THE UNIVERSITY OF CALGARY

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AN EXPLORATORY STUDY OF ACADEMIC HIGH-RISK COLLEGE STUDENTS

BY

ELIZABETH ANNE PYBUS

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

CALGARY, ALBERTA

JUNE, 1991

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ISBN 0-315-71126-4



APPROVAL PAGE

The University of Calgary Faculty of Graduate Studies

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "An Exploratory Study of Academic High-Risk College Students" submitted by Elizabeth Anne Pybus in partial fulfillment of the requirements for the degree of Master of Science.

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ABSTRACT

Many academic high-risk post-secondary students in North America are enrolling in a variety of specialized programs designed to promote student success. One such program is the Program for Academic Success and Satisfaction (PASS), sponsored by the Counselling Department at Mount Royal College in Calgary, Alberta. The department offers a six-week, non-credit, voluntary, intervention program for academic high-risk students who are being placed on academic warning or are returning to the college after being disqualified. The course curriculum addresses students' academic and social concerns. The variety of skills taught includes (1) time management, (2) stress management, (3) textbook reading, (4) assertiveness training, (5) memory improvement, and (6) strategies for staying motivated. The instruction takes place in small group settings.

Evidence in the literature suggests that long-term intervention programs such as freshman experiences, retention courses, orientation seminars, and developmental classes of 30 to 32 weeks are successful in aiding the needs of academic high-risk students. However, very little information is provided regarding the success of short-term intervention programs of 15 to 16 weeks or less for this same population. The purpose of this research, then, was to explore the needs of academic high-risk students through an evaluation of the short-term PASS program at Mount Royal College. The measures used in this investigation were grade point averages, the Survey of Study Habits and Attitudes, the Self-

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Esteem Inventories, and the Student Problem Inventory Profile. Exploratory data analysis was the statistical method used in this study.

The findings of this study indicate encouraging support for PASS helping to improve academic high-risk students' GPAs, study habits and attitudes, and student problems. There was little evidence to suggest that PASS improves students' self-esteem or that there were any gender differences among the subjects.

The transcripts of subjects indicated that a greater number of PASS students were taken off academic warning in comparison to the control group. Similarly, PASS participants were less likely to voluntarily withdraw from college than were the students in the control group.

ACKNOWLEDGEMENTS

I would like to thank the students at Mount Royal College who volunteered their time to participate in this study, and without whose support this thesis would not have been possible.

I would like to express my gratitude to Dr. Hal Altmann for being my supervisor and to the other members of my thesis committee, Dr. Walter Zwirner, and Dr. Paul Adams.

I am also grateful for the assistance received from Betty Matthews in marking the subjects' assessments, Shauna Cowling for her peer support, and Juli Faminow for her unending patience and expertise in typing this manuscript.

Lastly, I would like to thank my wonderful husband Keith Brown, my children Jordan and Emily, my parents Vivian and Wilfrid Pybus, and my friends for their steadfast encouragement and love throughout this project.

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CHAPTER ONE: INTRODUCTION

Thomas Jefferson, in 1837, expounded upon the democratic ideal that all individuals should not only be allowed, but encouraged, to develop their potential. His conviction led to the concept of free education for all citizens.

In the United States greater access to higher education was initially achieved in 1862 by the land-grant colleges of Massachusetts. Thus, according to Roueche and Baker (1987), "the people's college was born" (p. 3). Later, in 1896, William Ruiney Harper founded the first junior college at the University of Chicago, and the expectation was born that community colleges in both Canada and the United States could provide equal opportunities for all, regardless of their religion, ethnic group or socioeconomic status.

In the United States, this fundamental democratic precept gave rise to the college open-door policy established in 1944. During the mid 1940's, the numbers of students entering colleges rose sharply with the passage of the G.I. Bill of Rights, which provided substantial funding for education to American war veterans. The philosophy of open access was further advanced by President Truman's 1947 Commission on Higher Education, which strongly advocated free public education for all. Bogue (cited in Roueche & Baker, 1987) expressed a similar view "that education is a never-ending process of the community, by the community, and for the community" (p. 4). During the 1960's, the open-door policy, coupled with the increasing college enrollments of the so-called "baby

boomers," led to a dramatic increase in student population and diversity for the majority of two-year colleges throughout North America (Cross, 1971).

As a result, during the past three decades North American community colleges have been struggling to meet the diversified needs of the students they admit. In Canada, Crombie's (1989) recent federal report to the Department of the Secretary of State emphasizes the need to make higher education available on an equitable basis to all Canadians, so it is likely that these concerns are only going to increase. For example, Crombie and the provincial ministers have now agreed that certain target groups should receive special assistance to participate in post-secondary education: aboriginal Canadians, visible minorities, the disabled, immigrant groups, women in certain fields, and francophones outside of Quebec.

