2002

Learning and Study Strategies as they Relate to Success in an Open-Entry/Open-Exit College Developmental Reading Course

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LEARNING AND STUDY STRATEGIES AS THEY RELATE
TO SUCCESS IN AN OPEN-ENTRY/OPEN-EXIT
COLLEGE DEVELOPMENTAL
READING COURSE

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Ginna A. Wenger

April 2002

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ABSTRACT

LEARNING AND STUDY STRATEGIES AS THEY RELATE
TO SUCCESS IN AN OPEN-ENTRY/OPEN-EXIT
COLLEGE DEVELOPMENTAL
READING COURSE

by

Ginna A. Wenger

Chair: James A. Tucker

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

Title: LEARNING AND STUDY STRATEGIES AS THEY RELATE TO SUCCESS IN AN OPEN-ENTRY/OPEN-EXIT COLLEGE DEVELOPMENTAL READING COURSE

Name of researcher: Ginna A. Wenger

Name and degree of faculty chair: James A. Tucker, Ph.D.

Date completed: April 2002

This study examines whether student interviews, students' responses on the Learning and Study Styles Inventory (LASSI), or both, could be useful for sorting students who are likely to succeed from those students who are less likely to succeed in an open-entry/open-exit college reading skills course at a small, rural Michigan community college.

The study combined qualitative data in the form of student interviews and quantitative data that consisted of LASSI scores from 41 students. The qualitative part of the study employed a constant comparative method to analyze data from five semi-structured interviews. The quantitative part of the study computed Pearson r correlations for each of LASSI's 10 subscales

and the LASSI total score with success in the reading course. ANOVA was used on all scores that correlated at a significance level equal to or below .05 level to determine if results were affected by gender or age.

The qualitative part of the study revealed several factors that appear to distinguish course completers from non-completers. Successful completers reported that they were self-disciplined and sought help when needed. Non-completers described themselves as procrastinators who lacked self-discipline and had not sought help. Past experience in a self-paced course and having had a choice of course format also related to success.

The quantitative part of the study found that the LASSI total score and seven of the subscale scores correlated at a significance level equal to or below the .05 level. The LASSI total score exhibited the strongest correlation; the subscale scores Motivation, Concentration, Selecting Main Ideas, Time Management, Self-Testing, Test Strategies, and Information Processing also had significant correlations.

Recommendations include providing courses in both traditional and open-entry/open-exit formats, allowing for student choice, and screening with the LASSI and/or using careful advising to assure optimal student placement.

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TO SUCCESS IN AN OPEN-ENTRY/OPEN-EXIT
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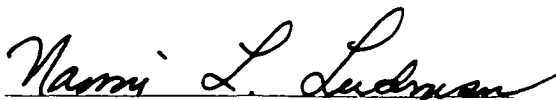
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CHAPTER 1

INTRODUCTION

"To be successful in the next decade, colleges will have to find ways to transcend bricks and mortar in their infrastructure planning" (Gross, 1995, p. 1).

As many community colleges are finding themselves being crunched between high costs and declining enrollments, community college administrators are looking for ways to transcend the bricks and mortar in an effort to get and retain students. For many, college marketing campaigns have failed to recruit enough students to ensure institutional survival. As a result, many have come to see retention of students as their best hope (Alfred, 1998; Clagett, 1996; Closson, 1996; Cope & Hannah, 1975; Tinto, 1993).

Coupled with this need to recruit and retain students, community colleges are grappling with enormous societal and cultural changes. They are struggling to keep up with advances in technology and communications (Alfred, 1998; Closson, 1996; Waul, 1987). Gross (1995) points out that it is easier to move information than people. Moving information to many

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locations makes it more accessible. Therefore, as a practical matter, it makes more sense for colleges to find new ways to deliver information to students than to use the old model of students traveling to a campus to receive their education. He foresees the nature of learning-needs becoming more individualized, as well. The result of these factors means that colleges will have to become more "flexible and efficient about developing self-paced educational programs tailored to smaller target populations" (Gross, 1995, p. 32).

One way that more and more community colleges are attempting to meet the challenge of moving information to the students, plus individualizing instruction while saving money, is by using open-entry/open-exit self-paced delivery systems (Alfred, 1998; Cornell, 1996; McClenney, 1998; Walstrum, 1985). These systems provide the flexibility and convenience that is more and more being demanded by students, businesses, and industries (Alfred, 1998; Gross, 1995; Smith & Tarkow, 1998). They also have the financial benefit for institutions of requiring fewer full-time faculty who will generally be contracted to work more hours than has been traditional (Gausman, 1978; Lazdowski, 1986). Hence, colleges have financial incentives, as well as societal and policy ones, to move to this delivery mode.

Background of the Problem

Open-entry/open-exit programs have been used in vocational and technical programs for many years, and as this trend continues and expands, colleges are seeing a need to provide this type of delivery in academic classes, including those for underprepared students. After all, once they have recruited a student by offering him or her the flexibility of open-entry/open-exit, how can that student be retained if required to do seat time in a traditional semester-long course?

But where retention is concerned, other factors need to be considered as well. Tinto (1993) suggests that "the more students are involved in the social and intellectual life of a college, the more frequently they make contact with faculty and other students, . . . the more students are likely to learn" (p. 69). Involvement with others "increases the likelihood that students will continue to be involved in the future" (p. 69). This link between learning and persistence has been borne out by several studies (Bers & Smith, 1991; Clagett, 1996; Cope & Hannah, 1975; Lenning & Mohnkern, 1986; Nelson et al., 1993; Tinto, 1993). So has the link between involvement with others (social integration) and retention (Allison, 1999; Bers & Smith, 1991; Halpin, 1990; Tinto, 1993).

The issue of social integration may be especially important for community colleges where full-time participation in the social and intellectual life of the college is not common. Most students have many

external responsibilities such as jobs and families that keep them from the college community. "When the academic and social systems of the institution are weak, the countervailing external demands may seriously undermine the individual's ability to persist" (Tinto, 1993, p. 109). This helps explain the attrition rates being higher at 2-year public colleges (as much as 50% in the first year) than any other category of higher education (Lenning & Mohnkern, 1986; Starke, 1994; Tinto, 1993).

Tinto (1993) gives as a principle of retention the following: "Effective retention programs are committed to the development of supportive social and educational communities in which all students are integrated as competent members" (p. 147). He goes on to stress the importance of the classroom, especially in nonresidential institutions, reporting that for new students especially, engagement in the community of the classroom becomes a gateway for subsequent student involvement. When on campus, students spend most of their time in the classroom; it is the one most common educational experience shared by commuting students. It is also the one place where the student and institution most frequently meet.

> Nowhere is the potential for involvement greater than in the classroom. It is for that reason that an increasing number of commuting institutions have turned to the classroom as a point of departure for their efforts to involve students in the life of the college, seeking to enhance both student learning and persistence. (Tinto, 1993, p. 193)

By their nature, open-entry/open-exit courses do not lend themselves to the social integration of students. In her study of nontraditional students, Allison (1999) found that a sense of belonging and morale was significantly related to persistence, and students who chose to take another class with a peer were more likely to persist. In the world of open-entry/open-exit, where students start and end and come and go at different times, where the likelihood of getting to know other students is diminished, for those students who work best in community, persistence may be a problem.

A second part of the problem is concerned with first-year college students. Students who have already established themselves, have become socially integrated, and are known to be successful, may function well in open-entry/open-exit courses. However, these kinds of courses may be particularly difficult for entering freshmen. Students who have just left high school are normally having their first experience with structuring their own time. Older returning students have been away from an academic setting for several years and are unaccustomed to the demands of academic endeavors; plus, they generally have many external responsibilities and concerns. According to Gardner and Jewler (1985), "the single greatest problem college students face is the problem of freedom—too much freedom" (p. 4). Of course, his point is that students at this juncture in their college careers are not always self-disciplined enough to meet the demands of college. This problem is magnified in courses which are self-paced or learner-directed.

Studies show that the first year of college is especially important in the process of persistence. The largest proportion of institutional leaving occurs in that year, particularly the first quarter or semester, and the character of one's experience in that year is important in shaping subsequent persistence (Spann, 1990; Tinto, 1993). Several studies have shown that freshman attrition can be reduced by providing a "Freshman Seminar" or similar class which helps students integrate socially and intellectually into the college community (Dale, 1995; Kalsbeek, 1989; Lenning & Mohnkern, 1986; Starke, 1994). Clearly, first-year (and especially first semester) college students are at particularly high risk for dropping out. It is the time that is the most important for them to become integrated into and therefore committed to the institution. For most students, then, the first semester or two is probably not the best time to take a course which is not classroom-based unless some other way is provided for them to become part of the college community. Referring to nonresidential colleges, Tinto (1993) says,

> It behooves such institutions to do what they can to encourage the development of on-campus communities whenever and wherever possible. Though nonresidential institutions will rarely have the same sorts of communities found on residential campuses, the importance of student involvement in those communities is the same, namely that they enhance the likelihood of persistence. (p. 193)

A third issue of concern is that of underprepared students who typically have passive learning styles, basic skills deficiencies, poor or nonexistent study habits, and lack of self-regulation. They may also have

problems with attitudes and motivation, as well. These students who are not academically prepared for college-level work may have difficulty adjusting to the demands of college. Poor academic performance is a major contributor to attrition (Nelson et al., 1993). Underprepared students "need a comprehensive and intensive support system. Anything less will have at best a marginal impact on the overall success of this group" (Clagett, 1996, p. 65). Unfortunately, open-entry/open-exit courses do not offer the intense support that these students need, and since they are generally not prone to seek help, they are the most likely not to receive the support necessary to function successfully in such a course (Newman, 1994; Smith & Price, 1996; Young & Ley, 2000). These issues combine to make the idea of offering open-entry/open-exit courses, especially to developmental college freshmen, one that requires careful study. The problem of lack of self-regulation and poor study habits and attitudes is certainly limited neither to developmental students nor college freshmen; however, this study focuses only on one small, rural community college's experience with offering a developmental reading course in an open-entry/open-exit format.

Statement of the Problem

Open-entry/open-exit courses are certainly part of the answer to the question of how higher education will survive and flourish in the 21st century. But for students to survive and flourish as well, other questions must be

answered. Is open-entry/open-exit for everybody? Can we find ways to identify which students will succeed in such a system and which need the structure of a classroom or some other form of support to help them become self-regulated? It is this last question that this study endeavors to answer.

The literature suggests that open-entry/open-exit courses may not be the best placement for all entering community college freshmen, especially those identified as developmental (Lazdowski, 1986; Long & Walsh, 1993; Palagi, 1993). From the literature reviewed in chapter 2, it can be concluded that a need exists to provide an adequate basis for counseling students for placement into appropriate intervention or classes to improve their chance of success.

To accomplish this, methods must be found which will adequately assess learning and study strategies and lead to the appropriate intervention and placement of developmental students. From this apparent need, the following problem has emerged: What are the learning and study practices and attitudes of developmental community college freshmen and how do they relate to success in an open-entry/open-exit self-paced system of course delivery? Is there a valid, easily administered measure of those practices and attitudes?

Purpose and Design of the Study

The purpose of this study was to examine the learning and study strategies of students in developmental college reading courses to determine if pre-course assessment of students could be used to determine which of them were most likely to succeed or not succeed in open-entry/open-exit self-paced courses. I used the Learning and Study Strategies Inventory (LASSI) (Weinstein, 1987) to pre-assess the use of learning and study strategies for students in a fall 2000 semester open-entry/open-exit college reading course (called FLEX for Flexible Learning EXperience) and for students in both FLEX and traditionally delivered college reading sections in the winter 2001 semester. The LASSI is a self-report instrument which identifies student strengths and weaknesses on 10 scales which cover both affective and cognitive processes. These affective and cognitive processes are associated with self-regulation, the theoretical link for this study.

For the purpose of this study, success was measured by passing the course (these were pass/fail courses) within the 15-week semester. Although this was not an experimental study since no treatment was given, the winter traditional college-reading-skills sections served as a quasi-control group since the course was delivered to those students in a traditional classroom manner, and identical information was presented by the same instructor in all sections and in both semesters. All members of both groups were surveyed, so the population was a census of the students in each individual

group. The goal of this aspect of the study was to look at student scores on each of the 10 subscales of the LASSI, plus the total score, to determine if there were correlations between any of the subscales or the total score and eventual success in the FLEX course.

In addition to the correlational research using the LASSI, I also interviewed five students. These students were chosen randomly and were representative of the fall 2000 FLEX cohort; the cohort of students who took FLEX in the fall of 2000 but did not complete and so re-enrolled in the traditional course in the winter of 2001; the winter 2001 FLEX cohort; and the winter 2001 traditional cohort. I interviewed one student from each of three cohorts which comprised fewer than 15 students and two from the larger fall 2000 cohort. The interviewees included both successful and unsuccessful students.

Discussion with the group of students who had taken the fall 2000 FLEX course but did not complete, and so then enrolled in the traditional course in the winter, served as a guide in formulating questions for the interviews and provided additional qualitative data. Other sources of possible questions came from my own experience with the students and the system, other instructors in the FLEX system, and research by Zimmerman and Martinez-Pons (1986) on developing a structured interview for assessing student use of self-regulated learning strategies. Besides questions providing background information, students were interviewed concerning their learning

and study strategies as well as their feelings about the delivery system of their class, their opinions on what worked or did not work for them and why, and their view of why they were or were not successful in the course. These were semi-structured interviews which allowed for freedom of expression for both interviewer and interviewee.

Research Questions

The research question for the quantitative part of the study is, *Is there a relationship between the scores on any of the LASSI subscales or the LASSI total score and success in the fall 2000 college reading FLEX course?*

The research hypothesis for this study is that a relationship exists between the students' LASSI subscores or the total score on the LASSI and their success in the FLEX course. Some subhypotheses related to age and gender were also tested.

The research question for the qualitative part of the study is, *Can student interviews yield information that will help sort students who are likely to succeed in a FLEX formatted course from those who are not likely to succeed?*

Significance of the Study

Although this study's primary aim is to help counselors and developmental educators at Kirtland Community College better assess and

place developmental students into appropriate courses, it has implications that reach beyond this one small, rural community college. Colleges across the country are looking to new course delivery systems to meet 21st century demands (Alfred, 1998; Gross, 1995). The number of underprepared students entering colleges, especially community colleges, continues to increase (Amey & Long, 1998; Boylan, 1987). As community colleges look toward meeting the needs of large numbers of underprepared students by using open-entry/open-exit, self-paced delivery systems, they must also look at the appropriateness of placing all of these students into such courses. Since, in general, underprepared students are known to have a variety of deficiencies in learning and study strategies (McMillan, Parke, & Lanning, 1997), many of them do not possess the skills in self-regulation necessary for success in such courses. It will be important for colleges to find methods to determine which students can be expected to succeed in these types of courses and which ones either should not be placed in them or will require additional support if they are placed in them.

To date, little or no research has been done to shed light on this particular issue. Several studies have used the LASSI with developmental students, but for other purposes (Albaili, 1997; Deming, Valeri-Gold, & Idleman, 1994; Grimes, 1997; Hewlett, Boonstra, Bell, & Zumbo, 2000; Ley & Young, 1998; Nist, Mealey, Simpson, & Kroc, 1990). Two studies did attempt to use the LASSI as a predictor of success in courses that were not face-to-

face classes. One was in an online research methods class, and the other was in two-way interactive distance education classes (Clow, 1998; Loomis, 2000). Although both of these studies indicated correlation of success with some of the LASSI variables, neither focused on underprepared students.

Existing research clearly indicates that the LASSI may be a helpful tool to use in advising students; however, the dearth of research that relates this possibility to underprepared students and particularly underprepared students who may be placed in open-entry/open-exit, self-paced courses makes this a study that will begin to shed some light on this important and timely issue.

Definitions

At-risk/developmental/remedial/underprepared: These are students who have been identified by an institution as being in danger of failure without some kind of intervention. This is usually measured by SAT and ACT tests or by assessment instruments administered by the institution, as well as high school grade point averages in some cases.

It should be noted that all students are developmental learners. The term as it is used throughout this study refers to students who are underprepared or to programs designed to help them.

College-ready/college-level/regularly admitted: Students who are deemed to be academically prepared to succeed at college-level work.

Community college: An institution of higher education with 2-year associate degree transferable curricula as well as vocational certificate programs. These are frequently (as is the one in this study) nonresidential institutions or "commuter colleges."

FLEX: The acronym used by Kirtland Community College for its open-entry/open-exit program. It stands for Flexible Learning EXperience. This program offers courses which have limited open-entry (registration occurs every 2 weeks), are self-paced, and are open-exit to the extent that students may exit a program as soon as they finish; however, they are expected to finish a three-credit-hour course, such as College Reading Skills, within 15 weeks.

Individualized: Instruction related to the individual student's needs, ability to learn, interests, motivations, previous education, and history.

LASSI: The Learning and Study Strategies Inventory (LASSI) is a 77-item self-report instrument which measures the following affective and cognitive strategies: attitude, motivation, time management, anxiety, concentration, information processing, selecting main ideas, study aids, self-testing, and test strategies (Weinstein, 1987).

Learner-directed/self-directed: Learning that is controlled by the learner. Learners retain personal autonomy and make decisions regarding

their own learning. This requires self-motivation and self-monitoring as well as self-control.

Open-entry/open-exit: Formats and procedures which allow learners to enter a program whenever they are ready and available, move through the curriculum at their own pace, and leave when competencies are obtained. These programs offer ongoing education to individuals who must drop in and drop out of an educational program because of job or family responsibilities and financial considerations (Gill, 1978).

Self-paced: Learning which allows students to complete assignments at their own rate. It allows them to repeat segments they did not understand without fear of holding up a class; it also allows faster students (or those with more time to devote to the class) to move through the curriculum sooner.

Self-regulated: Learners who are self-regulated are in control of their behavior, motivation, affect, and cognition. They are goal driven, and they (not an instructor or some other person) are in control of their actions (Pintrich, 1995, p. 5).

Student thought: The smallest idea or piece of information that a student expressed that could stand by itself. It is the unit used for data analysis in the qualitative part of the study.

Traditional student: A student who attends college within the first 2 years after high-school graduation.

Non-traditional student: A student who is older than 20 and who began college after other life experiences.

Delimitation of the Study

This study was limited to one small, rural community college in northern Michigan. Results are based on one group of FLEX students in the fall 2000 semester, so they may not be generalizable to other colleges in other settings or with other groups.

Limitations of the Study

Though an attempt was made to administer the LASSI to all students early in the semester, in the fall semester FLEX course, not all students made themselves available to participate as early in the semester as those students in the winter semester who took the LASSI during regular class time. It is not believed that this problem skewed the results, however, because LASSI scores dispersed similarly in both semesters, and those students who were successful in the FLEX class, for the most part, were also the students who responded early, so any higher scores would not be the result of learning from the course.

Because so many of the fall 2000 FLEX students did very little or nothing in the class, not enough actual scores were available for use in statistical procedures. As a result, scores used were pass = 2 and fail =1.

Organization of the Research

This study is organized into five chapters. Chapter 1 presents an introduction which is an overview of why open-entry/open-exit systems are gaining increasing prevalence on community college campuses and explains why this mode of course delivery may be problematic for certain students. It also gives the rationale for, significance of, and design of the study. Chapter 2 presents a review of literature in four areas pertinent to the study: open-entry/open-exit, developmental students/programs, self-regulated learning, and the LASSI . The third chapter describes the methodology used in the study, including a section on the qualitative aspect of the study and a section on the quantitative aspect of the study. Chapter 4 contains the results of the study in both qualitative and quantitative form. And the final chapter concludes with a summary and discussion of the findings, including recommendations for further research.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The review of the literature is divided into four categories. (1) open-entry/open-exit and self-paced instruction, (2) developmental students/programs, (3) self-regulated learning, and (4) LASSI (Learning and Study Strategies Inventory).

Open-Entry/Open-Exit and Self-paced Instruction

The review of the literature using the descriptor "open-entry/open-exit" produced limited results, especially as related to this study. However, with the descriptor expanded to "self-paced," "individualized," "self-directed," or similar terms, the literature becomes more abundant. When the descriptors "developmental" or "remedial" were used in combination with the previously mentioned descriptors, the available data were more useful for this study but less prevalent. Most literature related to open-entry/open-exit systems is concerned with vocational education.

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Open-entry/open-exit programs were defined by Gill (1978) as "programs . . . designed to allow students to enroll, move through the curriculum at their own pace and leave at any date" (p. 9). Open-entry/open-exit self-paced courses, especially in the area of vocational/technical education, have been in existence since the early 1960s (Gausman, 1978) and even earlier in the case of the Emily Griffith Opportunity School of Denver, Colorado (Campbell, 1980).

The Emily Griffith Opportunity School (EGOS) was founded in 1916 in Denver by Emily Griffith, a teacher who had a dream that

> a boy or girl working in a bakery, store, laundry or any kind of shop, who has an hour or two to spare, may come to my school and study what he or she wants to learn to make life more useful. The same rule goes for older folks, too. (EGOS, 2001)

The school was open 13 hours a day, 5 days a week, and may have been the earliest large school to use the open-entry/open-exit system on a large scale. Most courses were vocational in nature, which is a tradition that appears to have held true in open-entry/open-exit education throughout the 20th century.

While there is a dearth of information about open-entry/open-exit programs prior to 1970, in the early to mid-70s to mid-80s renewed interest in these types of programs seems to have arisen, but again, almost all of the literature reports on programs which are vocational in nature, ranging from sewing and horticulture to shorthand and welding. With the exception of an

occasional adult basic education program, the literature in this area until the late 1990s is nearly entirely regarding vocational education.

The primary reasons for implementing and using such systems for instruction are cost and convenience (Alfred, 1998; Cornell, 1996; Gausman, 1978; Smith & Tarkow, 1998; Walstrum, 1985; Waul, 1987). The increasing demand for remedial education has caused Mesa Community College in Phoenix, Arizona, for example, to pilot open-entry/open-exit and self-paced courses in English, math, and reading in an effort to remediate without placing increasing demands on scarce resources (Cornell, 1996). Interestingly, in describing Mesa's pilot program, Cornell reports that, "ideally, students should be highly motivated, and disciplined (self-starters) to exit the program with success. Students not possessing these attributes quickly realize they have to acquire them to complete the class with a desired level of success" (p. 4). One is left to wonder what then happens to those undisciplined students once they have made that realization. Do they fall by the wayside, or are they assisted in some way to acquire those attributes? This study gives no indication of how Mesa handles those students, but the point made about students in self-paced courses needing these attributes is well-taken.

Clearly, urban community colleges such as Mesa are not alone in the struggle to survive in an increasingly competitive market. Gausman (1978) reported that those living in rural areas can be denied higher education

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because they do not live near a college or there are not enough people to justify expensive programs. He discusses the use of open-entry/open-exit self-paced programs at Central Technical Community College in Nebraska as a practical solution to these problems. Some reported financial advantages were increased enrollment, greater productivity per instructor, increased portability of courses permitting more use of part-time instructors, and less instructor travel time.

Market forces are driving community colleges in all types of locales and all across the country to "rethink their strategies, structures, and processes to reach beyond traditional boundaries" (Alfred, 1998, p. 3). Flexible access and convenience are parts of the package that today's consumer students seek when looking at the postsecondary education market (Alfred, 1998).

Delivery systems such as open-entry/open-exit and self-paced programs have many advantages for students, as well as for community colleges. The format is geared to the business world, where layoffs and hiring do not occur conveniently at the beginning of a traditional school semester (Smith & Tarkow, 1998; Walstrum, 1985). Flexible scheduling fits both part- and full-time employment (Gausman, 1978). Another advantage for students is that lessons can be skipped if not needed or repeated until mastered, and faster learners can move on without waiting for the rest of the class to catch up (Smith & Tarkow, 1998).

With so many advantages for both community colleges and their students, one might wonder why open-entry/open-exit and/or self-paced programs are not more prevalent. Certainly, postsecondary education is moving in the direction of making open-entry/open-exit opportunity available as one of many options (McClenney, 1998). However, change rarely comes easily. Colleges which embrace these systems have to break the bounds in many areas. "Semesters and seat time mean less and less, and faculty contracts . . . may run from 166 days to well more than 200 days" (McClenney, 1998, p. 12). Working in teams and using technology to assist students replace lecturing in front of a class. Many faculty members have invested "entire careers in an educational delivery system built around fixed-entry/fixed-exit" (Alfred, 1998, p. 36).

Open-entry/open-exit systems "have placed tremendous burdens on teachers" (Waul, 1987, p. 43). Some problems for faculty which have been identified are finding sufficient time to prepare for individual students and the difficulty of keeping track of new students enrolling in a program at different times and moving at different paces (Waul, 1987). It is interesting to note that in an extensive investigation of arguably the oldest open-entry/open-exit program in the United States, the Emily Griffith Opportunity School in Denver, Colorado, one of the problems identified by instructors was that of scheduling of new learners into the system (Campbell, 1980). At the time of this study, the Emily Griffith Opportunity School had been in

existence for more than 60 years, so it is probably fair to say that this is a persistent problem.

A descriptive study by Walstrum (1985) in which he collected survey data from 58 institutions which had been identified as having experience with open-entry/open-exit delivery revealed that a problem common to many of the institutions was excessive record keeping. Some recommendations to help alleviate this problem include employing instructional aides or other paraprofessionals to do routine clerical tasks; developing computerized systems to enroll, track, and evaluate students; and providing extensive opportunity to faculty and aides for program development and inservice training (Walstrum, 1985; Waul, 1987).

The benefits of open-entry/open-exit and self-paced delivery systems are many. The busy pace of our society and the varied needs of today's adult learners combine to make this an idea whose time has come. However, experience is showing that although adult learners prefer to be responsible for their own learning (Knowles, Holton, & Swanson, 1998), many do not possess the self-directed learning readiness to succeed in self-paced courses (Long & Walsh, 1993).

To help students stay on track, several open-entry/open-exit and self-paced programs require attendance. Forty-eight of the 58 respondents to Walstrum's (1985) survey disagreed with the statement, "Attendance policies should be removed from the students in an OE/OE system" (p. 104). In a

study comparing the effectiveness of open-entry/open-exit classes to closed-entry classes requiring attendance, "academic growth (at least one grade level in mathematics, vocabulary, and reading comprehension) was positively correlated to a minimum of 75 percent student attendance" (McCrossan, McDowell, & Cooper, 1998, p. 17). Requiring attendance can help those students who have not learned to be self-directing. This often includes those students who are considered developmental.

Two studies reviewed by Long and Walsh (1993) focused on developmental community college students. They concluded that these students are more likely to persist if they have received instruction in study skills and training in self-directed learning. Reporting on an open-entry/open-exit program designed for developmental students at El Paso Community College in Texas, Lazdowski (1986) reports that "a vast majority of first-time students continue to have inadequate prerequisites for successful college study" (p. 3). When developmental students enter college and find themselves in a course requiring self-direction, if they are not given prior training in the skills necessary to succeed in such classes, as many as two-thirds may not succeed (Palagi, 1993).

One study, which was conducted in New Mexico at the Santa Fe Community College Flex Lab, attempted to determine what types of students were successful in this self-paced method where students could complete assignments at home, work, or in an open classroom. Results identified

seven characteristics that correlated with higher completion rates: computer knowledge, part-time status, caring for children, scholarship funding, typing skills, and being male (Richards, 1998). This particular study did not focus on developmental students, but it did point research in an important direction if, indeed, these types of educational delivery systems are the wave of the future.

Cost benefits to institutions, convenience to students, and issues of change for faculty and staff are all irrelevant if education is not truly happening for students. Not all students are ready to succeed in open-entry/open-exit courses, especially those not requiring attendance. Developmental students, in particular, have special needs that put them at risk. The Community College of Denver uses a "high-tech, high-touch" approach with such students (McClenney, 1998, p. 13). This highly innovative and successful community college has obviously learned something about the needs of these students to have a "high-touch" atmosphere for their success. Thus, a critical need, particularly in the area of developmental or remedial education where open-entry/open-exit or self-paced delivery is concerned, is to determine which students have the readiness for success in the system and which need prior training in being self-directed or possibly would be more successful in traditional courses.

Developmental Students/Programs

Community colleges, with their open-door admission policies, have traditionally led the way in providing access and education for academically underprepared students. Almost a third of all students entering colleges and universities are underprepared, and about two thirds of those participating in developmental education attend community colleges (Boylan, 1999). The number of underprepared students is expected to continue to increase each year (Amey & Long 1998; Boylan, 1987; Roueche & Roueche, 1994). As budget constraints force institutions to look for ways to economize, open-entry/open- exit and self-paced delivery systems for these ever-increasing numbers of students appear to be an efficient solution. These types of programs are capable of serving large numbers of students with a minimal number of faculty and staff and are therefore relatively inexpensive to operate (Gausman, 1978; Lazdowski, 1986; McMillan et al., 1997).

