	40 (14.8)	39 (14.4)	19 (7.0)	24 (8.9)	66 (24.4)
	TOTAL	(390)	113 (29.0)	56 (14.4)	52 (13.3)	37 (9.5)	35 (9.0)	97 (24.9)
Calculating assignments not completed	PD	(117)	49 (41.9)	27 (23.1)	20 (17.1)	6 (5.1)	4 (3.4)	11 (9.4)
	FAC	(269)	84 (31.2)	36 (13.4)	38 (14.1)	17 (6.3)	29 (10.8)	65 (24.2)
	TOTAL	(386)	133 (34.5)	63 (16.3)	58 (15.0)	23 (6.0)	33 (8.5)	76 (19.7)
Personal journals of instructors	PD	(119)	97 (81.5)	16 (13.4)	4 (3.4)	0 (0.0)	2 (1.7)	0 (0.0)
	FAC	(265)	227 (85.7)	11 (4.2)	7 (2.6)	6 (2.3)	5 (1.9)	9 (3.4)
	TOTAL	(384)	324 (84.4)	27 (7.0)	11 (2.9)	6 (1.6)	7 (1.8)	9 (2.3)
Post-course evaluations	PD	(120)	24 (20.0)	14 (11.7)	12 (10.0)	9 (7.5)	21 (17.5)	40 (33.3)
	FAC	(265)	92 (34.7)	21 (7.9)	17 (6.4)	14 (5.3)	34 (12.8)	87 (32.8)
	TOTAL	(385)	116 (30.1)	35 (9.1)	29 (7.5)	23 (6.0)	55 (14.3)	127 (33.0)
Comparison of final grades with dates of 1st completed assignment	PD	(117)	80 (68.4)	19 (16.2)	10 (8.5)	4 (3.4)	1 (0.9)	3 (2.6)
	FAC	(260)	168 (64.6)	24 (11.2)	22 (8.5)	5 (1.9)	11 (4.2)	25 (9.6)
	TOTAL	(377)	248 (65.8)	43 (12.7)	32 (8.5)	9 (2.4)	12 (3.2)	28 (7.4)
Periodic course surveys of students	PD	(118)	38 (32.2)	17 (14.4)	15 (12.7)	16 (13.6)	6 (5.1)	26 (22.0)
	FAC	(264)	115 (43.6)	26 (9.8)	28 (10.6)	20 (7.6)	25 (9.5)	50 (18.9)
	TOTAL	(382)	153 (40.1)	43 (11.3)	43 (11.3)	36 (9.4)	31 (8.1)	76 (19.9)

Table 29

COMPARISON OF TECHNIQUES USED BY DISTANCE EDUCATORS
TO GATHER DATA ON ACADEMIC PROCRASTINATION

Technique	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Personal journals of students	118	1.43	0.767	274	1.46	1.219	-0.287
Structured interviews with students who completed the course	116	1.49	0.937	270	1.61	1.228	-0.997
Structured interviews with students who did not start or who dropped the course	117	1.46	0.969	270	1.37	0.911	0.795
Informal discussions with students	119	3.07	1.354	280	3.94	1.691	-4.937 **
Calculating the frequency of late assignments	117	2.00	1.299	275	2.63	1.812	-3.439 **
Calculating the time between when assignments are given and when work begins	116	1.76	1.196	265	2.15	1.654	-2.274 *
Calculating the frequency of non-starts	118	2.54	1.814	270	2.78	1.999	-1.174
Calculating the frequency of withdrawals	119	3.45	1.964	270	3.22	1.988	1.050
Calculating assignments not completed	116	2.31	1.573	269	3.24	2.001	-4.469 **
Personal journals of instructors	118	1.27	0.687	265	1.40	1.157	-1.188
Post course evaluations	119	3.89	1.980	265	3.52	2.176	1.678
Comparison of final grades with dates of first completed assignments	116	1.59	1.118	260	1.98	1.654	-2.334 *
Periodic course surveys of students	117	3.10	1.949	265	2.88	2.011	1.022

* Significant at the .05 level

** Significant at the .01 level

with 55.6 percent of the faculty indicating they used this technique in at least 50 percent of their courses. The informal discussions with students was the most popular data gathering technique with distance education faculty.

Calculating the frequency of withdrawals was the third most popular data gathering technique of distance educators with 43.4 percent indicating they used this technique in at least 50 percent of their courses. Periodic course surveys of students was the fourth most popular technique to collect data. 37.4 percent of the distance educators indicated that they used this technique in at least 50 percent of their courses.

Several significant differences were found between program director responses and those of faculty regarding the data gathering techniques they use (see Table 29). The most significant of these were informal discussions with students, calculating the frequency of late assignments ($t = -3.439$, $p < .01$) and calculating assignments not completed ($t = -4.469$, $p < .01$). In each of these instances faculty indicated the techniques were used more than did program directors.

Of the thirteen techniques listed in the questionnaire, faculty indicated that eight of the techniques were used more than did program directors. Program directors indicated the following techniques were used more than faculty: structured interviews with students who did not

start or who dropped the course, calculating the frequency of withdrawals, calculating assignments not completed, post-course evaluations and periodic course surveys of students.

Twelve distance educators (11 faculty) identified other data gathering techniques they used in every course but which were not listed on the questionnaire. The most frequently mentioned of these was telephoning students who are late in turning in assignments. The complete list of these "other" techniques is found in Appendix E.

Relationships Among Variables

Pearson Correlation Coefficients were calculated for both program directors and faculty to determine interrelationships between distance educators' data gathering techniques. Relationships were considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74), and strong (.75 and above). Several important positive relationships were found between program directors' responses to questions regarding data gathering techniques and between faculty responses to the same questions. Similar relationships were found in both program directors' and faculty responses. Moderately strong positive relationships (.60 to .74) and moderate relationships (.45 to .59) were found in the responses from program directors and faculty respectively regarding the

extent to which they used the following techniques to collect data: structured interviews with students who completed the course and structured interviews with students who did not start or who dropped the course; calculating the time between when assignments are given and when work begins, and calculating the frequency of late assignments and calculating assignments not completed. Moderate positive relationships (.45 to .59) were also found in program directors' responses between the extent to which they used structured interviews with students who completed the course and the extent to which they used personal journals of instructors and comparison of final grades with dates of first completed assignments.

A moderate positive relationship (.58) was found in program directors' responses between the extent to which they calculated the time between when assignments are given and when work begins, and the extent to which they compare final grades with dates of first completed assignments. Moderate positive relationships (.45 to .59) were also found in both directors' and faculty responses between the extent to which they use post-course evaluations and the extent to which they use periodic course surveys of students. A moderately strong positive relationship (.68) was found between the extent to which faculty calculate the frequency of withdrawals and the extent to which they calculate assignments not completed, while program directors'

responses indicated a moderate positive relationship (.46) with the same techniques. Moderately strong positive relationships (.63) were found in both distance educators' responses between the extent to which they calculated the frequency of late assignments and the extent to which they calculated assignments not completed. Program directors also indicated a moderate positive relationship between the extent to which they calculated the frequency of late assignments and the extent to which they calculated the frequency of non-starts. A strong positive relationship (.77) was found in faculty responses between the extent to which they calculated the frequency of non-starts and the extent to which they calculated the frequency of withdrawals. These relationships are presented in Table 30. These data appear to indicate that distance education program directors and faculty who do gather data tend to use more than one data source. However, the multiple sources tend to include data only in a single domain such as work completion or interviews with students.

Summary

Distance educators are not collecting much data regarding academic procrastination. The primary methods which are used to collect data are traditional post-course evaluations and unsophisticated informal discussions with students. The majority of distance educators do not collect

Table 30

INTERCORRELATIONS OF TECHNIQUES USED BY
DISTANCE EDUCATORS TO GATHER DATA ON ACADEMIC
PROCRASTINATION EQUAL TO OR GREATER THAN .45

Technique	Correlation		Technique
	Pgrm Dir	Faculty	
Structured interview with student who completed the course	.70	.48	Structured interview with students who did not start or who dropped the course
	.47	--	Personal journals of instructors
	.50	--	Comparison of final grades with dates of first completed assignments
Calculating the time between when assignments are given and when work begins	.62	.48	Calculating the frequency of late assignments
	.68	.47	Calculating assignments not completed
	.58	--	Comparison of final grades with dates of first completed assignments
Calculating the frequency of withdrawals	.46	.68	Calculating assignments not completed
Post course evaluations	.49	.46	Periodic course surveys of students
Calculating the frequency of late assignments	--	.45	Calculating the frequency of withdrawals
	.63	.60	Calculating assignments not completed
	.46	--	Calculating the frequency of non-starts
Calculating assignments not completed	--	.64	Calculating the frequency of non-starts
Calculating the frequency of non-starts	.68	.77	Calculating the frequency of withdrawals

any data using several data gathering techniques found in the literature. The four most popular techniques used by distance educators to collect data on academic procrastination are: (1) post-course evaluations, (2) information discussions with students, (3) calculating the frequency of withdrawals and, (4) periodic course surveys of students. Only one of these techniques, post-course evaluations, was used by more than half the distance educators (53.3%) in more than 50 percent of their courses. More than half of the faculty (55.6%) used informal discussions with their students as the primary technique for collecting data on academic procrastination. Although distance educators indicated that they gather data from multiple sources, these sources tended to include data only in a single domain such as work completion and interviews with students.

Faculty tended to respond that techniques used to gather data were used more than did program directors. Several significant differences were found between program director responses and those of faculty with regard to the data gathering techniques they use. The most significant of these were informal discussions with students, calculating the frequency of late assignments, and calculating assignments not completed. In each of these, faculty indicated the techniques were used more than did program directors. These data indicate that faculty may have a

better understanding of the extent to which academic procrastination is a problem and possible causes for procrastination.

Several relationships were found between program directors' responses and between faculty responses regarding data gathering techniques. Many of these were similar between the two groups. A strong positive relationship was found in faculty responses between the extent to which they calculated the frequency of non-starts and the extent to which they calculated the frequency of withdrawals. No important relationships were found between the data gathering techniques used by distance educators and program demographics, how distance educators perceived student noncompletion or their perceptions of academic procrastination.

Strategies Used by Distance Educators to Combat

Academic Procrastination

Data were collected from 400 distance educators (120 program directors and 280 faculty) regarding the activities or strategies they used to combat academic procrastination. Frequencies, means and percentages were calculated. Pearson Correlation Coefficients and T-tests were also administered. The following is a presentation of the findings and an analysis of the data.

Strategies Used to Reduce Procrastination

Distance educators used a variety of strategies to combat procrastination among distance learners. Three strategies were used by over one-half of the distance educators in every course: (1) establishing due dates on all assignments, (2) providing extensive directions to students on obligations and expectations and, (3) providing students with an orientation to distance education. The most frequently used strategy by distance educators in every course was establishing due dates on all assignments (70.2%). Eighty-four percent of the distance educators indicated they used this technique in over 50 percent of their classes (see Table 31). The most frequently used strategy by distance educators in more than 50 percent of their courses was providing extensive directions to students on obligations and expectations (84.4%). Two-thirds (66.3%) of the distance educators indicated they used this strategy in every course.

The least used strategies by distance educators to reduce procrastination were reducing the number of assignments and reducing the amount of time allowed to complete the course assignment. Distance educators used each of these strategies less than one percent of the time in every course. A ranking of most frequently used strategies to reduce academic procrastination can be found in Table 32.