According to Roueche and Baker (1987), "a major problem accompanying an open-door access policy is the generally low college aptitude found among an unselected student population" (p. 6). The consequence is that many college students find themselves in academic jeopardy shortly after their enrollment and are identified as "academic high-risk college students." This population often has averaged below C in their high school grades, or their grade point averages are below the designated standards of the post-secondary institution they are registered in (Whyte, 1978).

To assist the needs of academic high-risk students, American and Canadian college administrators have responded by offering expanded student and counselling services; however, their motivations for doing so differ. Since student attrition at the post-secondary level in the United States means a loss of monetary income to the institution, the resources to set up, maintain, and evaluate academic support services for high-risk students are mainly market-driven (Lane, 1990). For example, a study by Belcher, Ingold, and Lombard (1985) assessed the initial effectiveness of Student Learning Skills 1101 (SLS), a one-credit orientation course offered by Miami Dade Community College and designed to provide academic high-risk students with the information and skills they need to survive. The objective of the course is to reduce the attrition rate and to increase the grade point average scores of students. Results indicated that students who enrolled in SLS 1101 were still enrolled one year later and, in fact, earned a first semester GPA of at least 2.0. Statistical analysis indicated that the SLS 1101 course also helped to retain 75 students who otherwise would no longer be enrolled. With an average credit load of 9.0 in one semester, these 75 retained students generated \$42,000 in additional revenue to the college. If all freshmen students had successfully completed the course and had re-enrolled the following year, they would have potentially generated \$236,700 in revenue.

Canadian post-secondary institutions are not market-driven and to date are experiencing over-enrollment and crowding problems. As a result, the question could be asked: "Why assist Canadian academic high-risk students under these circumstances?"

Bowles, Karabel and Zwerking (cited in Kaliszeski, 1988) suggest that by not addressing the needs of academic high-risk students, young people in postsecondary institutions are inadvertently being directed into the same social structure that their parents already occupy. These three investigators argue that by not enabling academic high-risk students to succeed they are being channelled into low status jobs. They also assert that, "the high rate of attrition at community colleges is actually functional and necessary for the existing social system" (Kaliszeski, 1988, p. 7).

Although some Canadian post-secondary administrators may disagree with the assertions of Bowles, Karabel, and Zwerking (cited in Kaliszeski, 1988), many are nonetheless concerned with the ethical implications of the high attrition rates of their institutions. For instance, Parsons and McLachlan (1990) state that "a graduation rate of 50% at the University of Victoria is shocking when one considers that only 70% of British Columbian grade 12 students receive a high school diploma, and only 19% of these attend University" (p. 1). This suggests that about one in fifteen B.C. grade 12 students will earn a Bachelor's Degree $(.70 \times .19 \times .50 = .0665)$ from the University of Victoria.

Whether the reasons are philosophical (as indicated by the open-door policy), economical, political, or ethical, student services are currently being made available to assist academic high-risk college students in both Canada and the United States.

Statement Of The Problem

Student services may include skill-building courses, orientation and retention seminars, freshman experiences, learning assistance, college preparation classes,

courses in English as a second language, mentoring and peer assistance programs, and developmental programs initiatives. In light of all this assistance, the question remains: "Are high-risk students able to experience academic success?" A number of 30- to 32-week, long-term intervention programs such as freshman experiences, retention courses, orientation seminars, and developmental classes have reported significant findings in successfully aiding academic high-risk postsecondary students (Abrams & Jernigun, 1984; Cartledge & Walls, 1986; Cellucci & Price, 1987; Donnangelo, Santa, & Emilo, 1982; Dukes & Gaither, 1984; Farr, Jones, & Samprone, 1987; Fidler, 1989; Gordon & Grites, 1984; Miller, 1983; Pascarella, 1986; Rice, 1984; Stupka, 1986; Upcraft, Gardner, & Associates, 1989). However, very little exploratory or empirical information is provided regarding the success of short-term intervention programs of 15 to 16 weeks or less. In a recent informal Canadian survey conducted by the researcher, the majority of intervention programs for academic high-risk students at the post-secondary level were found to be short-term (Appendix A). Although many of the interventions were claimed to be effective, no proof could be provided. According to Burch (1990) at Assinibone Community College, "resources for summative evaluation are often not included in agency budgets and the planning of service delivery is seldom, if ever, guided by the intention to establish exploratory or empirical support of program effectiveness or a basis for the progressive improvement of services over time" (p. 17). This, however, is not the case for the short-term Program for Academic Success and Satisfaction (PASS) offered at Mount Royal

College (MRC), Calgary, for academically high-risk college students. Since the program's inception, it was understood by the Counselling Department's administration that data would be collected on an ongoing basis to evaluate PASS.