Behaviorist learning theories generally underlie the concept of programs which are self-paced, computer-assisted, or in open-entry/open-exit format (McMillan et al., 1997). However, while behaviorist learning strategies may be used as part of a developmental curriculum, in developmental theories of learning, the instructor plays an important role by creating a supportive and encouraging environment that provides challenges at appropriate levels (McMillan et al., 1997). A developmental education

approach is "a comprehensive process focusing on the intellectual, social and emotional growth and development of all learners" (Casazza, 1999, p. 4).

The National Association of Developmental Education (NADE) has issued the following definition of developmental education:

> Developmental education is a field of practice and research with a theoretical foundation in developmental psychology and learning theory. It promotes the cognitive and affective growth of all learners, at all levels of the learning continuum. It is sensitive and responsive to the individual differences and special needs among learners. (NADE, 1996)

Underprepared students are generally not ready for the responsibility of a self-directed approach to learning; however, while successful developmental programs are based on developmental theories, the delivery of instruction often includes instructional modes associated with behavioral theory. Such a blend can provide cost effectiveness and, at the same time, provide the support most developmental students need. Care must be taken, however, in program design to consider the special characteristics of these students. "Learning styles of developmental students tend to be more passive than those of their peers in college-level academic programs" (McMillan et al., 1997, p. 26).

John and Suanne Roueche (1994) reviewed 25 years of research concerning at-risk college students. Their overarching recommendation was that, for these students to be successful, colleges need to increase support and structure for them. "It is obvious from our current study that at-risk

students require more structure than any other group of learners in American higher education" (p. 6).

A plethora of researchers have attempted to identify the differences between college-ready and at-risk students. Grimes (1997), for example, collected data for 140 community college students, 91 of whom were identified as underprepared and 49 of whom were college-ready. A primary finding of this study was that underprepared students demonstrated a more external locus of control than college-ready students. Another study of 500 community college freshmen also indicated that more than just academic preparation (underprepared students rate themselves differently on many experiential and attitudinal measures than college-ready students do) comes into play (Grimes & David, 1999).

Another study by Smith and Price (1996) surveyed 233 college developmental students. Interestingly, most students have positive perceptions of teachers and school experiences. However, causal attributions for poor academic performance tended to point the finger of blame at external factors such as task difficulty or luck rather than their own effort or lack thereof. Once again, this external locus of control appears to result in passive learning styles and lack of academic success.

Wambach (1993) chose a different course of study but obtained similar results. Her qualitative study involved interviews with 19 at-risk freshmen who were successful students (as determined by achieving Dean's-list status

in their first quarter in college). Results suggested that their improved academic performance could be explained by Weiner's (1985) attribution theory of motivation which posits that students attribute successes and failures to ability, effort, task difficulty, and luck. Ability and effort are internal factors; task difficulty and luck are external factors. Most successful students who were interviewed for this study indicated that their previous lack of academic success was due to lack of effort. Mealey (1990) agrees that

> until at-risk college reading students are motivated to take responsibility for their own learning, until they attribute their success to their own efforts, until they see themselves as learners, they will be unable to take advantage of strategic learning instruction. (p. 598)

In another qualitative study, Yaworski, Weber, and Ibrahim (2000) interviewed 21 developmental students, half of whom were on academic probation and half of whom had relatively high grade point averages. This study uncovered six characteristics of successful students: They attend and participate in class, complete assignments, view instructors as experts, use an organized study routine, develop a repertoire of study skills strategies, and take responsibility for their own learning. The low achievers in the study apparently also believed that those were the characteristics that were key to academic success; however, they did not engage in them for a number of reasons including lack of interest, lack of motivation, and lack of knowledge with respect to strategy use.

Clearly, the needs of underprepared students are varied and many. They "possess a collage of academic, social, and economic problems that challenge their success in college " (Roueche & Roueche, 1994, p. 4). Good developmental education recognizes that students are developing personally as well as academically. It sees them as total human beings and attends to both their cognitive development and their affective development (Boylan, 1999; Casazza, 1999; Grimes, 1997; Mealey, 1990; Roueche & Roueche, 1994; Yaworski et al., 2000). According to Turnbull (1986) the success of developmental students increases proportionally with the amount of time, energy, and effort devoted to the learning process. Support should focus on the lack of motivation that some students feel toward academic work and be designed to help them increase their ability to use strategies, set goals, develop positive academic self-concepts, and feel a sense of self-efficacy (Yarworski et al., 2000).

Developmental students with identified skill deficiencies in only one subject area may be successful in self-paced courses, but those students with multiple deficiencies and a passive learning style "may need to attend classes where they interact with an instructor and are offered extensive guidance and feedback. Clearly students exhibit a range of needs in the area of remedial/developmental instruction for which there is no one-size fits-all solution" (McMillan et al., 1997, p. 29).

Self-Regulated Learning

It seems axiomatic that students who have been identified as developmental, especially those with reading problems, might be expected to perform poorly in a class where their ability to read independently as well as comprehend and follow written instructions is fundamental to success. But beyond their poor reading skills, an even more important factor may be implicated, and that is the value of self-regulatory processes to academic success. Evidence points to the inability of students to exercise self-control effectively as a major cause of underachievement (Zimmerman, 1994). A body of research evaluated by Borkowski and Thorpe (1994) indicates that underachievers "are more impulsive, have lower academic goals, and are less accurate in assessing their abilities; furthermore, they are more self-critical and less self-efficacious about their performance and tend to give up more easily than achievers" (Zimmerman, 1994, p. 5).

Although the research evaluated by Barkowski and Thorpe (1994) dealt with elementary and high-school students, more recent research reviewed by Young and Ley (2000) focused on college students, assessing the self-regulating needs associated with developmental and low achievement status. They found that self-regulated learning strategies were significantly different between regularly admitted and developmental students. Developmental students were found to be deficient in "self-evaluation,

environmental structuring, organizing and transforming, reviewing tests and keeping records, and monitoring" (p. 58).

Since World War II, many educational reform movements in the United States were based on assumptions about how students learn. They put the responsibility to adapt education to students' needs on teachers and school officials. Resulting instructional theory viewed the students' part in their education as reactive rather than proactive (Zimmerman, 1989). Self-regulated learning theories, instead, assume that students

> (1) can personally improve their own ability to learn through selective use of metacognitive and motivational strategies; (2) can proactively select, structure, and even create advantageous learning environments; and (3) can play a significant role in choosing the form and amount of instruction they need. (p. 4)

Theories of self-regulated learning help us to understand how some students succeed despite limitations in mental ability, social environment, background, or educational quality while others fail to learn despite advantages in these areas. Self-regulation happens when students strategically monitor and control their behavior and their study environment. Students are self-regulated if they are metacognitively, motivationally, and behaviorally actively participating in their own learning (Young & Ley, 2000; Zimmerman, 1989, 1994). Weinstein (1996), in discussion of the changing roles, needs, and demands for 21st century instructors and students, defines strategic learners as those who

have self-regulation strategies to plan, orchestrate, and manage their studying and learning. . . . [They] use a systematic approach to setting and meeting their learning goals. This includes setting a study or learning goal; creating a plan to reach the goal; selecting the specific methods to be used in reaching the goal; implementing the method; monitoring progress; modifying the plan, methods or even the goal, if necessary; and evaluating the process to decide if this would be a good way to try to meet similar goals in the future. (p. 50)

Self-regulation, according to Pintrich (1995), involves the regulation of three aspects of academic learning. One is actively controlling resources such as faculty and peers as well as time and study environment. The second is controlling and changing such motivational beliefs as efficacy and goal setting, along with controlling emotions such as anxiety. The third is controlling cognitive strategies for learning such as paraphrasing and outlining.

Clearly these are skills that are requisite for success in an open-entry/open-exit class where, to be successful, students must take control of their own learning, be aware when they need help, and take the initiative to get that help.

The amount of literature on the topic of self-regulation since the mid-1980s is overwhelming. Numerous approaches have been used to study the topic. Self-regulation has been discussed and studied from a number of theoretical perspectives including operant, phenomenological, social-cognitive, volitional, Vygotskian, and constructivist (Zimmerman & Schunk, 1989). The topic is too large to study in its entirety within this chapter. A brief look, however, at some of the processes involved in self-regulated

learning may help shed some light on the struggles of many developmental students to succeed in a self-directed learning situation. An important aspect of theories of self-regulated learning is that student learning and motivation are treated as interdependent processes that cannot be fully understood apart from each other (Zimmerman, 1990). Boekaerts (1995) concurs that self-regulated learning strategies involve affective as well as cognitive variables. Other studies examining affective and cognitive variables found relationships as well (Hansford, 1994; LaVergne, 1988).

Self-regulated learners, rather than being passive recipients of information, as many developmental students frequently are, contribute actively to their learning and take control of attainment of learning goals (Schunk, 1989). They participate actively in their own learning process cognitively, metacognitively, motivationally, and behaviorally (Zimmerman & Martinez-Pons, 1988).

Some cognitive strategies that an expert learner will have control of include such knowledge as how to acquire, process, and organize information. They will also know how to use mnemonics and rehearsal, take notes, write papers, prepare for and take tests, select main ideas, and recognize important information (Weinstein & Van Mater Stone, 1993).

In terms of metacognitive processes, self-regulated learners monitor their own comprehension by self-assessment such as paraphrasing (Weinstein & Van Mater Stone, 1993). They set goals, and use forethought,

planning, and self-reflection (Brown & Pressley, 1994; Zimmerman, 1998) in a self-regulatory cycle which gives them important feedback so that they can alter their strategies or goals as necessary and also feel a sense of personal control over their learning (Lan, 1998; Zimmerman, 1998; Zimmerman, Bonner, & Kovach, 1996).

With regard to motivation, self-regulated learners have positive perceptions of their competence, which are self-reinforcing. They have a willingness to learn, are self-efficacious, and perceive themselves to have control over their learning. They attribute their success to their own effort (Schunk, 1994; Weinstein & Van Mater Stone, 1993; Zimmerman, Bandura, & Martinez-Pons, 1992).

Where behavior is concerned, self-regulated learners "select, structure, and even create social and physical environments" (Zimmerman & Martinez-Pons, 1988, p. 284) that enhance learning. They manage their time (Zimmerman, Greenberg, & Weinstein, 1994), environment, and self (Zimmerman, 1989, 1994, 1998). Among their behaviors is the strategy of seeking help from a more knowledgeable person when faced with a difficult task (Neuman, 1994; Zimmerman & Martinez-Pons, 1986).

All of these self-regulatory strategies are crucial for success in any self-directed learning situation. Therefore, if developmental students have not learned to be self-regulated learners prior to college entrance, and their first

required class upon beginning college requires skills in self-regulation, it stands to reason that most will fail.

Eom and Reiser (2000) conducted a small study of 37 students, comparing a group in learner-controlled computer-based instruction with a group in program-controlled computer-based instruction. The learner-based instruction allowed students to choose the type and amount of instruction and practice that they did, while the program-based instruction gave all of the instruction and all of the practice to the students. Prior to instruction, students were classified (according to the results of a questionnaire) as either high or low self-regulating learners. Results revealed that students in the program-based group scored higher on a posttest than those in the learner-controlled group, and that the poorer performance in the learner-controlled group was particularly pronounced among the low self-regulating students.

The implication here is that putting students into a learner-controlled instructional setting without first making sure that they have the skills and abilities to self-regulate their own learning is to set them up for failure. Pintrich (1995) contends that self-regulated learning is teachable and suggests specific strategies for helping college students become self-regulating learners. However, "underprepared students may need more directed assistance with their reading and writing skills" (Hofer, Yu, & Pintrich, 1998, p. 64) prior to taking a course in strategy instruction.

In a discussion of a comprehensive theory for developmental education, Wambach, Brothen, and Dikel (2000) have suggested that "the conscious development of self-regulation is the task that might distinguish developmental education from other postsecondary education programs" (p. 3).

Certainly developmental education must concern itself with more than basic skills in reading, writing, and mathematics if students are to be successful. Low self-regulating students need to be identified so that they will not be inappropriately placed in courses which require them to take control of their own learning before they are ready.

The Learning Skills and Strategies Inventory (LASSI)

Standardized assessment instruments such as the LASSI can give students and instructors important information about students' motivational beliefs and learning strategies (Pintrich, 1995). The LASSI diagnoses student learning and study strategies on 10 scales: Attitude, Motivation, Time Management, Anxiety, Concentration, Information Processing, Selecting Main Ideas, Study Aids, Self-Testing, and Test Strategies. It was designed over a period of 9 years of research, development, and testing by Claire Weinstein and associates (Weinstein, 1987). It is a 77-item self-assessment tool which measures both affective and cognitive strategies.

The purposes for developing the LASSI were twofold: (1) the authors saw a need for a way to measure the deficits and progress of students in college programs designed to address student deficiencies, and (2) they saw a need to diagnose specific areas of weakness so that individualized prescriptions for improvement could be made for students. This would also provide a basis for evaluating the effectiveness of a program (Weinstein, 1987; Weinstein, Zimmerman, & Palmer, 1988).

Weinstein and her associates (Weinstein, 1987; Weinstein et al., 1988), began by analyzing existing commercial and experimental instruments and inventories. Regarding these, they reached the following conclusions: (a) across study skills inventories, there was no consistent definition of study-skills, (b) the low reliability of subscales on those tests which had them, rendered them useless, (c) most of the "good" study skills inventoried had not been empirically validated, (d) no instrument had been validated as a diagnostic measure, (e) most instruments could be easily faked by students, and (f) most items dealt only with consistent and regular study to the exclusion of testing for an "active" learning style.

A survey project was undertaken to look at the contents of study-skills books and programs, and to interview experts in an attempt to arrive at definitional components. Individual items from existing inventories and from experts elicited a pool of 645 items which were then sorted into categories. It first became necessary to eliminate duplicate items. Then came the

elimination of items which did not directly deal with study practices (items about personality characteristics, for example) and items about previous behavior or experience that could not be changed or remediated. They eliminated items which were confusing or asked more than one question in the same item, and they rewrote poorly worded items. This reduced the item pool to 291.

The items were put into a true-false format, and a preliminary pilot test was conducted. As a result, items were added, eliminated, or altered based on student and practitioner suggestions, comparison of test data with other student data, and research in cognitive psychology. Also, items that had a significant correlation (positive or negative) with the measure of social desirability which students had also taken, were eliminated. After independent examination by two content-matter specialists and two psychometricians, a revised set of 14 categories with at least 7 items in each category (for a total of 149 items) was created. The test was also reformatted from its true-false design to a 5-point Likert-type format.

A second pilot test was then conducted during which criteria were established for selecting items for the field test version of the LASSI. Using the data from several field tests, the number of items was reduced to 90, and 10 scales measuring different groups of strategies and attitudes were developed. Using the fall 1982 incoming freshman class at a small private college in the eastern United States (n=783), preliminary norms were

developed (Weinstein, 1987; Weinstein et al., 1988). Item analysis data were used to create the current 77-item form after which another field test was conducted in 1984.

Norms for the current version were developed using a sample of 880 incoming freshmen at a large southern university. Test-retest correlations (separated by a 3-week interval) were computed using a sample of 209 students in an introductory course at the same school (Weinstein, 1987).

Weinstein (1987) reports that several approaches have been used to confirm the validity of the LASSI, and her confidence in it extends to using it in her own work with students. Additionally, the LASSI is recognized nationally as a well-constructed inventory (Mealey, 1988). Research studies report varying results when looking at the LASSI in terms of validity. Cole (1988) found that the LASSI correlated positively with both first-semester grade point average and another survey of study habits and attitudes. On the other hand, Perkins (1991), examining the predictive validity of the LASSI, found that though it was reliable, it had low predictive validity using first-semester grade point average as the performance criterion.

Of particular interest here are two studies focused on developmental college students. Since the LASSI is widely advertised as an assessment tool for developmental reading programs (Nist et al., 1990), and was actually designed for use with underprepared students (Weinstein, 1988), Nist et al. questioned its being normed using 880 incoming freshmen from a major southern university. Nist et al. used the LASSI for pre- and posttesting of a

group of regularly admitted students and a group of developmental students. They found that for developmental students, the LASSI had no predictive ability for success in regular college course work. While conceding that the students might have responded to the items in a way they thought was "correct," they caution against using the LASSI as a predictor of success for developmental students' performance in regular college courses.

In response to Nist et al. (1990), Deming et al. (1994) took up the challenge to conduct additional research investigating the use of the LASSI with developmental students. In this study, 9 of the 10 scale reliability coefficients approached but did not equal those given by Weinstein (1987). The Study Aids scale coefficient did not approach Weinstein's coefficient. Clearly, the results of the Nist et al. study and the Deming et al. study are contradictory.

In a further attempt to test the stability of the LASSI, Everson, Weinstein, and Laitusis (2000) used high-school students of varied background (858 10th-grade and 791 11th-grade students). These students had also taken the Preliminary Scholastic Achievement Test (PSAT/NMSQT). Results found coefficient alphas ranging from .68 to .82. demonstrating coefficient alphas similar to or higher than those reported in the user's manual. Reliabilities for the test were high as well, with .95 for the 10th grade and .94 for the 11th grade. These are also consistent with results reported in the user's manual.

Several other studies have used the LASSI. Kochenderfer (1988), in a study of 974 community college students, found that learning and study strategies, as measured by the LASSI, are positively related to academic success as determined by grade point average and that the Motivation scale had the greatest bearing on this result.

In a study by Schumacker, Sayler, and Bembry (1995), the LASSI was administered to 156 early-admission students at the University of North Texas. Four scales were found to distinguish the academically successful from unsuccessful students. At Ball State University, Robertson (1994) has administered the LASSI to approximately 3,800 incoming freshmen each year since 1990 and found it predictive of successful and unsuccessful students.

Loomis (2000) investigated the relationship between students' LASSI scores and their performance in an online research methods class. Five of the LASSI scales had significant correlations with at least one aspect of the course assessment. The strongest correlation occurred between the Time Management variable and the final grade. Studies such as Loomis's, which look at the success of students in classes that are more learner- than instructor-directed, are of particular interest here. In another such study, Clow (1998) conducted a similar study of students in a distance education class. Results indicated a strong correlation between grade point average and seven of the LASSI variables: Attitude, Time Management, Motivation, Anxiety, Concentration, Test-Taking, and Selecting Main Ideas. She found

that Motivation was the most useful variable for predicting academic success, but no variable was significant in predicting course completion. The researcher attributed this to an unusually low attrition rate due to faculty having recruited "outstanding" students who had successfully completed 65 quarter hours for the distance education courses.

Heaney (1996) conducted a study of 492 students entering a community college for the first time. She found that academic achievement as measured by first-semester college grade point averages was correlated with seven of the subscales on the LASSI. These were Attitude, Motivation, Time Management, Concentration, Study Aids, Self-Testing, and Test Strategies.

A study by Hewlett et al. (2000) looked at the possibility of using LASSI scores to determine if students have reading problems. They hoped that LASSI scores would help them sort better from poorer readers because students are more willing to complete a nonthreatening self-report such as LASSI than take a standardized reading test. The study, however, did not give evidence that the LASSI would sort good readers from poor ones. Since it was not designed for that purpose, this was certainly no surprise.

Three studies compared underprepared college students or low achievers with higher achievers. In her study, Grimes (1997) found that underprepared students demonstrated a perception of less control over their

environment and less responsibility for taking action as well as higher anxiety than college-ready students.

In an interesting contradiction, Ley and Young (1998), using only the LASSI Motivation scale, found no difference between developmental and regularly admitted students. However, Albaili (1997), in a larger study of 168 university undergraduates, found that low-achieving students scored significantly lower than the average- and high-achieving students on all of the 10 scales, and that Motivation was the most powerful factor that separated low achievers from high achievers.

"Given the imperfect state of measurement practice, it is safe to say that no test is perfectly valid" (Patten, 2000, p. 53). Much evidence exists, however, that the LASSI is an accurate predictor of academic success in a variety of situations and with thousands of students. Given the preponderance of studies which have found the LASSI useful and given its 10 subscales which are aligned with the self-regulatory strategies that students need to succeed in a self-directed learning situation, it may be a helpful tool to use to sort those developmental students who are more likely to succeed in an open-entry/open-exit self-paced course from those who will need traditionally delivered courses or other support.

CHAPTER 3

METHODOLOGY

Introduction

In the first part of this chapter, the qualitative aspect of the study is discussed. This part of the study involved interviewing five students to elicit descriptive data concerning their experience with their college reading course. I wanted to gain insight into the phenomena of participation in a FLEX or traditional college reading skills course from the perspective of the participants. I also wanted to investigate whether interviewing students could serve as a method of sorting those who might not succeed in a self-paced open-entry/open-exit course from those who were more likely to succeed. The combination of data from the two parts of the study helps to provide triangulation. Triangulation helps to provide validity to a study by using more than one investigator, more than one source of data, or more than one method to confirm the findings. I have chosen to use both qualitative student interviews and a quantitative measure of students' study skills to see if one or the other method might provide more useful data, or if a

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combination of methods would be most helpful. Additionally, the quantitative measure could help provide validity for the qualitative method.

Part I of the chapter also includes information about student selection, interview procedures, identification of the interviewer, validity, and methods employed in data analysis.

In the second part of this chapter, the design of the quantitative aspect of the study is discussed. This part of the study was correlational and used a self-report survey instrument. The purpose was to correlate the students' scores on the instrument with their success or lack of success in a college reading FLEX class. Part II of the chapter also includes the population, data collection instrument (LASSI) and procedures, and methods used to analyze the data.

Part —The Words

Purpose

Blending quantitative and qualitative research is a trend which allows the researcher to combine the objectivity of validated measures with the flexibility of exploring phenomena in their natural settings (Gay & Airasian, 2000; Patten, 2000; Rudestam & Newton, 1992). In this aspect of the study, the qualitative part, I endeavored to approach the topic of developmental students in open-entry/open-exit and traditionally delivered courses from their own perspectives. My purpose was to allow their voices to be heard

while listening to them for insight into why this delivery system did or did not work for them, what learning strategies they used, their view of why they did or did not succeed, whether they could have told us which delivery system works best for them, and their feelings about the course as they took it.

Student Selection

I used purposeful random sampling to identify the five students whom I interviewed. The reason for this was to establish that the sampling procedure was not biased (Gall et al., 1996, p. 235). I wanted to get students to speak from as many perspectives as possible, so I first divided all of the students into specific cohorts as follows: (1) all students who were in the fall 2000 FLEX course; (2) students who enrolled in the winter 2001 traditionally delivered class; (3) students who enrolled in a winter 2001 FLEX class; and (4) students who were in, but did not complete, the fall FLEX class and subsequently enrolled in the winter traditionally delivered class (this cohort overlaps with cohort number 1).

First, I consecutively numbered the students in each cohort. Then using the Statdisk Uniform Random Sample Generator (TCC, Password, & Flynn, 2001), I obtained two random numbers for each cohort. I then identified which student in each cohort had been assigned those numbers. Those students were identified as the interviewees. Since the Statdisk does

not generate a sample size of fewer than two, for the small groups, for which I would interview only one student, I chose to consistently use the top number generated. Appendix A shows the randomly generated numbers for each of the cohorts. I interviewed one student from each cohort with the exception of the larger fall FLEX group, from which I interviewed two students. The random generation for that group conveniently produced one successful and one unsuccessful student, providing a good balance. If it had not, I would have generated another set or divided the cohort into completers and non-completers because I was particularly looking for a fair balance. And even though there were considerably more unsuccessful than successful students in that cohort, I already would be interviewing another unsuccessful student from that group when I interviewed the student from the overlapping cohort number 4 that consisted of students who had taken the FLEX course in the fall and not been successful so were taking the traditionally delivered course in the winter.

Interview Procedures

The interviews were semistructured. I was guided by a list of questions (see Appendix B), but I did not ask every student every question and the students were encouraged to share any other thoughts or information that was pertinent to the issue. I added or modified questions as appropriate (Gay & Airasian, 2000, p. 221). For example, when one student

mentioned having taken a similar course in high school, I followed up with questions about that course and whether that experience had helped prepare her for the FLEX course. Since some of the students had taken the FLEX course and some had taken the traditional course, not all questions were appropriate for all students. Fall 2000 FLEX students, for instance, were not queried about why they chose FLEX, since in that semester it was the only option. Winter semester students, however, were asked about why they chose one format or the other. All students were asked about their study habits and attitudes. Questions came from several sources. Zimmerman and Martinez-Pons (1986) have developed a structured interview for assessing student use of self-regulated learning strategies. Their work served as a guide for some questions, such as, "Is there any particular method of study you normally use?" Others, like asking for their recommendation for how the class should be offered in the future, arose from my desire to learn from the students' experiences. Some questions, such as those asking how many hours each day the student generally studies and whether the student tried to get help, came from my own experience of teaching the class, as well as from student comments. To maintain a distinctness between the two aspects of the study, I chose not to consult the LASSI when formulating interview questions. Therefore, the interview questions, though similar, were able to reflect more specifically focused aspects of my experience with students in the open-entry/open-exit course.

Interviews all began with questions to gain background information and other neutral questions that helped to put the interviewee at ease. All students were contacted on campus or called at home to schedule the interviews at a convenient time for them. All but one were conducted in an empty classroom on campus. One was conducted in an empty cafeteria at the workplace of the interviewee. With the permission of the participants, audiotapes were made of each interview. Interviews varied in length from 15 to 25 minutes. Students chose or were given aliases to protect their identity. At the time of each interview, I reviewed the consent form with all interviewees to make sure they understood all aspects of it and also to have them check the statement verifying their willingness to participate in an interview. I also assured them that they would be able to verify my work before it would be published.

Validity

Since I personally worked with the students in all of the college reading courses over the two semesters, I had heard most of the comments made by the interviewees from other students as well, so I felt that their views were consistent with those of others in the courses. This structural corroboration was also borne out in agreement among a group of students I spoke with more casually as well as among individual interviewees. There was a "confluence of evidence that breeds credibility" (Eisner, 1998, p. 110).

In addition, students were asked to read the part of the study which reflected their comments to check for accuracy and conformity to the intentions of their words—in other words, did I say it the way they meant it? (See Appendix C.)

Merriam (2001) poses several questions that "challenge the trustworthiness of qualitative research" (p. 202). These questions are:

1. What can you possibly tell from an *n* of 1 (3, 15, 29, etc.)?
2. What is it worth just to get one person's interpretation of someone else's interpretation of what is going on?
3. How can you generalize from a small, nonrandom sample?
4. If the researcher is the primary instrument for data collection and analysis, how can we be sure the researcher is a valid and reliable instrument?
5. How do you know the researcher isn't biased and just finding out what he or she expects to find?
6. Doesn't the researcher's presence so alter the participant's behavior as to contaminate the data?
7. Don't people often lie to field researchers?
8. If somebody else did this study, would they get the same results? (p. 202)

Two of these questions are particularly relevant here where my role as researcher overlaps with my role as instructor. The first of these questions is, "How do you know the researcher isn't biased and just finding out what he or she expects to find?" In answer to this, I placed some safeguards into my design. The random selection of participants meant that I could not purposely or subconsciously choose participants whom I knew to be biased in any particular direction. That was also my reason for choosing students from several different cohorts, as well as a mix of those who were successful and those who were unsuccessful. Also, I had a keen interest in learning about

the students' experiences and wanted to learn from them how we could best help future students. I really was not sure what I would find.

The second relevant question is, "Doesn't the researcher's presence so alter the participant's behavior as to contaminate the data?" Once again, I built safeguards into my procedure to avoid this as much as possible. I interviewed students at the end of or after the semester in which they took the class so that they would not feel pressured in any way about their answers influencing their grade. I also carefully assured all participants of the purpose of my research, and I believe the variety of both positive and negative responses about their FLEX experiences speaks for itself to validate that students felt free to express their honest views.

Lastly, I employed a strategy recommended by Merriam (2001, p. 204): that of peer examination. I asked the other instructors who participated in the FLEX program and the FLEX program coordinator to comment on the part of the manuscript that described the FLEX program to verify accuracy (see Appendix D).

Spradley (1979) points out that most interviewers will be conducting participant observation at the same time, and he suggests that these relationships "contribute to rapport as much as, or more than, the encounters during actual interviews" (p. 79). According to Spradley, the interview process goes through the following stages: apprehension, exploration, cooperation, and participation, and under conditions such as my ongoing

relationship with my students, the relationship may move quickly to the stages of full cooperation and participation. In a study such as this, where I was looking for specific information that I could get in just one interview with each participant, the previous relationship I had with my students was an advantage since I had positive rapport with the interviewees from the beginning of the interview process.