Table 31

STRATEGIES USED BY DISTANCE EDUCATORS TO REDUCE
ACADEMIC PROCRASTINATION

Strategy	Dist Ed	(No)	Percentage of Courses in Which Data are Collected						Every Course
			Not at All N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)		
Establish due dates on all assignments	PD	(119)	12 (10.1)	5 (4.2)	6 (5.0)	8 (6.7)	22 (18.5)	66 (55.5)	
	FAC	(277)	30 (10.8)	6 (2.2)	4 (1.4)	7 (2.5)	18 (6.5)	212 (76.5)	
	TOTAL	(396)	42 (10.6)	11 (2.7)	10 (2.5)	15 (3.8)	40 (10.1)	278 (70.2)	
Take off points or reduce grade for late assignment	PD	(119)	27 (22.7)	15 (13.4)	22 (18.5)	19 (16.0)	22 (18.5)	13 (10.9)	
	FAC	(272)	97 (35.7)	19 (7.0)	15 (5.5)	12 (4.4)	27 (9.9)	102 (37.5)	
	TOTAL	(391)	124 (31.7)	35 (8.9)	37 (9.5)	31 (7.9)	49 (12.5)	115 (29.4)	
Reward students for early submission of assignments	PD	(118)	72 (61.0)	38 (32.2)	2 (1.7)	5 (4.2)	0 (0.0)	1 (0.8)	
	FAC	(275)	231 (84.0)	21 (7.6)	4 (1.5)	3 (1.1)	2 (0.7)	14 (5.1)	
	TOTAL	(393)	303 (77.1)	59 (15.0)	6 (1.5)	8 (2.0)	2 (0.5)	15 (3.8)	
Put easier assignments at the beginning of the course	PD	(115)	42 (36.5)	35 (30.4)	17 (14.8)	8 (7.0)	9 (7.8)	4 (3.5)	
	FAC	(272)	147 (54.0)	21 (7.7)	20 (7.4)	17 (6.3)	20 (7.4)	47 (17.3)	
	TOTAL	(387)	189 (48.8)	56 (14.5)	37 (9.6)	26 (6.5)	29 (7.5)	51 (13.2)	
Give bonus points for completion of 1st assignment	PD	(117)	81 (69.2)	30 (25.6)	2 (1.7)	2 (1.7)	0 (0.0)	2 (1.7)	
	FAC	(272)	252 (92.6)	2 (0.7)	3 (1.1)	5 (1.8)	3 (1.1)	7 (2.6)	
	TOTAL	(389)	333 (85.6)	32 (8.2)	5 (1.3)	7 (1.8)	3 (0.8)	9 (2.3)	
Require in-class group meeting first class	PD	(118)	41 (34.7)	13 (11.0)	7 (5.9)	7 (5.9)	11 (9.3)	39 (33.1)	
	FAC	(274)	128 (46.7)	8 (2.9)	6 (2.2)	9 (3.3)	13 (4.7)	110 (40.1)	
	TOTAL	(392)	169 (43.1)	21 (5.4)	13 (3.3)	16 (4.1)	24 (6.1)	149 (38.0)	
Require individual face-to-face meeting with instructor	PD	(117)	44 (37.6)	25 (21.4)	14 (12.0)	6 (5.1)	6 (5.1)	22 (18.8)	
	FAC	(273)	155 (56.8)	23 (8.4)	16 (5.9)	9 (2.9)	18 (6.6)	53 (19.4)	
	TOTAL	(390)	199 (51.0)	48 (12.3)	30 (7.7)	14 (3.6)	24 (6.2)	75 (19.2)	

Table 31 (Continued)

STRATEGIES USED BY DISTANCE EDUCATORS TO REDUCE
ACADEMIC PROCRASTINATION

Strategy	Dist Ed	(No)	Percentage of Courses in Which Data are Collected						Every Course
			Not at All N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)		
Provide students with an orientation to distance education	PD	(120)	22 (18.3)	10 (8.3)	19 (15.8)	6 (5.0)	7 (5.8)	56 (46.7)	
	FAC	(279)	51 (18.3)	13 (4.7)	11 (3.9)	8 (2.5)	19 (6.8)	178 (63.8)	
	TOTAL	(399)	73 (18.3)	23 (5.8)	30 (7.5)	13 (3.3)	26 (6.5)	234 (58.7)	
Provide extensive directions to students on obligations and expectations	PD	(120)	3 (2.5)	13 (10.8)	15 (12.5)	12 (10.0)	20 (16.7)	57 (47.5)	
	FAC	(280)	9 (3.2)	8 (2.9)	15 (5.4)	11 (3.9)	29 (10.4)	208 (74.3)	
	TOTAL	(400)	12 (3.0)	21 (5.3)	30 (7.5)	23 (5.8)	49 (12.3)	265 (66.3)	
Require periodic contacts with instructors	PD	(119)	25 (21.0)	15 (12.6)	17 (14.3)	15 (12.6)	11 (9.2)	36 (30.3)	
	FAC	(272)	115 (42.3)	17 (6.3)	23 (8.5)	10 (3.7)	13 (4.8)	94 (34.6)	
	TOTAL	(391)	140 (35.8)	32 (8.2)	40 (10.2)	25 (6.4)	24 (6.1)	130 (33.2)	
Periodically mail reminders of assignments and due dates to all students	PD	(119)	17 (14.3)	26 (21.8)	18 (15.1)	14 (11.8)	11 (9.2)	33 (27.7)	
	FAC	(276)	103 (37.3)	18 (6.5)	12 (4.3)	17 (6.2)	21 (7.6)	105 (38.0)	
	TOTAL	(395)	120 (30.3)	44 (11.1)	30 (7.6)	31 (7.8)	32 (8.1)	138 (34.9)	
Contact students by mail who are not submitting assignments	PD	(119)	18 (15.1)	29 (24.4)	15 (12.6)	15 (12.6)	11 (9.2)	31 (26.1)	
	FAC	(272)	120 (44.1)	20 (7.4)	22 (8.1)	15 (5.5)	19 (7.0)	76 (27.9)	
	TOTAL	(395)	138 (34.9)	49 (12.4)	37 (9.4)	30 (7.6)	30 (7.6)	107 (27.1)	
Contact students by telephone who are not submitting assignments	PD	(119)	20 (16.8)	28 (23.5)	18 (15.1)	21 (17.6)	12 (10.1)	20 (16.8)	
	FAC	(277)	110 (39.7)	27 (9.7)	30 (10.8)	17 (6.1)	22 (7.9)	71 (25.6)	
	TOTAL	(396)	130 (32.8)	55 (13.9)	48 (12.1)	38 (9.6)	34 (8.6)	91 (22.9)	

Table 31 (Continued)

STRATEGIES USED BY DISTANCE EDUCATORS TO REDUCE
ACADEMIC PROCRASTINATION

Strategy	Dist Ed	(No)	Percentage of Courses in Which Data are Collected						Every Course
			Not at All N (%)	1%-24% N (%)	25%-50% N (%)	51%-75% N (%)	76%-99% N (%)		
Increase the frequency and immediacy of feedback	PD	(115)	21 (18.3)	24 (20.9)	21 (18.3)	17 (14.8)	20 (17.4)	12 (10.4)	
	FAC	(256)	64 (25.0)	14 (5.5)	38 (14.8)	23 (9.0)	29 (11.3)	88 (34.4)	
	TOTAL	(371)	85 (22.9)	38 (10.2)	59 (15.9)	40 (10.8)	49 (13.2)	100 (30.0)	
Reduce the number of assignments	PD	(116)	68 (58.6)	32 (27.6)	9 (7.8)	5 (4.3)	2 (1.7)	0 (0.0)	
	FAC	(273)	215 (78.8)	33 (12.1)	13 (4.8)	8 (2.9)	1 (0.4)	3 (1.1)	
	TOTAL	(389)	283 (72.8)	65 (16.7)	22 (5.7)	13 (3.3)	3 (0.8)	3 (0.8)	
Reduce the amount of time allowed to complete the course requirements	PD	(113)	73 (64.6)	22 (29.1)	3 (2.7)	1 (0.9)	3 (2.7)	0 (0.0)	
	FAC	(270)	229 (84.8)	24 (8.9)	6 (2.2)	6 (2.2)	2 (0.7)	3 (1.1)	
	TOTAL	(383)	302 (78.9)	57 (14.9)	9 (2.3)	7 (1.8)	5 (1.3)	3 (0.8)	
Encourage students to form study groups and interact	PD	(118)	33 (28.0)	30 (25.4)	22 (18.6)	16 (13.6)	9 (7.6)	8 (6.8)	
	FAC	(271)	111 (41.0)	27 (10.0)	34 (12.5)	18 (6.6)	19 (7.0)	62 (22.9)	
	TOTAL	(389)	144 (37.0)	57 (14.7)	56 (14.4)	34 (8.7)	28 (7.2)	70 (18.0)	
Provide counseling and tutoring services to students	PD	(116)	16 (13.8)	22 (19.0)	15 (12.9)	9 (7.8)	14 (12.1)	40 (34.5)	
	FAC	(271)	65 (24.0)	23 (8.5)	24 (8.9)	22 (8.1)	22 (8.1)	115 (42.4)	
	TOTAL	(387)	81 (20.9)	45 (11.6)	39 (10.1)	31 (8.0)	36 (9.3)	155 (40.1)	

Table 32

RANK ORDER OF MOST FREQUENTLY USED STRATEGIES OF
DISTANCE EDUCATORS TO REDUCE ACADEMIC PROCRASTINATION

Percent of Courses in Which Used		Strategies
Every	≥ 50%	
1	2	Establish due dates on all assignments
2	1	Provide extensive directions to students on obligations and expectations
3	3	Provide students with an orientation to distance education
4	4	Provide counseling and tutoring services to students
5	8	Require in-class group meeting for first class
6	6	Periodically mail reminders of assignments and due dates to all students
7	9	Require periodic contacts with instructor
8	5	Increase the frequency and immediacy of feedback
9	7	Take points off or reduce grade for late assignments
10	10	Contact students by mail who are not submitting assignments
11	11	Contact students by telephone who are not submitting assignments
12	12	Require individual face-to-face meeting with instructor
13	14	Encourage students to form study groups and interact
14	13	Put easier assignments at the beginning of the course
15	15	Reward students for early submission of assignments
16	16	Give bonus points for completion of first assignment
17	17	Reduce the number of assignments
18	18	Reduce the amount of time required to complete the course assignment

The data revealed that distance educators tended not to use strategies which were reward based or reduced the amount of work required of the students. More than 50 percent of the distance educators reported not using the following strategies at all: (1) rewarding students for early submission of assignments, (2) giving bonus points for completion of first assignment, (3) reducing the number of assignments and (4) reducing the amount of time allowed to complete the course requirements. Instead, distance educators tended to select strategies which structure student course requirements.

Twenty-four distance educators identified other strategies which they used in every course but which were not listed on the questionnaire. These strategies are identified in Appendix F.