Purpose of the Study

Each year at MRC almost 30 percent of students experience academic difficulties, and the result is a formal academic warning or disqualification. Miles (1987) suggests that this rate of failure has high cost both to students and to the institution. For the student the costs may be of an emotional, financial, and/or vocational nature, whereas costs to the institution may be of an administrative nature; ultimately, the costs have an impact on the availability of education offered to the student body. For example, students who register and then drop out during their first semester prevent other students who may have been wait-listed, from being admitted into programs.

The Counselling Department and Learning Centre at MRC has established a number of short-term intervention programs to assist students in academic jeopardy. In an attempt to aid this type of student, the Counselling Department created the Program for Academic Success and Satisfaction, referred to as "PASS," in November, 1987. This short-term intervention program of six weeks focuses on developing the students' abilities to assume greater responsibility for their own learning in such areas as (1) time management, (2) comprehension of textbook information, (3) stress management, (4) assertive learning, (5) memory and concentration, and (6) motivation. The creator of PASS, Dr. Fred Miles of the Counselling Department at MRC, notes that PASS serves a two-fold purpose: (1) to help students improve their academic performance, and (2) to raise their level of satisfaction with their college experience.

Despite the popularity of post-secondary short-term intervention programs for academic high-risk students, very little research has been conducted in Canada. Therefore, the purpose of this research is to gain insights into the effectiveness of the PASS program, and to determine whether or not a future empirical study is warranted. The method of investigation in this study was exploratory (this is elaborated upon on page 45). The following questions provide further clarification of the purpose:

- Will academic high-risk students, as a result of PASS, experience improvements in their (a) grade point averages, (b) study skills and attitudes, (c) self-esteem, and (d) student problems?
- 2. What kinds of recommendations would be best suited for the design of future support programs for academic high-risk college students at MRC and elsewhere?
- 3. What kind of model would be appropriate for meeting the needs of academic high-risk students attending Canadian community colleges?

This study is important for at least three reasons: first, it will further contribute to the literature on Canadian academic high-risk college students; second, it will provide some insight as to whether or not short-term intervention programs are successful in helping academic high-risk college students; third, it may provide counsellors, educators, administrators, and the high-risk students themselves with some helpful information regarding effective intervention strategies.

Basic Tenants

This study is based on five tenants:

- 1. Intervention programs are a helpful resource for assisting the needs of academic high-risk students.
- 2. Even though these programs are made available, students will often choose not to avail themselves of the assistance (Friedlander, 1980).
- 3. Tinto's theoretical model of "dropout behaviour" is applicable to academic high-risk students.
- 4. The PASS curriculum being evaluated and the intervention programs cited in the literature have a common purpose.
- 5. First year students are most likely to be or become academic high-risk students (Noel, Levitz, Saluri, & Associates, 1985).

Definitions of Terms

Academic High-Risk Students: Students having high school academic averages below C or grade point averages below the designated standards of the postsecondary institution they are registered in (Whyte, 1978). This definition is expanded upon on page 11.

- Academic Warning: A term used by the registrar to identify students whose grade point averages fall below the designated standards of their post-secondary institution. For example, at Mount Royal College, students are put on academic warning with an overall GPA greater than or equal to 1.50, but less than 2.00.
- Attrition: The percentage of students who withdraw from their post-secondary institution prior to the completion of their program. The national attrition rate at Canadian universities is approximately 30% (Parson & McLachlan, 1990).
- *Disqualification*: A requirement by a post-secondary institution for students placed on academic warning that if they do not bring their GPA's to the standard level of acceptance in the required time they must withdraw from the institution. At Mount Royal College, students are required to withdraw if they have a GPA < 1.00 or if they accumulate seven or more withdraw (W) grades on their academic record.
- *Exploratory Study*: A method of investigation which uses systematic statistical tools for gaining insights into areas of research largely unexplored (Tukey, cited in Breckenridge, 1983).
- Mount Royal College (MRC): A community college located in Calgary, Alberta, Canada, which offers a variety of career and liberal arts programs.

- *Probation*: A period of time set by the institution for students on academic warning to raise their semester and cumulative GPA scores. (At MRC, students have one semester to raise their marks to a cumulative GPA score of greater than or equal to 2.00.)
- Program for Academic Success and Satisfaction (PASS): A non-credit six-week intervention program for volunteer academic high-risk students who are either placed on academic warning or are returning to MRC after being disqualified. Retention/Persistence: The percentage of students who continue to complete their
 - education at the same institution they have enrolled in, or who have transferred to another institution to complete a degree program.

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CHAPTER TWO: LITERATURE REVIEW

This chapter is concerned with (1) further defining academic high-risk college students; (2) providing a theoretical rationale using Tinto's model; (3) outlining programs to assist high-risk students; and (4) critically reviewing related studies in the areas of grade point averages (GPA), study habits and attitudes, self-esteem, and student problems.