The Interviewer

Since who I am cannot be separated from the researcher, it is appropriate to identify myself and discuss my personal biases with regard to this study. I have been an educator since the mid-1970s and have taught at Kirtland Community College in the department of developmental education since 1984. My primary emphasis, both in my own education and my teaching, has been in the area of reading improvement. I am a trained developmental educator who keeps abreast of the field through regular continued education, conference attendance, and journal reading. With my interest and knowledge of developmental education and developmental students, I admit to some bias when I feel that the needs of my students are not being met.

I readily admit that I went into the fall 2000 semester with apprehension because, since I knew that developmental students tend to lack self-regulation and be passive learners, I feared that the self-paced, learner-

directed nature of the FLEX course would challenge them. Even I, however, was surprised at how many of them did not succeed. Of the 49 students who enrolled in the class, only 6 completed within the 15-week semester.

But I am also an optimist who would rather make something positive out of a negative than get mired in the mud of regret and frustration. So doing this research is my way of making lemonade out of lemons. I hope this study will enable developmental educators to serve future students better. I believe that I recognize my biases and am able to "minimize, record, and report them" (Gay & Airasian, 2000, p. 224). Clearly, as the instructor for the college reading courses, I had a high degree of involvement with the program and the students. This means that I need to be aware of and alert to my biases, but it also means that I have in-depth understanding and insight about both the program and the students.

Data Analysis

Description is the first and most basic step in presenting qualitative research findings (Eisner, 1998; Gay & Airasian, 2000; Merriam, 2001). To provide an understanding of the context in which the study took place, I have begun with descriptive information about Kirtland Community College, its mission, its location, and its student body. Additionally, I have included background information about the conception, design, and operation of the FLEX program as well as the students who became FLEX participants. This

information is crucial for the reader to have a "true picture of the settings and events that took place" (Gay & Airasian, 2000, p. 241).

Moving beyond description, the study proceeds to the classification of the interview data. All interviews were conducted by me and transcribed verbatim by a professional transcriptionist. For analysis, I used a step-by-step process of constructing categories that represent different aspects of the data (Gay & Airasian, 2000; Merriam, 2001). Concepts in the data were examined and compared to one another, making connections and forming categories. This "constant comparative method" (Rudestam & Newton, 1992, p. 114) allowed me to recognize and reflect on recurring comments or thoughts. These became the categories into which my data would be divided. These categories should (and do) reflect the purpose of the research (Merriam, 2001, p. 183). It was necessary to develop a category-coding procedure, and the system I used involved putting units of information on separate index cards after coding the units in the margins of the interview transcripts. The unit of analysis that I used was each expressed "student thought." A student thought was the smallest idea or piece of information that was expressed by a student that could stand by itself. In some cases, it was expressed in a word; in others a phrase or whole paragraph.

Since my aim was to understand and explain my data, the constant comparative method was the most useful choice of methods of analysis. It allowed me to recognize and choose categories that made logical sense of the

data and gave me a feasible way to structure the analysis and, in turn, interpret the data. My main purpose was to identify student attributes that would cause them to succeed or not succeed in a self-paced open-entry/open-exit course. Analyzing the interviews in this way helped me see emerging patterns and issues and then organize the data into meaningful categories for interpretation.

Part II–The Numbers

Population

The population for this part of the research was students who were enrolled in the developmental college reading FLEX course in the fall 2000 semester at Kirtland Community College. During that semester, 49 students registered in the course; all but 2 were registered in the class on the original start of August 25, 2000. The 2 added students registered on October 10, 2000. Eight of this group of 49 students were not included in the study because they never attended class or never returned after the first day of class (the orientation day), and they could not be located. Therefore, the population consists of the census of students (41) who at some point in the semester after the first day had contact with the instructor. In the fall 2000 semester, the FLEX format was the only format in which the college reading course was offered, so all students who needed the course that semester took the FLEX format course.

In the winter 2001 semester, the course was offered in both a traditionally delivered style and the FLEX format. Of the students who enrolled in the class in the winter semester, 13 registered for the traditional class and 9 registered for the FLEX format. For the purposes of this part of the study, these students were all grouped together as students in a traditional class. The reason for this is that all but 3 of the students in the FLEX format group indicated that they had registered for that format only because they could not be available at the time the traditionally delivered classes were offered. Because of this, those classes were conducted similarly to the traditional course, giving those who really wanted the FLEX option the choice about attendance. Almost all of those students attended regularly and treated the class as a traditional class. (Two of the 3 who chose to use their FLEX option and not attend regularly were the 2 who did not finish the class.)

Although the winter group included virtually no FLEX students, and were not technically part of the study, they were also surveyed using the LASSI. Their results on the LASSI provided an important basis for comparison and control by demonstrating that the LASSI is useful as a predictor specific to the format of the class rather than the content since the winter and fall semester courses consisted of identical content and were taught by the same instructor.

Data Collection Instrument

Prior to data collection, permission to conduct the study and collect the data was obtained from the Dean of Instructional and Educational Services (see Appendix E). The instrument used was the Learning and Study Strategies Inventory (LASSI; Weinstein, 1987). The LASSI was developed at the University of Texas at Austin by Claire Weinstein, David Palmer, and Ann Schulte (Weinstein et al., 1988). It is a self-report assessment tool designed to measure students' use of learning and study strategies, both affective and cognitive. It focuses on both overt and covert thoughts and behaviors. Its creation was the result of 9 years of research, development, and testing.

The LASSI is comprised of 77 items using a Likert-type scale for responses. Each item asks the student to identify whether the statement is "Very much typical of me," "Fairly typical of me," "Somewhat typical of me," "Not very typical of me," or "Not at all typical of me." A copy of the test can be found in Appendix F. It is available in both an electronic version and a pen and paper version. For this study, the latter was used because it could be administered in class, in the FLEX Lab, or mailed, as necessary. Administration can be completed in one 30-minute session. Student responses are scored on each of the 10 individual strategies and reported as scale scores. The scale scores are then put on a chart which graphs the

student's numerical score as percentile scores. The LASSI is recommended for the following uses:

> (1) as a diagnostic measure to help identify areas in which students could benefit most from educational interventions, (2) as a basis for planning individual prescriptions for both remediation and enrichment, (3) as a pre-post achievement measure for students participating in programs or courses focusing on learning strategies and study skills, (4) as an evaluation tool to assess the degree of success of intervention courses or programs, and (5) as a counseling tool for college orientation programs, developmental education programs, and learning centers. (Weinstein, 1987, p. 2)

Table 1 also presents LASSI's 10 scales, a description of each, and coefficient alpha and test-retest data as presented in the *LASSI User's Manual* (Weinstein, 1987). The user's manual indicates that the individual scales were identified by groups of experts and refined using psychometric data for each potential scale. The experts compared scale scores to other tests or subscales measuring similar factors (Weinstein et al., 1988).

The test-retest correlations were computed on a sample of 209 students in an introductory course in communications, and there was a 3-week interval between the test and the retest. Test-retest reliability coefficients are calculated from scores from two administrations of the same test to the same individuals on two different occasions. The higher the correlation coefficient, called "coefficient of stability," the more reliable the test instrument (Gall et al., 1996). The coefficient alpha is "an upper-limit estimate of the test-retest reliability" (Weinstein et al., 1988, p. 34). The

validity has been examined using several approaches. The scale scores have

been compared to other tests or subscales measuring similar factors.

Additionally, several of the scales have been validated against performance

measures. Also, the LASSI has been subjected to many tests of user validity

(Weinstein, 1987).

Table 1

Scales of the LASSI

SCALE	DESCRIPTION	COEFFICIENT ALPHA	TEST-RETEST	ITEMS
1	Attitude	.72	.75	5. 14. 18. 29. 38. 45. 51. 69
2	Motivation	.81	.84	10. 13. 16. 28. 33. 41. 49. 56
3	Time Management	.86	.85	3. 22. 36. 42. 48. 58. 66. 74
4	Anxiety	.81	.83	1. 9. 25. 31. 35. 54 .57. 63
5	Concentration	.84	.85	6. 11. 39. 43. 46. 55. 61. 68
6	Information Processing	.83	.72	12. 15. 23. 32. 40. 47. 67. 76
7	Selecting Main Ideas	.74	.78	2. 8. 60. 72. 77
8	Study Aids	.68	.75	7. 19. 24. 44. 50. 53. 62. 73
9	Self-testing	.75	.78	4. 17. 21. 26. 30. 37. 65. 70
10	Test Strategies	.83	.81	20. 27. 34. 52. 59. 64. 71. 75

The LASSI was chosen for this study for the following reasons: First, it is a statistically reliable and valid tool. Second, it includes a broad range of affective (attitude, motivation, time management, anxiety, and concentration) and cognitive (information processing, selecting main ideas, study aids, self testing, and test strategies) strategies which are aspects of the self-regulation that students need for success in self-directed learning situations such as open-entry/open-exit courses.

Data Collection Procedures

The LASSI was primarily administered to the fall 2000 cohort of FLEX students in either a developmental classroom or the FLEX Lab. Five of the inventories were mailed and returned because I could not locate the students on campus. Those which were administered on campus were all administered by me either individually or in small groups. All instructions were given as indicated in the user's manual. The inventories that were mailed included the consent form and an accompanying letter of request and explanation. These are available in Appendix E. Each envelope contained the LASSI instrument, the consent form, letter, and a return envelope pre-addressed for return to me at Kirtland's faculty office. Each also had sufficient postage for the return affixed to the return envelope.

All students were requested to participate but were told that their participation was entirely voluntary and that non-participation would not

result in negative consequences. Each was given a consent form to read and sign before completing the inventory. The consent form was printed so that there would be a carbonless copy, and the students were advised to keep that copy. The consent form is displayed in Appendix E. The Human Subjects Review Board of Andrews University has granted exemption from full HSRB review. The letter indicating this exemption is in Appendix E.

The administration of the LASSI in the FLEX class, as has already been mentioned in chapter 1 as a possible limitation of the study, could not be done all at the same time but occurred over a period of about 4 weeks. Due to the FLEX format of the class, it proved to be quite a challenge to get students into the lab or classroom to complete the survey.

The winter 2001 group members, however, were all surveyed in class, during their normal class time within the first 2 weeks of the semester. The same procedure was used with the winter group as with the fall group as far as directions and consent procedures.

Although the LASSI is designed for self-scoring, to ensure accuracy, I did all the scoring myself. Each test was assigned a number corresponding to a numbered list of students so that once I connected the scores with whether the student had passed or failed at the end of the semester, I could discard the identifications and thereby preserve confidentiality and anonymity.

Null Hypotheses Tested

Three null hypotheses were tested:

1.   No relationship exists between students' LASSI subscales or the total LASSI score and their success in the fall 2000 college reading FLEX course.

2.   There is no significant difference between the LASSI subscores or the LASSI total scores of the fall 2000 college reading FLEX course by age.

3.   There is no significant difference between the LASSI subscores or the LASSI total scores of the fall 2000 college reading FLEX course by gender.

Data Analysis

All data analysis procedures were done using the SPSS computer program. The first null hypothesis was tested for each LASSI subscale and the LASSI total score using Pearson product-moment correlations. The following assumptions are required for use of this method. First, the sample of paired data (x, y) is random. Second, the pairs of data have a bivariate normal distribution. In other words, for any fixed value of x, the corresponding y values have a normal distribution, and for a fixed value of y, the values of x have a normal distribution (Triola, 2001). Third, the relationship between the variables being correlated must be linear. Last, "both variables to be correlated are expressed as continuous data such as ratio or interval data" (Gay & Airasian, 2000, p. 329). Since the LASSI

variables represent interval data, Pearson product-moment correlations can be used to describe the strengths of their relationships, and since Pearson r results in precise estimates of correlation, its use is appropriate.

The second null hypothesis was tested using a one-way analysis of variance (ANOVA). The ANOVA was used to determine whether significant differences exist between the means of the various age groups. The third null hypothesis was also tested using the ANOVA. The purpose was to determine whether the means of males and females differed significantly. If means were significantly different for the second hypothesis, a post-hoc analysis was performed to determine where the difference lay. All decisions on the significance of findings were made using an alpha level of .05, meaning that one is 95% confident that the test results are true.

Pearson product-moment correlations were also conducted on the population of students in the winter 2001 college reading courses. The reason for this last test was to rule out, as much as possible, the possibility that issues other than the course format influenced test results.

CHAPTER 4

DESCRIPTION AND DATA ANALYSIS

Part I—The Words

Gay and Airasian (2000) propose that description addresses this issue: "What is going on in this setting and among these participants?" (p. 241). To fully understand the context in which this study took place, the study must begin with a description of Kirtland Community College. The information provided here came from college officials, its 2000-2001 catalog, its promotional literature, and its web site.

Kirtland Community College was established in 1966 by a vote of the electorate from six local K-12 school districts. It is a publicly supported community college which offers more than 50 degree and certificate programs, both academic and occupational (technical career oriented). Transfer degree programs are offered in the following areas: associate in arts, associate in business administration, associate in computers, associate in criminal justice, associate in fine arts, and associate in science. Associate in applied science degrees are also available in several occupational areas. Occupational areas offering certificate and/or degree programs include health-related career programs, criminal justice, cosmetology, office

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information systems, automotive technology, computer-aided drafting, manufacturing technologies, and welding.

Kirtland operates on a semester calendar with two 15-week semesters beginning in late August and mid-January. A 6-week summer session begins in June. The college is accredited by the North Central Association of Colleges and Schools.

Kirtland employs about 30 full-time and 60 part-time faculty, as well as about 80 staff members and 11 administrators. Student support services such as tutoring, personal and career counseling, and sign language interpreters are available at no cost to students. The college also has a child care center, a center for the performing arts, a youth theater program, a greenhouse, a literary magazine, a campus newspaper, and a reading series. Kirtland annually hosts the Kirtland's Warbler Festival in May to celebrate the return to northern Michigan of the tiny, endangered bird which gave the college its name.

Kirtland is primarily a commuter school; however, housing is provided on campus for approximately 40 students. Class sizes are generally small. Facilities and technologies are "state of the art" and continually updated.

Kirtland competes in intercollegiate athletics as a member of the Eastern Conference of the Michigan Community College Athletic Association. The Kirtland Firebirds compete in men's and women's basketball and men's and women's golf.

While Kirtland is the third smallest community college in Michigan in student population, it is the largest Michigan community college district in area, with a district totaling 2,500 square miles and consisting of all or part of nine counties. Approximately 65,000 people live in the Kirtland district.

Kirtland's promotional *Viewbook* (2001) boasts, "Here at Kirtland you're somebody, not just another body." And, "You'll get lots of personal attention and have the opportunity to interact with instructors and classmates."

The College's Mission

Kirtland's mission "stems from a commitment to the development of the individual and is guided by the underlying belief that learning is a lifelong process that must consider an individual's life experiences, motivation, and readiness to learn" (*College Catalog and Student Handbook*, 2000-2001, p. 1). The mission, as stated in the 2000-2001 catalog, is as follows:

> The purpose of Kirtland Community College is to improve the quality of life in the Kirtland region by providing educational programs and services. (p. 1)

The College's Location

Kirtland is located very close to the geographic center of its district. It is a very rural location, about 170 miles north of Detroit, Michigan. It is surrounded by nine communities which vary in distance from the college

from 8 to 40 miles. The closest communities, St. Helen, 8 miles distant, and Roscommon, 11 miles distant, are both small communities comprising one or more townships. The three largest communities in the district are the city of Grayling, 30 miles northwest, the community of Houghton Lake, 30 miles southwest, and the city of West Branch, 25 miles southeast (see Figure 1).

Within the Kirtland district is the AuSable River, one of the world's most famous trout streams and home to the annual world-renowned AuSable River Canoe Marathon.

The district also has myriad lakes, including Michigan's largest, Houghton Lake, and crystal-clear Higgins Lake, billed the "sixth most beautiful lake in the world." Hundreds of miles of snowmobile, ORV, hiking, snowshoe, and cross-country ski trails criss-cross the district, and golf and downhill ski facilities are available nearby, as well.

The campus itself sprawls over 180 acres where one need not walk the campus nature/fitness trail to find oneself spying deer, wild turkeys, and bald eagles, or nearly stepping on the ubiquitous chipmunks and squirrels that scamper freely on campus sidewalks. Those who live in campus housing occasionally find themselves contending with nighttime visits from black bears to bird feeders and dumpsters. Kirtland truly is a little college in the woods.
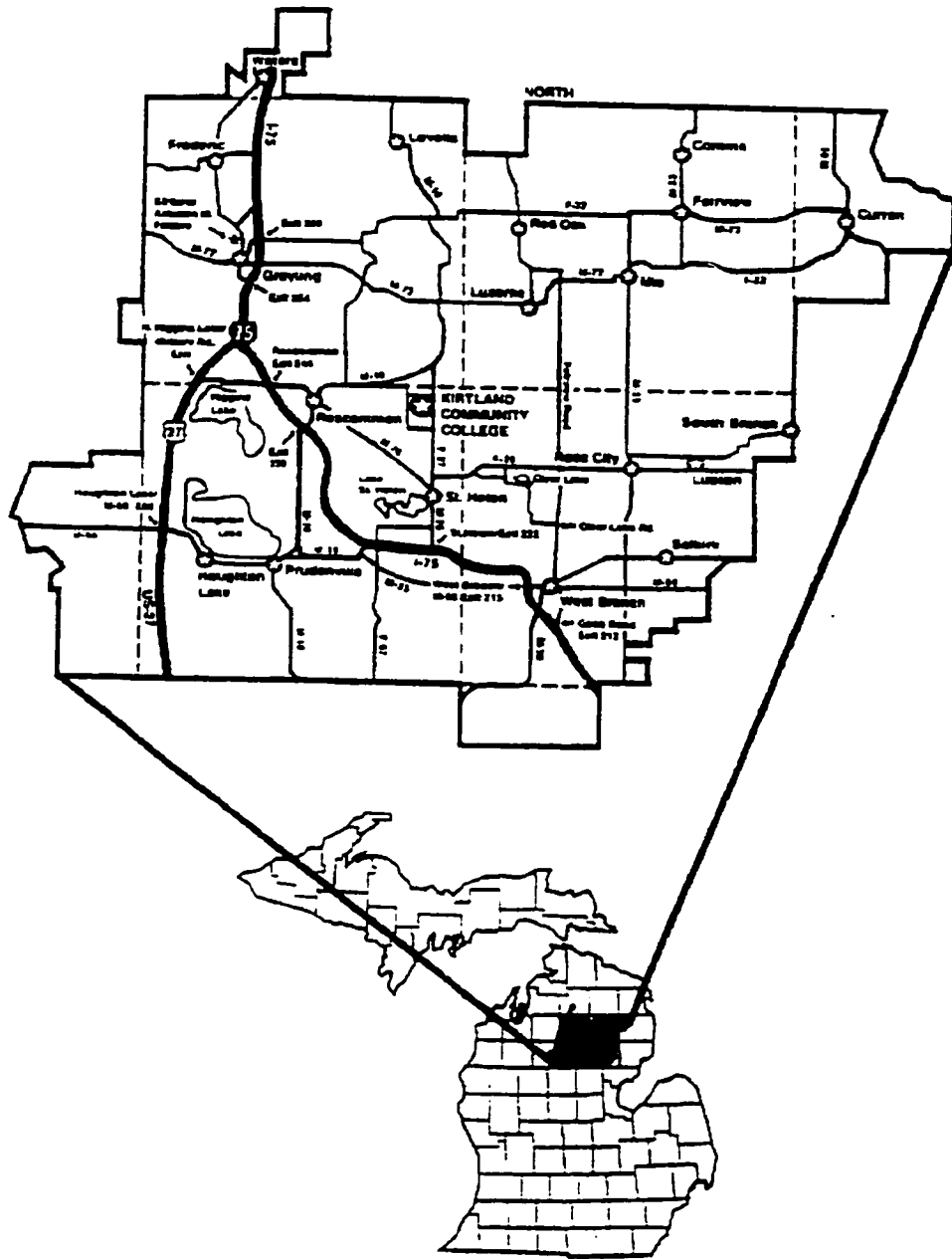
Figure 1. Kirtland College district and location.

The College's Students

Student enrollment each semester generally hovers around 1,500. Total enrollment for the fall 2000 semester was 1,516. The average student age is 32 with approximately the following distribution: 40% are 24 and under, 32% are 25 to 39, 21% are 40-59, and 4% are 60 and older. Females outnumber males by 58% to 42%. Almost 75% of students come from within the college district, with the largest number, 30%, coming from Roscommon County, the county in which the college is situated.

About 63% of Kirtland students attend on a part-time basis (1-11 credit hours). Full-time (12 credit hours or more) students make up about 31% of the student population. The average student credit load is 8 credit hours. Approximately one-third of students are in college for the first time, and two-thirds are returning students. Non-traditional students predominate; however, Kirtland is seeing a trend of enrolling more and more students directly from local high schools each year.

Many students, almost 32%, plan to transfer to a 4-year school. Almost 55% of students are in occupational programs, with health occupations at 19%, and criminal justice and business at 9% each, being the most popular programs.

Most students commute, many from great distances, and almost all have one or more responsibilities such as a part- or full-time job, family, or

athletics, beyond that of being a student. Approximately two-thirds are employed.

Kirtland adheres to an "open door" policy of granting admission to all applicants who are high-school graduates, General Education Development test completers, and those who meet "ability to benefit" as defined by federal regulations. The college requires prospective students to demonstrate basic academic skill proficiencies in English, reading, and mathematics before they take college-level courses. At the time of this study, the Nelson-Denny Reading Test was used to determine reading proficiency. In the fall 2000, approximately 80% of the students who tested needed at least one developmental course. Of these, 33% needed one or the other of the two levels of reading improvement which are offered.

The students who were enrolled in developmental reading courses had been identified by this placement testing as reading below college level. All reading placements are verified by a system of re-testing students on the first day of class with a different form of the Nelson-Denny Reading Test. The students who were enrolled in the College Reading Skills course in the fall 2000 and winter 2001 would have been identified as reading between about the 9th- to the 11th-grade levels. Placements into developmental courses at Kirtland are mandatory for those whose test scores indicate a need for them.

The College's FLEX Program

Kirtland's FLEX program was conceived in the spring and summer of 2000. It had two main purposes. One was to save from extinction Kirtland's Office Information Systems and Medical Office Assistant (OIS/MOA) programs which had been suffering steadily declining enrollments.

A second major purpose was to serve as a pilot for the program delivery method that would be used at Kirtland's Michigan Technical Education Center^{SM} (M-TEC^{SM}) which was slated to begin operation in Gaylord, Michigan, in the fall of 2001. The M-TEC^{SM} would be a satellite campus in Otsego County, the county just north of the Kirtland College district. It would be 1 of 18 Michigan Technical Education Centers^{SM} approved by the Michigan Economic Development Corporation offering career and technical education. Kirtland received a $4.1 million grant to assist in constructing and equipping the M-TEC^{SM}. One of the requirements for receiving this grant award was that programs and training would be delivered through a predominantly open-entry/open-exit system. Therefore, college administrators were eager to try the open-entry/open-exit system with some on-campus occupational courses on a pilot basis.

Now, the idea of offering occupational courses in an open-entry/open-exit system did not roll around in administrative heads too long before it became clear that some accommodation would have to be made for the great number of students who would test at the developmental level. Clearly, if

open-entry/open-exit would be the delivery mode for the occupational courses at the M-TEC^SM, and possibly on campus as well, then developmental curriculum would also have to fit that system.

As a result, in the summer of 2000, developmental instructors were requested to begin in the fall 2000 to teach three developmental courses (college reading, basic math, and beginning algebra) in an open-entry/open-exit format. At that point in time, many college reading students had already registered for what they expected to be a traditionally delivered course. Since all offered sections were changed to one large FLEX section, all students who registered for developmental college reading found themselves in the FLEX course.

Goals of the program, as outlined in a paper presented to the Kirtland faculty on January 15, 2001 (see Appendix G), were as follows:

1. To increase enrollment within the OIS/MOA programs.
2. To improve student retention within the OIS/MOA programs.
3. To increase the number of student contact hours per full-time faculty.
4. To reduce direct instructional costs per contact hour within the OIS/MOA programs.
5. To evaluate the impact of a flexible learning experience on the grades and retention rates of students enrolled in developmental courses.
6. To serve as a pilot for the program delivery method to be used at the M-TEC^SM. (par. 1)

And so began the journey of this researcher and college reading instructor into the land of FLEX.

The Land of FLEX

Before sharing the experiences of the individual students who were interviewed, it is appropriate in my continuing quest to provide a description of the setting to give a view of the college reading FLEX course from the perspective of the instructor.

As the researcher, the interviewer, and the instructor, I bring a unique perspective to this study. No other person understands the program in exactly the same way that I do. Admittedly, one might construe my intimate involvement in the situation to be a hindrance to objectivity; however, as Gay and Airasian (2000) state, "The greater the involvement, the greater the opportunity for acquiring in-depth understanding and insight" (p. 223). As a participant in the FLEX experience, I was familiar with the phenomenon being studied and, like the students, I went into the situation with some concerns, but I did not begin with a preconceived idea of what I would find because I did not know. This had never been tried before at Kirtland.

I am fully conscious of

the balance needed between insider and outsider in qualitative research. "Experiencing the program as an insider is what necessitates the participant part of participant observation. At the same time, however, there is clearly an observer side to this process. The challenge is to combine participation and observation so as to become capable of understanding the program as an insider while describing the program for outsiders (Patton, 1990, p. 207)." (Merriam, 2001, p. 102)

I was approached during the summer of 2000 by the Chairperson for Career & Technical Studies who had been given the job of coordinating the pilot FLEX program. She explained to me the goals of the FLEX program and requested my participation. I was asked to teach all of the developmental college reading skills courses in the upcoming fall semester in an open-entry/open-exit format.

I had some serious concerns about this at the time. I have been a developmental educator for more than 20 years, and I knew from experience that most of the students who test into developmental reading courses have not gotten there because they are highly self-regulating or have strong study skills. As a matter of fact, most of the content of the course had been designed to teach and encourage those very attitudes and skills so that students would have a better chance of success in future college-level courses. I agreed to try the FLEX system because, as I was reminded, though I had legitimate concerns, I did not know that this might not be even better for the students since it would give them flexibility and potentially more one-on-one attention from me. We would not know unless we tried.

During the first week of classes, I met with my students in the classroom as was scheduled. During the first session of each class, the FLEX program coordinator attended all classes to explain the program to the students and have them each sign a FLEX contract (see Appendix G). The class was also visited by someone from Kirtland's Help Desk who gave college

e-mail accounts to anyone who did not already have e-mail access. This was considered an important feature of the FLEX program because, with all students on a class listserv, the instructor would be able to communicate with the class as needed. Also, during the first week, I gave students an overview of the course, explaining the requirements, provided my office hours and the hours I would be available in the FLEX Lab, and distributed the syllabi.

After that first week of the semester, classes were no longer held in the classroom. Students were to work on their own and get help in the FLEX Lab as needed. I encouraged them to treat this as a normal class and plan to work in the FLEX Lab during the time that they had expected to be in class.

The FLEX Lab was set up in an open part of the library, a central campus location. It was furnished with computers, some study carrels for test-taking, and a computer and desk area for FLEX instructors. The FLEX Lab operated Mondays through Thursdays from 8:30 a.m. to 7:30 p.m. Five instructors were involved in the FLEX program in the fall of 2000: one developmental math instructor, three OIS/MOA instructors, and me, the reading instructor. We each scheduled certain hours (the number depending on how much of our load was in the FLEX courses) to supervise the FLEX Lab. The FLEX Lab hours that were not supervised by an instructor were covered by work-study students. Technical assistance for computer problems was also available.

Students were urged to visit the FLEX Lab for help during the time that their particular instructor was on duty; however, general FLEX questions and test taking for any FLEX course could be handled by any FLEX instructor. Tests were not given if an instructor was not on duty.

My time in the FLEX Lab was scheduled, as much as possible, to coincide with the class times for which the students had originally scheduled their reading class. Each instructor was also required to be available one evening each week, as well.

The FLEX program coordinator and all of the FLEX instructors met together once each week to discuss problems and concerns. Early in the semester, most concerns revolved around "housekeeping"-type details such as locations for test files, computer problems, and students being unable to get started because books or equipment were not available. As the semester wore on, however, concerns became more and more student-centered. All of the instructors were experiencing problems with many of their students not doing assignments or making any contact. These were issues that occurred in the OIS/MOA and math courses as well as the reading course. The problems I describe were not unique to developmental reading students; many students in all the FLEX courses were not responding. However, for the purposes of this study, only the reading students were studied.