Several significant differences were found between program directors responses and those of faculty regarding the strategies they use to reduce procrastination (see Table 33). The most significant of these were providing extensive directions to students on obligations and expectations ($t = -4.526, p < .01$) and increasing the frequency and immediacy of feedback ($t = -2.666, p < .01$). In each of these instances faculty reported that the strategies were used more than did program directors. Of the eighteen strategies listed on the questionnaire, program directors responded that ten of the strategies were used more than did

Table 33

COMPARISON OF STRATEGIES USED BY DISTANCE EDUCATORS
TO REDUCE ACADEMIC PROCRASTINATION

Strategy	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Establish due dates on all assignments	118	4.84	1.683	278	5.22	1.668	-2.056 *
Take off points or reduce grade for late assignment	118	3.24	1.684	273	3.57	2.240	-1.581
Reward students for early submission of assignments	117	1.52	0.846	275	1.42	1.203	.932
Put easier assignments at the beginning of the course	114	2.30	1.408	272	2.56	1.995	-1.468
Give bonus points for completion of first assignment	116	1.43	0.856	272	1.25	0.986	1.744
Require in-class group meeting for 1st class	117	3.42	2.190	274	3.36	2.370	0.236
Require individual face-to-face meeting with instructor	116	2.76	1.908	273	2.52	2.045	1.126
Provide students with an orientation to distance education	119	4.13	2.020	279	4.66	2.016	-2.390 *
Provide extensive directions to students obligations and expectations	119	4.71	1.541	281	5.38	1.277	-4.526 **
Require periodic contacts with instructors	118	3.67	1.947	273	3.27	2.259	1.772
Periodically mail reminders of assignments and due dates to all students	118	3.61	1.848	277	3.56	2.271	0.234
Contact students by mail who are not submitting assignments	118	3.52	1.843	273	3.06	2.171	2.006 *
Contact students by telephone who are not submitting assignments	118	3.28	1.700	277	3.09	2.092	0.874
Increase the frequency and immediacy of feedback	114	3.21	1.638	256	3.79	2.019	-2.666 **

Table 33 (Continued)

COMPARISON OF STRATEGIES USED BY DISTANCE EDUCATORS
TO REDUCE ACADEMIC PROCRASTINATION

Strategy	Program Director			Faculty			T-value
	N	$\bar{X}$	SD	N	$\bar{X}$	SD	
Reduce the number of assignments	115	1.62	0.931	273	1.37	0.878	2.478 *
Reduce the amount of time allowed to complete the course assignment	112	1.48	0.827	270	1.28	0.833	2.133 *
Encourage students to form study groups and interact	117	2.67	1.535	271	2.97	2.039	-1.420
Provide counseling and tutoring services to students	115	3.89	1.916	271	3.95	2.092	-0.248

* Significant at the .05 level

** Significant at the .01 level

than did faculty. Given that faculty are directly involved in the teaching and learning process with distance learners, these data suggest that program directors may be less aware of the actions being used to combat academic procrastination.

Relationships Among Variables

Pearson Correlation Coefficients were calculated for both program directors and faculty to determine interrelationships between distance educators' data gathering techniques. Relationships were considered important at the .45 level and above. Important relationships were categorized as follows: moderate (.45 to .59), moderately strong (.60 to .74), and strong (.75 and above). Several important positive relationships were found between program directors' responses to questions regarding strategies used to reduce procrastination and faculty responses to the same questions (see Table 34). The majority of these relationships were found in program directors' responses. All were moderate positive relationships (.45 to .59) except the relationship between the extent to which program directors indicated the use of giving bonus points to students for completing their first assignment and the extent to which they indicated the use of rewarding students for early submission of assignments (.73). This relationship was judged moderately strong (.60

Table 34

INTERCORRELATIONS OF STRATEGIES USED BY
DISTANCE EDUCATORS TO REDUCE ACADEMIC PROCRASTINATION
AT THE .45 LEVEL

Strategy	Correlation		Strategy
	Pgrm	Dir Faculty	
Establish due dates on all assignments	.59	--	Take off points or reduce grade for late assignment
	.73	--	Reward students for early submission of assignments
	.51	--	Require periodic contacts with instructor
	.50	--	Require in-class group meeting for first class
Require in-class group meeting for first class	.46	--	Take off points or reduce grade for late assignment
	.57	--	Require individual face-to-face meeting with instructor
	.51	--	Group meeting as primary method of student/faculty interaction
	.52	--	Provide student with orientation to distance learning
Require individual face-to-face meetings	.47	--	Individual meetings as a primary method of student/faculty interaction
	--	.46	Require periodic contacts with instructor
Contact students by telephone who are not submitting assignments	.45	--	Increase the frequency and immediacy of feedback
	.56	.52	Contact students by mail who are not submitting assignments
Periodically mail reminder of assignments and due dates to all students	.56	.49	Contact students by mail who are not submitting assignments

Table 34 (Continued)

INTERCORRELATIONS OF STRATEGIES USED BY
DISTANCE EDUCATORS TO REDUCE ACADEMIC PROCRASTINATION
AT THE .45 LEVEL

Strategy	Correlation Pgmr Dir Faculty		Strategy
	.49	--	Contact students by telephone who are not submitting assignments
	.51	--	Increase the frequency and immediacy of feedback
Encourage students to form study groups	.53	--	Take off points or reduce grade for late assignments
Provide counseling and tutoring services to students	.48	--	Provide students with orientation to distance learning
	.45	--	Provide extensive directions to students on obligations and expectations

to .74).

Two relationships were similar between faculty and program directors. A moderate positive relationship (.45 to .59) was found in both groups between the extent of periodically mailing reminders of assignments and due dates to all students and the extent of contacting students by mail who are not completing assignments. A moderate positive relationship was also found in both groups between the extent of contacting students by telephone who are not submitting assignments and the extent of contacting students by mail who are not submitting assignments.

No important relationships were found in either group between distance educators perceptions of student noncompletion, academic procrastination or the techniques used by distance educators to collect data on academic procrastination. These data indicate that the strategies used to combat academic procrastination are not based on distance educators' perceptions of the problem or on data they have gathered about the problem.

Summary

Distance educators use a variety of strategies to reduce academic procrastination. The most frequently used of these are establishing due dates on all assignments, providing extensive directions to student on obligations and expectations and providing students with an orientation to

distance education. Distance educators tended to add more structure (due dates, etc.) to reduce procrastination as opposed to rewarding students for early completion of assignments. Previous research has indicated that increased structure was a primary technique used in PSI education to combat procrastination. As in PSI education, increased structure of distance learners has the potential to impair some of the advantages of this type of education. Reducing the amount of work required by students was the least likely strategy to be selected by distance educators.

Several significant differences were found between program directors' responses and those of faculty. The most significant of these were providing extensive directions to students on obligations and expectations, and increasing the frequency and immediacy of feedback. In both instances faculty reported using the strategies more than did program directors.

Several important relationships were found between program directors' responses and between faculty responses, the majority being in program director responses. Two important relationships were similar between faculty and program directors. Moderate positive relationships were found in both groups between: the extent to which periodic mailed reminders of assignments and due dates are sent to all students and the extent to which students are contacted by mail who are not completing assignments, and between the

extent to which students who are not submitting assignments were contacted by telephone and by mail. Apparently, distance educators who contact students to tell them of upcoming due dates also contact those students who miss the due dates.

No important relationships were found between either group regarding the strategies they used to reduce procrastination and their perception of procrastination or the techniques they use to collect data on procrastination. Only two important relationships were found between program demographic data and the strategies used to reduce procrastination. Program directors' responses indicated a moderate positive relationship existed between the extent to which they require in-class group meetings or individual face-to-face meetings and the extent to which group meetings or individual meetings were used as primary methods of student/faculty interaction. Apparently size and age of program have no important relationships with the types of strategies used by distance educators to reduce procrastination.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Procrastination, the act of needlessly putting off a task, is a frequently expressed concern of distance educators and a common practice among all students. Procrastination often leads to noncompletion or low quality performance. According to some estimates, 95% of college students engage in academic procrastination (Ellis and Kraus, 1977). Despite its prevalence, there has been relatively little research which deals with this phenomenon.

Distance education is generally characterized by the separation of student and instructor during the primary modes of educational delivery and focuses on independent and self-directed learning. By its very nature, distance education allows students to control much of their own learning, including decisions about when to study and to respond to academic assignments. The opportunities for distance learners to procrastinate are abundant. For adults learning at a distance, little is known about the causes, effects and conditions which are associated with academic procrastination.

The purpose of this study was to chart the dimensions of academic procrastination in distance education. To do this all distance education programs from two national data

sources (the participants of the Instructional Telecommunications Consortium "Telecourse Utilization Survey" and the National University Continuing Education Association's "Directory of Distance Education Through Telecommunications") were surveyed on the following questions:

1. To what extent is academic procrastination perceived to be a problem in distance education by these distance educators?
2. What data have these distance educators collected on academic procrastination?
3. What strategies are these distance educators using to combat academic procrastination?

Conclusions

Based on the results of this study, conclusions are drawn with respect to the research questions.

Distance Educators' Perceptions of Academic Procrastination

The findings drawn from this study regarding the extent to which academic procrastination was perceived to be a problem in distance education by these distance educators are:

1. While the distance educators identified academic procrastination to be a problem in distance education, it was not perceived to be a serious

problem by over 60 percent of them. However, almost 40 percent of the distance educators identified academic procrastination as a serious problem in that distance learners frequently or always procrastinate.

2. Distance education program directors believed academic procrastination was more of a problem than did faculty who work directly with students.
3. Procrastination by distance learners appears to be similar to procrastination by traditional college students in terms of frequency and types as reported in other research.
4. Procrastination on reading assignments, procrastination on seeking assistance, procrastination on writing assignments, procrastination on studying for tests and exams, procrastination in viewing or listening to instructional materials, and procrastination on submitting assignments for evaluation were identified as the order for most frequent procrastination behaviors by the distance educators.
5. The distance educators believed academic procrastination was caused by a combination of factors but generally by cognitive "blocks" and environmental conditions.

6. The distance educators believed academic procrastination was related to students not being able to manage their time well and having unrealistic expectations of what can be accomplished.
7. The size and age of the distance education programs and how long the program allows students to complete a course appeared unrelated to distance educators' perceptions of the extent to which academic procrastination is a problem.

Thus, academic procrastination was identified as a problem by the distance educators. Less than five percent of the distance educators indicated that procrastination was not a problem in their programs. This result is consistent with research by Ellis and Kraus (1977) in which it was estimated that 95 percent of college students engage in procrastination. However, only 37.5 percent of the distance educators indicated that academic procrastination was frequently or always a problem. This was less than expected based on inferences concerning the problem in the review of related literature. Coincidentally, distance educators reported lower levels of student noncompletion than had been previously reported in the literature by Woodley and Parlett (1983). Sixty-one percent of the distance educators indicated that 10 percent or less of their distance learners did not complete any assignments and 51.5 percent indicated

that 10 percent or less withdrew or were dropped for not completing assignments. If procrastination is linked to student noncompletion as is suggested in the literature and in reporting by distance educators in this study, then lower noncompletion rates would suggest less concern with academic procrastination. Procrastination by distance learners appears to be similar to procrastination by traditional college students identified by Rothblum and Solomon (1986).

Over two-thirds of the distance educators believed that academic procrastination was frequently or always caused by cognitive blocks (e.g. inadequate information, unclear priorities and failure to appreciate the need for timely action) and environmental conditions (e.g. clutter, disorganization, noise, unmanageable workloads, friends and relatives who distract students of their academic tasks). Both of these causes suggest a lack of structure and control often associated with poor individual self-management. They also suggest a somewhat simplistic view of procrastination as suggested by Ziebat, Rosenthal and White (1978). However, the distribution of responses regarding causes of procrastination and the finding of several important relationships between perceived causes of procrastination indicate that distance educators also view the phenomenon as being the result of a combination of attitudinal factors, cognitive blocks, environmental conditions and physiological barriers.

Data Collected by Distance Educators on Academic Procrastination

The findings drawn from this study regarding the data distance educators reported collecting on academic procrastination are:

1. The distance educators have collected little data on academic procrastination and what data they have collected is the result of post-course evaluations and informal discussions with students.
2. Distance education faculty indicated more data are collected on academic procrastination than did program directors.
3. The majority of the distance educators did not collect any data using the following data gathering techniques: personal journals of students, structured interviews with students who completed the course, structured interviews with students who did not start or who dropped the course, calculating the time between when assignments are given and when work begins, personal journals of instructors and comparisons of final grades with dates of first completed assignments.
4. More than 40 percent of the distance educators did not collect any data by calculating the frequency

of late assignments, calculating the frequencies of non-starts or through periodic course surveys of students.

5. In order of frequency of use the distance educators collected data by: post-course evaluation, informal discussions with students, calculating the frequency of withdrawals and periodic course surveys of students.
6. The distance education faculty used informal discussions with students, calculating the frequency of late assignments, and calculating assignments not completed significantly more frequently than did program directors to collect data on academic procrastination.
7. When distance educators indicated that they gathered data from multiple sources, these sources tended to include data in only a single domain such as work completion or interviews with students.
8. The data the distance educators collected on academic procrastination appeared unrelated to their perceptions of academic procrastination, their perceptions of student noncompletion and the size or age of the distance education program.