Definition

Miller (1983) defines academic high-risk college students as individuals who are deficient in academic and study skills. They usually lack a positive self-concept and clarification of their life goals. On the measurable side, Whyte (1978) classifies academic high-risk students as having high school academic averages below C or GPAs below the designated standards of the post-secondary institution they are registered in. In more generic terms, Friedlander (1980) suggests that these students are more likely to experience repeated failure in school situations; they may have difficulty performing traditional educational tasks; and they receive insufficient positive feedback or encouragement from teachers or classmates for their efforts to overcome academic deficiencies. Furthermore, students are likely to have been in the bottom third of their high school graduating class. Consequently, they may have little confidence in their ability to learn new tasks, and they avoid participating in learning experiences that have been associated with failure in the past, tending to participate only in those activities in which they are sure of experiencing success.

The literature generally also identifies academic high-risk college students as follows: freshmen (Farrar, 1988; Noel, et al., 1985; Upcraft, et al., 1989); individuals experiencing career uncertainty (Barak, Librowsky, & Shiloh, 1989; Foote, 1980; Henry, 1989; Jones, Gorman, & Schroeder, 1989; Latona, 1989; Lent, Larkin, & Brown, 1989; Niles & Herr, 1989), and persons from low socioeconomic backgrounds (Karabel, cited in Kinnick & Kempner, 1988). Richardson (1989) also classifies the following to be academic high-risk students: firstgeneration college students, single parents, non-traditional students, and documented learning disabled students. More recently, Crombie (1989) and the provincial ministers have identified academic high-risk students to be aboriginal Canadians, visible minorities, immigrant groups, women in certain fields, and francophones outside of Quebec.

Academic high-risk college students may persist or voluntarily withdraw; they may be put on academic warning or may be academically dismissed by their institution. Tinto's (1975) conceptual schema for dropout from college does not specifically address academic high-risk students; however, he does address students who voluntarily withdraw or who are academically dismissed. Because academic high-risk students may experience either of these latter two alternatives, Tinto's model can be applied to this study. Tinto's (1975) Conceptual Schema for Dropout from College

Tinto's (1975) theoretical model of dropout builds on the work of Spady (1970), which has its roots in Durkeim's social psychology theory of suicide (cited in Tinto, 1975, p. 91) (Figure 1). Tinto states: "According to Durkeim, suicide is more likely to occur when individuals are insufficiently integrated into the fabric of society. Specifically, the likelihood of suicide in society increases when two types of integration are lacking: insufficient moral (value) integration and insufficient collective application" (p. 91). For example, individuals may be more apt to commit suicide if they do not have a value system that purports that taking your own life is morally wrong or if they feel a deep sense of isolation from not being able to closely affiliate with their family and community.

Tinto (1975) concurs with Spady (1970) that when one views the college as a social system with its own value and social structures, one can treat dropout from that social system in a manner analogous to a microcosm of the larger society. For example, "one can reasonably expect, that social conditions affecting dropout from the social system of the college would resemble those resulting in suicide in the wider society" (Tinto, 1975, p. 91). In turn, a lack of integration into the social system of the college may lead to low commitment to that social system and may increase the likelihood of student withdrawal. Coupled with the college social system is its academic system. Spady suggests that students may be able to achieve integration in one area, but not in the other. Dropout occurs, then, when there is social or academic malintegration. Variables proposed by Tinto's model



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Figure 1. A conceptual schema for dropout from college (Tinto, 1975).

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which may affect students' social or academic integration include: sex, race, ability, pre-college experiences (e.g., grade point averages, academic and social attainments), family values, expectations, and social status attributes. Tinto argues that these background characteristics serve as predictors as to whether or not students will instinctively commit themselves. In the final analysis, Tinto suggests that "it is the interplay between the individuals' commitment to the goals of college completion and their commitment to the institution that determines whether or not individuals decide to drop out of college and the forms of dropout behaviours the individuals adopt" (Tinto, 1975, p. 96).

Through further study, Pascarella (1979), Pascarella and Chapman (1983), Pascarella and Terenzini (1980, 1983, 1986), Pascarella, Terenzini and Wolfle (1986), Stoecker, Pascarella, and Wolfle (1988) have confirmed Tinto's (1975) model. Pascarella and Chapman have shown, however, that academic integration has a stronger indirect effect on persistence than does social integration at both two- and four-year commuter institutions. Pascarella and Terenzini (1980), as well as validating the major dimensions of Tinto's model, also found that there were significant associations between frequency of student-faculty informal contact and college persistence. The significance of this research suggests that the quality and impact of informal student-faculty contacts may be more important to students' institutional integration than their peer relationships. Tinto's model equally weighted the influence of these two variables on students' social integration. Pascarella and Terenzini's (1980) research may have implications for the teaching of support programs if student-faculty interaction is a significant variable in preventing academic high-risk students from withdrawing from college. Pascarella, Terenzini, and Wolfle, in using Tinto's model, found that students are less likely to persist with their education if orientation is only a one-time, pre-enrollment experience. This finding suggests that support programs need to be more than a quick-fix approach. Pascarella and Terenzini (1983), using path analysis, found that the constructs in Tinto's model have reasonable predictive power in explaining variance in freshman year persistence and voluntary withdraw decisions. Pascarella and Terenzini's study (1983) states:

Tinto's contention that persistence and withdrawal behaviour is essentially the result of a longitudinal process of person-environment fit was generally supported by the data. His core concepts of academic and social interaction not only had important direct effects on persistence, but also had indirect effects through their influence on the casually subsequent constructs of institutional and goal commitment (p. 225).