In the beginning of the semester, some students were coming to ask me questions and turn in assignments. However, I never saw many of the

students on my class list. So by the middle of September, I was already growing concerned about the many students I had not seen and about the relatively few assignments which had been turned in. I sent out my first e-mail to the whole class, reminding them to contact me at least once a week and answering a number of the questions that had come up with those students who had checked in with me (see Appendix E).

By the end of September, I had only five to seven students who were turning in work, taking tests, or seeing me regularly. By this time, my stints in the lab were taken up less with working with my students and more and more with making phone calls and writing progress reports for those I had not seen. One result of my calls was the revelation that, although hypothetically everyone was geared up to receive e-mail messages from me, for various reasons a great majority had not read my mid-September message.

The other predominant message I got from the students was that FLEX was not working for them. So with the approval of the FLEX coordinator, I decided to hold a traditional class in the classroom during my free time, and I e-mailed the news to students on September 28 (see Appendix E). Since I knew by that time that e-mail would not reach everyone, I also posted notices on campus and called as many students as I could.

When I chose the time to hold the traditional course, I realized that it could not possibly work for everyone's schedule, but I was not prepared for the response on the first day of the "class." I felt like I had given the proverbial party to which no one came. Where were all of those students who had been telling me that if I would only conduct a traditional class that they could come to regularly that they would be willing and able to come finish the class? Although I continued to sit in that classroom at the "class" time for the remainder of the semester, few students ever showed up. On a good day, two or three would be there, but most days, no one came.

When I held the class to which no one came, I began getting very concerned. I decided that I needed to find another way to make sure everyone was getting my messages. At this point, I shared my concern with the Dean of Career & Technical Studies. We decided, with secretarial help, to send a message by regular mail. The letter would be on Kirtland stationery with the dean's signature below mine so that it would look official and important and get the students' attention. This letter was mailed in early October (see Appendix E).

By the middle of October, it had become exceedingly clear that most of my students would not complete the course. Not enough time was left in the semester for most of them to do the work even if they got started then. It is hard to describe how I felt. I think most people who teach do so because of the joy they get when they see their students succeed. This was the most

joyless semester of my entire career to date. I felt guilty, too. I wondered how I could have done things differently to have avoided this disaster. And most of all, I felt bad for my students; they needed this class, and they had gotten into something they had not expected and did not know how to handle. At one of the FLEX staff meetings during this time, I lost my usual composure and wept for my students and the situation we were in.

I asked if we could find a way to give the students more time without penalizing them. As a result of that request, the FLEX staff conceived a plan to give students an extension rather than a failing grade at the end of the semester. The FLEX program coordinator took our proposal to the Dean of Career and Technical Studies and the Provost for M-TEC[SM]. These officials took the proposal to the college President who approved the plan (see Appendix E).

On November 1, I mailed notification of the extension option to all students (see Appendix E). In this letter, I gave them until November 30 to talk to me about the extension if they wished to take advantage of it. Fewer than one-third came. I could hardly believe that so many of them did not contact me, even to take advantage of their one hope of not failing the class. On November 14, I sent a reminder e-mail and began another campaign to contact all of the students in person. I called them and/or hunted them down on campus, extension form in hand, over the next 2 weeks. I talked to parents, I talked to the coach, I talked to their other instructor—anyone who

had contact with the students who might be able to get them to come see me. By the end of the semester, I had gotten 33 of them to sign up for the extension, which would allow them to sit in a traditional course in the winter semester if they chose to do so.

At the beginning of the semester, 47 students had registered for the class. On an open enrollment date in October, 2 more students enrolled. Of these, 6 students finished and passed by the end of the 15-week semester.

Those six flourished in the system and could not have been happier with the design of the class. They all visited me in the FLEX Lab as needed, some frequently; others mixed visits and phone calls. They were usually ahead of the schedule in the syllabus. In fact, one of the six was one of the two students who had not begun the class until in the middle of October.

As the student interviews will show, a wide variety of factors came into play as students struggled to cope with, gave up on, or diligently accomplished the course. I recognized this from the beginning, and what quickly became clear to me was that if we had some way of identifying which students could work well in this kind of system and which could not, we could get them into the system that would work best for them. So my overriding goal, if I could not get all of my students through the class, was to learn from our experience and offer hope for a better way of providing education to future students. Hence, this study.

Analysis of the Interview Data

Eisner (1998) states, "We live and learn. We try to make sense out of the situations in and through which we live and to use what we learn to guide us in the future" (p. 104). This statement exactly identifies the priority of this research. We need to learn from these students' experiences to guide us into the future. Before and during data collection I was progressively narrowing the focus. Conceiving possible categories began before and while I developed questions and spoke with students.

Previous to the student interviews, I had gathered a group of four of the students who had been in the fall 2000 FLEX course and received an extension and were completing the course by sitting in a winter 2000 traditional course. Since these students had experienced the class in both formats, they were an ideal group to use to help develop and test the interview questions. The primary focus of the questions was to determine students' study skills and attitudes, whether they were self-aware enough to self-select into a FLEX or traditional course, and what about the course, as they took it, worked or did not work for them.

After the interviews were transcribed, I read through them and noted that the transcriptionist had, in some places, not been able to understand a student's comments. So I listened to all of the tapes and filled in the gaps. This first reading of the transcripts was the first of many in the iterative

process of analyzing the content of the interviews in order to classify the data into categories. The strategy I chose to use for category construction and assignment was the constant comparative method. This method involves the constant comparison of identified topics to "determine their distinctive characteristics so that they can be placed in appropriate categories" (Gay & Airasian, 2000, p. 243). I used "student thoughts" as the units of data to be sorted. These thoughts might have been expressed in as little as one word or entire phrases or paragraphs.

I began by reading through each transcript, making margin notes. I also made a list of recurring ideas as I noticed them when reading successive transcripts. I continually compared comments from interview to interview.

First, I classified the data into two large groups into which all data could fall: "personal information" and "other." Then I began dealing with the great variety of information in the "other" category, dividing it once again into two groups: "comments about the students themselves" and "comments about the course." Keeping in mind that, above all, "categories should reflect the purpose of the research" (Merriam, 2001, p. 183), I looked at the data again and again and discovered that within these two broad groups, I could once again divide my data into more specific and more relevant categories. At this point, I found it helpful to map my progression (see Figure 2).

Personal Information	All Other Data

Information Relating to Students	Information Relating to Course

Attitudes	Study Habits	Factors that helped success	Factors that hindered

Traditional	FLEX	Traditional	FLEX
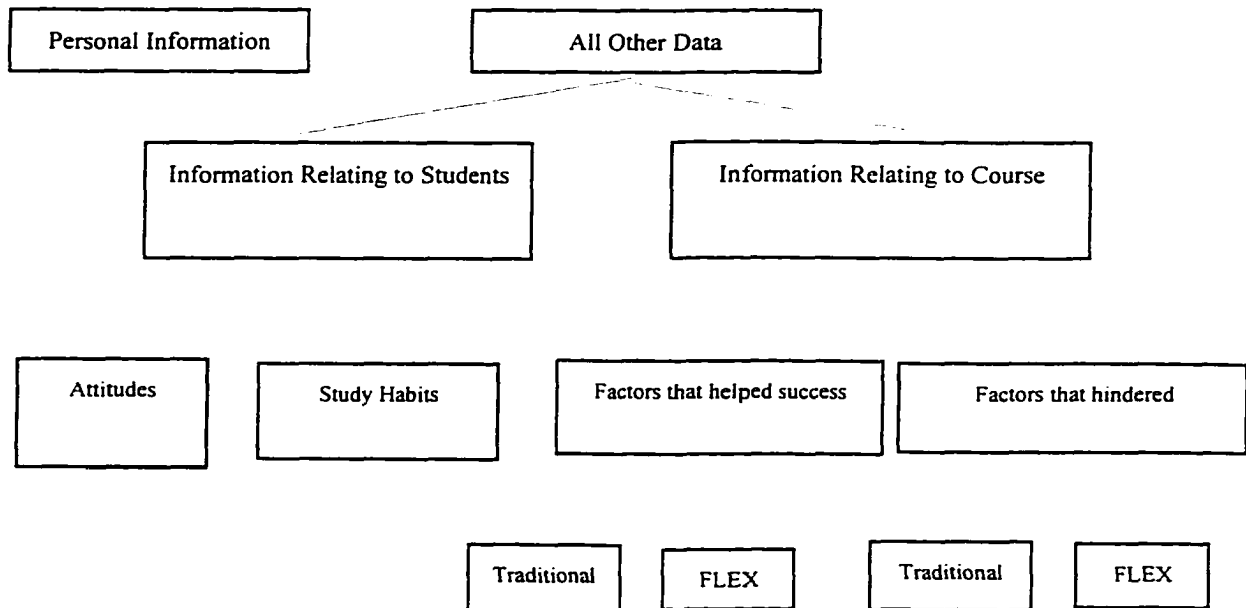
Figure 2. Data map.

Then to help me constantly compare the data into more specific subcategories within my broad division, I used different colored index cards and put each unit of data from each interview on separate cards. Sorting the cards in several different ways helped me to clearly define logical categories. I had to make some difficult decisions, for example, whether a comment about not getting help in the FLEX course was a comment about the student's strategies or about the format of the course or both. Eisner (1998) says, "There can be no evaluation without value judgments" (p. 100).

As I worked with the data, I found some categories of information that I had not expected to find and other categories which were subsumed under others. I finally reached a point at which I had a "minimum of unassignable data items, as well as relative freedom from ambiguity of classification" (Guba & Lincoln, 1991, as cited in Merriam, 2001, p. 185). I was also satisfied that I had a plausible set of categories that would both help me make sense of the data and answer the research question.

Student Demographics

I interviewed two male and three female students. Both male students and one of the females were traditional students. Two females were non-traditional students, and both were married and had children. All of the students had something outside of school which consumed at least some of their time: one was on Kirtland's basketball team, three held part-time jobs, and one worked full-time. Three of the students were pursuing careers in the health field, two in computers, and one hopes to be a paralegal. Two expect to transfer to a 4-year university when they leave Kirtland. Four of the five were attending college full-time; the fifth was a part-time student (see Table 2).

Table 2

Personal Information

Demographic	Barry	George	Marcy	Robin	Sylvia
Male	X	X			
Female			X	X	X
Graduated from high school last year	X	X		X	
Non-traditional student			X		X
Single	X	X		X	
Married w/children			X		X
Part-time job	X	X		X	X
Full-time job			X		
Part-time student			X		
Full-time student	X	X		X	X

Marcy

Marcy was without question the most pleased with the FLEX design of the class. She was a non-traditional student, a wife and mother who attended school part-time and worked full-time. She works in a hospital and would like to become a nurse, but she finds it very hard to take classes because of her busy schedule. For her, the FLEX class was the perfect solution. She would be happy if all of the classes on her program were FLEX courses. When I interviewed her during the semester after her FLEX class, she was not enrolled in college because none of the classes she had to take

were scheduled at a time that she did not have to be at work. "I would have to take time off work, and it's just not possible right now."

Marcy is one of the six students who successfully completed the fall 2000 FLEX course within the 15-week semester. Although when she took the FLEX course, there was no other option, she was not sorry. In fact, she was delighted. She said, "For me it was great! I could spend more time with my kids. It is hard for me to take traditional classes." Other benefits of the FLEX course for Marcy were that she

> didn't have to take off work early. Also, if I didn't feel like doing it, I didn't. For example, if something came up on Tuesday night, I didn't have to be in class and I wasn't missing out on anything. I could make it up. I liked the way it fit into my schedule more than traditional classes. I didn't miss out on anything if I didn't study for a few days.

Marcy had no problems doing the course on her own "because if I had questions, I could get a hold of you. I came in and talked to you a couple of times. You had a schedule, and you were there." She did not feel that she missed anything by taking the class in the FLEX design. She had taken college classes that were not FLEX, but "didn't get any more out of the classroom experience."

While admitting that FLEX might not be the best option for everyone, especially "younger people," Marcy is wishing "there were more." She wants to go back to school. "Yes, I'm going back. Sometimes I long for that." And she wants to be a role model for her children. "They loved it and thought it

was just great. I showed them that it's never too late." Marcy's last words

about FLEX were, "I loved it! The convenience of it. For me, it was perfect!"

George

George also took the fall 2000 FLEX course, and unlike Marcy, he "was

disappointed" that he could not choose a traditional course. "I knew from the

beginning that I would not get through the FLEX class. It sounded good; but

I knew I would probably procrastinate." Also unlike Marcy, George was a

traditional student. He had just graduated from high school, was living with

his parents, and worked at a part-time job. His goal is to get an associate

degree in computer science, transfer, and "work with computers." He was a

full-time student and considered himself generally a pretty good student

though he was one of the many who did not complete the FLEX class in the

fall of 2000.

> When you do it by yourself, it's too easy to put it off. It brought out my
> worst tendencies. I had good intentions in the beginning and even
> started working in the class, but then other things got in the
> way—mostly school work—and this one was the easiest to let go.

George felt totally unprepared for such a class. "Most of us were just

out of high school, so we needed more help. The work seemed too hard to do.

I wasn't disciplined enough."

George is the only one of the students I interviewed who experienced

the class in both formats. He took the extension at the end of the fall 2000

semester and chose to finish by attending a traditional class in the winter

2001 semester. So he brings a unique perspective to this study. He thrived in the traditional class. He is a likeable and gregarious fellow who brought energy to his class in the same way that the class gave the needed energy to him. In the FLEX class he was, to me, just one of many names on my list of students whom I had to keep calling or hounding on campus. In the classroom, he was one of those delightful students who participates freely and appropriately, shows enthusiasm and effort, and displays a quick wit and perceptive mind. I would never have known.

Why did George flourish in the traditional class after such a miserable experience in FLEX? At least partly, I think that he is one of those "people who need people." He says he likes school and has done well in all of his other classes. "The FLEX one is the only one that was a problem." When he took it in the traditional format he did better because "working together as a group so we could get help from one another helped. Plus, we could always ask you for help if we needed it. And we could get the help right away—*when* we needed it." And most of all, George thinks it was the format. "I enjoyed the classroom atmosphere, and it helped me keep on schedule when the whole class was progressing together. The work didn't seem as hard."

Barry

Barry was the third of the students whom I interviewed who had taken the fall 2000 FLEX course. Like George, he did not finish and opted to take

the extension, although he did not opt to sit in a traditional class in the winter 2000 but rather continued as a FLEX student. Also like George, he was a full-time traditional student whose first semester in college was the semester he took the FLEX course. He came to Kirtland for "athletics basically. I play basketball." He lives in campus housing with other athletes. He likes "making different designs and things; I'm kind of creative." Thus, he is studying computer-aided drafting.

Had he been given a choice, he says he would not have taken the course in the FLEX format. "Me personally, I would have had it in a class because I'm not that disciplined to take a course, you know, by myself." He also had never had any experience that would have prepared him for taking a class that required so much self-discipline.

He was frustrated by the format of the class. He thinks a classroom setting would work better for him "because the instructor is right there and he or she can help with whatever the problem is and do it over and make sure it's completed right instead of guessing and trying to catch up all the time." At the same time, Barry blames himself for his failure to complete the class. He says he should not have waited until almost the end to seek help. "It's my own fault; I just should've done it."

Sylvia

Sylvia was one of the two non-traditional students whom I interviewed. She is married and has one son. She worked part-time, helping in her husband's business, and she was a full-time student in the nursing program.

Sylvia took the college reading course in the winter 2001 semester. At that time, due to the huge number of students who had experienced problems in the fall of 2000, the course was offered in both traditional and FLEX formats. Sylvia, though she lived at the edge of the college district and had a 40-mile drive to school, chose to take the traditional course,

> because I thought I would do better in a traditional course. I would not do well in FLEX because I don't think I am determined enough, and I need the teacher to explain things to me. I need hands on. I know if I had to do things on my own, I would probably just slack off and end up being more stressed out.

I found Sylvia's choice of traditional format over FLEX interesting, especially considering the long drive she made, because Sylvia was actually a very good student who was also very good at keeping up with assignments. When I mentioned this to her, she replied that if she had taken FLEX, "it would be too easy to let it go. If I was home instead of in class, there would be too many interruptions and projects, and I wouldn't get much done." She was very happy with her decision to take the class in the traditional format because the daily routine kept her motivated. "I had to show up in class to

take exams, there is, for me–I have to prepare myself. There is a process for me, and I think that is positive because it helps me get more motivated."

Robin

Robin also took the college reading course in the winter 2001 semester, and she chose the FLEX option. Like George and Barry, she was a traditional student. She lived at home with her parents and worked part-time while attending school full-time. Her career goal is to be a paralegal. She started college in the fall 2000 semester at Ferris but did not do very well, so she attended Kirtland in the winter 2001 semester because "it is close to home, and I needed to get my GPA up."

Robin wanted the FLEX option "because it was the best thing–fitting in with my job." I wondered if she really understood what that meant, and she replied that she had taken similar courses in high school, so she had experience which prepared to succeed in such a class. In high school, she had been in an alternative education program which used a self-paced type of curriculum. "In FORCE, we had two teachers all day, usually one or two classrooms, and we were mostly on our own and responsible to get our work done. I haven't taken traditional classes since my sophomore year of high school."

From our discussion, I gleaned that Robin had had an interesting educational background and experiences which suited her to work better in a

FLEX than a traditional class. She said she liked the FLEX class, but the rest of her classes were a problem for her because "I miss too many days. I missed a lot of days in high school, too. I always have. But I catch up."

She was particularly glad to have the FLEX class that winter because

it gave me a little freedom to take vacations and come back and get caught up. It might have been easier in a regular classroom, but actually, I'm glad I took it in FLEX because when I went to Florida for two weeks, when I came back, I wasn't totally out of it. I could catch up.

I can only guess how that 2-week vacation in Florida went over with the rest of her instructors.

Since most of students in the class section that Robin had registered for really preferred a traditional class but took the FLEX class only because they were unable to attend during the time the traditional classes were scheduled, I conducted the course as a traditional course, allowing anyone who wanted to use the FLEX option to do so. Robin came to class off and on and sat off by herself, working industriously when she was there. Clearly, this was a system that had worked for her in the past and one she had grown accustomed to. Over and over throughout the interview, her comments revealed this. "The class was there, and I came when I needed to." And, "It works for me to work at the last minute when I get behind. I've always worked best that way." I asked if she ever got concerned about being behind, but she said, "No, when I go home and study for about 2 hours, I am able to catch up. I'm a crammer. I would rather cram and do it all at once."

I worried about Robin all semester long. I would not see her or hear from her for long periods at a time, but then she would turn up and work until she was caught up again and then disappear again. She worked that way for most of the semester and, each time, I thought she either was not coming back that time, or she would be so far behind that she would not catch up. But she always did. Near the end of the semester, she came for a few days in a row for some marathon "cramming." And somehow, in the end, she managed to get everything done and passed. For Robin, just passing, just squeaking by, was all that was important. She always managed to do just enough to make it. "If I study, like an hour before I take a test, I can pass. I get it in my head an hour just before the test, then don't think about anything else till I get that done."

Student Study Habits and Attitudes

Of the five students I interviewed, four took the college reading class in the FLEX format; only one of these took the FLEX format by choice. Of these four, two completed successfully. The one of the five who took the class in the traditional format did so by choice in the winter 2001. She successfully completed the traditional course, as did the one overlapping student who took the traditional course in the winter 2001 after failure to complete the fall 2000 FLEX course.

Since it was my belief from years of experience and reading in the field of developmental education that many students who are required to start college in developmental courses have not yet learned crucial skills and attitudes that would help them succeed, several of my questions were designed to investigate study habits (see Table 3). Four of the five students reported that they can concentrate well when studying, so that did not appear to be a major factor associated with completion or non-completion. Some of the habits that were revealed, however, do seem to shed some light on the phenomena of success or failure. Neither of the students who failed to complete had asked for help when they needed it; all three of those who passed did.

When asked if they considered themselves a procrastinator, the two non-completers said, "Ya, big time," and "Ya, I knew I would procrastinate." Two of the three completers said they did not usually procrastinate. Along that same line, the two non-completers reported that they were not good managers of their time; meanwhile, of the three completers, two considered themselves good managers of their time most of the time, and the third, some of the time. Neither of the non-completers reported using any study method. Two of the three completers did use at least some method. One indicated that she made mapping outlines of her textbook chapters and had someone quiz her. The other read and made study notes and used mnemonic tricks.

Lastly, while two of the three completers reported studying 2 hours a day or more, both of the non-completers studied less than 2 hours a day.

Table 3

Study Habits

Habit	Barry	George	Marcy	Robin	Sylvia
Concentrates well	yes	yes	yes	no	yes
Asks for help when needed	no	no	yes	yes	yes
Is generally a procrastinator	yes	yes	no	yes	no
Manages time well	no	no	yes	varies	yes
Uses a study method	no	no	yes	no	yes
Studies 2 hours or more per day	no	no	yes	no	yes

All of the students reported having a positive attitude about college in general, although all but one does experience some anxiety about school. Interestingly, neither of the non-completers was pleased with the format of the course as he took it, yet all three of the completers were very pleased with their courses' format. Although I had not specifically asked a question about self-discipline, both of the non-completers, somewhere along in the interview, mentioned that they did not discipline themselves well. The three completers all indicated having varying levels of self-discipline (see Table 4).

Table 4

Attitudes

Attitudes	Barry	George	Marcy	Robin	Sylvia
Likes school	yes	yes	yes	yes	yes
Worries about school	yes	yes	yes	no	yes
Liked format of the course as they took it	no	no	yes	yes	yes
Is self-disciplined	no	no	yes	varies	ye

Issues About the Course

Several issues relating to the course format arose (see Table 5). Both of those who did not complete did not have a choice of which format they took. Two of the three completers had been able to choose the format. The one completer who did not have a choice but was happy with the FLEX format was the only one who passed.

When asked how important it was to work in a classroom with other students, responses were mixed. One non-completer and two completers said it was not important, and one non-completer and one completer said it was important. However, both the students who took the traditional course by choice and the two who unhappily took the FLEX course with no choice felt that working closely in a classroom setting with an instructor available was important. On the other hand, the student who took FLEX by choice and the one who had no choice but was happy with the FLEX format did not see

working closely with an instructor as important to their success. They were just happy to have the instructor available to seek out as necessary. The students were unanimous in their agreement that both formats had their positive and negative aspects and that students should be able to choose what works best for them.

Table 5

Issues About the Course Format

Issue	Barry	George	Marcy	Robin	Sylvia
Had previous experience to prepare them for FLEX	no	no	yes	yes	no
Had choice of format	no	no	no	yes	yes
Considers working closely with other students in classroom important	no	yes	no	no	yes
Considers working closely with teacher in a classroom important	yes	yes	no	no	yes
Believes FLEX can fit some lifestyles and be a good option for some students	yes	yes	yes	yes	yes
Believes FLEX is *not* a good option for all students	yes	yes	yes	yes	yes
Believes the course should be offered in both formats to provide choice	yes	yes	yes	yes	yes

Part II—The Numbers

The primary purpose of this part of the study was to determine if a relationship exists between scores on any of the LASSI subscores or the total score on the LASSI and success in the fall 2000 college reading FLEX course. This part of the chapter presents the data analysis for the research question as well as demographic characteristics of the research participants.

Demographic Information

Demographic data obtained from the participants included age and gender. Of the 41 participants, 24 were female and 17 were male. Ages ranged from 18 to 45. Traditional students (ages 20 and under) made up the greatest part of the group ($n = 26$). Six students ranged in age from 21 to 26, and five ranged from 31 to 38. Four students were in their early 40s. (See Tables 6 and 7.)

Table 6

Age of Students

Age of Students	Number	Percentage
Under 21 years of age	26	63.4
21 years to 30	6	14.6
31 years to 40	5	12.2
41 years to 45	4	9.8
Total	41	100.0

Table 7

Gender of Students

Gender of Students	Number	Percentage
Male	17	41.5
Female	24	58.5
Total	41	100.0

Data Analysis

Data analysis procedures were done using SPSS. All decisions on the significance of the findings were made using an alpha level of 0.05. The statistical technique used to compute correlation coefficients was the product-moment correlation coefficient, the Pearson r. This method is an appropriate coefficient for determining relationship on a measure such as the LASSI which has variables expressed in interval or ratio data (Gay & Airasian, 2000).

The LASSI measured the students' learning and study strategies early in the semester in which they were enrolled in a college reading course. The LASSI measures five affective and five cognitive strategies on its 10 scales.

Anxiety (ANX): The degree to which students worry about their school performance is measured by this scale. The mean score was 23.05 ($SD =$ 6.55), and the median score was 22.00. The score range was 10 to 36 with a possible range of 8 to 40. Higher scores indicate lower levels of anxiety regarding school and academic performance.

Attitude (ATT): This subscale measures general attitudes and interests that lead to college success. The mean score for this subscale was 30.85 (*SD* = 5.81) with a median score of 32.00. The scores ranged from a minimum of 11 to a maximum of 40. Possible scores could range from 8 to 40 with higher scores indicating a more positive attitude toward school.

Motivation (MOT): Students' diligence, self-discipline, and willingness to work hard were measured by this subscale. The mean score on this one was 30.02 (*SD* = 5.23), and the median score was 30.00. The range was 18 to 40 with a possible range of 8 to 40. Higher scores reflected greater motivation.

Time Management (TMT): This subscale measures use of time-management principles for academic tasks. The mean score was 24.15 (*SD* = 6.65). The median score was 25.00 with a score range from a minimum of 8 to a maximum of 37. Possible scores on this subscale ranged from 8 to 40. Higher scores show better use of time management relating to academic tasks.

Concentration (CON): The purpose of this subscale is to measure the students' ability to concentrate and attend to academic tasks. The mean score was 24.98 (*SD* = 5.54), and the median was 25.00. The score range was 10 to 35, with a possible range of 8 to 40. High scores indicate better skills in concentrating and directing attention to school and school-related tasks.

Information Processing (INP): Students' ability to interrelate new information, create comparisons, and use reasoning and logic in acquiring

new information are measured by this subscale. The mean score was 26.73 (SD = 5.77). The median score was 26.00, and the scores ranged from 14 to 38 with a possible range of 8 to 40. Higher scores on this subscale show better use of information-processing skills.

Selecting Main Ideas (SMI): This subscale measures students' ability to choose important information for studying. The mean score on this subscale was 16.39 (SD = 3.52). The median score was 17.00. The scores ranged from a minimum of 8 to a maximum of 24, and the possible range was 5 to 25. Higher scores on this subscale indicate better ability to select important information for further study.

Study Aids (STA): Ability to use support techniques or materials to help students' learn and remember information is measured by this subscale. The mean score was 22.66 (SD= 5.26), and the median was 22.00. The score range was 12 to 35 with a possible range of 8 to 40. Higher scores reflected greater use of study aids to improve learning.

Self-Testing (SFT): This subscale measures students' ability to review and prepare for classes. The mean score was 25.27 (SD = 5.84). The median score was 25.00. The range was from 10 to 39 with a possible range from 8 to 40. Higher scores show better ability to review and prepare for classes.

Test Strategies (TST): Students' strategies for preparing for and taking tests are measured by this subscale. The mean score was 27.61 (SD = 5.14), and the median score was 28.00. The scores ranged from 13 to 36, and the

possible range was 8 to 40. High scores indicated better strategies for preparing for and taking tests.

Total: The total is a sum of the LASSI subscale scores. The mean total score was 251.71 (SD = 36.80), and the median score was 248.00. The scores ranged from 174 to 325 with a possible range of 77 to 385. Higher total scores may indicate generally better functioning in learning and study strategies overall. Table 8 summarizes these results.

The primary research question is, *Is there a relationship between the scores on any of the LASSI subscales or the LASSI total score and success in the fall 2000 college reading FLEX course?*

The subscale and total scores on the LASSI were each tested for any relationship with students' success in the FLEX course as measured by pass/fail (pass = 2, fail = 1) on the class performance. See Appendix H for data from the fall 2000 cohort.

Null Hypotheses Testing

Null Hypothesis 1. No relationship exists between students' LASSI subscores or the total LASSI score and their success in the fall 2000 college reading FLEX course.

Null Hypothesis 1a. Anxiety–This null hypothesis was retained (r = .146, p = .361). There was no significant relationship between students' Anxiety and success in the fall 2000 FLEX course.