Thus, the distance educators data collecting was neither extensive nor systematic. The data that they

reported collecting came from traditional sources and unsophisticated methods of data collection. Distance educators' perceptions of student noncompletion or academic procrastination appeared unrelated to the amount or types of data they collected. This suggests that the distance educators' beliefs about academic procrastination may be based more on impressions and hearsay than systematic observation and analysis. They may also have a distorted idea of the prevalence and importance of academic procrastination. That almost one-third of the distance education programs have less than one full-time equivalent staff person involved in delivering distance education courses implies that it is likely that program directors have other institutional responsibilities and that they may not have the time to collect and analyze data. This lack of time to devote to the problems of academic procrastination was identified in an earlier study by Wilkinson and Sherman (1989). However, the size and age of distance education programs appeared unrelated to the types or amounts of data collected on academic procrastination. This suggests that, even in larger programs with several staff members, academic procrastination may not be viewed as a sufficiently significant problem on which to collect data. Other reasons data may not be collected are lack of knowledge about program evaluation procedures and insufficient resources to analyze data.

Strategies Used by Distance Educators to Combat Academic Procrastination

The findings drawn from this study regarding the strategies distance educators use to combat academic procrastination are:

1. The distance educators used a variety of strategies to combat academic procrastination. However, the strategies they used and their perceptions of academic procrastination or data they collected on the problem appeared unrelated.
2. The most frequently used strategies reported by distance educators to reduce academic procrastination were establishing due dates on all assignments, providing extensive directions to students on obligations and expectations, providing students with an orientation to distance education and providing counseling and tutoring services to students.
3. The distance educators tended to add more structure and control to reduce procrastination as opposed to rewarding students for early completion of assignments.
4. Reducing the amount of work required by students was the least likely strategy to be selected by the distance educators to reduce procrastination.
5. Distance education program directors reported that

strategies to combat academic procrastination were used more than did faculty indicating that program directors may be less aware of the actions being used to combat academic procrastination.

6. The distance education faculty differed significantly from program directors on the percentage of courses in which the following strategies are used: providing extensive directions to students on obligations and expectations and increasing the frequency and immediacy of feedback. In both instances the faculty reported using the strategies more than did the program directors.
7. The strategies used in distance education programs to reduce academic procrastination appeared unrelated to the size and age of the program or how long the program allows students to complete a course.

Thus, the distance educators used a variety of strategies to reduce academic procrastination among their distance learners, although the majority indicated that academic procrastination was less than a serious problem and did not collect much data on the phenomenon in their respective programs. These actions suggest that, for those programs where procrastination is a serious problem (37.5%), activities are undertaken to combat the problem of academic

procrastination. That distance educators use procrastination reducing strategies which have little relationship to their perceptions of student noncompletion and academic procrastination, or data they have collected on procrastination indicates that the distance educators implement these strategies based on an intuitive belief that students will procrastinate unless something is done by programs or faculty. This, as Shale (1987) suggests, is essentially a widely held but empirically unsupported belief.

Implications and Recommendations for Further Study

This study investigated academic procrastination in distance education. The study concluded that while academic procrastination was viewed as a problem in 95 percent of the distance education programs, it was not viewed as a serious problem in the majority of those programs. In fact, distance educators' perceptions of the procrastination behaviors of distance learners was similar to self-reported procrastination behaviors of traditional college students in on-campus courses as reported in other research on procrastination. However, for almost 40 percent of the distance education programs, academic procrastination is frequently or always a problem.

This study is one of the first to provide systematically gathered data to verify this problem.

However, the knowledge base about procrastination is tenuous nonetheless because, the techniques distance educators used to collect data appeared unrelated to the distance educators' perceptions of academic procrastination or the various strategies they implement to reduce procrastination. Thus, their concerns for and actions to reduce procrastination appear to be the result of distance educators' intuitive beliefs rather than well documented conclusions based upon carefully collected data.

Additional research is needed to provide a more complete picture of the problem of academic procrastination particularly for those institutions where academic procrastination is a serious problem. This research should address a number of questions including: (1) What differences exist between programs with few academic procrastination problems and those with serious academic procrastination problems? (2) What are the perceptions and actions of distance learners with regard to academic procrastination and do these vary from the perceptions and actions of distance educators or traditional on-campus students? (3) What data collecting techniques are most effective and efficient in gathering data on academic procrastination and in predicting procrastination behavior? and (4) What strategies or interventions are most effective in reducing academic procrastination of distance learners without sacrificing the advantages of distance education?

Responses to questions such as these may generate a reliable data base for decisions about academic procrastination. These answers may also contribute to the development of a technology which will make management of academic procrastination a realistic goal in distance education. This study was a first step in the development of this technology.

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APPENDIX A
DISTANCE EDUCATION PROGRAMS SELECTED
FOR THE STUDY

DISTANCE EDUCATION PROGRAMS SELECTED FOR THE STUDY

*Allan Hancock College
Santa Maria, CA

*Amarillo College
Amarillo, TX

***Anne Arundel Comm. Col.
Arnold, MD

**Appalachian State Univ.
Boone, NC

*Arizona State University
Tempe, AZ

*Asnuntuck Community College
Enfield, CT

**Auburn University
Auburn University, AL

*Austin Community College
Austin, TX

*Bakersfield College
Bakersfield, CA

**Ball State University
Muncie, IN

*Barstow College
Barstow, CA

*Belleville Area College
Belleville, IL

***Boise State University
Boise, ID

**Bowling Green St. Univ.
Bowling Green, OH

*Bowling Green State Univ.
Huron, OH

*Brevard Community College
Cocoa, FL

***Brigham Young University
Provo, UT

*Broward Community College
Ft. Lauderdale, FL

*Butler Community College
El Dorado, KS

**California State Univ./Chico
Chico, CA

**CA State Univ./Los Angeles
Los Angeles, CA

*Cameron University
Lawton, OK

*Carl Sandburg College
Galesburg, IL

*Catawba Valley Tech. College
Hickory, NC

*Catonsville Community College
Catonsville, MD

*Central Florida Comm. College
Ocala, FL

*Central Michigan University
Mt. Pleasant, MI

*Central Piedmont Comm. Col.
Charlotte, NC

*Central State University
Edmond, OK

*Cerritos College
Norwalk, CA

*Chemeketa Community College
Salem, OR

*Chicago City-Wide College
Chicago, IL

*Chipola Junior College
Marianna, FL

*Chippewa Valley Tech. College
Eau Claire, WI

*Citrus College
Glendora, CA

*Clackamas Comm. College
Oregon City, OR

*Clark College
Vancouver, WA

*Clark County Comm. College
N. Las Vegas, NV

*Coastline Community College
Costa Mesa, CA

*College of Dupage
Glen Ellyn, IL

*College of Lake County
Grayslake, IL

*College of the Canyons
Valencia, CA

***Colorado State University
Fort Collins, CO

Columbus St. Comm. College
Columbus, OH

*Comm. Col. of Rhode Island
Lincoln, RI

*Compton Community College
Compton, CA

*Cuyamca College
El Cajon, CA

*Cypress College
Cypress, CA

*Dallas Cty. Comm. Col. Dist.
Dallas, TX

*Davidson County Comm. College
Lexington, NC

*De Anza College
Cupertino, CA

*Durham Tech. Comm. College
Durham, NC

*Dutchess Community College
Poughkeepsie, NY

*Dyersburg State Comm. College
Dyersburg, TN

*East Central College
Union, MO

**East Tennessee State Univ.
Johnson City, TN

**Eastern Kentucky University
Richmond, KY

**Eastern Oregon State Univ.
La Grande, OR

*El Camino College
Torrance, CA

*El Paso Comm. College
El Paso, TX

*Elgin Community College
Elgin, IL

**Embry-Riddle Aeronaut. Univ.
Daytona Beach, FL

*Enterprise State Jr. College
Enterprise, AL

*Essex Community College
Baltimore, MD

Fayette Technical Institute
Fayetteville, NC

*Flaming Rainbow University
Stilwell, OK

**Florida State University Tallahassee, FL	*Hagerstown Junior College Hagerstown, MD
*Florida C. C. of Jacksonville Jacksonville, FL	*Highland Community College Freeport, IL
*Fort Scott Community College Fort Scott, KS	*Hillsborough Comm. College Plant City, FL
*Fox Valley VTAE District Appleton, WI	*Houston Community College Houston, TX
*Fresno City College Fresno, CA	*Howard Community College Columbia, MD
*Fullerton College Fullerton, CA	*Illinois Central College East Peoria, IL
*Galveston College Galveston, TX	*Illinois State University Normal, IL
*Gateway VTAE District Kenosha, WI	*Illinois Valley Comm. College Oglesby, IL
**George Mason University Fairfax, VA	**Indiana State University Terre Haute, IN
**George Washington Univ. Washington, DC	*Indiana Univ. of Pennsylvania Indiana, PA
*Glendale Community College Glendale, CA	**Iowa Lakes Comm. College Esterville, IA
*Glenoaks Community College Centreville, MI	***Iowa State University Aims, IA
*Glenville State College Glenville, WV	*Jamestown Community College Jamestown, NY
*Gloucester Community College Sewall, NJ	*Jefferson College Hillsboro, MO
*GMI Eng. & Mgt. Institute Flint, MI	*John R. Logan College Carterville, IL
***Governors State University University Park, IL	*John Wood Comm. College Quincy, IL
*Grand Rapids Jr. College Grand Rapids, MI	**Johnson Co. Comm. College Overland Park, KS