Findings from this study also supported the idea that students' interactions with the college environment subsequent to enrollment is a more important factor in persistence than the characteristics the student brings to college. The opportunity to participate in effective support programs may have more influence on the success of high-risk students than their preceding experiences based on family background, individual attributes, and pre-college schooling.

The most convincing confirmation of Tinto's model is the national, nine-year, multi-institutional study by Stoecker, et al. (1988). This research supported Tinto's model of the persistence-withdrawal process and serves to validate that the most important determinants of persistence are the students' academic and social integration at the institution. Upon further examination of Tinto's model and the subsequent research cited, college support services can be categorized to emphasize (a) students' academic integration, (b) students' social integration, or (c) both.

Programs Available to Academic High-Risk College Students
<u>Academic Programs</u>

Programs aimed solely at students' academic integration include the following: Developmental Programs (Miller, 1983), Individual Educational Plan (IEP) Programs (Aronoff, 1990), Mentoring Programs (Oestereicher, 1985), Basic Skills Courses and English as a Second Language (Scales, Burley, & Orsini, 1979; Judd, 1985); Remedial Classes (Annis, 1987; Kaliszeski, 1988); Academic Preparation Courses (Ironside, 1988).

Social Programs

Programs aimed solely at students' social integration include: college transition programs (Thompson, 1988), residential programs; campus-wide activity programs (Upcraft, et al., 1989); and health and wellness programs (Leafgren, cited in Upcraft, et al., 1989).

Academic and Social Programs

Programs aimed at promoting college students' academic and social integration include (1) retention programs (Cellucci & Price, 1986; Pascarella, 1986); (2) freshmen courses (Abrams & Jernigan, 1984; Dukes & Gaither, 1984; Gordon & Grites, 1984; Rice, 1984; Cartledge & Walls, 1988; Farr, Jones, & Samprone, 1987; Fidler, 1986; Stupka, 1986; Upcraft, et al., 1989); (3) mentoring programs (Gardner, 1981); (4) campus cluster programs (Dukes & Gaither, 1984); and (5) orientation courses (Donnangelo, et al., 1982; Belcher, et al., 1985; Cohen, 1988). All of these programs are described in Appendix B.

The short-term intervention PASS program offered at Mount Royal College has both an academic and a social focus. For example, to help students in the realm of academics, the curriculum includes time management, textbook reading, stress management, assertiveness training, memory improvement and concentration, and maintenance of motivation. On the other hand, to facilitate students' social integration, students can get to know their peers and instructors in small group settings. Thus the low teacher-pupil ratio of approximately 1:8 promotes positive interaction between instructors and students. At the end of the program, a party is held and the Director of the college is invited to award students with a participatory certificate. After the course is over, PASS students are encouraged to continue to meet each other on an informal basis to ensure social contact and to help students remain academically motivated.

In order to assess whether or not students have fulfilled their goals of improving academically and being more satisfied with their college experiences, pre- and post-tests are administered by the PASS instructors. The instruments distributed are the Survey of Study Habits and Attitudes (SSHA) (Brown & Holtzman, 1984); the Self-Esteem Inventories (SEI) (Coopersmith, 1986), and the Student Problem Inventory Profile (SPIP) (Miles, 1984). In addition, in some cases, grade point averages are also compared prior to and after the course (Harvie, 1989). Since these and similar measures have been cited in the literature as being legitimate tools for discerning differences between academic high-risk students who participate in support programs and those who do not, it was decided for the purpose of evaluating the PASS program to utilize the same assessments. A critical review of related studies in the areas of grade point averages, study habits and attitudes, self-esteem, and student problems will follow. Grade Point Averages

<u>Definition</u>. Grade point averages (GPAs) are computed by adding up students' individual course grades out of a score of 4.00 and computing the average score. Scores computed over the semester are referred to as current GPA scores, and scores computed from semester to semester are referred to as cumulative GPA scores.

<u>Research relating to academic high-risk college students and their grade point</u> <u>averages</u>. Studies that measure students' grade point averages prior to and after their participation in post-secondary support programs show discrepant results. The following section will reveal, first, studies which do find meaningful differences with random samples, and second, studies which do not. A discussion will follow as to why the results may be discrepant, and the applicability of the research to the evaluation of PASS at Mount Royal College.