Table 8

Summary of LASSI Results

LASSI Scale	Mean	SD	Median	Actual Score Range	Possible Range
Anxiety	23.05	6.55	22.00	10-36	8-40
Attitude	30.85	5.81	32.00	11-40	8-40
Motivation	30.02	5.23	30.00	18-40	8-40
Time Management	24.15	6.65	25.00	8-37	8-40
Concentration	24.98	5.54	25.00	10-35	8-40
Information Processing	26.73	5.77	26.00	14-38	8-40
Selecting Main Ideas	16.39	3.52	17.00	8-24	5-25
Study Aids	22.66	5.26	22.00	12-35	8-40
Self-Testing	25.27	5.84	25.00	10-39	8-40
Test Strategies	27.61	5.14	28.00	13-36	8-40
Total	251.71	36.80	248.00	174-325	77-385

Null Hypothesis 1b. Attitude—This null hypothesis was retained $(r = .215, p = .177)$. There was no significant relationship between students' Attitudes and success in the fall 2000 FLEX course.

Null Hypothesis 1c. Motivation—This null hypothesis was rejected $(r = .546, p = .000)$. There was a significant relationship between students' Motivation and success in the fall 2000 FLEX course.

Null Hypothesis 1d. Time Management—This null hypothesis was rejected $(r = .474, p = .002)$. There was a significant relationship between students' Time Management and success in the fall 2000 FLEX course.

Null Hypothesis 1e. Concentration–This null hypothesis was rejected (r = .519, p = .001). There was a significant relationship between students' Concentration and success in the fall 2000 FLEX course.

Null Hypothesis 1f. Information Processing–This null hypothesis was rejected (r = .322, p = .040). There was a significant relationship between students' Information Processing and success in the fall 2000 FLEX course.

Null Hypothesis 1g. Selecting Main Ideas–This null hypothesis was rejected (r = .489, p = .001). There was a significant relationship between students' Selecting Main Ideas and success in the fall 2000 FLEX course.

Null Hypothesis 1h. Study Aids–This null hypothesis was retained (r = .240, p = .131). There was no significant relationship between students' use of Study Aids and success in the fall 2000 FLEX course.

Null Hypothesis 1i. Self-Testing–This null hypothesis was rejected (r = .459, p = .003). There was a significant relationship between students' Self-Testing and success in the fall 2000 FLEX course.

Null Hypothesis 1j. Test Strategies–This null hypothesis was rejected (r = .440, p = .004). There was a significant relationship between students' Test Strategies and success in the fall 2000 FLEX course.

Null Hypothesis 1h. Total–This null hypothesis was rejected (r = .567, p = .000). There was a significant relationship between the students' Total LASSI scores and success in the fall 2000 FLEX course.

See Table 9 for summary.

Table 9

Summary of Hypothesis 1

Scale	Correlation with FLEX Success	Probability
Anxiety	.146	.361
Attitude	.215	.177
Motivation	.546***	.000
Time Management	.474**	.002
Concentration	.519***	.001
Information Processing	.322*	.040
Selecting Main Ideas	.489***	.001
Study Aids	.240	.131
Self-Testing	.459**	.003
Test Strategies	.440**	.004
Total	.567***	.000

* Significant at less than or equal to the .05 level. **Significant at less than or equal to the .01 level. ***Significant at less than or equal to the .001 level

Null Hypothesis 2. There is no significant difference between the LASSI subscores or the LASSI total scores of the fall 2000 FLEX course by age.

Null Hypothesis 2a. Anxiety—This null hypothesis was retained ($F_{(3,37)}$ = 1.170, p = .334). There is no significant difference between the LASSI subscale scores for Anxiety for the fall 2000 FLEX course by age.

Null Hypothesis 2b. Attitude—This null hypothesis was retained ($F_{(3,37)}$ = 1.638, p = .197). There is no significant difference between the LASSI subscale score for Attitude for the fall 2000 FLEX course by age.

Null Hypothesis 2c. Motivation–This null hypothesis was retained $(F_{(3,37)} = 1.057, p = .379)$. There is no significant difference between the LASSI subscale scores for Motivation for the fall 2000 FLEX course by age.

Null Hypothesis 2d. Time Management–This null hypothesis was retained $(F_{(3,37)} = 1.876, p = .151)$. There is no significant difference between the LASSI subscale scores for Time Management for the fall 2000 FLEX course by age.

Null Hypothesis 2e. Concentration–This null hypothesis was retained $(F_{(3,37)} = 1.493, p = .232)$. There is no significant difference between the LASSI subscale scores for Concentration for the fall 2000 FLEX course by age.

Null Hypothesis 2f. Information Processing–This null hypothesis was retained $(F_{(3,37)} = .616, p = .609)$. There is no significant difference between the LASSI subscale scores for Information Processing for the fall 2000 FLEX course by age.

Null Hypothesis 2g. Selecting Main Ideas–This null hypothesis was retained $(F_{(3,37)} = .333, p = .802)$. There is no significant difference between the LASSI subscale scores for Selecting Main Ideas for the fall 2000 FLEX course by age.

Null Hypothesis 2h. Study Aids–This null hypothesis was retained $(F_{(3,37)} = 1.609, p = .204)$. There is no significant difference between the LASSI subscale scores for Study Aids for the fall 2000 FLEX course by age.

Null Hypothesis 2i. Self-Testing–This null hypothesis was rejected $(F_{(3,37)} = 3.919, p = .016)$. There is a significant difference between the LASSI subscale scores for Self-Testing for the fall 2000 FLEX course by age.

Null Hypothesis 2j. Test Strategies–This null hypothesis was retained $(F_{(3,37)} = .305, p = .821)$. There is no significant difference between the LASSI subscale scores for Test Strategies for the fall 2000 FLEX course by age.

Null Hypothesis 2k. Total–This null hypothesis was retained $(F_{(3,37)} = 1.773, p = 1.69)$. There is no significant difference between the LASSI Total scores for the fall 2000 FLEX course by age.

Post-hoc analysis using Tukey, Scheffe, and Student-Newman-Keuls was performed. Group 2 (ages 21-30) scored significantly lower on Self-Testing than the other age groups. (See Table 10.)

Table 10

Post-hoc Analysis of Self-Testing

Age Group	Number	Mean	Std. Deviation
1 (under 20)	26	24.35	4.418
2 (21-30)	6	21.83	8.159
3 (31-40)	5	31.40	6.656
Table 10–*Continued*			
4 (over 40)	4	28.75	3.594
Total	41	25.27	5.844

Table 11 summarizes the one-way ANOVA for LASSI subscores and Total scores by age.

Table 11

Summary of One-Way ANOVA for LASSI Subscores and Total Scores by Age

Scale		Sum of Squares	df	Mean Square	F	Sig.
ANX	Between Groups	86.264	3	28.755	1.057	.334
	Within Groups	1006.712	37	27.208		
	Total	1092.976	40			
ATT	Between Groups	158.423	3	52.808	1.638	.197
	Within Groups	1192.699	37	32.235		
	Total	1351.122	40			
MOT	Between Groups	86.264	3	28.755	1.057	.379
	Within Groups	1006.712	37	27.208		
	Total	1092.976	40			
TMT	Between Groups	233.283	3	77.761	1.876	.151
	Within Groups	1533.838	37	41.455		
	Total	1767.122	40			
CON	Between Groups	132.464	3	44.155	1.493	.232
	Within Groups	1094.512	37	29.581		
	Total	1226.976	40			
INP	Between Groups	63.331	3	21.110	.616	.609
	Within Groups	1268.718	37	34.290		
	Total	1332.049	40			
SMI	Between Groups	13.027	3	4.342	.333	.802
	Within Groups	482.729	37	13.047		
	Total	495.756	40			
STA	Between Groups	127.548	3	42.516	1.609	.204
	Within Groups	977.672	37	26.424		
	Total	1105.220	40			
SFT	Between Groups	329.381	3	109.794	3.919	.016
	Within Groups	1036.668	37	28.018		
	Total	1366.049	40			
TST	Between Groups	25.511	3	8.504	.305	.821
	Within Groups	1030.245	37	27.844		
	Total	1055.756	40			
PASSFAIL	Between Groups	.742	3	.247	2.091	.118
	Within Groups	4.379	37	.118		
	Total	5.122	40			
TOTAL	Between Groups	6808.220	3	2269.407	1.773	.169
	Within Groups	47360.268	37	1280.007		
	Total	54168.488	40			

Null Hypothesis 3. There is no significant difference between the LASSI subscores or the LASSI Total scores of the fall 200 FLEX course by gender.

Null Hypothesis 3a. Anxiety–This null hypothesis was retained ($F_{(1,39)}$ = 3.180, p = .082). There is no significant difference between the LASSI subscale scores for Anxiety for the fall 2000 FLEX course by gender.

Null Hypothesis 3b. Attitude–This null hypothesis was retained ($F_{(1,39)}$ = 1.774, p = .191). There is no significant difference between the LASSI subscale score for Attitude for the fall 2000 FLEX course by gender.

Null Hypothesis 3c. Motivation–This null hypothesis was retained ($F_{(1,39)}$ = 1.534, p = .223). There is no significant difference between the LASSI subscale scores for Motivation for the fall 2000 FLEX course by gender.

Null Hypothesis 3d. Time Management–This null hypothesis was retained ($F_{(1,39)}$ = 1.260, p = .268). There is no significant difference between the LASSI subscale scores for Time Management for the fall 2000 FLEX course by gender.

Null Hypothesis 3e. Concentration–This null hypothesis was retained ($F_{(1,39)}$ = 1.671, p = .204). There is no significant difference between the LASSI subscale scores for Concentration for the fall 2000 FLEX course by gender.

Null Hypothesis 3f. Information Processing–This null hypothesis was retained ($F_{(1,39)}$ = .876, p = .356). There is no significant difference between the LASSI subscale scores for Information Processing for the fall 2000 FLEX course by gender.

Null Hypothesis 3g. Selecting Main Ideas—This null hypothesis was retained $(F_{(1,39)} = 1.842, p = .183)$. There is no significant difference between the LASSI subscale scores for Selecting Main Ideas for the fall 2000 FLEX course by gender.

Null Hypothesis 3h. Study Aids—This null hypothesis was retained $(F_{(1,39)} = 1.581, p = .216)$. There is no significant difference between the LASSI subscale scores for Study Aids for the fall 2000 FLEX course by gender.

Null Hypothesis 3i. Self-Testing—This null hypothesis was rejected $(F_{(1,39)} = 4.253, p = .046)$. There is a significant difference between the LASSI subscale scores for Self-Testing for the fall 2000 FLEX course by gender. Males scored significantly lower on Self-Testing than females.

Null Hypothesis 3j. Test Strategies—This null hypothesis was retained $(F_{(1,39)} = .032, p = .858)$. There is no significant difference between the LASSI subscale scores for Test Strategies for the fall 2000 FLEX course by gender.

Null Hypothesis 3k. Total—This null hypothesis was retained $(F_{(1,39)} = 1.621, p = .211)$. There is no significant difference between the LASSI Total scores for the fall 2000 FLEX course by gender.

Table 12 summarizes the one-way ANOVA for LASSI subscores and Total scores by gender.

The winter 2001 college reading courses were also surveyed with the LASSI, and Pearson r correlations were also conducted on this population of students. See Table 13 for evidence that the correlation found in the fall 2000 FLEX course with LASSI scores was due to the FLEX format rather

than course content or instructor. Virtually all winter 2001 students took the course in a traditional format and both the course content and the instructor were the same for both the fall 2000 FLEX course and the winter 2001 courses.

Clearly, r-values show that no correlation exists between any of the LASSI subscale scores or the LASSI total score and success or failure in the winter college reading courses.

Table 12

Summary of One-Way ANOVA for LASSI Subscores and Total Scores by Gender

Scale		Sum of Squares	df	Mean Square	F	Sig.
ANX	Between Groups	129.219	1	129.219	3.180	.802
	Within Groups	1584.684	39	40.633		
	Total	1713.902	40			
ATT	Between Groups	58.796	1	58.796	1.774	.191
	Within Groups	1292.326	39	33.137		
	Total	1351.122	40			
MOT	Between Groups	41.372	1	41.372	1.534	.223
	Within Groups	1051.604	39	26.964		
	Total	1092.976	40			
TMT	Between Groups	55.318	1	55.318	1.260	.268
	Within Groups	1711.804	39	43.892		
	Total	1767.122	40			
CON	Between Groups	50.408	1	50.408	1.671	.204
	Within Groups	1176.568	39	30.168		
	Total	1226.976	40			
INP	Between Groups	29.199	1	29.199	.874	.356
	Within Groups	1302.850	39	33.406		
	Total	1332.049	40			
SMI	Between Groups	22.355	1	22.355	1.842	.183
	Within Groups	473.401	39	12.138		
	Total	495.756	40			
STA	Between Groups	43.067	1	43.067	1.581	.216
	Within Groups	1062.152	39	27.235		
	Total	1105.220	40			
SFT	Between Groups	134.329	1	134.329	4.253	.046
	Within Groups	1231.720	39	31.583		
	Total	1366.049	40			
TST	Between Groups	.877	1	.877	.032	.858
	Within Groups	1054.879	39	27.048		
	Total	1055.756	40			
PASSFAIL	Between Groups	.264	1	.264	2.123	.153
	Within Groups	4.857	39	.125		
	Total	5.122	40			
TOTAL	Between Groups	2161.379	1	2161.379	1.621	2.11
	Within Groups	52007.109	39	1333.516		
	Total	54168.488	40			

Table 13

Pearson r Correlations for Winter 2001 College Reading Courses

Scale	Correlation With Success in Winter Course	Probability
Anxiety	-.091	.688
Attitude	.252	.258
Motivation	.245	.272
Time Management	.204	.363
Concentration	-.062	.785
Information Processing	-.075	.739
Selecting Main Ideas	.118	.600
Study Aids	-.072	.751
Self-Testing	.066	.772
Test Strategies	-.036	.873
Total	.092	.685

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study emerged from a situation at Kirtland Community College in which students who had been identified as reading below college level on placement testing were enrolled into a developmental college reading course that was structured with an open-entry/open-exit format. The purpose of the study was to determine if a method could be found to determine what the learning and study strategies of these students were and how these strategies related to success in the open-entry/open-exit class.

The overall goal was to locate an instrument or devise an interview which could be easily administered and would help admissions counselors, advisors, and others to sort students who were less likely to succeed in such an academic delivery system from those who have a greater chance for success in an open-entry/open-exit system.

I chose to combine qualitative and quantitative inquiry because I thought that one might elicit more promising results than the other, or possibly a combination of the two might be implicated as the best solution to the problem of finding the best placements for such students.

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The discussion in this chapter is presented in four sections: (a) a review of the qualitative findings, (b) a review of the quantitative findings, (c) integration and implications, and (d) recommendations for further research.

Review of Qualitative Findings

Kirtland Community College is a small rural college in northern Michigan. Like many other community colleges, it finds itself looking for ways to attract and retain students while struggling with high costs and student and business/employer demand for more flexibility.

Kirtland has numerous qualities to recommend it. It offers many accredited academic and technical degrees and certificates. It has several student services and offers many student activities. Kirtland's population is small, and its students come from a very large community college district and beyond. Class sizes are generally small. The campus is located in a wonderland of natural beauty, including lakes, streams, and forests.

Kirtland students are both traditional and non-traditional students. Most live off campus and commute to classes from various distances. A great percentage of them place into developmental courses on initial placement testing. Many of those who tested into a developmental reading course in the fall 2000 found themselves in a FLEX course which allowed them to work on their own, getting help from the instructor as needed. They could set their own pace but were expected to finish the class within a 15-week semester (or less, if they registered at a registration date after the first one). They were

given a syllabus with suggested completion dates for assignments to help them stay on schedule. As it turned out, the majority of the students did not complete the course within the 15 weeks.

For this part of the research, I randomly chose five college reading students to interview. The main purpose of the interviews was to determine if these students had the necessary learning and study strategies to succeed in a self-paced class and if they had the self-knowledge to choose the best course delivery system for themselves. I hoped that the information gleaned from the interviews would teach us how to better serve future students.

Since I wanted a balanced view, the five students were randomly chosen to represent several different groups. Marcy was a fall 2000 FLEX student who completed and passed the class. Barry was a fall 2000 FLEX student who did not complete or pass the class. George was also a fall 2000 FLEX student who did not complete or pass the FLEX class; however, he had a unique perspective because he took the class over in the winter 2001 in the traditional format. Sylvia and Robin both took the college reading class in the winter 2001: Sylvia opted for the traditional format while Robin chose the FLEX format. Both were successful.

Interview questions centered on the students' study habits and attitudes as well as their feelings about the course format including why or why not one or the other format was preferred by them. Overwhelmingly, all students felt strongly that both formats had positive and negative aspects and that both formats should be available for the students to choose between.

All interviewees agreed that the FLEX format was not a good option for all students. Two of the issues that emerged as being indicators that a student might be successful in FLEX were (a) having had some previous experience with self-regulation and (b) having had the opportunity to choose the FLEX option. George, for example, like many others in the course, was just out of high school and had never had to work on his own before. Hofer et al. (1998) point out that many college students are not self-regulating learners and that prior experience may have them entrenched in non-productive habits. This may be true of George. Also, he was unhappy to have been put into a self-paced course with no choice in the matter. Sylvia also felt choice was important and was glad that in the winter semester she had been given the choice. This issue of having choice appears to be an important one because all three of the students who were happy with the format of their class did pass, while both of the students who were unhappy with the format of their class did not pass.

Another factor that stood out as being an important determiner of who would succeed was the issue of self-discipline. Both of the unsuccessful students volunteered that they lacked self-discipline. They both also admitted to not being good managers of their time. Additionally, neither of them uses any study method, and they both reported studying less than 2 hours per day. The literature certainly supports this conclusion. According to Pintrich (1995) three important aspects of academic learning are controlling motivational beliefs, controlling resources such as time, and

controlling cognitive strategies, such as using study methods. All three of these aspects were lacking in the unsuccessful students.

Another defining quality that distinguished successful students from non-successful students was their willingness to get help when needed. All passing students reported that they had gotten help when they needed it; however, both of the non-successful students had failed to get help when needed. Newman (1994) considers help-seeking different from most other self-regulated learning strategies because it is a social strategy. Both motivational and affective factors are involved. One must not only recognize the need for help but also be willing to seek it. For whatever reason these students did not get help, their lack of success because of it is no surprise. According to Newman, high achievers are much more likely than low achievers to frequently engage in help-seeking from their instructors or classmates.

Lastly, both unsuccessful students defined themselves as procrastinators while only one of the passing students did. In their study of research on academic study time, Zimmerman et al. (1994) report that "there is a growing body of evidence to suggest that students' purposive use of strategy to manage their academic study time is a vital component of the strategic efforts to succeed in school" (p. 190). Certainly students who procrastinate have not learned to manage their study time. A study of academic procrastination by Day, Mensink, and O'Sullivan (2000) identified three most common patterns of academic procrastination. These were

evaluation anxiety, being discouraged, or being dependent. Being dependent is described as excessive dependency for structure and direction by others. Both dependency and discouragement could likely have been factors for the unsuccessful FLEX students. These are all issues of self-regulation, and they appear to be very important issues to consider in determining whether to place developmental students into self-paced or teacher-directed learning situations.

Robin's answers were the most confounding. Though she passed the FLEX course in the winter 2001 semester, many of her answers fell in line with the two FLEX students who did not pass. For example, her time management and self-discipline were reported as variable, she reported using no particular study method, and, like the unsuccessful students, she reported studying less than 2 hours per day and being a procrastinator. The one major difference between Robin and the two unsuccessful students appears to be that she had taken self-paced courses in high school and had learned strategies that helped her work within a self-paced system. Her answers about her self-discipline and time management being variable reflect this. She had learned to discipline herself and manage her time at crucial points in the semester in order to complete all assignments just in time.

Some conclusions can be drawn from the qualitative data. The FLEX system worked well for some while failing miserably for others, so if a self-paced system such as FLEX is going to be offered to college reading students, students also need to have the option of taking the class in the traditional

format. Students who are allowed to choose appear to be happier and more successful. It also appears that some students have enough self-knowledge to place themselves into the better format for themselves. Additionally, careful advising can also help identify students who would not be good candidates for a FLEX course. If an option is not possible, students will need to be given training prior to taking a FLEX course that will help them learn study habits and skills that will help them become more successful at self-regulation. Much evidence exists that self-regulated learning is teachable, and several programs and strategies for teaching these skills have been researched and recommended (Hofer et al., 1998; Lan, 1998; Weinstein, 1996; Zimmerman et al., 1996).

Review of Quantitative Findings

The Learning and Study Strategies Inventory was administered to the students in both the fall 2000 and winter 2001 college reading courses. The purpose was to see if there was a correlation between LASSI scores and success in the fall 2000 FLEX course.

This determination was made using Pearson product-moment correlations using an alpha at the .05 level to show correlation. The null hypothesis was that there is no significant relationship between students' LASSI subscores or the LASSI total scores and their success in the fall 2000 college reading FLEX course. This hypothesis was tested for each LASSI subscale and the total LASSI score.

Seven of the subscale scores and the total score (sum of the subscale scores) were positively correlated with success. The strongest correlation was with the Total score ($r = .567$, $p = .000$). The next strongest correlation was with the subscale score of Motivation ($r = .546$, $p = .000$). Correlations were also positive for the LASSI variables of Concentration ($r = .519$, $p = .001$), Selecting Main Ideas ($r = .489$, $p = .001$), Time Management ($r = .474$, $p = .002$) Self-Testing ($r = .459$, $p = .003$), Test Strategies ($r = .440$, $p = .004$), and Information Processing ($r = .322$, $p = .040$). Three of the subscale scores did not correlate at the .05 level or below. These were Anxiety ($r = .146$, $p = .361$), Attitude ($r = .215$, $p = .177$), and Study Aids ($r = .240$, $p = .131$).

A second null hypothesis was tested using a one-way analysis of variance (ANOVA). The ANOVA was used to determine whether significant differences exist between the means of the various age groups. Students were grouped by age into four groups: ages 20 or under, ages 21-30, ages 31-40, over age 40. The test was performed for each LASSI subscale and the Total score. The null hypothesis was retained for the Total score and all of the LASSI subscores except one. The null hypothesis was rejected for the subscore of Self-Testing. Post-hoc analysis using Tukey, Scheffe, and Student-Newman-Keuls demonstrated that the group of students ages 21-30 scored significantly lower on Self-Testing than the other age groups.

A third null hypothesis was also tested using the ANOVA. The purpose was to determine whether the means of the males and females differed significantly. The test was performed for each LASSI subscale score

and the Total LASSI score. The null hypothesis was retained for the Total score and all of the LASSI subscores except one. Males scored significantly lower than females on Self-Testing.

Lastly, to ensure that the correlations were not due to some factor other than the course format, Pearson product-moment correlations were also performed on LASSI results from students who took traditionally formatted college reading courses in the winter 2001 semester. Their success or failure showed no correlation with any of the LASSI variables, so it appears that the course format was the factor which influenced the correlations.

Because there was a strong correlation between seven of the LASSI subscores and especially the LASSI total score and success in the FLEX course, it can be concluded that the LASSI inventory may be a useful tool that can be used to help sort students who are likely to succeed in FLEX formatted courses from those who are not.

Integration and Implications

Although this study was done with one very small group of students in one very small rural community college, it has implications that may well extend to community colleges across the country. Some strong evidence from both the quantitative and qualitative aspects of this study indicate that screening and careful placement of students can help lead community college educators into a future where classrooms will often have no walls and class schedules will often have no times.

Results of the quantitative aspect of this study show that assessment of students using a measure of their learning and study strategies such as the LASSI could help in placement of developmental students (and maybe others) into a course format in which they have the greatest chance for success. It is clear from the literature that students who lack self-regulation need direct intervention and hands-on assistance in order to become successful students. Students lacking in self-regulation, especially in those areas identified by this study, need to be placed into courses where their lack of self-regulation will not be working against them, but instead, they are taught those skills.

It is interesting that, similar to the fall 2000 FLEX students, Lassi results for the winter 2001 students showed a great variety in and often lack of learning and study strategies, but unlike the fall 2000 students, almost all passed the class (18 of 22 students). It appears that the class made up for students' lack of study strategies by teaching those strategies as they needed them, which was exactly what the class was designed to do. Morante (1989 p. 4) confirms this idea when he asserts that "if a develomental course is functioning well, correlations between placement scores and grades should approach zero."

Assessment with a measure such as the LASSI could help sort students into traditional or FLEX courses. But that is only helpful if both are offered. Certainly, a strong implication of the study is that FLEX is not for everyone, especially not for every developmental student. Students need a

choice, and I believe that the qualitative aspect of the study reveals that many students know themselves well enough to make the right choice for themselves. Surely, advising or counseling which asks specific questions about time management, procrastination, study methods, and willingness to ask for help and spend time studying will help sort those who can self-regulate from those who cannot. Undoubtedly, a combination of using a measure such as the LASSI and careful advising would be the optimum system for assuring correct placement.

The importance of careful and thoughtful advising is particularly indicated as an adjunct to using a measure such as the LASSI in a situation such as Robin's. Though her self-reported study habits and attitudes may have caused her to appear not to be a good candidate for FLEX, in her prior experience she had learned strategies to compensate for this lack. An inventory of study skills alone would not have revealed this information.

Another implication from this study would certainly be that in a situation such as occurred at Kirtland in the fall 2000 where no option was offered to students, some other form of student support needs to be offered to students, and ideally, this support system needs to be mandatory. Students who lack self-regulation tend not (as in the case of George and Barry) to seek out help. If left to their own devices, most will ignore all opportunities and even pleas to voluntarily present themselves for assistance.

Retention is an enormous concern at all levels of higher education but especially at community colleges. Since first-semester success is so crucial a

factor in keeping students in school (Spann, 1990; Tinto, 1993), it is extremely important for community colleges to do their best to help first-semester students learn the skills and attitudes that they will need to become successful and self-regulating students and to do that in a system that offers their best chance for a successful first semester.

This study implies that this can be accomplished by measuring students' learning and study strategies and careful interviewing and advising. It implies that students need a choice between self-paced and teacher-directed courses, or lacking that, mandatory intervention to support students identified by study-skills inventories and advising as being at risk for failure.

Recommendations for Further Research

This study is just a beginning. The number of students involved in it was quite small. Considering the headlong rush that many community colleges are in to provide alternatives to traditional classrooms for busy students, the issues raised here are issues that need to be addressed, and addressed quickly. Increased flexibility and decreased spending are only useful if colleges do not lose sight of their essential mission—education. Obviously, students who fail and drop out are not being educated.

Based on the findings and conclusions of this study, the major recommendation for further research is to perform additional research using

the LASSI with larger groups of students to see if the findings can be replicated with large numbers of students.

Similar research could also be done using other types of distance education such as online courses. A similar study conducted with students who are in distance education or self-paced programs who are *not* developmental students would provide a somewhat different perspective. Although this study focused only on developmental students, the issue of the lack of self-regulatory skills is common to many students at all levels.

Additionally, other study strategy inventories could be compared to the LASSI to determine their usefulness as predictive instruments.