**Kansas Regents Network
Manhattan, KS

**Kansas State University
Manhattan, KS

*Kaskaskia College
Centralia, IL

*Kent State Univ/Stark County
North Canton, OH

*Kirkwood Community College
Cedar Rapids, IA

*Kishwaukee College
Malta, IL

*Lakeland Community College
Mentor, OH

*Lakeshore VTAE District
Cleveland, WI

*Lake Sumter Comm. College
Leesburg, FL

*Lane Community College
Eugene, OR

*Lewis & Clark Comm. College
Godfrey, IL

*Lincoln Land Comm. College
Springfield, IL

*Linn-Benton Comm. College
Albany, OR

*Long Beach City College
Long Beach, CA

*Los Angeles Valley College
Van Nuys, CA

***Louisiana St. Univ.
Baton Rouge, LA

*Madison Area Tech. Col.
Madison, WI

*Marygrove College
Detroit, MI

*Mass. Bay Comm. College
Wellesley Hills, MA

*McHenry County College
Crystal Lake, IL

*Meridan Junior College
Meridan, MS

**Metropolitan State College
Denver, CO

*Metropolitan Tech Comm. Col.
Omaha, NB

*Miami-Dade Comm. College
Miami, FL

*Mid-State VTAE District
Wisconsin Rapids, WI

*Miles Community College
Miles City, MN

*Milwaukee Area Tech. College
Milwaukee, WI

*Miracosta College
Oceanside, CA

*Miss. Gulf Coast Jr. College
Jackson, MS

**Missouri Western St. College
St. Joseph, MO

*Monroe Community College
Rochester, NY

*Moorpark College
Moorpark, CA

*Moraine Park VTAE District
Fond Du Lac, WI

*Moraine Valley Comm. College
Palos Hills, IL

*Morehead State University
Morehead, KY

*Morton College
Cicero, IL

*Mount Hood Comm. College
Gresham, OR

*Mt. San Antonio College
Walnut, CA

*Napa College
Napa, CA

***No. Carolina State Univ.
Raleigh, NC

*North Central Tech. College
Wasau, WI

**North Dakota Div. Ind. Study
Fargo, ND

*North Iowa Area Comm. College
Mason City, IA

*North Shore Comm. College
Beverly, MA

***Northern Kentucky Univ.
Covington, KY

*Northern Michigan University
Marquette, MI

*Northern VA Comm. College
Annandale, VA

*Oakland Community College
Bloomfield Hills, MI

*Oakton Community College
Des Plains, IL

*Odessa College
Odessa, TX

*Ohio State University
Columbus, OH

**Ohio University
Athens, OH

*Oklahoma City Com College
Oklahoma City, OK

**Oklahoma State Regents
Oklahoma City, OK

***Oklahoma State University
Stillwater, OK

**Old Dominion University
Norfolk, VA

*Oregon State University
Corvallis, OR

*Our Lady of Holy Cross Col.
New Orleans, LA

*Oxnard College
Oxnard, CA

*Palomar College
San Marcos, CA

*Parkland College
Champaign, IL

*Pasadena City College
Pasadena, CA

**Penn. State University
University Park, PA

*Pensacola Junior College
Pensacola, FL

*Peru State College
Peru, NE

*Prairie State College
Chicago Heights, IL

*Providence College
Providence, RI

**Purdue University
West Lafayette, IN

Purdue University
Westville, IN

*Purdue Univ./Calumet
Hammond, IN

**Radford University
Radford, VA

*Rancho Santiago College
Santa Ana, CA

*Rend Lake College
Ina, IL

*Richland Community College
Decatur, IL

*Rio Salado Comm. College
Phoenix, AZ

*Riverside City College
Riverside, CA

*Roanoke-Chowan Tech. College
Ahoskie, NC

*Rochester Community College
Rochester, MN

***Rochester Inst. of Tech.
Rochester, NY

*Rockingham Comm. College
Wentworth, NC

*Rockland Com. College
Suffern, NY

*Rose State College
Midwest City, OK

*Saddelback College
Mission Viejo, CA

*San Bernadino Valley College
San Bernadino, CA

*Sinclair Community College
Dayton, OH

*Southern Arkansas Univ/Tech.
East Camden, AR

**Southern Illinois University
Carbondale, IL

**Southern Illinois University
Edwardsville, IL

*Southwestern College
Chula Vista, CA

*St. Louis Community College
St. Louis, MO

*St. Petersburg Jr. College
St. Petersburg, FL

*Tarrant County Jr. College
Ft. Worth, TX

**Temple University
Philadelphia, PA

**Texas A & M
College Station, TX

**Texas Tech University
Lubbock, TX

**Thomas A. Edison St. College
Trenton, NJ

*Thornton Community College
South Holland, IL

*Towson State University
Towson, MD

*Treasure Valley Comm. College
Ontario, OR

*Triton College
River Grove, IL

*Truckee Meadows Comm. College
Reno, NV

*Tulsa Junior College
Tulsa, OK

*Tyler Junior College Tyler, TX	***Univ. of MD Univ. College College Park, MD
*Umpqua Community College Roseburg, OR	**Univ. of Massachussetts Amherst, MA
*Union College/KY Barbourville, KY	**University of Michigan Ann Arbor, MI
*Union County College Cranford, NJ	**University of Minnesota Minneapolis, MN
*University of Alabama Birmingham, AL	**University of Missouri Columbia, MO
***Univ. of Alaska/Fairbanks Fairbanks, AK	**University of Missouri St. Louis, MO
**University of Arizona Tucson, AZ	**University of Montana Missoula, MT
**Univ. of Calif./San Diego La Jolla, CA	**Univ. of Nebraska-Lincoln Lincoln, NE
***Univ. of Cincinnati Cincinnati, OH	**Univ. of Nevada-Reno Reno, NV
***Univ. of Colorado/Boul. Boulder, CO	**Univ. of New Hampshire Durham, NH
**University of Georgia Athens, GA	**University of New Orleans New Orleans, LA
**University of Houston Houston, TX	**University of New Mexico Albuquerque, NM
University of Idaho Moscow, ID	*Univ. of North Carolina Greensboro, NC
**University of Illinois Champaign, IL	*Univ. of North Carolina Chapel Hill, NC
**University of Iowa Iowa City, IA	**University of Oklahoma Norman, OK
**University of Kentucky Lexington, KY	**Univ. of Rhode Island Providence, RI
***University of Louisville Louisville, KY	***Univ. of So. Carolina Columbia, SC

**University of South Florida Tampa, FL	**Virginia Commonwealth Univ. Richmond, VA
**Univ. of South. Mississippi Hattiesburg, MS	**Washington State University Pullman, WA
**University of Tennessee Knoxville, TN	*Washtenau Comm. College Ann Arbor, MI
**Univ. of Texas at Austin Austin, TX	*Waubensee Comm. College Sugar Grove, IL
**University of Virginia Charlottesville, VA	**Weber State College Ogden, UT
**University of Washington Seattle, WA	**Webster University St. Louis, MO
**University of Wisconsin Eau Claire, WI	**West Virginia University Morgantown, WV
**Univ. of Wisconsin-Ext. Madison, WI	**Western Carolina University Cullowhee, NC
**Univ. of Wisconsin-La Crosse La Crosse, WI	**Western Washington Univ. Bellingham, WA
**Univ. of Wisconsin-Madison Madison, WI	*W. Va. Inst. of Tech. Montgomery, WV
Univ. of Wisconsin-Mil. Milwaukee, WI	*Western Illinois University Macomb, IL
***Univ. of Wisconsin/St. Pt. Stevens Point, WI	**Western Michigan University Kalamazoo, MI
*Univ. of Wisconsin/Superior Superior, WI	*Western Oklahoma St. College Altus, OK
**Utah State University Logan, UT	**Western Oregon St. College Monmouth, OR
*Valencia Community College Orlando, FL	*Western Washington University Bellingham, WA
*Ventura College Ventura, CA	***Wichita State University Wichita, KS
*Victor Valley Comm. College Victorville, CA	*Wilkes Community College Wilkesboro, NC

*William Rainey Harper College
Palatine, IL

*Wisconsin Indianhead VTAE Dt.
Shell Lake, WI

*Wright State University
Dayton, OH

*Xavier Univ. of Louisiana
New Orleans, LA

*Yakima Valley Comm. College
Yakima, WA

*York College of Pennsylvania
York, PA

*Yuba College
Marysville, CA

* Appeared on the Instructional
Telecommunications Consortium Anneberg/CPB Project
"Telecourse Utilization Survey" list.

** Appeared on the National University Continuing
Education Association's "Directory of Distance
Education Through Telecommunications" list.

*** Appeared on both lists.

APPENDIX B
DISTANCE EDUCATION PROGRAM DIRECTOR SURVEY

DISTANCE EDUCATION PROGRAM DIRECTOR SURVEY

This survey is part of a study investigating academic procrastination and distance education. For the purpose of this study, the following definitions are used:

Academic Procrastination: the act of needlessly postponing beginning and/or completing academic tasks.

Distance education: the separation of student and instructor during the primary modes of educational delivery.

Distant learner: a student pursuing course work by means of distance education.

Noncompletion: students who do not complete a course for which they enroll, for whatever reason.

PART I - INSTITUTION AND PROGRAM INFORMATION

DIRECTIONS: Please respond to the following questions by checking the one appropriate space.

1. Which of the following best describes your institution? (check only one)
 - ☐ (1) Technical school
 - ☐ (2) Junior college
 - ☐ (3) Community college
 - ☐ (4) College/university (4 years only)
 - ☐ (5) College/university (4 years plus masters)
 - ☒ (6) College/university (4 years through doctorate or professional degree)
2. Approximately how many students (headcount) were enrolled in your institution for the Fall semester/quarter 1988? (check only one)
 - ☐ (1) Under 3,000
 - ☐ (2) 3,000 to 5,000
 - ☐ (3) 5,001 to 10,000
 - ☐ (4) 10,001 to 20,000
 - ☒ (5) Over 20,000
3. How many full-time equivalent (FTE) students were enrolled in your institution for the Fall semester/quarter 1988? (check only one)
 - ☐ (1) Under 1,000
 - ☐ (2) 1,000 to 3,000
 - ☐ (3) 3,001 to 5,000
 - ☐ (4) 5,001 to 10,000
 - ☐ (5) Over 10,000
4. Which of the following best describes your institution's distance education program? (check only one)
 - ☐ (1) My institution's primary instructional delivery method.
 - ☐ (2) A separate college/division within the institution.
 - ☐ (3) Department coordinating distance education offerings of the various colleges/divisions within the institution.
 - ☐ (4) Part of a consortium which provides distance education to member institutions.

5. Which of the following best describes the geographic area your distance education program primarily serves? (check only one)

- ☐ (1) Urban community
- ☐ (2) Rural community
- ☐ (3) State
- ☐ (4) Regional
- ☐ (5) National
- ☐ (6) Other (please specify) _____

6. How many students (headcount) were enrolled in distance education courses in your institution for the Fall semester/quarter 1988? (check only one)

- ☐ (1) Less than 100
- ☐ (2) 101 to 300
- ☐ (3) 301 to 500
- ☐ (4) 501 to 1,000
- ☐ (5) 1,001 to 2,500
- ☐ (6) 2,501 to 5,000
- ☐ (7) More than 5,000

7. How many FTE's were generated by your distance education enrollment in the Fall semester/quarter 1988? (check only one)

- ☐ (1) Less than 10
- ☐ (2) 11 to 25
- ☐ (3) 26 to 50
- ☐ (4) 51 to 100
- ☐ (5) 101 to 250
- ☐ (6) 251 to 500
- ☐ (7) More than 500

8. How many years has your institution's distance education program been in existence? (check only one)

- ☐ (1) 1-5 years
- ☐ (2) 6-10 years
- ☐ (3) 11-15 years
- ☐ (4) 16-20 years
- ☐ (5) More than 20 years

9. How many different distance education courses did your institution offer in the Fall 1988? (check only one)

- ☐ (1) 1 to 5
- ☐ (2) 6 to 10
- ☐ (3) 11 to 20
- ☐ (4) 21 to 50
- ☐ (5) More than 50

10. How many total FTE staff are involved in delivering distance education courses? Do not count teaching faculty, but count directors, secretaries, developers, etc. Please combine portions of an individual's job responsibilities when they are working less than full time. (check only one)

- ☐ (1) Less than 1
- ☐ (2) 1 to 3
- ☐ (3) 4 to 9
- ☐ (4) 10 to 15
- ☐ (5) 16 to 25
- ☐ (6) More than 25

11. How much money is budgeted for your distance education program, excluding personnel salaries, per year? Include items such as: supplies, equipment, contractual agreements with program producers including licenses and student fees, contractual agreements with program distributors such as cable companies, and any other costs associated with your program. (check only one)
- ☐ (1) Less than \$25,000 per year
- ☐ (2) \$25,001 to \$50,000 per year
- ☐ (3) \$50,001 to \$100,000 per year
- ☐ (4) \$100,001 to \$200,000 per year
- ☐ (5) \$200,001 to \$500,000 per year
- ☐ (6) More than \$500,000 per year
12. What level of instruction does your distance education program deliver? (check only one)
- ☐ (1) Undergraduate only
- ☐ (2) Graduate only
- ☐ (3) Predominately undergraduate, some graduate
- ☐ (4) Predominately graduate, some undergraduate
- ☐ (5) Combination
- ☐ (6) Other
13. How long are students given to complete a distance education course in your program?
- ☐ (1) Within the term for which they are enrolled
- ☐ (2) Within an academic year
- ☐ (3) Within 6 months
- ☐ (4) Within a calendar year
- ☐ (5) Within 2 calendar years
- ☐ (6) Other _____

DIRECTIONS: Please use the scale below to answer questions 14-17 by circling the most appropriate number next to each item.

not at all	1%-24%	25%-50%	51%-75%	76%-99%	every course
1	2	3	4	5	6

In what percent of your distance education courses are the following methods of instructional delivery used as the primary method of delivery?