At Miami Dade College, a one-credit orientation course is offered to provide students with the information and skills they need to survive campus life. Belcher, et al., (1985) found that with students who participated in this course, Student Learning Skills (SLS) 1101, 68% of the enrollees had first semester GPAs that exceeded 2.0, compared to 56% of those who did not enroll and had GPAs less than 2.0. Similarly, one year later, 60% of the course participants continued to earn a GPA of at least 2.0 compared to 56% of the non-completers whose GPA continued to be less than 2.0.

Stupka (1986) found similar GPA results when he evaluated a year-long orientation program called College Success at Sacramento City College. Using matched groups, he found that freshman seminar students achieved an average that was 0.71 grade points higher than students attending either a one-hour or four-hour new student orientation. His findings were statistically significant (z-score; p < .05).

Donnangelo, et al., (1982), in order to determine the effectiveness of two freshman courses at Bronx Community College, investigated the mean cumulative GPA and retention rates of first-year students.

One of the freshman courses (SPD-99) was a non-compulsory course, consisting of ten weekly one-hour, non-credit sessions. Since the instructors developed their own lesson plans, the course content was somewhat varied. The course targeted grade policies, graduation and curricula requirements, registration procedures, and student development support services.

The second course (OCD-01), on the other hand, was a compulsory credit program consisting of 14 weekly one-hour sessions. Course content focused on getting acquainted, setting goals for the course, college resources, motivation, study plans, grading policies and retention standards, goal setting, time management, college coping skills, and the exploration of students' values, interests, and abilities as they related to curriculum choice and career goals.

At the end of the course, OCD-01 students were graded from A to F. Students had to drop the course if they had two absences. In OCD-01 sessions participants were required to formally complete assignments by certain deadlines as compared to a much more flexible method used in SPD-99. Similarity of course content was ensured by a set curriculum to be followed by the instructors.

Using analysis of covariance, the two groups were compared with separate control groups and each other regarding their cumulative GPA results prior to the two orientation programs and after completion. The results were as follows:

- 1. The mean GPA (2.71) of SPD-99 students was significantly higher than the mean GPA (2.11) of a control group that did not attend SPD-99 at the .01 level;
- 2. The mean GPA (2.31) of students who attended OCD-01 was significantly higher than the mean GPA (1.79) of the control group that did not attend OCD-01 at the .01 level; and
- 3. The mean GPA (2.71) of SPD-99 students was significantly higher than the mean GPA (2.31) of students who attended OCD-01 at the .05 level.Although both orientation programs were effective in improving students'

GPAs in comparison to the two control groups, the element of self-selection

versus mandatory selection may have contributed to the higher motivation of the SPD-99 group to succeed, and resulted in the higher cumulative GPAs they attained.

Unlike the preceding researchers, Potter and McNairy (cited in Upcraft, et al., 1989), and Farr, Jones, and Samprone (1986), found that students' GPA measures did not statistically increase after their participation in similar intervention programs. For example, they found that when the GPA scores of fall 1982 Freshman Course 1010 students at Clarion University of Pennsylvania were compared with the GPA scores of a control group at the end of the first and third semesters, no significant differences in academic performances were observed.

Shanley (1987) conducted a longitudinal study from the fall of 1979 to the spring of 1986 for first-year students enrolled in College Freshman 101 at the University of South Carolina. He found that the mean GPA of non-completers over the seven years (2.31) was significantly higher than the GPA of completers (2.16).

Similar results were found among pupils enrolled in Georgia College 101 (a freshman course). Farr, et al., (1987) studied the students' mean GPAs after three quarters and after six quarters. No statistical differences were noted in mean GPAs between the participating freshmen students and a randomly selected control group.

Even though the preceding six studies are similar in that they investigate intervention programs of similar duration for comparable subjects, the results are inconclusive. These discrepant findings may be attributed to the fact that the majority of the research analyzed only one intervention program, and as well, the research was conducted in one specific post-secondary institution and was not longitudinal. These factors make it difficult to generalize the findings. For the purpose of this exploratory study, it was decided to assess the pre- and post-grade point averages of the subjects selected to see which body of literature the outcomes would support.

Study Habits and Attitudes

<u>Definition</u>. Study habits and attitudes include students' study methods and their motivation for studying, and attitudes toward scholastic activities, both of which are important in the classroom (Brown & Holtzman, 1984).

<u>Research relating to academic high-risk college students and their study habits</u> <u>and attitudes</u>. This section discusses intervention programs as related to the study habits and attitudes of academic high-risk students. Implications for future research regarding PASS will also be addressed.

Oestereicher (1985) examined the potential contribution of mentoring to academic high-risk students at Brooklyn College. He assigned student mentors for six weeks to an experimental group. Mentors were not assigned to the control group. The mentors' primary responsibilities were to encourage the participation of students and to be available as role models and homework helpers for about five hours per week. Pre- and post-course assessments were undertaken using the Brown and Holtzman (1984) Survey of Study Habits and Attitudes to assess
whether or not a mentoring intervention program would improve the study habits and attitudes of academic high-risk students. Oestereicher's (1985) preliminary findings suggest that there are no differences regarding mentored students' study habits and attitudes from the start to the end of a difficult course.