Further qualitative research would also add to what is known about the experiences of students in these types of courses. Qualitative studies could investigate reasons for choosing or withdrawing from self-paced instruction as well as levels of satisfaction with this type of education. Studies of the experiences and levels of satisfaction of instructors would add an interesting dimension to this field of research as well.
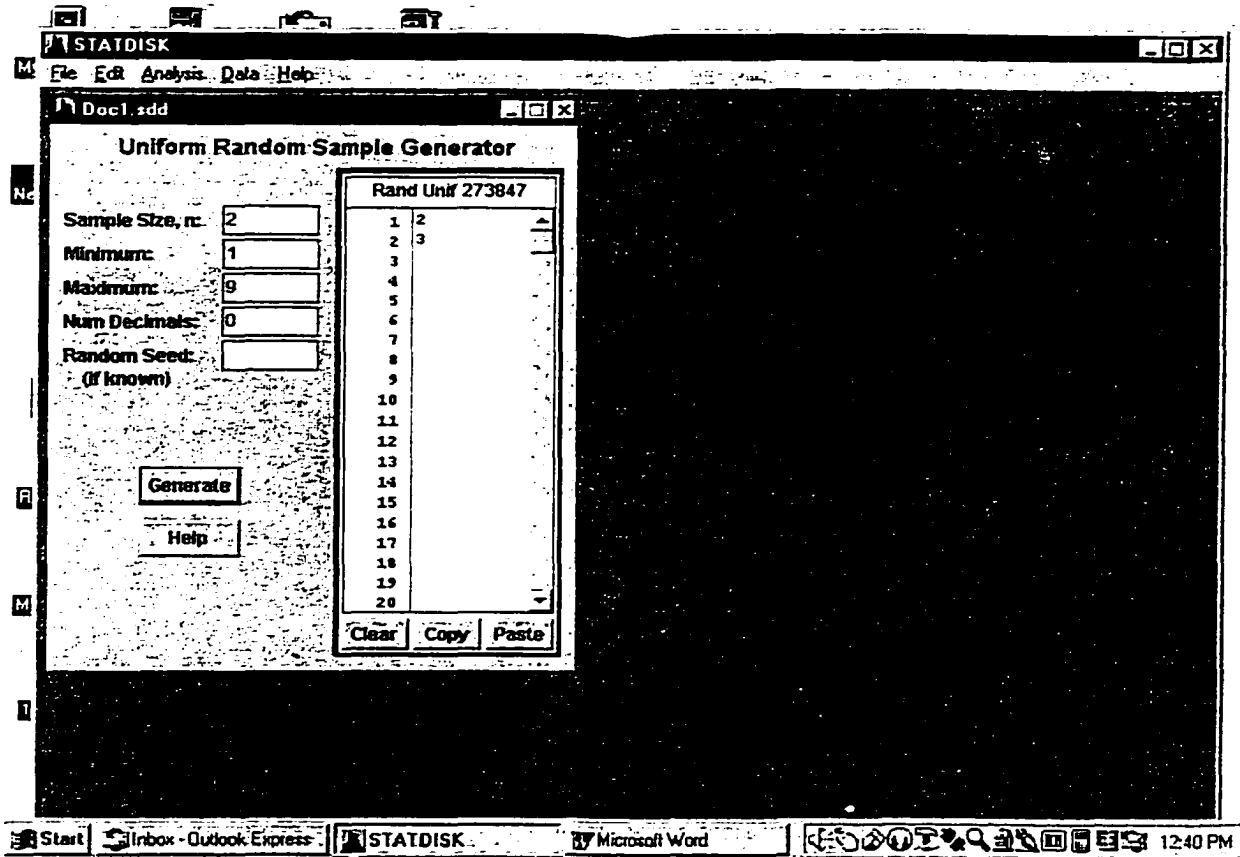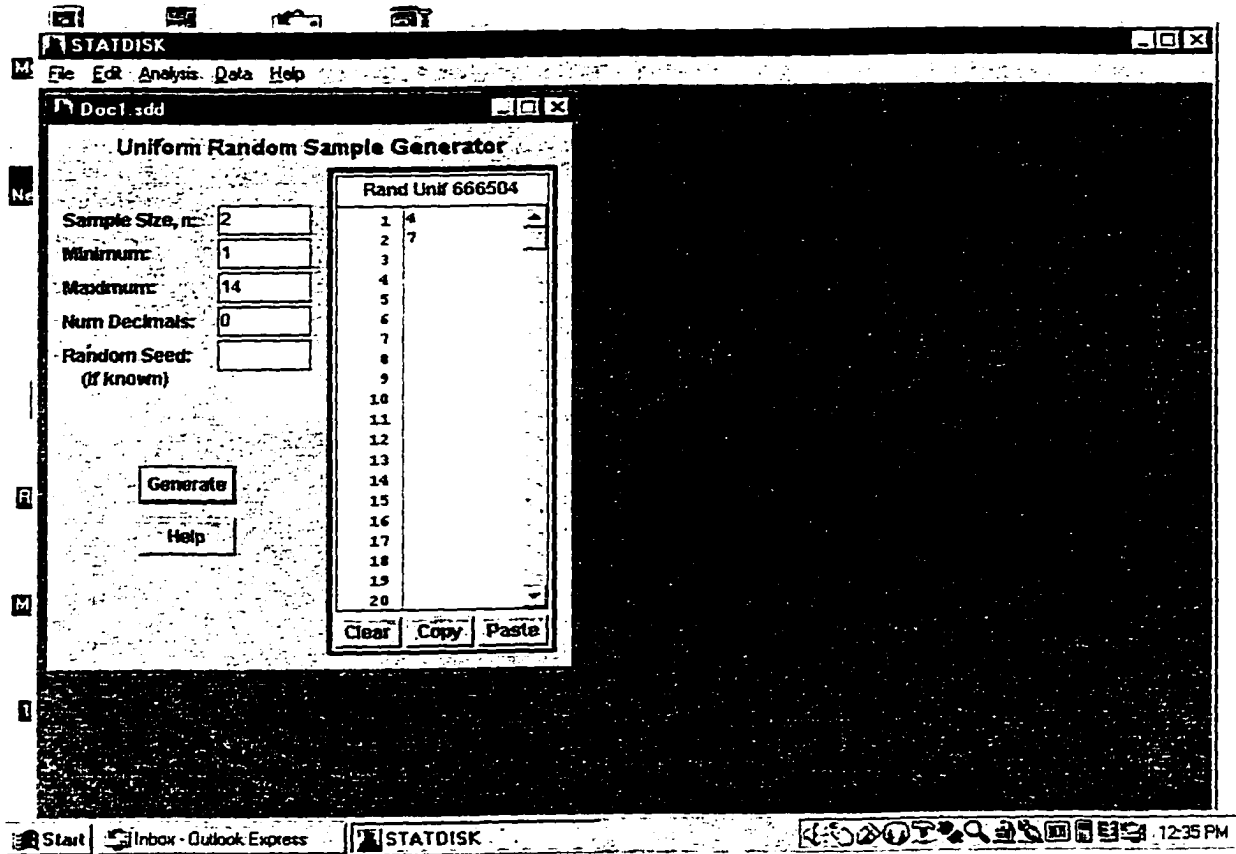
APPENDIX A

RANDOMLY GENERATED NUMBERS
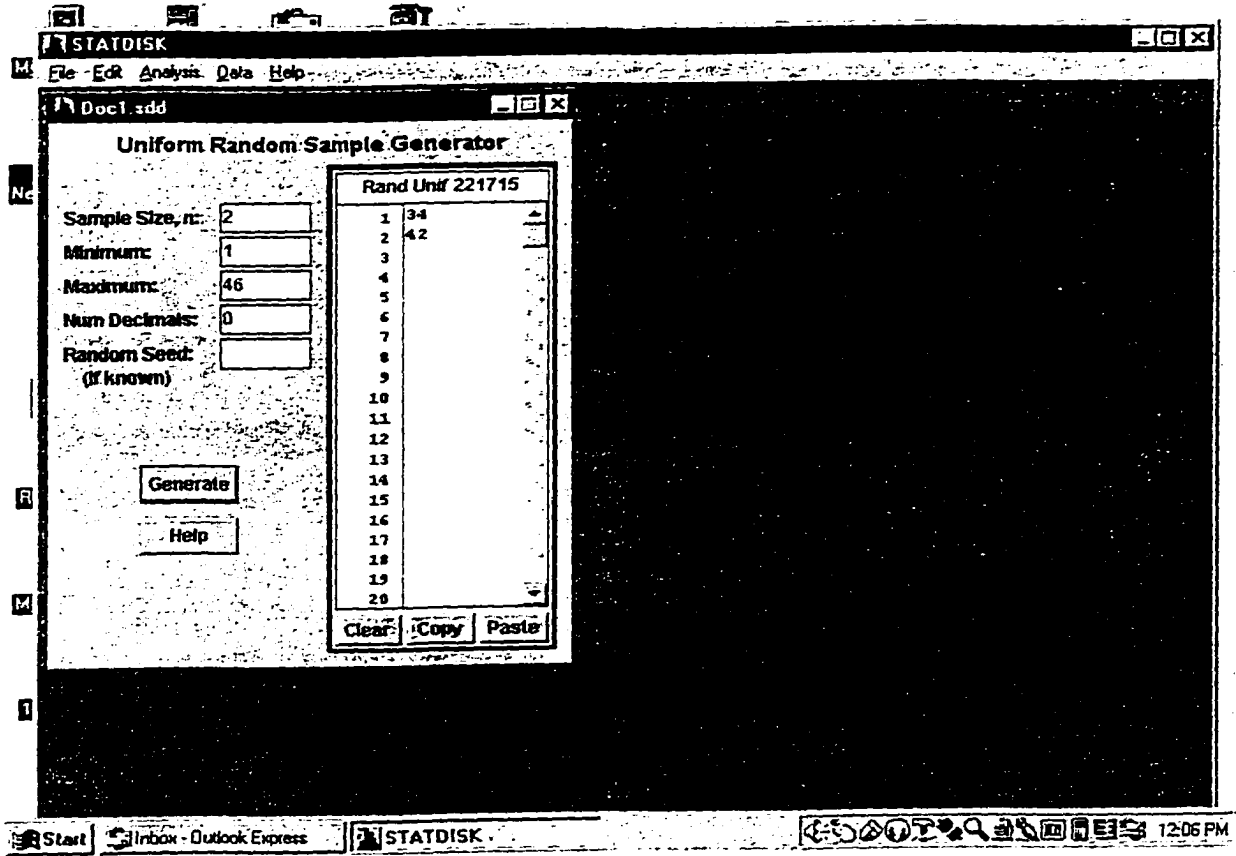
Randomly generated numbers - Fall, 2000 FLEX cohort
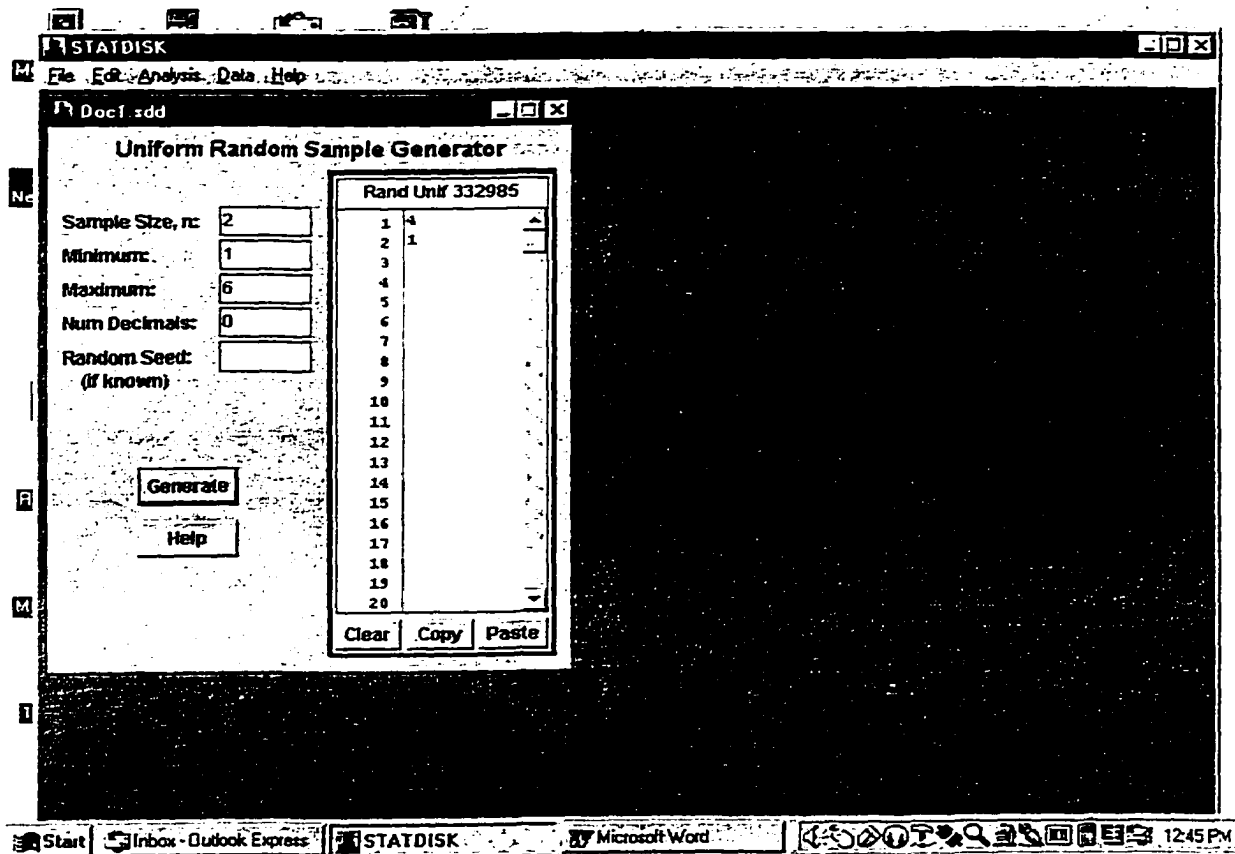
Randomly generated numbers - Fall, 2000 FLEX/Winter 2001 traditional cohort

Randomly generated numbers - Winter 2001FLEX by choice cohort

Randomly generated numbers - Winter, 2001 traditional cohort

APPENDIX B

INTERVIEW QUESTIONS

Possible Interview Questions

1. Background—married? children? job? (full or part-time?)

2. When did you graduate from high school?

3. Was the semester you took the College Reading Skills course your first semester at Kirtland? Any college?

4. What program are you on? Career goal?

5. Why did you choose Kirtland? Full or part-time student?

6. Did you take the course in the traditional or FLEX format? Why?

7. If you had no choice of format, how did you feel about that?

8. If you had been given a choice, which format do you think you would have chosen? Why?

9. How successful were you in your course? To what do you attribute your success of non-success?

10. Do you think you would have had more or less success in a different delivery mode? Why?

11. What were the good things about the course they way you took it—what did you like?

12. What were the weaknesses—what didn't you like?

13. If you took FLEX, why do you think the FLEX format did or did not work for you?

14. What about being in a classroom setting does or does not work for you?

15. Tell me about your experience with the class.

16. Did you ever ask questions or try to get help? If not, why? If so, what happened?

17. How would you describe your attitude toward going to college?

18. Are you generally pretty good or not so good at keeping up with homework assignments and studying? Explain.

19. Would you say you are a person who manages your time or one who just lets things happen? Explain.

20. Are you a procrastinator?

21. How much do you worry about school/test performance?

22. How good are you at concentration when studying or reading, or are you easily distracted?

23. What study methods do you normally use?

24. On average, how many hours per day would you say you study?

25. How do you prepare for tests?

26. What, if any, preparation, did you have for a FLEX format class?

APPENDIX C

MEMBER CHECKS FROM STUDENTS

Dear

Once again, thank you so much for your help with my dissertation. As I mentioned in our recent phone conversation, I would like you to read and comment on the first draft of the part of my paper that discusses my interview with you.

Please verify that the quotes and comments that I used are accurate and also that the way I worded it says just what you meant to say.

I really want this to accurately convey your experience with your FLEX course, so please feel free to correct me if I misinterpreted anything.

You may make comments or corrections right on the page, or if you don't have any corrections, you may just state that (or make any other helpful comments) in the space at the bottom of this page.

You'll remember that I gave you a fictitious name; yours is Robin. You only need to respond to the part that is about you.

I really appreciate your help with this, Melissa, and if you can do it right away, that would be wonderful; I'd like it back no later than the middle of January, if possible.

Just return all the pages in the enclosed self-addressed, stamped envelope. Thank you and Happy New Year!

Sincerely,

Ginna

Ginna Wenger

      (call if you have any questions.)

_____

Student comments:

looks great :-)

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when you are all
done with this study
could you send me
a final copy of
your findings, and
maybe a final copy
of your report.

Thanks

Dear

Once again, thank you so much for your help with my dissertation. As I
mentioned in our recent phone conversation, I would like you to read and
comment on the first draft of the part of my paper that discusses my interview
with you.
Please verify that the quotes and comments that I used are accurate and also
that the way I worded it says just what you meant to say.
I really want this to accurately convey your experience with your I   course, so
please feel free to correct me if I misinterpreted anything.
You may make comments or corrections right on the page, or if you don't have
any corrections, you may just state that (or make any other helpful comments) in
the space at the bottom of this page.
You'll remember that I gave you a fictitious name; yours is Sylvia. You only need
to respond to the part that is about you.
I really appreciate your help with this, Beate, and if you can do it right away, that
would be wonderful; I'd like it back no later than the middle of January, if
possible.
Just return all the pages in the enclosed self-addressed, stamped envelope.
Thank you and Happy New Year!

Sincerely,
Ginna
Ginna Wenger
       (call if you have any questions.)

Student comments: *It's all OK — just how I meant it !*

"Happy New Year"

Dear

Once again, thank you so much for your help with my dissertation. As I mentioned in our recent phone conversation, I would like you to read and comment on the first draft of the part of my paper that discusses my interview with you.

Please verify that the quotes and comments that I used are accurate and also that the way I worded it says just what you meant to say.

I really want this to accurately convey your experience with your FLEX course, so please feel free to correct me if I misinterpreted anything.

You may make comments or corrections right on the page, or if you don't have any corrections, you may just state that (or make any other helpful comments) in the space at the bottom of this page.

You'll remember that I gave you a fictitious name; yours is Barry. You only need to respond to the part that is about you.

I really appreciate your help with this, Monte, and if you can do it right away, that would be wonderful; I'd like it back no later than the middle of January, if possible.

Just return all the pages in the enclosed self-addressed, stamped envelope.
Thank you and Happy New Year!

Sincerely,

Ginna

Ginna Wenger

       (call if you have any questions.)

This everything is fine about what was said

Student comments:

Dear

Once again, thank you so much for your help with my dissertation. As I mentioned in our recent phone conversation, I would like you to read and comment on the first draft of the part of my paper that discusses my interview with you.

Please verify that the quotes and comments that I used are accurate and also that the way I worded it says just what you meant to say.

I really want this to accurately convey your experience with your FLEX course, so please feel free to correct me if I misinterpreted anything.

You may make comments or corrections right on the page, or if you don't have any corrections, you may just state that (or make any other helpful comments) in the space at the bottom of this page.

You'll remember that I gave you a fictitious name; yours is Marcy. You only need to respond to the part that is about you.

I really appreciate your help with this, Patti, and if you can do it right away, that would be wonderful; I'd like it back no later than the middle of January, if possible.

Just return all the pages in the enclosed self-addressed, stamped envelope.
Thank you and Happy New Year!

Sincerely,
Ginna
Ginna Wenger

(call if you have any questions.)

Student comments:

no changes or comments, Ginna.

Thank you for thinking of me.

Just to let you know; they are training me on the job - no classes needed. Although would really like to find the time to pick up a couple - hopefully!!

Good Luck on your paper -

APPENDIX D

MEMBER CHECKS FROM PEERS

take college-level courses. At the time of this study, the Nelson-Denny 143
Reading test was used to determine reading proficiency. In the fall 2000,
approximately 80% of the students who tested needed at least one
developmental course. Of these, 33% needed one or the other of the two
levels of reading improvement which are offered.

The students who were enrolled in reading courses had been identified
by this placement testing as reading below college level. All reading
placements are verified by a system of re-testing students on the first day of
class with a different form of the Nelson-Denny Reading test. The students
who were enrolled in the College Reading Skills course in the fall 2000 and
winter 2001 would have been identified as reading between about the 9th to
the 11th grade levels. Placements into developmental courses at Kirtland are
mandatory.

The College's FLEX Program

Kirtland's FLEX program was conceived in the spring and summer of
2000. It had two main purposes. One was to save from extinction Kirtland's
Office Information Systems and medical Office Assistant (OIS/MOA)
programs which had been suffering steadily declining enrollments.
A second major purpose was to serve as a pilot for the program
delivery method that would be used at Kirtland's Michigan Technical
Education Center (M-TEC) which was slated to begin operation in Gaylord,
Michigan in the fall of 2001. The M-TEC would be a satellite campus in

Otsego County, the county just north of the Kirtland College district. It would be one of 18 Michigan Technical Education Centers approved by the Michigan Economic Development Corporation offering career and technical education. Kirtland received a 4.1 million-dollar grant to assist in constructing and equipping the M-TEC. One of the requirements for receiving this grant award was that programs and training would be delivered through an open-entry/open-exit system. Hence, college administrators were eager to try the open-entry/open-exit system with some on-campus occupational courses on a pilot basis.

Now, the idea of offering occupational courses in an open-entry/open-exit system did not roll around in administrative heads too long before it became clear that some accommodation would have to be made for the great number of students who would test at the developmental level. Clearly, if open-entry/open-exit would be the delivery mode for the occupational courses at the M-TEC and possibly on campus as well, then developmental curriculum would also have to fit that system.

As a result, in the summer of 2000, developmental instructors were requested to begin in the fall 2000 to teach three developmental courses (college reading, basic math, and beginning algebra) in an open-entry/open-exit format. At that point in time, many students had already registered for what they expected to be traditionally-delivered courses. Since all offered sections were changed to large FLEX sections, all students who registered for

That is why we wanted you + the other instructors involved in FLEX.

same way that I do. Admittedly, one might construe my intimate involvement in the situation to be a hindrance to objectivity; however, as Gay & Airasian (2000) state. "The greater the involvement. the greater the opportunity for acquiring in-depth understanding and insight" (p. 223). As a participant in the FLEX experience. I was familiar with the phenomenon being studied and, like the students, I went into the situation with some concerns. but I did not begin with a preconceived idea of what I would find because I truly did not know. This had never been tried before at Kirtland.

I appreciate this about you, Linna!

↘ I am fully conscious of

> The balance needed between insider and outsider in qualitative research. "Experiencing the program as an insider is what necessitates the participant part of participant observation. At the same time, however, there is clearly an observer side to this process. The challenge is to combine participation and observation so as to become capable of understanding the program as an insider while describing the program for outsiders (Patton. 1990. p. 207)" (Merriam. 2001. p. 102).

I was approached during the summer of 2000 by the Chairperson for Career & Technical Studies who had been given the job of coordinating the pilot FLEX program. She *explained* to me the goals of the FLEX program and requested my participation. I was asked to teach all of the developmental college reading skills courses in the upcoming fall semester in an open-entry/open-exit format.

I had some serious concerns about this at the time. I have been a developmental educator for over twenty years. and I knew from experience

semester for most of them to do the work even if they got started then. It's

hard to describe how I felt. I think most people who teach do so because of

the joy they get when they see their students succeed. This was the most

joyless semester of my entire career. I felt guilty, too. I wondered how I

could have done things differently to have avoided this disaster. And most of

all, I felt bad for my students: they needed this class, they had gotten into

something they had not expected and did not know how to handle. At one of

the FLEX staff meetings during this time, I lost my usual composure and

wept for my students and the situation we were in.

I asked if we find a way to give the students more time without

penalizing them. As a result of that request, the FLEX staff conceived a plan

to give students an extension rather than a failing grade at the end of the

semester. The FLEX coordinator took our proposal to the college President

who approved the plan (see Appendix ___).

On November 1, I mailed notification of the extension option to all

students (see Appendix ___). In this letter, I gave them until November 30 to

talk to me about the extension if they wished to take advantage of it. Fewer

than one-third came. I could hardly believe that so many of them did not

contact me, even to take advantage of their one hope of not failing the class.

On November 14, I sent a reminder e-mail and began another campaign to

contact all of the students in person. I called them and/or hunted them down

on campus, extension form in hand, over the next two weeks. I talked to

parents, I talked to the coach, I talked to their other instructors, anyone who

had contact with the students who might be able to get them to come see me.

By the end of the semester. I had gotten 33 of them to sign up for the

extension. *→ to be offered in a Traditional class format.*

At the beginning of the semester. 47 students had registered for the

class. On an open enrollment date in October. 2 more students enrolled. Of

these, 6 students finished and passed by the end of the 15-week semester.

I learned from the 6 students who passed as well as the 42 who did

not. Those six flourished in the system and could not have been happier with

the design of the class. They all visited me in the FLEX Lab as needed. some

frequently; other mixed visits and phone calls. They were usually ahead of

the schedule in the syllabus. In fact, one of the six was one of the two

students who had not begun the class until in the middle of October.

As the student interviews will show. a wide variety of factors came into

play as students struggled to cope with. gave up on. or diligently

accomplished the course. I recognized this from the beginning, and what

quickly became clear to me was that if we had some way of identifying which

students could work well in this kind of system and which could not, we could

get them into the system that would work best for them. So my overriding

goal, if I could not get all of my students through the class, was to learn from

our experience and offer hope for a better way of providing education to

future students. Hence. this study.

Jenna,
May I see/use your student interviews?
You are welcome to use any other info or raw-data
from the FLEX study.

take college-level courses. At the time of this study, the Nelson-Denny Reading test was used to determine reading proficiency. In the fall 2000, approximately 80% of the students who tested needed at least one developmental course. Of these, 33% needed one or the other of the two levels of reading improvement which are offered.

The students who were enrolled in reading courses had been identified by this placement testing as reading below college level. All reading placements are verified by a system of re-testing students on the first day of class with a different form of the Nelson-Denny Reading test. The students who were enrolled in the College Reading Skills course in the fall 2000 and winter 2001 would have been identified as reading between about the 9th to the 11th grade levels. Placements into developmental courses at Kirtland are mandatory.

The College's FLEX Program

Kirtland's FLEX program was conceived in the spring and summer of 2000. It had two main purposes. One was to save from extinction Kirtland's Office Information Systems and medical Office Assistant (OIS/MOA) programs which had been suffering steadily declining enrollments.

A second major purpose was to serve as a pilot for the program delivery method that would be used at Kirtland's Michigan Technical Education Center (M-TEC) which was slated to begin operation in Gaylord, Michigan in the fall of 2001. The M-TEC would be a satellite campus in

take college-level courses. At the time of this study, the Nelson-Denny

Reading test was used to determine reading proficiency. In the fall 2000,

approximately 80% of the students who tested needed at least one

developmental course. Of these, 33% needed one or the other of the two

levels of reading improvement which are offered.

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by this placement testing as reading below college level. All reading

placements are verified by a system of re-testing students on the first day of

class with a different form of the Nelson-Denny Reading test. The students

who were enrolled in the College Reading Skills course in the fall 2000 and

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programs which had been suffering steadily declining enrollments.

A second major purpose was to serve as a pilot for the program

delivery method that would be used at Kirtland's Michigan Technical

Education Center (M-TEC) which was slated to begin operation in Gaylord,

Michigan in the fall of 2001. The M-TEC would be a satellite campus in

APPENDIX E

LETTERS

Permission to conduct research at Kirtland
Community College

Permission to copy LASSI in dissertation

Request for student participation in research

Request and explanation to students not
on campus

Exemption from HSRB Review

Communications with and about FLEX 2000
students

Community College

January 17, 2001

To Whom It May Concern:

Ginna Wenger is an instructor in the Developmental Education department at Kirtland, as well as a Ph.D. student in the Andrews University School of Education's Leadership Program. She has requested permission to do research for her dissertation using the students from the Fall, 2000 and Winter, 2001 semesters of her College Reading Skills classes as subjects.

Ginna has explained her purpose and procedures and provided information about the self-report measure that the students will be asked to complete. Her proposed study meets with my approval, and Ginna is granted permission to conduct her research at Kirtland Community College.

Sincerely,

Richard Silverman
Dean of Instruction and Educational Services

RS/dn

10775 N. St. Helen Road • Roscommon, Michigan 48653 • 517-275-5121

Ginna

From: Bob Hackworth <rhackworth@hhpublishing.com>
To: Ginna Wenger <wengerg@kirtland.cc.mi.us>
Sent: Wednesday, June 27, 2001 11:58 AM
Subject: Re: LASSI

Dear Ginna,

Happy to hear of your good progress.

Permission is granted to your request to include a copy of LASSI in the appendix of your dissertation. This will of course include all the copyright information and that is our greatest concern.

Robert D Hackworth

From: "Ginna Wenger" <wengerg@kirtland.cc.mi.us>
Date: Wed, 27 Jun 2001 06:11:29 -0400
To: <rhackworth@hhpublishing.com>
Subject: LASSI

Dear Mr. Hackworth,
I am a student at Andrews University, Berrien Springs, MI. Last fall I communicated with you about using the LASSI as the instrument in my doctoral dissertation. You kindly approved my research and provided me with a discount for the purchase.

Now I need to request your permission to include a copy of the LASSI in the appendix of my dissertation, which is tentatively entitled "Learning and Study Strategies as They Relate to Success in an Open Entry/Open Exit Developmental Reading Course."

As we agreed before, I intend to share my results with you as well as the academic community.