- 1 2 3 4 5 6 (14) Print-based
- 1 2 3 4 5 6 (15) Video-based technology (including broadcast, cable, ITFS, videotape, videodisc)
- 1 2 3 4 5 6 (16) Audio-based technology (including radio, telephone, facsimile, audio cassette)
- 1 2 3 4 5 6 (17) Computer-based technology (including computer conferencing, electronic mail, computer graphics)

DIRECTIONS: Please use the scale below to answer questions 18-23 by circling the most appropriate number next to each item.

not at all	1%-24%	25%-50%	51%-75%	76%-99%	every course
1	2	3	4	5	6

In what percent of your distance education courses are the following methods of student/faculty interaction used as the primary method of interaction?

- 1 2 3 4 5 6 (18) Print (including mail)
- 1 2 3 4 5 6 (19) Video technology (including slow-scan, full-motion live, compressed)
- 1 2 3 4 5 6 (20) Audio technology (including telephone, facsimile, audio cassette)
- 1 2 3 4 5 6 (21) Computer technology (including computer conferencing, electronic mail)
- 1 2 3 4 5 6 (22) Individual meetings (including periodic face to face meetings between faculty and instructor)
- 1 2 3 4 5 6 (23) Group meetings (including in class group orientation meeting, and periodic group meetings between faculty and students)

PART II - STUDENT NONCOMPLETION

DIRECTIONS: Please respond to the following questions by checking the appropriate spaces.

24. What percentage of distant learners in your program enroll in courses but do not complete any assignments (i.e., non-starts)? (check only one)
- ☐ (1) Less than 5%
- ☐ (2) 5% to 10%
- ☐ (3) 11% to 25%
- ☐ (4) 26% to 50%
- ☐ (5) Greater than 50%
- ☐ (6) Don't know
25. What percentage of distant learners in your program withdraw or are dropped from courses because they are not completing assignments? (check only one)
- ☐ (1) Less than 5%
- ☐ (2) 5% to 10%
- ☐ (3) 11% to 25%
- ☐ (4) 26% to 50%
- ☐ (5) Greater than 50%
- ☐ (6) Don't know
26. Which response best describes how the majority of distant learners in your programs distribute time to complete their assignments? (check only one)
- ☐ (1) Completes as soon as possible
- ☐ (2) Distributes efforts over time allowed to complete assignments
- ☐ (3) Waits until last minute
- ☐ (4) Turns in assignments late
- ☐ (5) Submits several assignments at one time not allowing for feedback between assignments
- ☐ (6) Don't know

DIRECTIONS: Use the scale below to indicate how frequently you believe each of the following contributes to student non-completion in distance education courses. Circle the most appropriate number next to each item.

- | | never | rarely | occasionally | frequently | all the time | |
|-----------|-------|--------|--------------|------------|--------------|---|
| | 1 | 2 | 3 | 4 | 5 | |
| 1 2 3 4 5 | | | | | | (27) Students' reasons for taking courses change |
| 1 2 3 4 5 | | | | | | (28) Distance education does not fit students' learning styles. |
| 1 2 3 4 5 | | | | | | (29) Students do not manage their time well, get behind and cannot recover. |
| 1 2 3 4 5 | | | | | | (30) Problems with course design and implementation |
| 1 2 3 4 5 | | | | | | (31) Course materials are boring or poorly produced. |
| 1 2 3 4 5 | | | | | | (32) Unexpected illness/family responsibilities. (personal) |
| 1 2 3 4 5 | | | | | | (33) Unexpected/new work responsibilities. (business/professional) |
| 1 2 3 4 5 | | | | | | (34) Students have unrealistic expectations of what can be accomplished; they become overcommitted. |
| 1 2 3 4 5 | | | | | | (35) Students are unprepared for the course content |

PART III - ACADEMIC PROCRASTINATION

DIRECTIONS: Please use the scale below to indicate the extent to which you believe each of the following are problems among distant learners in your distance education program. Circle the appropriate number next to each item.

- | | not | rarely | occasionally | frequently | always | |
|-----------|-----------|-----------|--------------|------------|-----------|---|
| | a problem | a problem | a problem | a problem | a problem | |
| | 1 | 2 | 3 | 4 | 5 | |
| 1 2 3 4 5 | | | | | | (36) Academic procrastination in general. |
| 1 2 3 4 5 | | | | | | (37) Procrastination on viewing or listening to instructional materials such as audio or video tapes, or televised programs. |
| 1 2 3 4 5 | | | | | | (38) Procrastination on reading assignments. |
| 1 2 3 4 5 | | | | | | (39) Procrastination on writing assignments. |
| 1 2 3 4 5 | | | | | | (40) Procrastination on studying for tests and exams. |
| 1 2 3 4 5 | | | | | | (41) Procrastination on seeking assistance by calling, writing or contacting their instructor or the distance education office. |
| 1 2 3 4 5 | | | | | | (42) Procrastination on submitting assignments for evaluation. |

DIRECTIONS: Please use the scale below to indicate the extent to which you believe the following factors are causes of procrastination among distant learners at your institution. Circle the most appropriate number next to each item.

- | | not
a cause
1 | rarely
a cause
2 | occasionally
a cause
3 | frequently
a cause
4 | always
a cause
5 |
|-----------|---------------------|------------------------|------------------------------|----------------------------|------------------------|
| 1 2 3 4 5 | | | | | |
| | | | | | |
| 1 2 3 4 5 | | | | | |
| | | | | | |
| 1 2 3 4 5 | | | | | |
| | | | | | |
| 1 2 3 4 5 | | | | | |
| | | | | | |
| 1 2 3 4 5 | | | | | |
| | | | | | |
- (43) Attitudinal factors such as fear of failure, fear of success, low self-esteem, shyness, feelings of guilt.
- (44) Cognitive "blocks" such as inadequate information, unclear priorities and failure to appreciate the need for timely action.
- (45) Environmental conditions such as clutter, disorganization, noise, unmanageable workloads, and friends and relatives who distract students their academic tasks.
- (46) Physiological barriers such as fatigue, stress and illness.
- (47) Other (please specify) _____

DIRECTIONS: Please use the scale below to estimate the percentage of classes in which each of the following techniques are used to gather data on academic procrastination in your distance education program. Circle the most appropriate number next to each item.

- | | not at all
1 | 1%-24%
2 | 25%-50%
3 | 51%-75%
4 | 76%-99%
5 | every course
6 |
|-------------|-----------------|-------------|--------------|--------------|--------------|-------------------|
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
| 1 2 3 4 5 6 | | | | | | |
| | | | | | | |
- (48) Personal journals of students.
- (49) Structured interviews with students who completed the course.
- (50) Structured interviews with students who did not start or who dropped the course.
- (51) Informal discussions with students.
- (52) Calculating the frequency of late assignments.
- (53) Calculating the time between when assignments are given and when work begins.
- (54) Calculating the frequency of non-starts (students who register but never begin)
- (55) Calculating the frequency of withdrawals.
- (56) Calculating assignments not completed.
- (57) Personal journals of instructors.
- (58) Post course evaluations.
- (59) Comparison of final grades with dates of first completed assignments.
- (60) Periodic course surveys of students.
- (61) Other techniques (please specify) _____

DIRECTIONS: Please use the scale below to estimate the percentage of classes in which each of the following activities are used to reduce academic procrastination in your distance education program. Circle the appropriate number next to each item.

- | not at all | 1%-24% | 25%-50% | 51%-75% | 76%-99% | every course | |
|------------|--------|---------|---------|---------|--------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | 2 | 3 | 4 | 5 | 6 | (62) Establish due dates on all assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (63) Take off points or reduce grade for late assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (64) Reward students for early submission of assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (65) Put easier assignments at the beginning of the course. |
| 1 | 2 | 3 | 4 | 5 | 6 | (66) Give bonus points for completion of first assignment. |
| 1 | 2 | 3 | 4 | 5 | 6 | (67) Require in-class group meeting for first class. |
| 1 | 2 | 3 | 4 | 5 | 6 | (68) Require individual face-to-face meeting with instructor. |
| 1 | 2 | 3 | 4 | 5 | 6 | (69) Provide students with an orientation to distance education. |
| 1 | 2 | 3 | 4 | 5 | 6 | (70) Provide extensive directions to students on obligations and expectations. |
| 1 | 2 | 3 | 4 | 5 | 6 | (71) Require periodic contacts with instructors. |
| 1 | 2 | 3 | 4 | 5 | 6 | (72) Periodically mail reminders of assignments and due dates to all students. |
| 1 | 2 | 3 | 4 | 5 | 6 | (73) Contact students by mail who are not submitting assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (74) Contact students by telephone who are not submitting assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (75) Increase the frequency and immediacy of feedback. |
| 1 | 2 | 3 | 4 | 5 | 6 | (76) Reduce the number of assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (77) Reduce the amount of time allowed to complete the course assignment. |
| 1 | 2 | 3 | 4 | 5 | 6 | (78) Encourage students for form study groups and interact. |
| 1 | 2 | 3 | 4 | 5 | 6 | (79) Provide counseling and tutoring services to students. |
| 1 | 2 | 3 | 4 | 5 | 6 | (80) Other activities _____. |

THANK YOU FOR YOUR ASSISTANCE.

Please return this survey and those of three selected faculty in the prepaid envelope within 5 days.

**Thomas W. Wilkinson
Director of Learning Resources
New River Community College
P.O. Drawer 1127
Dublin, Virginia 24084**

APPENDIX C
DISTANCE EDUCATION FACULTY SURVEY

DISTANCE EDUCATION FACULTY SURVEY

This survey is part of a study investigating academic procrastination and distance education. For the purpose of this study, the following definitions are used:

Academic Procrastination: the act of needlessly postponing beginning and/or completing academic tasks.

Distance education: the separation of student and instructor during the primary modes of educational delivery.

Distant learner: a student pursuing course work by means of distance education.

Noncompletion: students who do not complete a course for which they enroll, for whatever reason.

PART I - STUDENT NONCOMPLETION

DIRECTIONS: Please respond to the following questions by checking the appropriate spaces.

1. What percent of distant learners in your courses do not complete any assignments (i.e., non-starts)? (check only one)
☐ (1) Less than 5%
☐ (2) 5% to 10%
☐ (3) 11% to 25%
☐ (4) 26% to 50%
☐ (5) Greater than 50%
☐ (6) Don't know
2. What percent of distant learners in your courses withdraw or are dropped from courses because they are not completing assignments? (check only one)
☐ (1) Less than 5%
☐ (2) 5% to 10%
☐ (3) 11% to 25%
☐ (4) 26% to 50%
☐ (5) Greater than 50%
☐ (6) Don't know
3. Which response best describes how the majority of distant learners in your courses distribute time to complete their assignments? (check only one)
☐ (1) Complete as soon as possible
☐ (2) Distribute efforts over time allowed to complete assignments
☐ (3) Wait until last minute
☐ (4) Turn in assignments late
☐ (5) Submit several assignments at one time not allowing for feedback between assignments
☐ (6) Don't know

DIRECTIONS: Use the scale below to indicate how frequently you believe each of the following contributes to student noncompletion in your distance education courses. Circle the most appropriate number next to each item.

- | never | rarely | occasionally | frequently | all the time |
|-----------|--------|--|------------|--------------|
| 1 | 2 | 3 | 4 | 5 |
| 1 2 3 4 5 | (4) | Students' reasons for taking courses change | | |
| 1 2 3 4 5 | (5) | Distance education does not fit students' learning styles. | | |
| 1 2 3 4 5 | (6) | Students do not manage their time well, get behind and cannot recover. | | |
| 1 2 3 4 5 | (7) | Problems with course design and implementation. | | |
| 1 2 3 4 5 | (8) | Course materials are boring and poorly produced. | | |
| 1 2 3 4 5 | (9) | Unexpected illness/family responsibilities. (personal) | | |
| 1 2 3 4 5 | (10) | Unexpected/new work responsibilities. (business/professional) | | |
| 1 2 3 4 5 | (11) | Students have unrealistic expectations of what can be accomplished; they become overcommitted. | | |
| 1 2 3 4 5 | (12) | Students are unprepared for the course content | | |

PART III - ACADEMIC PROCRASTINATION

DIRECTIONS: Please use the scale below to indicate the extent to which you believe each of the following are problems among distant learners in your distance education courses. Circle the appropriate number next to each item.