Annis (1987) investigated Project Start, a summer study skills course offered to incoming academic high-risk college students at Ball State University, Indiana. The topics addressed in the study techniques course included modifying study behaviour and increasing motivation to learn; a cognitive psychology theory of verbal learning; effective reading; benefitting from lectures, textbooks, and other media; special study techniques; test wiseness; and writing course papers and exams. The Survey of Study Habits and Attitudes was administered to students the first and last weeks of the 10-week program. The SSHA pre-test and post-test results showed incremental mean differences on all four of the subscales. Annis (1987), however, did not analyze her data for statistical significance.

Research conducted by Scales, et al. (1979) measured students' awareness of a variety of readings and study skill elements including author attitude and bias, signal words, vocabulary, organizing to read, note taking, mental imagery, and reading flexibility. Of 26 academic high-risk college students, 13 were enrolled in the treatment program and 13 served as the control group. Both groups were administered the Survey of Study Habits and Attitudes at the beginning and end of the six-week intervention program. The post-test scores of both groups indicated no significant differences.

Judd, Wedemeyer, Williams, Padilla, Krom, and Blustein (1985) compared students who were in academic difficulty on five constructs: reading ability, career decisiveness, learning styles, study habits and attitudes, and motivational factors. Multiple regression analysis was used to determine the differences between the two groups. Although statistical significance was not found, the researchers suggested from the multiple regression analysis that academic difficulty seemed to be most associated with the cognitive dimension of reading comprehension skills and the attitudinal factors of expectations for academic success and study habits and attitudes.

Rice's (1984) research contradicts the findings of Oestereicher (1985), Annis (1987), and Judd, et al. (1985) with regard to the ineffectiveness of intervention programs on the study habits and attitudes of academic high-risk college students. He investigated the gains made in study habits and attitudes while students were enrolled in the freshman course University 101 at South Carolina University, Lancaster. Students improved significantly on all the SSHA scales (t-test; p < .01). His findings thus lend support to the notion that intervention programs can positively affect the study habits and attitudes of academic high-risk students.

Rice's (1984) research may contradict the preceding studies because each lacked important research factors to bear out statistical significance. For example, Oestereicher's (1985) research, beyond comparing the mean differences for each group, did not statistically analyze the results of the pre- and post-test SSHA measures for the experimental group and control group. Similarly, Annis' (1987) research did not employ a control group, and beyond mean comparisons, also failed to test for significance. Although research by Scales, et al. (1979) included a control group and utilized Analysis of Covariance to test for significance, their sample size was very small and the intervention time was very short. In research by Judd, et al. (1985), implementation of multiple regression was limited due to sample size, a post hoc design, and the variability of group membership (i.e., 31 students not in academic difficulty as compared with 19 students in academic difficulty).

Bearing in mind the limitations of these studies on the study habits and attitudes of academic high-risk college students, the researcher decided to further investigate this area by (1) having at least 25 subjects in the experimental group, (2) using exploratory data analysis to compare pre- and post-test means, and (3) including subjects in the control group who are also academic high-risk college students versus students not in academic difficulty. Studies regarding the selfesteem of academic high-risk students will follow.

Self-Esteem

<u>Definition</u>. "Self-esteem is a personalized judgement of worthiness expressed in the attitudes individuals hold toward themselves" (Coopersmith, 1986, p. 2).

Research relating to academic high-risk college students and their self-esteem. Do post-secondary support programs influence academic high-risk college students' personality development? Few researchers have attempted to answer this question. The following discussion will cite studies related to the personality variables of academic high-risk college students and possible implications for future research.

Nisbet, Ruble, and Schurr (1982) conducted a study to examine the effectiveness of five predictors in assessing college academic success for high-risk college students. One of these predictors was the Myers-Briggs Type Indicator (MBTI). The MBTI is a personality type indicator that purports to measure extraversion-introversion, sensation-intuition, thinking-feeling, and judgement-perception. Regression analysis was used to determine whether specific factors from a number of instruments (including the MBTI) would help predict individual success potential within the academic high-risk group. This group consisted of 658 matriculating students who had been selected for the Academic Opportunity Program (AOP) at Ball State University. "The program is designed to ensure that high-risk students have the opportunity to prove their competence in total academic participation while receiving academic and special service support" (p. 228).

Results from regressing GPA on the five predictors (Scholastic Aptitude; High School Percentile; Effective Study Skills; Myers Briggs; Nelson, Denny and Holland Vocational Preference Inventory) showed significance for the MBTI main effects (p < .05) but no significance for the three MBTI interactions.