Sincerely,
Ginna

06/27/2001

Ginna Wenger-Leadership Program Student
Andrews University School of Education
Study – Identification of Factors That Contribute to Student Success in College
Reading Skills FLEX Courses Using the Learning and Study Strategies Inventory

Dear College Reading Student,
You are being asked to participate in a research project because you are now, or
were in the Fall 2000 semester, a student in a College Reading Skills class.
The purpose of the research is to determine if students' answers to questions on
the Learning and Study Strategies Inventory (LASSI) can help identify which
students will be good candidates for College Reading Skills FLEX courses.
This research is being conducted as partial fulfillment of the requirements for my
Ph.D. degree at Andrews University.
Your participation is voluntary and will in no way affect your course grade.
All data collected in this study will become the property of the researcher, be kept
confidential, and be used for research purposes only. All data will be anonymous;
names of participants will not be published or connected with the information
collected.
There are no foreseeable risks associated with participation in the research. By
participating in the research, you will be contributing to a very important area of
research and will help future students make the best possible decisions about the
FLEX option for College Reading Skills.
Thank you for your help,

Ginna Wenger

Ginna Wenger

I agree to participate in this research project, and I understand that
1. The nature of my participation involves completing one self-report
   measure, the LASSI, which will take approximately 15-20 minutes.
2. My participation is voluntary and will have no affect on my course grade. I
   may refuse to participate or withdraw from the study at any time without
   penalty.
3. All data will be confidential and used for research purposes only.
4. I have been given an opportunity to ask questions, and if I have questions
   about the research or want to talk with the researcher after my
   participation in the study, I can contact her by calling (517) 275-5000, ext.
   324, e-mailing wengerg@kirtland.cc.mi.us, or writing to
   Ginna Wenger
   Kirtland Community College
   10775 North St. Helen Road
   Roscommon, MI 48653

Signed _____ Date_____

_____ Please check here if you would also be willing to participate in an
interview with the researcher.

Please keep the second copy of this form for your own records

Dear Fall, 2000 College Reading Skills FLEX Student,

Please read this note even if you have dropped or don't intend to finish the class. I need your help!

I am doing research to try to determine how Kirtland can better meet the various learning needs of College Reading Skills students. We have already learned that the FLEX program does not match everyone's learning style. Now what I am trying to do is find a way to determine which students will succeed in that type of class and which need a more traditional class.

I have included a survey which I am asking you to complete. Your answers, **even if you have dropped or don't intend to complete the class**, will be very valuable and will help future students. Please complete and return the survey in the enclosed postage-paid envelope right away.

I have also included a consent form which I need you to sign. Please return the white copy of the consent form with your survey; you may keep the yellow copy.
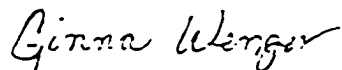
When you complete the survey, you will need to pull out the middle pages and be careful not to stack them on one another when you darken your answers.

You only need to read the directions on the front of the form. After you've answered the questions, just put the entire booklet in the return envelope. I will do all the scoring.

If you'd like the Student's Copy of your results, I'll be happy to mail it to you. Just let me know. I would also like to hear any comments you have about the FLEX format of the class and the reason(s) you dropped or didn't finish the class if you did not complete. Any information you can give me will be very helpful, and I am **very grateful** for your help with this project.

If I can help you with this or any future developmental class at Kirtland, I would be delighted to work with you again. Call if you have questions or if I can help in any way.

Thank you so much for your help!

Ginna Wenger

Ginna Wenger
Kirtland Community College
10775 St. Helen Road
Roscommon, MI 48651
(517) 275-5000 ext.324
wengerg@kirtland.cc.mi.us

Ginna Wenger
2078 Pontiac Drive
Prudenville, MI 48651

July 15, 2001

Dear Ginna

This is to verify that your application for *Exempt from Full HSRB Review* has been approved.

We wish you luck with your research and ask that you inform us once the survey portion of your research has been completed so that we can close this file.

May the Christ be with you.

Michael D Pearson

Ginna Wenger

From: Ginna Wenger <wengerg@kirtland.cc.mi.us>
To: College Reading Skills <dev096-01@www.kirtland.cc.mi.us>
Sent: Thursday, September 14, 2000 11:52 AM
Subject: [dev096-01] Reminders for College Reading Skills students

Hi to all of you students out there in the land of FLEX.

This is your College Reading Skills instructor, and I'm wondering how you are doing. Many of you have come with your questions, and lots of homework is being turned in. That's great!

I have not seen nor heard from a few of you. Please let me know how you're coming. Everyone should really make some contact with me (in person or by phone or e-mail) at least once weekly.

Several questions have come up that I would like to answer for everyone.

* You may turn in your work in the FLEX lab in the library any time it is open. (You have the schedule in your orientation packet.)

You may also turn in work in the DEV lab (lower level of the Administration Building, room 111).

You may also give things to me during my office hours.

*I will grade your work and put it in a file with your name on it in the DEV lab, and you may pick it up there.

*Please keep turning work in regularly; I don't want piles at the end of the semester.

*You need to go to the DEV lab for your tests. Be sure to take your book with you; it will be checked to make sure that you have finished the work in the chapters before you will be allowed to take the test.

*In your assignment packet,the Vocabulary Card File assignment refers you to pages 14 and 15 in your textbook. This is incorrect. In this new edition of the book, the pages you will need to look at are 363 and 364.

*Another change created by the new edition is the schedule of tests. Your syllabus lists four tests - after chapters 1&2, then 3&4, then 5,6,&7, Then 8,9,&10. This has been changed.

Instead, due to the new edition, you will have a test after every two chapters - after 1&2, then 3&4, then 5&6, then 7&8, then 9&10 - a total of five.

*If you have not done and turned in the pretests on pages 1 - 14 in your textbook, please do so immediately. When you take these tests, please remember that they are tests. Do not look up the words you don't know. It is not to your advantage to do too well on the pretest because you will get points at the end for doing better on the posttest. So please just show me what you know now.

Also, it is important that you time yourself on the comprehension part of the test. Please follow the directions carefully.

*Write in your book. The bookstore will not take them back at the end of the

12/12/2000

semester even if you haven't written in it, so you might as well use it as it's intended. *I suggest that you work on your Reading Road Trip (CD-ROM) in the DEV Lab, at least the first time or two. The paraprofessionals in there (Norma and Brenda) can help you with it.

As other general questions come up, I will answer them on this listserve. You may ask questions or make comments on this listserve, too. Please be aware, however, that anything that goes to this address will go to the entire class, so if you want to send an e-mail that only I will read, be sure to use my personal address –
wengerg@kirtland.cc.mi.us
Keep Reading! and Keep in Touch!
Ginna

Ginna Wenger
Instructor
Kirtland Community College
wengerg@kirtland.cc.mi.us
voice: (517) 275-5000 ext.324
fax: 517-275-8745

12/12/2000

Ginna Wenger

From: Ginna Wenger <wengerg@kirtland.cc.mi.us>
To: College Reading Skills <dev096-01@www.kirtland.cc.mi.us>
Sent: Thursday, September 28, 2000 10:25 AM
Subject: [dev096-01] College Reading Skills FLEX

Dear College Reading Students,

I know that some of you are having a struggle with the FLEX design of this class and would prefer a more structured class setting. For that reason, I have decided to conduct a more traditional College Reading Skills class on Thursday mornings at 10 am. It will be held in room 110 of the Administration Building (where we met the first week). Please join me there if a classroom setting would be helpful for you.

It is very important that you keep in contact with me and turn in assignments weekly. This is a required course, so you must complete it. If you're having problems, please come see me. You all have my schedule.

Ginna

P.S. Please remember - DO NOT respond to this e-mail by hitting the reply button unless you want everyone in the class to read your reply.

To send a message that only I will see, use my e-mail address.

wengerg@kirtland.cc.mi.us

Ginna Wenger

Instructor

Kirtland Community College

wengerg@kirtland.cc.mi.us

.voice: (517) 275-5000 ext.324

fax: 517-275-8745

You are currently subscribed to dev096-01 as: [wengerg@kirtland.cc.mi.us]

To unsubscribe, forward this message to leave-dev096-01-3268M@www.kirtland.cc.mi.us

Kirtland
Community College

10/3/00

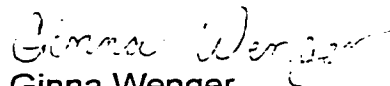Dear College Reading Skills FLEX Students,

We have now passed the point of being one-third of the way through the semester. This means that by now you should have completed through day 10 on your syllabus. (Figure 2 days per week)
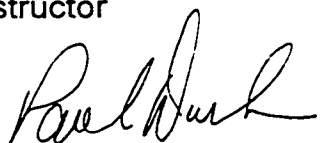
Please check your progress. If you are not very close to being on schedule, you are not likely to have time to finish the course within the time left in the semester. This is a required course, so you must get through it. Please come to see me if I can help. I'd really like to see you complete this semester.

If you are so far behind that you think it will be impossible to get caught up, you may consider dropping the course. Before considering this, however, if you are on Financial Aid, check first to see how dropping might affect your Aid. Also, be aware that since this is a required course, you will have to take the course again next semester. If you think that dropping will be necessary, please see me first.

Next semester, the course will be offered in both traditional and FLEX formats, so for some of you, this may be a better option.

You should be contacting me and turning in assignments weekly. Please get help if you need it.

Ginna Wenger
Instructor

Paul Durbin
Dean of Career and Technical Studies

10775 N. St. Helen Road • Roscommon, Michigan 48653 • 517-275-5121

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Ginna Wenger

From:	Doty Latuszek <latuszed@k2.kirtland.cc.mi.us>
To:	Ginna Wenger <wengerg@kirtland.cc.mi.us>; Marcell Romancky <romanckm@k2.kirtland.cc.mi.us>
Sent:	Wednesday, November 01, 2000 4:14 PM
Subject:	Dr. Rorie approval

Hi,

   I just received an email from Dr. Rorie approving the recommendations in the proposal for the CAT meeting. You can send out your letters when you think best. Please give me a copy and the number that you send out. Thanks.

Doty

****

Doty Latuszek
Co-chair of Career and Technical Studies
Kirtland Community College
517.275.5000 ext. 326
latuszed@kirtland.cc.mi.us
****
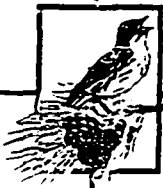
November 1, 2000

Dear College Reading *FLEX* Students:

To complete this course you **must** attend class to take the post-tests. You will be allowed to take the post-tests **only** if you have satisfactorily completed all other tests and assignments. These post-tests will be given during the last week of the semester at the class times for which you originally signed up for the course. You may choose to attend during any one of the following classes:

Tuesday, December 5	6-8 p.m.
Wednesday, December 6	10-11:30 a.m.
Wednesday, December 6	1-2:30 p.m.
Thursday, December 7	8:30-10:00 a.m.
Thursday, December 7	11:30 a.m. – 1 p.m.
Monday, December 11	10-11:30 a.m.
Monday, December 11	1-2:30 p.m.
Tuesday, December 12	8:30-10 a.m.
Tuesday, December 12	11:30 a.m. – 1 p.m.
Tuesday, December 12	6 – 8:00 p.m.

Please meet in the DEV Lab, Room 111 of the Administration Building for these tests.

For those of you who will not be ready to take the post-tests, I have been given permission to extend the end date of the course for some students who have put forth effort but have not been able to keep up. I will do this for you if you meet the following two criteria:

1. You have made an attempt to complete the course.
2. You see me and talk to me **in person** any time between now and November 30, but no later than November 30. **Bring this letter with you** and we will fill out the bottom part of it together.

_____

Course: _____
Student Name: _____
Previous End Date: _____

( )   I will attend the regular College Reading Skills course for the Winter semester, so the end date will be May 11, 2001.

( )   My new course end date will be _____, and I will attend class on _____ to take the post-tests.

Date Signed: _____   Student: _____

Ginna Wenger

From: Ginna Wenger <wengerg@kirtland.cc.mi.us>
To: <dev096.01@www.kirtland.cc.mi.us>
Sent: Tuesday, November 14, 2000 12:52 PM
Subject: College Reading Skills extension

Dear College Reading Skills students,

By now you should have received my letter giving you the dates that you must come in to take your final test, OR, if you won't be ready for that, the opportunity to get an extension.

Please note that you must talk to me about the extension no later than November 30. Just bring me your letter and ANYTHING you have done to show me you have done some work on the course. It is to your advantage to take this extension because it will not show up on your grade report as a drop or a failure and should not affect your financial aid.

Please get in to talk with me as soon as you can.

Ginna Wenger

Instructor

Kirtland Community College

wengerg@kirtland.cc.mi.us

voice: (517) 275-5000 ext.324

fax: 517-275-8745

APPENDIX F

LEARNING AND STUDY STRATEGIES INVENTORY

LASSI

Learning And Study Strategies Inventory

by
Claire E. Weinstein, Ph.D., David R. Palmer, Ph.D.
Department of Educational Psychology, University of Texas at Austin
Ann C. Schulte, Ph.D.
University of North Carolina

Directions

The Learning and Study Strategies Inventory (LASSI) is designed to gather information about learning and study practices and attitudes. On the two forms at right, which you pull out to begin the LASSI, you will find 77 statements related to learning and studying. You are to read each statement and then mark a response according to the following key:

- Not at all typical of me
- Not very typical of me
- Somewhat typical of me
- Fairly typical of me
- Very much typical of me

To help you decide which responses to mark, we would like to explain what is meant by each term.

By **Not at all typical of me**, we do not necessarily mean that the statement would never describe you, but that it would be true of you only in rare instances. Mark an **a** for this response.

By **Not very typical of me**, we mean that the statement generally would not be true of you. Mark a **b** for this response.

By **Somewhat typical of me**, we mean that the statement would be true of you about half the time. Mark a **c** for this response.

By **Fairly typical of me**, we mean that the statement would generally be true of you. Mark a **d** for this response.

By **Very much typical of me**, we do not necessarily mean that the statement would always describe you, but that it would be true of you almost all the time. Mark an **e** for this response.

Please completely darken the appropriate letter. For example, darken the **d** if you feel that the statement is fairly typical of you.

a   b   c   ■   e

Try to rate yourself according to *how well the statement describes you*, not in terms of how you think you should be or what others do. There are no right or wrong answers to these statements. Please work as quickly as you can without being careless and *please complete all the items.*

Both of the forms at right, along with the Directions booklet are two-part, carbonless forms. Take care *not* to stack any of the forms on top of the other when writing since it would damage the forms below.

After reading the directions, tear out *both* two-part forms at right and set this booklet aside. The forms contain the statements you will respond to. This booklet contains information which will be used after you complete the LASSI.

Scoring Directions

After responding to statements 1-77, you may begin the scoring process. Peel off pages 2 and 3 of the inventory. These are the pages you marked with your answers. When the pages are removed, you will then see pages 4 and 5 of the inventory. These pages contain copies of the responses you made to the LASSI statements. Notice that each item is accompanied by a number you darkened and a three-letter code, such as ANX. You will use the code for each item as well as your answer to that item in calculating and plotting your scores.

To calculate your scores for the LASSI, you will need to add the numbers that have been darkened for each of the 10 different scales. Write the darkened number for each scale item in the appropriate space below.

For example, look at the first scale, labeled ATT below. The first item number for the ATT scale is item #5. Go to page 4 and find item #5. Copy the darkened number, in this example the number 3 (e.g. 1 2 ■ 4 5), into the space above item (5) on this page. Now find the next item for that scale, item #14. Write the darkened number from page 4 in the space provided.

Do this for all items for the ATT scale. Then carefully add the numbers and write the total at the far right in the space provided. **You will use these numbers again so please double check your work carefully.**

Now finish copying the darkened numbers for each item for all the scales below. Don't forget to add the numbers for each scale.

ATT ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ ATT
Item# (5)   (14)   (18)   (29)   (38)   (45)   (51)   (69)

MOT ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ MOT
Item# (10)   (13)   (16)   (28)   (33)   (41)   (49)   (56)

TMT ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ TMT
Item# (3)   (22)   (36)   (42)   (48)   (58)   (66)   (74)

ANX ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ ANX
Item# (1)   (9)   (25)   (31)   (35)   (54)   (57)   (63)

CON ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ CON
Item# (6)   (11)   (39)   (43)   (46)   (55)   (61)   (68)

INP ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ INP
Item# (12)   (15)   (23)   (32)   (40)   (47)   (67)   (76)

SMI ___ + ___ + ___ + ___ + ___ = ____ SMI
Item# (2)   (8)   (60)   (72)   (77)

STA ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ STA
Item# (7)   (19)   (24)   (44)   (50)   (53)   (62)   (73)

SFT ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ SFT
Item# (4)   (17)   (21)   (26)   (30)   (37)   (65)   (70)

TST ___ + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ TST
Item# (20)   (27)   (34)   (52)   (59)   (64)   (71)   (75)

Very much typical of me ————————⌐
Fairly typical of me ——————————⌐ |
Somewhat typical of me ———————⌐ | |
Not very typical of me ——————⌐ | | |
Not at all typical of me ————⌐ | | | |

Very much typical of me ————————⌐
Fairly typical of me ——————————⌐ |
Somewhat typical of me ———————⌐ | |
Not very typical of me ——————⌐ | | | **166**
Not at all typical of me ————⌐ | | | |

1 I worry that I will flunk out of school   a b c d e

2 I am able to distinguish between more important and less important information during a lecture   a b c d e

3 I find it hard to stick to a study schedule.   a b c d e

4 After a class, I review my notes to help me understand the information.   a b c d e

5 I don't care if I finish school as long as I find a husband/wife   a b c d e

6 I find that during lectures I think of other things and don't really listen to what is being said   a b c d e

7 I use special study helps, such as italics and headings, that are in my textbook   a b c d e

8. I try to identify the main points when I listen to lectures   a b c d e

9 I get discouraged because of low grades.   a b c d e

10. I am up-to-date in my class assignments.   a b c d e

11 Problems outside of school - being in love, financial difficulties, conflict with parents, etc. - cause me to neglect my school work   a b c d e

12 I try to think through a topic and decide what I am supposed to learn from it rather than just read it over when studying.   a b c d e

13. Even when study materials are dull and uninteresting, I manage to keep working until I finish   a b c d e

14 I feel confused and undecided as to what my educational goals should be.   a b c d e

15 I learn new words or ideas by visualizing a situation in which they occur.   a b c d e

16. I come to class unprepared.   a b c d e

17 When preparing for an exam, I create questions that I think might be included.   a b c d e

18 I would rather not be in school.   a b c d e

19 My underlining is helpful when I review text material   a b c d e

20. I do poorly on tests because I find it hard to plan my work within a short period of time.   a b c d e

21. I try to identify potential test questions when reviewing my class material.   a b c d e

22. I only study when there is the pressure of a test.   a b c d e

23. I translate what I am studying into my own words.   a b c d e

24. I compare class notes with other students to make sure my notes are complete   a b c d e

25. I am very tense when I study.   a b c d e

26. I review my notes before the next class   a b c d e

27. I am unable to summarize what I have just heard in a lecture or read in a textbook.   a b c d e

28. I work hard to get a good grade, even when I don't like a course.   a b c d e

29. I often feel like I have little control over what happens to me in school.   a b c d e

30. I stop periodically while reading and mentally go over or review what was said.   a b c d e

31. Even when I am well prepared for a test, I feel very anxious.   a b c d e

32. When I am studying a topic I try to make everything fit together logically   a b c d e

33. I talk myself into believing some excuse for not doing a study assignment.   a b c d e

34. When I study, I have trouble figuring out just what to do to learn the material.   a b c d e

35. When I begin an examination, I feel pretty confident that I will do well.   a b c d e

36. When it comes to studying, procrastination is a problem for me.   a b c d e

37. I check to see if I understand what the instructor is saying during the lecture.   a b c d e

38. I do not care about getting a general education. I just want to get a good job.   a b c d e

Very much typical of me ——————
Fairly typical of me ——————
Somewhat typical of me ——————
Not very typical of me ——————
Not at all typical of me ——————

Very much typical of me ——————
Fairly typical of me ——————
Somewhat typical of me ——————
Not very typical of me ——————
Not at all typical of me —————— 167

39. I am unable to concentrate well because of restlessness or moodiness.   a b c d e

40. I try to find relationships between what I am learning and what I already know.   a b c d e

41. I set high standards for myself in school.   a b c d e

42. I end up "cramming" for almost every test.   a b c d e

43. I find it hard to pay attention during lectures.   a b c d e

44. I key in on the first and/or last sentences of most paragraphs when reading my text.   a b c d e

45. I only study the subjects I like.   a b c d e

46. I am distracted from my studies very easily.   a b c d e

47. I try to relate what I am studying to my own experiences.   a b c d e

48. I make good use of daytime study hours between classes.   a b c d e

49. When work is difficult I either give up or study only the easy parts.   a b c d e

50. I make drawings or sketches to help me understand what I am studying.   a b c d e

51. I dislike most of the work in my classes.   a b c d e

52. I have trouble understanding just what a test question is asking.   a b c d e

53. I make simple charts, diagrams, or tables to summarize material in my courses.   a b c d e

54. Worrying about doing poorly interferes with my concentration on tests.   a b c d e

55. I don't understand some course material because I don't listen carefully.   a b c d e

56. I read textbooks assigned for my classes.   a b c d e

57. I feel very panicky when I take an important test.   a b c d e

58. When I decide to study. I set aside a specific length of time and stick to it.   a b c d e

59. When I take a test, I realize I have studied the wrong material.   a b c d e

60. It is hard for me to decide what is important to underline in a text.   a b c d e

61. I concentrate fully when studying.   a b c d e

62. I use the chapter headings as a guide to identify important points in my reading.   a b c d e

63. I get so nervous and confused when taking an examination that I fail to answer questions to the best of my ability.   a b c d e

64. I memorize grammatical rules, technical terms, formulas, etc., without understanding them.   a b c d e

65. I test myself to be sure I know the material I have been studying.   a b c d e

66. I put off studying more than I should.   a b c d e

67. I try to see how what I am studying would apply to my everyday living.   a b c d e

68. My mind wanders a lot when I study.   a b c d e

69. In my opinion, what is taught in my courses is not worth learning.   a b c d e

70. I go over homework assignments when reviewing class materials.   a b c d e

71. I have difficulty adapting my studying to different types of courses.   a b c d e

72. Often when studying I seem to get lost in details and "can't see the forest for the trees."   a b c d e

73. When they are available, I attend group review sessions.   a b c d e

74. I tend to spend so much time with friends that my coursework suffers.   a b c d e

75. In taking tests, writing themes, etc. I find I have misunderstood what is wanted and lose points because of it.   a b c d e

76. I try to interrelate themes in what I am studying.   a b c d e

77. I have difficulty identifying the important points in my reading.   a b c d e

3

APPENDIX G

FLEX CONTRACT AND REPORT
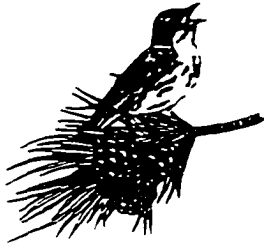
Kirtland Community College
FLEX Course
Student Learning Agreement

1. **Student Name:** _____
   PRINT (Last, First)

2. **Student ID Number:** _____

3. **Mailing Address:** _____

   _____

   _____

4. **Phone:**   **Day** _____

            Night _____

   Best hours to contact by phone: _____

5. **E-mail Address** _____

6. **Course Number:** _____

7. **Course Name:** _____

8. **Beginning Course Date:** _____

9. **End Course Date:** _____

10. **Orientation Completed:**   Yes ☐   No ☐

11. **Received Syllabus:**   Yes ☐   No ☐

The student and Kirtland Community College accept this learning agreement for the FLEX course named above

Student's signature _____ Date _____

Instructor's signature _____ Date _____
(or Designee)

Rev. 8/23/00

white-file   yellow-file   pink-Instructor   gold-Student

Flexible **L**earning **Ex**perience

Summary of Goals, Demographics and Preliminary Outcomes

Presented to: Kirtland Community College Faculty
January 15, 2001

Prepared by: Doty Latuszek & Katherine Nemeth

GOALS OF THE FLEX PROGRAM

1. To increase enrollment within the Office Information Systems and Medical Office Assistant (OIS/MOA) programs.
2. To improve student retention within the OIS/MOA programs.
3. To increase the number of student contact hours per full time faculty.
4. To reduce direct instructional costs per contact hour within the OIS/MOA programs.
5. To evaluate the impact of a flexible learning experience on the grades and retention rates of students enrolled in developmental courses.
6. To serve as a pilot for the program delivery method to be used at the M-TEC.

POPULATION

OIS/MOA Students

Students within the FLEX OIS/MOA programs were not a self-selecting group. The decision to move the OIS/MOA programs to FLEX was not made until the end of early registration after the majority of the students had already enrolled in their courses. Students were notified of the change during the summer of 2000 and given the option to either withdraw from the program or become a part of this pilot program. No students were known to withdraw from their courses as a result of this change in delivery method.

Twelve OIS courses and two MOA courses were offered during the fall, 2000 semester. At the onset of the semester, 79 students had enrolled in 106 courses totaling 318 credit hours. By the end of the semester 87 students had enrolled in 122 courses totaling 363 credit hours; a net gain of 10% in the number of students, 14% in the number of courses and 15% in the total number of credit hours generated within the programs. Within this final population, 36% of the students attended Kirtland full time while 57% were part-time students and females, comprising 91% of the population, clearly outnumbered males who comprised the remaining 9%.

Developmental Students

Three developmental courses were chosen to pilot FLEX; College Reading Skills, Basic Mathematics and Basic Algebra. As with the OIS/MOA programs, this too was not a self-selecting group. Students in College Reading Skills and Basic Mathematics had enrolled in courses believed to be offered in the traditional 15 week format while students enrolled in Basic Algebra had registered for a telecourse. The Basic Algebra continued as a telecourse, however students were allowed to enter and exit throughout the semester and were provided with additional faculty support if they chose to utilize the FLEX lab.

At the onset of the semester, 84 students had enrolled in 84 courses totaling 289 credit hours. By the end of the semester 96 students had enrolled in 96 courses totaling 335 credit hours; a net gain of 14% in the number of students, 14% in the number of courses and 16% in the total

number of credit hours generated within these courses. Within the developmental reading class, 41% of the students attended Kirtland full time while 53% were part-time students and females. comprising 63% of the population. outnumbered the males who comprised the remaining 37%. Within the two developmental math courses, 34% of the students attended full time while 45% were part-time students and females. comprising 83% of the population again outnumber males who comprised the remaining 17%

All FLEX Students

Within the entire FLEX population the mean age was 31.4, the median was 25 and the mode was 21. This represents a truly bipolar population. Fifty percent of all FLEX students were under the age of 26 while the remaining 50% of all students were 26 years of age or older.

Comparison of Demographics

	Full Time	Part Time	Female	Male	Mean Age
Traditional format 1999-00	79/172 45.9%	93/172 54.1%	152/172 88.4%	20/172 11.6%	31.4
Telecourse and online formats 1999-00	101/328 30.8%	227/328 69.2%	248/328 75.6%	80/328 24.4%	31.0
FLEX format Fall 2000 Note: 19 (9.6%) cases not determined	91/218 41.7%	106/218 48.6%	183/218 83.9%	35/218 16.1%	30.0

		Full Time	Part Time	Female	Male	Mean Age
Group 1	Traditional format 1999-00 DEV Reading DEV Math OIS/MOA Combined	79/172 45.9%	93/172 54.1%	152/172 88.4%	20/172 11.6%	31.4
Group 2	Telecourses and online formats 1999-00 All Kirtland instructors	101/328 30.8%	227/328 69.2%	248/328 75.6%	80/328 24.4%	31.0
Group 3	Traditional format 1999-00 DEV Reading	16/28 57.1%	12/28 42.9%	23/28 82.1%	5/28 17.9%	23.7
Group 4	Traditional format 1999-00 DEV Math combined	15/38 39.5%	23/38 60.5%	28/38 73.7%	10/38 26.3%	28.2
Group 5	Telecourse format 1999-00 DEV Math combined	9/33 27.3%	24/33 72.7%	25/33 75.8%	8/33 24.2%	30.9
Group 6	Traditional format 1999-00 OIS/MOA	48/106 45.3%	58/106 54.7%	101/106 95.3%	5/106 4.7%	34.2
Group 7	FLEX format Fall 2000 DEV Reading	20/49 40.8%*	26/49 53.1%*	31/49 63.3%	18/49 36.7%	23.1
Group 8	FLEX format Fall 2000 DEV Math combined	16/47 34.0%*	21/47 44.7%*	39/47 83.0%	8/47 17.0%	27.1
Group 9	FLEX format Fall 2000 OIS/MOA	30/84 35.7%*	48/84 57.2%*	76/84 90.5%	8/84 9.5%	32.9

Note: * 19 students did not have their ft/pt status entered on the AS400.