- | not
a problem | rarely
a problem | occasionally
a problem | frequently
a problem | always
a problem |
|------------------|---------------------|--|-------------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| 1 2 3 4 5 | (13) | Academic procrastination in general. | | |
| 1 2 3 4 5 | (14) | Procrastination on viewing or listening to instructional materials such as audio or video tapes, or televised programs. | | |
| 1 2 3 4 5 | (15) | Procrastination on reading assignments. | | |
| 1 2 3 4 5 | (16) | Procrastination on writing assignments. | | |
| 1 2 3 4 5 | (17) | Procrastination on studying for tests and exams. | | |
| 1 2 3 4 5 | (18) | Procrastination on seeking assistance by calling, writing or contacting their instructor or the distance education office. | | |
| 1 2 3 4 5 | (19) | Procrastination on submitting assignment for evaluation. | | |

DIRECTIONS: Please use the scale below to indicate the extent to which you believe the following factors are causes of procrastination among distant learners in your courses. Circle the most appropriate number next to each item.

- | | not a cause | rarely | occasionally | frequently | always a cause | |
|-----------|-------------|--------|--------------|------------|----------------|--|
| | 1 | 2 | 3 | 4 | 5 | |
| 1 2 3 4 5 | | | | | | (20) Attitudinal factors such as fear of failure, fear of success, low self-esteem, shyness, feelings of guilt. |
| 1 2 3 4 5 | | | | | | (21) Cognitive "blocks" such as inadequate information, unclear priorities and failure to appreciate the need for timely action. |
| 1 2 3 4 5 | | | | | | (22) Environmental conditions such as clutter, disorganization, noise, unmanageable workloads, and friends and relatives who distract students their academic tasks. |
| 1 2 3 4 5 | | | | | | (23) Physiological barriers such as fatigue, stress and illness. |
| 1 2 3 4 5 | | | | | | (24) Other (please state)_____. |

DIRECTIONS: Please use the scale below to estimate the percentage of courses in which you use each of the following techniques to gather data on academic procrastination in your distance education courses. Circle the most appropriate number next to each item.

- | | not at all | 1%-24% | 25%-50% | 51%-75% | 76%-99% | every course | |
|-------------|------------|--------|---------|---------|---------|--------------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 2 3 4 5 6 | | | | | | | (25) Personal journals of students. |
| 1 2 3 4 5 6 | | | | | | | (26) Structured interviews with student who completed the course. |
| 1 2 3 4 5 6 | | | | | | | (27) Structured interviews with students who did not start or who dropped the course. |
| 1 2 3 4 5 6 | | | | | | | (28) Informal discussions with students. |
| 1 2 3 4 5 6 | | | | | | | (29) Calculating the frequency of late assignments. |
| 1 2 3 4 5 6 | | | | | | | (30) Calculating the time between when assignments are given and when work begins. |
| 1 2 3 4 5 6 | | | | | | | (31) Calculating the frequency of non-starts (students who register but never begin) |
| 1 2 3 4 5 6 | | | | | | | (32) Calculating the frequency of withdrawals. |
| 1 2 3 4 5 6 | | | | | | | (33) Calculating assignments not completed. |
| 1 2 3 4 5 6 | | | | | | | (34) Personal journals of instructors. |
| 1 2 3 4 5 6 | | | | | | | (35) Post course evaluations. |
| 1 2 3 4 5 6 | | | | | | | (36) Comparison of final grades with dates of first completed assignments. |
| 1 2 3 4 5 6 | | | | | | | (37) Periodic course surveys of students. |
| 1 2 3 4 5 6 | | | | | | | (38) Other techniques (please state)_____. |

DIRECTIONS: Please use the scale below to estimate the percentage of courses in which you use each of the following activities to reduce academic procrastination in your distance education courses. Circle the appropriate number next to each item.

- | not at all | 1%-24% | 25%-50% | 51%-75% | 76%-99% | every course | |
|------------|--------|---------|---------|---------|--------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | 2 | 3 | 4 | 5 | 6 | (39) Establish due dates on all assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (40) Take off points or reduce grade for late assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (41) Reward students for early submission of assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (42) Put easier assignments at the beginning of the course. |
| 1 | 2 | 3 | 4 | 5 | 6 | (43) Give bonus points for completion of first assignment. |
| 1 | 2 | 3 | 4 | 5 | 6 | (44) Require in-class group meeting for first class. |
| 1 | 2 | 3 | 4 | 5 | 6 | (45) Require individual face-to-face meeting with instructor. |
| 1 | 2 | 3 | 4 | 5 | 6 | (46) Provide students with an orientation to distance education. |
| 1 | 2 | 3 | 4 | 5 | 6 | (47) Provide extensive directions to students on obligations and expectations. |
| 1 | 2 | 3 | 4 | 5 | 6 | (48) Require periodic contacts with instructors. |
| 1 | 2 | 3 | 4 | 5 | 6 | (49) Periodically mail reminders of assignments and due dates to all students. |
| 1 | 2 | 3 | 4 | 5 | 6 | (50) Contact students by mail who are not submitting assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (51) Contact students by telephone who are not submitting assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (52) Increase the frequency and immediacy of feedback. |
| 1 | 2 | 3 | 4 | 5 | 6 | (53) Reduce the number of assignments. |
| 1 | 2 | 3 | 4 | 5 | 6 | (54) Reduce the amount of time allowed to complete the course assignment. |
| 1 | 2 | 3 | 4 | 5 | 6 | (55) Encourage students for form study groups and interact. |
| 1 | 2 | 3 | 4 | 5 | 6 | (56) Provide counseling and tutoring services to students. |
| 1 | 2 | 3 | 4 | 5 | 6 | (57) Other (please state)_____. |

THANK YOU FOR YOUR ASSISTANCE.

Please return this survey within 5 days to your distance education program director.

APPENDIX D
CORRESPONDENCE RELATED TO DATA COLLECTION



September 18, 1989

Dear Distance Education Program Director:

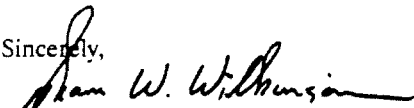
Procrastination is often expressed as a concern by distance educators along with the problems of attrition and non-completion. Surprisingly, there is relatively little research investigating procrastination in distance education to determine, if indeed, there is need for concern. As the leader of distance education efforts at your institution, your input on this issue is needed. Please take a few minutes to complete the enclosed questionnaire. The information you provide will be part of a descriptive study on academic procrastination and distance education.

Also, please select three faculty in your distance education program who you believe to be among your best, and who will participate in this study. Give each of these faculty one of the enclosed questionnaires entitled, "Faculty Survey". A cover letter explains the purpose of the study and instructs them to return the completed questionnaire to you. Please put all four completed questionnaires in the attached self-addressed stamped envelop and mail it within five days. Your assistance to ensure a high return rate from your faculty is appreciated.

Please be assured of complete confidentiality. The questionnaires contain identification numbers for mailing purposes and to match distance education faculty with their respective distance education programs. Names of neither individuals nor institutions will appear on the questionnaire or in the study. As you know, a high return rate of these questionnaires is important in this type of research.

You may receive a summary of the results of this study by including your business card in the return envelope. If you have any questions regarding this study or the questionnaire, you may call me at (703) 674-3625.

Thank you for your assistance.

Sincerely,

Thomas W. Wilkinson,

Director of Learning Resources

(703)674-3600
PO Drawer 1127
Dublin, Virginia 24084



September 18, 1989

Dear Distance Education Faculty Member:

Procrastination is often expressed as a concern by distance educators along with the problems of attrition and non-completion. Surprisingly, there is relatively little research investigating procrastination in distance education to determine, if indeed, there is need for concern. As a faculty member of the distance education program at your institution, your input on this issue is needed. Please take a few minutes to complete the enclosed questionnaire. The information you provide will be part of a descriptive study on academic procrastination and distance education.

Please return your completed questionnaire to your distance education program director within five (5) days. The program director will mail your questionnaire, his/her questionnaire, and the questionnaires of two other distance education faculty in a self-addressed stamped envelope.

Please be assured of complete confidentiality. The questionnaire contains identification numbers for mailing purposes and to match distance education faculty with their respective type of distance education program. Names of neither individuals nor institutions will appear on the questionnaires or in the study. As you already know, a high return rate of these questionnaires is important in this kind of research.

You may receive a summary of the results of this study by enclosing your business card in the return envelope. If you have any questions regarding this study or the questionnaire, you may call me at (703) 674-3625.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Thomas W. Wilkinson".

Thomas W. Wilkinson, Director

Learning Resources

(703)674-3600
PO Drawer 1127
Dublin, Virginia 24084



October 27, 1989

Dear Distance Education Program Director:

In September you were mailed a packet similar to this one. It contained four questionnaires regarding academic procrastination and distance education. You were asked to fill out the Program Director Questionnaire, have three faculty fill out the Faculty Questionnaire, and return all four questionnaires to me. Since I have not received a response from you, I am sending you a new set of questionnaires today. Please take a few minutes to complete the enclosed Program Director questionnaire.

Also, please select three faculty in your distance education program who you believe to be among your best, and who will participate in this study. Give each of these faculty one of the enclosed questionnaires entitled, "Faculty Survey." A cover letter explains the purpose of the study and instructs them to return the completed questionnaire to you. Please put all four completed questionnaires in the attached self-addressed stamped envelope and mail it within seven days.

Please be assured of complete confidentiality. The questionnaires contain identification numbers for mailing purposes and to match distance education faculty with their respective distance education programs. Names of neither individuals nor institutions will appear on the questionnaire or in the study.

Student procrastination is often expressed as a concern by distance educators along with the problems of attrition and non-completion. Surprisingly, there is relatively little research investigating procrastination in distance education to determine, if indeed, there is need for concern. As the leader of distance education efforts at your institution, your input on this issue is needed. The information you provide will be part of a descriptive study on academic procrastination and distance education. A high return rate is important in this type of research. Your assistance in this project is greatly appreciated.

You may receive a summary of the results of this study by including your business card in the return envelope. If you have any questions regarding this study or the questionnaire, you may call me at (703) 674-3625.

Thank you for your assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read "Thomas W. Wilkinson".

Thomas W. Wilkinson

Director of Learning Resources

(703)674-3600
PO Drawer 1127
Dublin, Virginia 24084



October 27, 1989

Dear Distance Education Faculty Member:

Procrastination is often expressed as a concern by distance educators along with the problems of attrition and non-completion. Surprisingly, there is relatively little research investigating procrastination in distance education to determine, if indeed, there is need for concern. As a faculty member of the distance education program at your institution, your input on this issue is needed. Please take a few minutes to complete the enclosed questionnaire. The information you provide will be part of a descriptive study on academic procrastination and distance education.

Please return your completed questionnaire to your distance education program director within five (5) days. The program director will mail your questionnaire, his/her questionnaire, and the questionnaires of two other distance education faculty in a self-addressed stamped envelope.

Please be assured of complete confidentiality. The questionnaire contains identification numbers for mailing purposes and to match distance education faculty with their respective type of distance education program. Names of neither individuals nor institutions will appear on the questionnaires or in the study. As you already know, a high return rate of these questionnaires is important in this kind of research.

You may receive a summary of the results of this study by enclosing your business card in the return envelope. If you have any questions regarding this study or the questionnaire, you may call me at (703) 674-3625.

Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Thomas W. Wilkinson".

Thomas W. Wilkinson, Director

Learning Resources

(703)674-3600
PO Drawer 1127
Dublin, Virginia 24084

New River
COMMUNITY COLLEGE

P.O. DRAWER 1127
DUBLIN, VIRGINIA 24084

Dear Distance Educator,

Recently you received a packet with four questionnaires regarding **ACADEMIC PROCRASTINATION AND DISTANCE EDUCATION**. Please take a few minutes to fill out the Program Director Questionnaire and have three faculty fill out the Faculty Questionnaire. It is important to have as many distance educators such as yourself respond to the survey.