		Grade of C or higher	D or E	W	I or AU	R
Group 1	Traditional format 1999-00 DEV Reading DEV Math OIS/MOA Combined	131/172 76.2%	25/172 14.5%	15/172 8.7%	1/172 0.6%	NA
Group 2	Telecourses and online formats 1999-00 All Kirtland instructors	212/328 64.6%	36/328 11.0%	68/328 20.7%	12/328 3.6%	NA
Group 3	Traditional format 1999-00 DEV Reading	19/28 67.9%	5/28 17.9%	4/28 14.3%	0	NA
Group 4	Traditional format 1999-00 DEV Math combined	20/38 52.6%	9/39 23.7%	8/38 21.1%	1/38 2.6%	NA
	Traditional format 1999-00 Basic Math	13/21 61.9%	4/21 19.0%	4/21 19.0%	0	NA
	Traditional format 1999-00 Basic Algebra	7/17 41.2%	5/17 29.4%	4/17 23.5%	1/17 5.9%	NA
Group 5	Telecourse format 1999-00 DEV Math combined	14/33 42.4%	6/33 18.2%	12/33 36.4%	1/33 3.0%	NA
	Telecourse format 1999-00 Basic Math	3/10 30%	3/10 30%	3/10 30%	1/10 10%	NA
	Telecourse format 1999-00 Basic Algebra	11/23 47.8%	3/23 13.0%	9/23 39.1%	0	NA
Group 6	Traditional format 1999-00 OIS/MOA	92/106 86.8%	11/106 10.4%	3/106 2.8%	0	NA
Group 7	FLEX format Fall 2000 DEV Reading	6/49 12.2%	5/49 10.2%	4/49 8.2%	1/49 2.0%	33/49 67.3%
Group 8	FLEX format Fall 2000 DEV Math combined	16/47 34.0%	6/47 12.8%	11/47 23.4%	1/47 2.1%	9/47 19.1%
	FLEX format Fall 2000 Basic Math	9/28 32.1%	4/28 14.3%	6/28 21.4%	0	7/28 25.0%
	FLEX format Fall 2000 Basic Algebra	7/19 36.8%	2/19 10.5%	5/19 26.3%	1/19 5.3%	2/19 10.5%
Group 9	FLEX format Fall 2000 OIS/MOA	45/122 36.9%	15/122 12.3%	12/122 9.8%	1/122 0.8%	47/122 38.5%

Fall 2000	Winter 2001
DEV09601 College Reading Skills	DEV09601 College Reading Skills
DEV06300 Basic Mathematics (Arithmetic)	DEV06300 Basic Mathematics (Arithmetic)
DEV07300 Basic Algebra	DEV07300 Basic Algebra
	DEV09903 Basic Writing Skills I & II
OIS10100 Basic Keyboarding	OIS10100 Basic Keyboarding
OIS10400 Keyboarding I	OIS10400 Keyboarding I
OIS10500 Business Correspondence	OIS10500 Business Correspondence
OIS11200 Business Calculations	OIS11200 Business Calculations
OIS11400 Keyboarding II	OIS11400 Keyboarding II
OIS1811x Word Processing I (Word or WordPerfect)	OIS1811x Word Processing I (Word or WordPerfect)
OIS19000 Machine Transcription	OIS19000 Machine Transcription
OIS20500 Filing and Records Management	OIS20500 Filing and Records Management
OIS21400 Keyboarding III	OIS21400 Keyboarding III
OIS21500 Desktop Publishing	OIS21500 Desktop Publishing
OIS2200x Word Processing II (Word or WordPerfect)	OIS2200x Word Processing II (Word or WordPerfect)
OIS2410x Externships	OIS2410x Externships
OIS27505 Directed Study	OIS27505 Directed Study
MOA11400 Medical Office Transcription	
MOA20501 Medical Keyboarding	
MOA22100 Medical Transcription II	
	OIS11100 Speedwriting
	OIS21000 Office Procedures and Practices
	MOA12100 Medical Transcription I
	MOA24100 Medical Transcription III

	Yes	No	Maybe
DEV Reading (Oct.)	4	5	1
DEV Math (Oct.)	6	1	2
OIS/MOA (Oct.)	16	5	4
DEV Reading (Dec.)	3	0	0
DEV Math (Dec.)	12	3	1
OIS/MOA (Dec.)	19	1	1
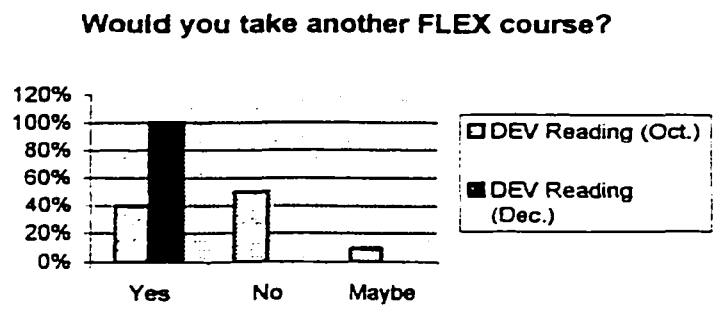
	Yes	No	Maybe
DEV Reading (Oct.)	40%	50%	10%
DEV Math (Oct.)	67%	11%	22%
OIS/MOA (Oct.)	64%	20%	16%
DEV Reading (Dec.)	100%	0%	0%
DEV Math (Dec.)	75%	19%	6%
OIS/MOA (Dec.)	90%	5%	5%
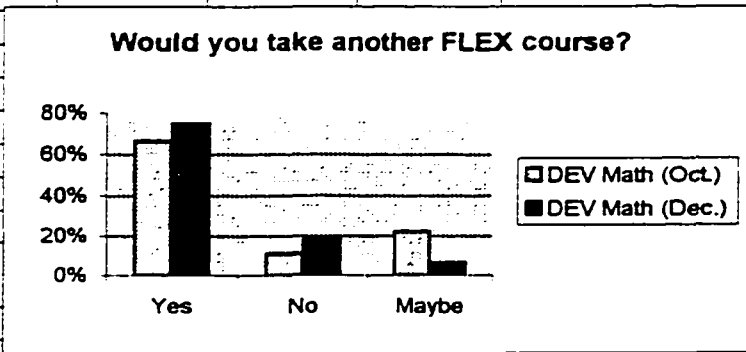
	Yes	No	Maybe
October	23	11	7
December	34	4	2

	Yes	No	Maybe
October	56%	27%	17%
December	85%	10%	5%

Would you take another FLEX course?

Legend: DEV Reading (Oct.), DEV Reading (Dec.)

Would you take another FLEX course?

Legend: DEV Math (Oct.), DEV Math (Dec.)

Would you take another FLEX course?

Legend: OIS/MOA (Oct.), OIS/MOA (Dec.)

Would you take another FLEX course?
41 of 120 surveys received in October
40 of 95 surveys received in December

Legend: October, December

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
DEV Reading (Dec.)	3	0	0	0	0
DEV Math (Dec.)	10	2	3	1	0
OIS/MOA (Dec.)	17	2	2	0	0

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
DEV Reading (Dec.)	100%	0%	0%	0%	0%
DEV Math (Dec.)	63%	13%	19%	6%	0%
OIS/MOA (Dec.)	81%	10%	10%	0%	0%

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
After completing course	30	4	5	1	0

	Very satisfied	Somewhat satisfied	Neutral	Somewhat unsatisfied	Very unsatisfied
After completing course	75%	10%	13%	3%	0%

Overall satisfaction of FLEX format

40 of 95 surveys received in December

□ After completing course
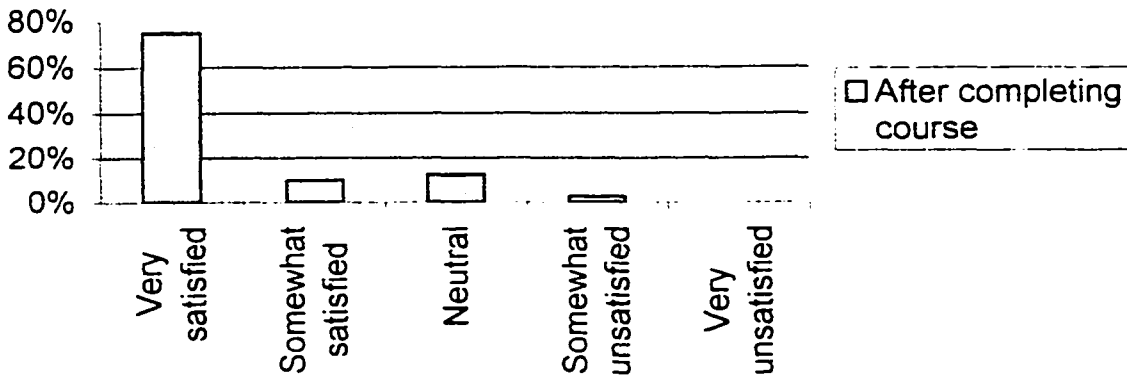
Students, Courses, Credit Hours
Summary

	August 28, 2000			December 15, 2000		
	Students	Courses	Credit Hours	Students	Courses	Credit Hours
DEV Reading	47	47	141	49	49	147
DEV Math	37	37	148	47	47	188
OIS/MOA	79	106	318	87	122	363
Total	163	190	607	183	218	698

Total gains of	20 students
	28 courses
	91 credit hours

Note: An additional 4 cosmetology students taking 4 courses and 32 credit hours are not in the above totals.

APPENDIX H

FALL 2000 DATA

Fall 2000 Data

	AGE	ANX	ATT	CON	INP	MOT	SFT	SMI	STA	TMT	TST	Total	P/F	Gender
	18	33	40	30	36	40	31	20	30	36	29	325	2	F
	36	22	37	32	38	38	24	27	27	29	36	321	2	F
	38	21	33	31	33	39	39	20	35	37	33	321	2	F
	24	29	28	35	33	40	35	23	23	36	35	317	2	M
	18	33	36	33	23	35	26	18	19	28	34	282	2	F
	26	17	29	30	24	29	21	18	20	24	31	243	2	F
	18	21	30	24	27	29	24	12	25	29	25	246	1	M
	25	13	35	20	28	30	25	12	28	23	20	224	1	F
	45	16	27	22	21	35	26	15	22	23	22	229	1	F
	18	20	30	23	28	25	26	14	20	21	26	233	1	F
	18	24	38	30	31	34	29	18	29	34	29	296	1	F
	44	27	37	28	29	27	28	21	22	28	29	273	1	F
	18	14	11	10	33	22	29	18	32	12	13	194	1	F
	18	18	25	21	21	26	19	11	19	17	23	200	1	M
	44	22	38	30	28	31	27	12	24	25	31	268	1	F
	31	10	33	20	23	28	25	11	23	25	22	220	1	F
	19	36	27	27	25	24	25	19	23	13	33	252	1	M
	24	20	20	20	18	18	10	12	20	8	25	174	1	F
	19	23	31	30	23	26	24	17	17	18	32	241	1	M
	18	30	23	17	21	27	15	8	19	21	25	206	1	M
	19	33	31	27	16	24	24	16	12	23	34	240	1	M
	19	32	32	27	26	32	28	19	27	27	32	282	1	F
	20	28	36	23	23	37	21	15	19	24	27	253	1	M
	18	30	34	20	27	23	15	14	16	23	31	233	1	M
	19	21	31	30	26	28	21	19	18	22	32	248	1	F
	21	33	34	20	31	32	19	18	17	18	32	254	1	M
	18	25	33	22	29	33	24	17	27	16	24	250	1	F
	19	15	21	20	24	30	20	13	27	33	16	219	1	M
	18	10	27	25	14	32	19	10	12	24	24	197	1	F
	18	21	32	27	35	32	29	17	31	25	30	279	1	M
	18	26	39	16	37	33	17	19	19	17	26	259	1	F
	32	17	33	27	34	32	29	17	25	27	24	265	1	M
	18	28	30	17	27	23	23	15	24	12	23	223	1	M
	19	19	30	28	23	28	23	18	20	25	24	238	1	F
	41	30	40	31	30	36	34	19	32	30	35	317	1	F

35	22	34	34	22	28	26	17	21	31	27	262	1	F
18	20	32	24	24	33	26	18	19	26	24	246	1	M
18	18	27	23	25	32	28	19	24	25	27	248	1	F
19	25	27	27	20	27	25	15	21	27	31	245	1	M
23	19	24	19	24	22	21	15	23	23	24	214	1	M
18	27	33	24	36	31	32	19	28	25	28	283	1	F

Descriptive Statistics

Mean	32.05	30.85	24.98	26.73	30.02	25.27	16.39	22.60	25.15	27.61	251.71	1.15
SD	6.55	5.81	5.54	5.77	5.23	5.84	3.52	5.26	6.65	5.14	36.80	36
Median	22	32	25	26	30	25	17	22	25	28	248	1
Minimum	10	11	10	14	18	10	8	12	8	13	174	1
Maximum	36	40	35	38	40	39	24	35	37	36	325	2

REFERENCE LIST

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Albaili, M. A. (1997). Differences among low-, average-, and high-achieving college students on learning and study strategies. *Educational Psychology, 17,* 171-177.

Alfred, R. L. (1998). Redesigning community colleges to compete for the future. *Community College Journal of Research and Practice, 22.* 315-319.

Allison, L. M. (1999). The impact of integrative experiences on persistence: A study of nontraditional students (Doctoral dissertation, University of Michigan, 1999). *Dissertation Abstracts International, 61,* 02A.

Amey, M. J., & Long, P. N. (1998). Developmental course work and early placement: Success strategies for underprepared community college students. *Community College Journal of Research and Practice, 22,* 3-10.

Bers, T. H., & Smith, K. E. (1991). Persistence of community college students: The influence of student intent and academic and social integration. *Research in Higher Education, 32,* 539-556.

Boekaerts, M. (1995). Self-regulated learning: Bridging the gap between metacognitive and metamotivational theories. *Educational Psychologist, 30,* 195-200.

Borkowski, J. G., & Thorpe, P. K. (1994). Self-regulation and motivation: A life span perspective on underachievement. In *Self-regulation of learning and performance: Issues and educational applications* (pp. 45-71). Hillsdale, NJ: Erlbaum.

Boylan, H. R. (1987). Demographics and developmental education. *Research in Developmental Education, 2,* 1-6.

Boylan, H. R. (1999). Demographics, outcomes, and activities. *Journal of Developmental Education, 23,* 2-8.

183

Brown, R., & Pressley, M. (1994). Self-regulated reading and getting meaning from text: The transactional strategies instruction model and its ongoing validation. In D. H. Schunk & B. J. Zimmerman (Eds.). *Self-regulation of learning and performance: Issues and educational applications* (pp. 155-178). Hillsdale, NJ: Erlbaum.

Campbell, D. W. (1980). A critical analysis of the open entry/exit philosophy as it relates to selected programs (Doctoral dissertation, Colorado State University, 1980). *Dissertation Abstracts International, 41,* 06A.

Casazza, M. E. (1999). Who are we and where did we come from? *Journal of Developmental Education, 23,* 2-7.

Clagett, C. A. (1996). Correlates of success in the community college: Using research to inform campus retention efforts. *Journal of Applied Research in the Community College, 4,* 49-86.

Closson, R. B. (1996). The learning society: How shall community colleges respond? *Community College Review, 24,* 3-18.

Clow, E. D. (1998). *Two-year college students in interactive distance education classes: The relationship of learning strategies to persistence and performance.* Unpublished doctoral dissertation, University of Georgia, Athens.

Cole, S. M. (1988). A validity study of the use of the Learning and Study Strategies Inventory (LASSI) with college freshmen (Doctoral dissertation, University of North Carolina at Chapel Hill, 1988). *Dissertation Abstracts International, 49,* 09A.

Cope, R., & Hannah, W. (1975). *Revolving college doors: The causes and consequences of dropping out, stopping out, and transferring.* New York: Wiley.

Cornell, V. (1996). *An anatomy of an innovation: Balancing the needs of developmental students with the needs of an institution.* Paper presented at the Fifth Annual International Conference for Community and Technical College Chairs, Deans and Other Organizational Leaders, Phoenix, AZ. (ERIC Document Reproduction Service No. ED 394 545)

Dale, P. M. (1995). *A successful college retention program* (Report No. HE 028 132). West Lafayette, IN: Purdue University. (ERIC Document Reproduction Service No. ED 380 017)

Day, V., Mensink, D., & O'Sullivan, M. (2000). Patterns of academic procrastination. *Journal of College Reading and Learning, 30,* 120-134.

Deming, M. P., Valeri-Gold, M., & Idleman, L. S. (1994). The reliability and validity of the Learning and Study Strategies Inventory (LASSI) with college developmental students. *Research and Instruction, 33,* 309-318.

Eisner, E. (1998). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice.* Upper Saddle River, NJ: Prentice-Hall.

Emily Griffith Opportunity School (EGOS). (2001). *History: From dream to reality* [on-line]. Available: http://www.egos-school.com/history/dream.htm

Eom, W., & Reiser, R. (2000). The effects of self-regulation and instructional control on performance and motivation in computer-based instruction. *International Journal of Instructional Media, 27,* 247-260.

Everson, H. T., Weinstein, C. E., & Laitusis, V. (2000). *Strategic learning abilities as a predictor of academic achievement.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman.

Gardner, J. N., & Jewler, A. J. (1985). *College is only the beginning: A student guide to higher education.* Belmont, CA: Wadsworth.

Gausman, C. H. (1978). *Curriculum comprehensiveness in the small rural community college: Strategies for getting more out of limited resources.* Paper presented at National Conference on Small/Rural Colleges, Blacksburg, VA. (ERIC Document Reproduction Service No. ED 167 223)

Gay, L. R., & Airasian, P. (2000). *Educational research: Competencies for analysis and application* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.

Gill, P. L. (1978). *The trustee and instructional programs.* Washington. DC: Association of Community College Trustees. (ERIC Document Reproduction Service No. ED 156 303)

Grimes, S. K. (1997). Underprepared community college students: Characteristics, persistence, and academic success. *Community College Journal of Research and Practice, 21,* 47-56.

Grimes, S. K., & David, K. C. (1999). Underprepared community college students: Implications of attitudinal and experiential differences. *Community College Review, 27,* 73-92.

Gross, R. (1995). Defining the future: The new mandate for distance learning in the 21st century. *Community College Journal, 66,* 28-33.

Halpin, R. L. (1990). An application of the Tinto model to the analysis of freshman persistence in a community college. *Community College Review, 17,* 23-32.

Hansford, C. L. (1994). The relationship between self-concept, perceived locus of control, self-regulated learning, and academic achievement in college students (Doctoral dissertation, Texas Tech University. 1994). *Dissertation Abstracts International, 55,* 09A.

Heaney, M. J. (1996). *Learning and study strategies, cognitive indicators, and demographic factors as related to academic achievement and retention among college freshmen.* Unpublished doctoral dissertation. Wayne State University, Detroit, MI.

Hewlett, M. G., Boonstra, J., Bell. J. H., & Zumbo, B. D. (2000). Can LASSI score profiles help identify postsecondary students with underlying reading problems? *Journal of College Reading and Learning, 30,* 135-143.

Hofer, B. K., Yu, S. L., & Pintrich, P. R. (1998). Teaching college students to be self-regulated learners. In D. H. Schunk & B. J. Zimmerman (Eds.). *Self-regulated learning: From teaching to self-reflective practice* (pp. 57-84). New York: Guilford.

Kalsbeek, D. H. (1989). *Linking learning style theory with retention research: The TRAILS project* (Report No. HE 022 252). Tallahassee, FL: Association for Institution Research. (ERIC Document Reproduction Service No. ED 304 964)

Kirtland Community College catalog and student handbook. (2000-2001). Roscommon, MI: Kirtland Community College.

Kirtland Community College viewbook. (2001). [Brochure]. Roscommon. MI: Kirtland Community College.

Knowles, M. S., Holton, E. F., & Swanson, R. A. (1998). *The adult learner* (5th ed.). Houston, TX: Gulf.

Kochenderfer, L. A. (1988). *Learning and study strategies as they relate to academic success in the community college.* Unpublished doctoral dissertation, University of California, Riverside.

Lan, W. Y. (1998). Teaching self-monitoring skills in statistics. In D. H. Schunk & B. J. Zimmerman (Eds.), Self-regulated learning: From teaching to self-reflective practice (pp. 86-104). New York: Guilford.

LaVergne, T. (1988). *Relationship among cognitive-motivational processes and academic performance in community college students with a history of academic failure.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans. LA. (ERIC Document Reproduction Service No. ED 300 723)

Lazdowski, W. P. (1986). *Saving your assets (open entry/open exit).* Paper presented at the Annual Conference of the Western College Reading and Learning Association, Los Angeles, CA. (ERIC Document Reproduction Service No. ED 270 186)

Lenning, O. T., & Mohnkern, D. F. (1986). *Programming dramatic decreases in freshman attrition: We can make it happen and IR can help.* Paper presented at the Annual Forum of the Association for Institutional Research, Orlando, FL.

Ley, K., & Young, D. C. (1998). Motivation in developmental and regular admission students. *Research and Teaching in Developmental Education, 14,* 29-36.

Long, H. B., & Walsh, S. M. (1993). Self-directed learning research in the community/junior college: Description, conclusions and recommendations. *Community College Journal of Research and Practice, 17,* 153-166.

Loomis, K. D. (2000). Learning styles and asynchronous learning: Comparing the LASSI model to class performance. *Journal of Asynchronous Learning Networks, 4,* 1-9.

McClenney, B. (1998). Quality learning-anyplace, anytime. *Community College Week, 10*, 4.

McCrossan, L. V., McDowell, C., & Cooper, P. (1998). *A comparison of the effectiveness of open entry/open exit classes to closed entry classes requiring attendance.* Pennsylvania State Dept. Education, Harrisburg. Dept. of Education, Washington, DC. (ERIC Document Reproduction Service No. ED 127 214)

McMillan, V. K., Parke, S. J., & Lanning, C. A. (1997). Remedial/developmental education approaches for the current community college environment. *New Directions for Community Colleges, 100*, 21-32.

Mealey, D. L. (1988). Test review: Learning and Study Strategies Inventory (LASSI). *Journal of Reading, 31*, 1-6.

Mealey, D. L. (1990). Understanding the motivational problems of at-risk college students. *Journal of Reading, 33*, 598-601.

Merriam, S. B. (2001). *Qualitative research and case study applications in education.* San Francisco: Jossey-Bass.

Morante, E.A. (1989). Selecting tests and placing students. *Journal of Developmental Education, 13*, 2-4.

National Association for Developmental Education (NADE). (1996). *Developmental education goals and definition* [on-line]. Available: http://www.umkc.edu/cad/nade/nadedocs/devgoals/htm

Nelson, B., Dunn, R., Griggs, S. A., Primavera, L., Fitzpatrick, M., Bacilious, Z., & Miller, R. (1993). Effects of learning style intervention on college students' retention and achievement. *Journal of College Student Development, 34*, 364-369.

Newman, R. S. (1994). Adaptive help seeking: A strategy of self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 283-299). Hillsdale, NJ: Erlbaum.

Nist, S. L., Mealey, D. L., Simpson, M. L., & Kroc, R. (1990). Measuring the affective and cognitive growth of regularly admitted and developmental studies students using the Learning and Study Strategies Inventory (LASSI). *Reading Research and Instruction, 30*, 44-49.

Palagi, R. (1993). *Competency based reading and math program for adult students entering vocational training programs.* Paper presented at the Mid-America Competency-Based Education Conference. Bloomington, MN. (ERIC Document Reproduction Service No. ED 360 519)

Patten, M. L. (2000). *Understanding research methods* (2nd ed.). Los Angeles: Pyrczak.

Perkins, A. W. (1991). Learning and Study Strategies Inventory (LASSI): A validity study (Doctoral dissertation, The College of William and Mary, 1991). *Dissertation Abstracts International, 52,* 09A.

Pintrich, P. R. (1995). Understanding self-regulated learning. *New Directions in Teaching and Learning, 63,* 3-12.

Richards, B. (1998). *A research study to determine a profile for student success in completing self-paced study* [Abstract]. Master's Research Project, University of Phoenix. (ERIC Document Reproduction Service No. ED 421 175)

Robertson, J. (1994). The learning and study strategies inventory: A versatile assessment enhances student success. *Research and Teaching in Developmental Education, 11,* 15-20.

Roueche, J. E., & Roueche, S. D. (1994). Responding to the challenge of the at-risk student. *Community College Journal of Research and Practice, 18,* 1-11.

Rudestam, K. E., & Newton, R. R. (1992). *Surviving your dissertation: A comprehensive guide to content and process.* Newberry Park, CA: Sage.

Schumacker, R. E., Sayler, M., & Bembry, K. (1995). Identifying at-risk gifted students in an early college entrance program. *Roeper Review, 18,* 126-129.

Schunk, D. H. (1989). Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theory, research, and practice* (pp. 85-107). New York: Springer-Verlag.

Schunk, D. H. (1994). Self-regulation of self-efficacy and attributions in academic settings. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 75-98). Hillsdale, NJ: Erlbaum.

Smith, D., & Tarkow, J. (1998). Individualized learning: The self-paced computer lab. *T.H.E. Journal, 25,* 62-4.

Smith, J. O., & Price, R. A. (1996). Attribution theory and developmental students as passive learners. *Journal of Developmental Education, 19,* 2-6.

Spann, M. G. (1990). Student retention: An interview with Vincent Tinto. *Journal of Developmental Education, 14,* 18-24.

Spradley, J. P. (1979). *The ethnographic interview.* New York: Holt.

Starke, M. C. (1994). *Retention, bonding, and academic achievement: Effectiveness of the college seminar in promoting college success.* Paper presented at the Annual Freshman Year Experience National Conference, Columbia, SC.

TCC, Password, and Flynn, B. (2001). Statdisk V 8.1. [Computer software]. Boston: Addison-Wesley.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago: University of Chicago Press.

Triola, M. F. (2001). *Elementary statistics* (8th ed.). Boston: Addison-Wesley.

Turnbull, W. W. (1986). Involvement: The key to retention. *Journal of Developmental Education, 10,* 6-10.

Walstrum, J. W. (1985). A study of open-entry/open-exit occupational programs in selected public postsecondary instutions (Doctoral dissertation, University of Maryland, 1985). *Dissertation Abstracts International, 47,* 04A.

Wambach, C., Brothen, T., & Dikel, T. (2000). Toward a developmental theory for developmental educators. *Journal of Developmental Education, 24,* 2-10, 29.

Wambach, C. A. (1993). Motivation themes and academic success of at-risk freshmen. *Journal of Developmental Education, 16,* 8-12, 37.

Waul, P. (1987). Managing open entry and open exit classrooms. *Vocational Education Journal, 62,* 43-44.

Weiner, B. (1985). An attributional theory of achievement, motivation and emotion. *Psychological Review, 92,* 548-573.

Weinstein, C. E. (1987). *LASSI user's manual.* Clearwater, FL: H & H.

Weinstein, C. E. (1996). Learning how to learn: An essential skill for the 21st century. *Educational Record, 77,* 48-52.

Weinstein, C. E., & Van Mater Stone, G. (1993). Broadening our conception of general education: The self-regulated learner. *New Directions for Community Colleges, 81,* 31-39.

Weinstein, C. E., Zimmerman, S. A., & Palmer, D. R. (1988). Assessing learning strategies: The design and development of the LASSI. In C. E. Weinstein, E. T. Goetz, & P. A. Alexander (Eds.), *Learning and study strategies, issues in assessment, instruction, and evaluation* (pp. 25-39). San Diego, CA: Academic Press.

Yaworski, J. A., Weber, R. M., & Ibrahim, N. (2000). What makes students succeed or fail. *Journal of College Reading and Learning, 30,* 195-219.

Young, D. B., & Ley, K. (2000). Developmental students don't know that they don't know part I: Self-regulation. *Journal of College Reading and Learning, 31,* 54-59.

Zimmerman, B. J. (1989). Models of self-regulated learning and academic achievement. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theory, research, and practice* (pp. 1-23). New York: Springer-Verlag.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25,* 3-17.

Zimmerman, B. J. (1994). Dimensions of academic self-regulation: A conceptual framework for education. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 3-19). Hillsdale, NJ: Erlbaum.

Zimmerman, B. J. (1998). Cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 1-18). New York: Guilford.

Zimmerman, B. J., Bandura, A., & Marinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal, 29.* 663-676.

Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). *Developing self-regulated learners: Beyond achievement to self-efficacy.* Washington. DC: American Psychological Association.

Zimmerman, B. J., Greenberg, D., & Weinstein, C. E. (1994). Self-regulating academic study time: A strategy approach. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 181-197). Hillsdale, NJ: Erlbaum

Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal, 23,* 614-628

Zimmerman, B. J., & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology, 80,* 284-290.

Zimmerman, B. J., & Schunk, D. H. (1989). *Self-regulated learning and academic achievement: Theory, research, and practice.* New York: Springer-Verlag.

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