If you have already filled out the questionnaire, your efforts are greatly appreciated.



Tom Wilkinson, Director of Learning Resources
New River Community College

APPENDIX E

**"OTHER" TECHNIQUES USED BY DISTANCE EDUCATORS
TO GATHER DATA ON ACADEMIC PROCRASTINATION**

APPENDIX E

"OTHER" TECHNIQUES USED BY DISTANCE EDUCATORS TO
GATHER DATA ON ACADEMIC PROCRASTINATION

Compare results with students taking same course in
classroom

Written reviews of telecourse programs, no late assignments
accepted

Students can write messages to me on the cover sheets of
tests and homework

Telephone contacts; answer phone available 24 hours

Activities journals of students

Phone calls and post cards following up non-receipt of
assignments

Follow up phone calls to students late in returning work

Data sheets covering goals, post ed., reason for taking
course, commitment to group work and seminar
assignments

Course evaluation

Written deadline/penalties/rewards/completed notebook

Phone calls and personal conferences

APPENDIX F

"OTHER" STRATEGIES USED BY DISTANCE EDUCATORS
TO COMBAT ACADEMIC PROCRASTINATION

"OTHER" STRATEGIES USED BY DISTANCE EDUCATORS TO
COMBAT ACADEMIC PROCRASTINATION

Provide 1-800 telephone number and access to instructor
through published office hours which enhances immediate
feedback from campus if course is a video course

Telecourse "Hotline" telephone service

Newsletter with study hints and student biographies

Provide incentives to instructors for timely return of
assignments

Phone calls to assess progress in all courses

Instructor teaches from remote location once a month,
facilitator used in remote call location

Require on-campus testing

Make available a book on academic success

I write students on a weekly basis, 13 times a semester,
long personal letters or notes

Send encouraging notes at specific dates during semester (to
all students)

The one deadline is the last week of the semester

Require call for approval to take course

Form good telephone communication

Provide positive reinforcement on successful work

Interactive video discussions

Joint projects with other students to reduce sense of
isolation

Meetings after/before mid-term/final exams

Always provide personal and extensive feedback on all
assignments, lots of encouragement

Written and telephone contact emphasizing responsibility

Instructor availability

Require completed notebook with a listing of required work

and grades earned on that work

Require students with specific writing skills deficiencies
to go to writing lab for tutorials

We are reviewing our activities in this area in the hopes of
retaining students better in the future History
telecourses

THOMAS WALTER WILKINSON

**Route 1, Box 335-C
Radford, Virginia 24141
(703) 639-4044**

SUMMARY OF QUALIFICATIONS

Education and training professional with over 16 years' comprehensive experience in industry and higher education managing people and programs. Documented leadership achievements in program design, implementation, and evaluation. Proven skills in teaching and training, team building, problem solving, planning, budgeting, instructional/curriculum design and development, media production and public relations. Demonstrated expertise in instructional technology and leadership through participative management.

SELECTED ACCOMPLISHMENTS**LEADERSHIP AND MANAGEMENT**

- Implemented an employee empowerment and participation program resulting in college receiving the U.S. Senate Productivity Award.
- Implemented participative management programs in industry and education with one quality circle team winning a national award for implementation of a cost-reduction idea saving \$42,000 annually.
- Managed the training and management development program for an electronics component manufacturing plant of 2,300 employees with budget responsibilities of up to \$400,000 per year.
- Led college learning resources program to a nationally recognized comprehensive instructional support unit of the college.
- Initiated college library collection development plan which resulted in an asset growth from \$15,665 in 1986 to more than \$81,000 in 1988 excluding a private endowment.
- Planned, organized and executed start-up of college distance learning program. Expanded course offerings from one to twelve courses serving over 475 students annually in less than three years.
- Planned organized and executed start-up of college teleconference service which served over 375 individuals during program's first year.
- Initiated a public service video program on alcohol awareness which resulted in two national awards.
- Served as President of regional center for training and development receiving a national vocational-technical education award during term of office.
- Initiated a human resource development conference resulting in the publication of a report on the human resource development needs of the New River Valley.
- Conducted an organizational climate study of manufacturing plant with 2,098 employees (92%) responding. Analyzed and reported results to top management and all employees. Recommended actions for improvement.
- Incorporated academic computing, tutoring and notetaking services into college's learning resource center.

INSTRUCTIONAL DESIGN AND DEVELOPMENT

- Developed and implemented curricula for first-level managers, engineers, quality assurance/quality control personnel, maintenance technicians, on-the-job trainers, lead production employees and new employees in industry.
- Developed and implemented a pre-employment orientation program for prospective employees resulting in a one year savings of \$100,000.
- Developed and implemented an off-hours training program in basic electricity in which 15% of work force participated.
- Coordinated industry GED program with over 20 employees receiving high school equivalency certificate.
- Revised training program for quality process checkers and developed tracking system which resulted in an increase in trained personnel from 20% to 94% in nine months.
- Conducted needs analysis and co-produced a report which resulted in the establishment of an education and training organization for a major automobile manufacture in the United States.
- Chairman of instructional development team which produced "Introduction to Microcomputers" - an independent learning course adopted by several community colleges.
- Member of instructional development team for satellite delivered "Office Procedures" class for Virginia Cooperative Extension Service secretaries.
- Designed college instructional development model cited by external evaluators as an exemplary method for improving instructional delivery.
- Conducted task analysis, set objectives, identified learner characteristics, determined appropriate training strategies, selected learning resources, and evaluated training programs.

TEACHING AND TRAINING

- Taught organizational behavioral class in community college business management program.
- Taught television and film production, photography, graphics, multi-image production, visual communication, and materials design and development classes in technical institute instructional media technology program.
- Taught audiovisual methods in instruction classes in university teacher training program.
- Conducted industry training sessions in: communications, company policies and procedures, decision making, human relations, problem solving, quality awareness, time management, training the trainer, and management and supervision.
- Taught seminars and workshops on communication, motivation, team building, and self esteem to government and community groups
- Skilled at using a variety of instructional techniques including: large group lecture, small group discussion, independent learning, role play, experiential learning and demonstration.

RELATED SKILLS AND EXPERIENCE

- Producer of over 50 instructional and public information media programs designed to meet client needs.
- Developed administrative cost reduction and cost avoidance cases in industry totaling over \$328,000.
- Demonstrated experience in budget analysis preparation, supervision and negotiation.
- Effectively managed and motivated employees to work as a team in several work environments.
- Analyzed problems, determined needs and systematically approached problem solving as a manager.
- Employed, developed, and supervised professional and support staff personnel in industry and education.
- Consulted with architects and planning engineers in the design and construction of media production facilities, electronic classrooms and training rooms.
- Provided consulting services to a variety of clients.
- Experienced presenter at local, state and national conferences.
- Experienced writer with several publications.
- Experienced at handling pressure, meeting deadlines and using initiative and creativity in a crisis.
- Member of Virginia Community College System Task Force on Future Computing Trends.

PROFESSIONAL HISTORY

New River Community College, Dublin, Virginia

Professor and Director of Learning Resources, 1989 to present

Associate Professor and Director of Learning Resources, 1986 to 1989

AT&T New River Valley Plant, Radford, Virginia

Supervisor of Training and Management Development, 1984 to 1986

Training Specialist, 1984

Training Associate, 1983 to 1984

New River Community College, Dublin, Virginia

Coordinator of Audiovisual Services, 1978 to 1983

Texas State Technical Institute, Waco, Texas

Instructor/Supervisor, 1976 to 1978

Liebherr-America, Inc., Newport News, Virginia

Graphic Artist/photographer, 1972 to 1975

OTHER WORK EXPERIENCE

Visiting lecturer, Virginia Tech, 1982 to 1984

taught Audiovisual Methods in Education courses

Training consultant, 1979 to present for:

AT&T

Honda of America, Mfg., Inc.

Pulaski Furniture Corp.

Pulaski County

Pulaski County School

Radford Public Health Dept.

Radford University

Volvo-GM Corp.

Volvo-White Corp.

Western Electric, Co.

EDUCATION

Ed.D., Instructional Technology (1990; QCA: 3.9)

Dissertation topic: The Perceptions and Actions of Selected Distance Educators on Academic Procrastination in Telecommunications-based Distance Education Programs in Higher Education.

College of Education, Division of Curriculum and Instruction
Virginia Tech
Blacksburg, Virginia 24061

CAGS (Certificate of Advanced Graduate Studies), Junior and Community College Education,

Instructional Technology emphasis, June 1983 (QCA 3.89)
College of Education,
Virginia Tech
Blacksburg, Virginia 24061

M.S., Educational Media, 1976 (QCA 4.0)

School of Education
Radford College
Radford, Virginia 24142

B.A. Art, 1972 (education minor)

College of Arts and Sciences
Virginia Tech
Blacksburg, Virginia 24061

Advanced graduate Work in Adult Education, Texas A&M, 1977

AT&T Corporate Training

Quality Manager Conference (20 hours), 1985
Basic Statistical Quality Control (12 hours), 1985
Planning and Decision Making (40 hours), 1984
Advanced Industrial Psychology (80 hours), 1984
Group Discussion Workshop (40 hours), 1983
Experienced Trainer Workshop (40 hours), 1983

CIVIC ACTIVITIES

- Board Member U.S. Senate Productivity Award for Virginia
- Board Member of the New River Valley Fine Arts Center, 1989-1991
- Chairman of Small Business Committee of the Pulaski County Chamber of Commerce, 1988
- Member of Pulaski Rotary Club, 1986-present
- Member of Economic Revitalization Committee of Pulaski Main Street Project, 1988-1989

HONORS

- Selected to **U.S. Senate Productivity Award Board** for Virginia (1989-1991)
- **Excellence in Education** award from Virginia Tech (1989) for innovation and excellence.
- Recipient of one of 38 **national VIP awards** for "exemplary achievement in strengthening the nation's vocational-technical education programs", 1988 (from the National Association of State Directors of Vocational Education, the National Association of State Councils on Vocational Education, the National Alliance of Business, and the National Council on Vocational Education)
- **AECT Memorial Scholarship**, 1983 (Highest AECT scholarship awarded for graduate student in U. S. and Canada)
- **AECT Convention Intern**, 1976 (Awarded one of ten internships nationwide to participate in leadership development at national conference)
- **AECT Convention Intern Coordinator**, 1977 (Selected from 1976 interns to coordinate 1977 intern leadership development program)
- **AECT Fellowship Alternate** to Lake Okoboji Educational Media Leadership Conference, 1976
- **Outstanding Young Man of America**, 1983
- **Phi Kappa Delta**, 1976; professional educational leadership organization
- **Phi Kappa Phi**, 1976; national all college honor society
- **Kappa Delta Pi**, 1976; national education honor society
- **Virginia State Tuition Waiver**, 1981-82

PROFESSIONAL AFFILIATIONS AND LEADERSHIP

American Society for Training and Development (ASTD)

Association for Educational Communications and Technology (AECT)

- President, Southwest Virginia Chapter of AECT, 1990
- National Leadership Development Committee, 1977-1980
- Member of Executive Planning Committee and Publicity Chairperson for Southeastern Regional Media Leadership Conference, 1981

Higher Education Media Association (HEMA)

National Eagle Scout Association

New River Valley Center for Training and Development

- President, 1987-1988

Texas Association for Educational Technology (TAET)

- Convention Coordinator, 1977-1978

Virginia Community College Association (VCCA)

- Learning Resources Commission Chairperson, 1989-1990
- Learning Resources Committee Chairperson, 1987-1988

Virginia Educational Media Association (VEMA)

- Chairperson, Leadership Development Committee, 1979-1981
- Publicity Chairperson and Member of Executive Planning Committee for 1979 state conference

Virginia Instructional Technology Association (VITA)