The use of the MBTI in this study seems to warrant the prediction that personality variables can prove to be significant in improving the success of academic high-risk college students.

At Columbus College, Cartledge and Walls (1986) did an extensive study involving students and non-participants from College 105, a two-semester freshman seminar course. Rotters (1971) Internal-External (IE) Locus of Control Scale and the Adult Form of the Coopersmith (1986) Self-Esteem Inventory (SEI) were administered to both groups. The IE test was given in the spring and fall quarters of 1984, and the winter and fall quarters of 1985; and the SEI test was distributed during the winter and fall quarters of 1985. No significant differences were found for either measure.

Cartledge and Walls (1988) concluded from their research that since only a few studies using personality variables have been reported, there is a limited basis for generalization. They suggest that additional research is needed before conclusions can be made regarding the effectiveness of intervention programs on the self-esteem of academic high-risk college students.

Kaliszeski (1988) and Miller (1983) support this recommendation, and also suggest that self-concept measures should be used to help assess how intervention programs can best be helpful in addressing the needs of academic high-risk college students.

Based upon these recommendations and the fact that the Self-Esteem Inventory is administered to PASS students, the possible effects of intervention programs on the self-esteem of academic high-risk college students was investigated. The final section of this chapter will address the area of student problems.

Student Problems

<u>Definition</u>. Student problems are concerns which deter a student from successfully integrating into college life either academically or socially (Tinto, 1975).

Areas in which college students most often experience difficulty include the following: (1) academic concerns in the areas of time management, concentration, processing information, selecting main ideas, utilizing study aids and test strategies; and (2) social emotional adjustments dealing with attitude, motivation and anxiety (Weinstein, Palmer, & Schulte, 1987).

Researchers Arnold (1989); Barak, et al. (1989); Foote (1980); Henry (1989); Jones, et al. (1989); Latona (1989); Lent, et al. (1989); and Niles and Herr (1989), conclude that college students' incongruent or undecided career choices can also lead to student problems such as dropping out or underachievement.

Research relating to academic high-risk college students and their problems. In order to investigate the study strategies of 514 first-year college students enrolled in a freshman orientation class at Murray State University, Hulick and Higginson (1989) administered subjects a demographic questionnaire and the Learning and Study Strategies Inventory (LASSI). An analysis of variance was completed using as the independent variable one group of freshmen students with GPAs above 2.75 on a 4-point scale, and another group with GPAs below 2.00 on a 4-point scale (Hulick & Higginson, 1989). The dependent variables were each of the ten scores on the LASSI. Significance at the p < .05 was found for the dependent variables: attitude, motivation, anxiety, concentration, information processing, and test-taking skills. Non-significance was found for time management, selecting main ideas, using study aids, and self-testing. As predicted, those students who use more of the learning and study strategies will tend to be more successful in learning as determined by the grades they receive.

Hulick and Higginson (1989) predicted that those students who were finding college to be more difficult would score lower on the LASSI scales. Respondents were split into high and low difficulty groups. The results of analysis of variance using the groups as the independent variable and the scales of the LASSI as the dependent variables were significant (p < .01) for attitude, time management, anxiety, concentration, selecting main ideas, and test-taking skills.

It was also predicted that students who studied more in high school would score higher on the LASSI scales (Hulick & Higginson, 1989). Students who reported studying a great deal in high school were assigned to one group and those who reported studying very little were put into a second group. Using ANOVA, significance at p < .05 was found for attitude and self-testing, and significance at p < .01 for motivation, time management, and test-taking skills.

The final hypothesis was that students who perceived themselves to be skilful and knowledgeable in the use of learning and study strategies would score significantly higher on the LASSI scales than those students who did not perceive themselves in the same way. Using the same statistical procedure, significance was found at p < .01 for attitude, information processing, and test-taking skills and at p < .001 for motivation, time management, anxiety, concentration, selecting main ideas, using study aids, and self-testing.

Although the LASSI is a self-report instrument and has inherent limitations in this regard, it can be surmised that academic high-risk college students would benefit from course work emphasizing learning and study strategies for overcoming both academic concerns and social-emotional problems.

Potter and McNairy (cited in Upcraft, et al., 1989) were interested in assessing Freshman Seminar 110 students' social emotional concerns using the Taylor Johnson Temperament Analysis. The control group consisted of freshman enrolled in General Psychology at Clarion University of Pennsylvania. The control group did better in the dominant scale (p < .01), whereas the experimental group performed better on four of the nine scales: nervous, active-social, expressive-responsive, and self-discipline. Based on these results, it can be suggested that college intervention programs for academic high-risk first-year freshmen students may be helpful in abating students' social-emotional concerns (e.g. by lowering apprehension, encouraging social involvement and responsiveness, and by students' becoming more self-disciplined).

Kluger and Koslowsky (1988) found commitment/motivation to also be a predictor of students' academic success or failure. For example, they hypothesized that students with higher commitment to their course work would perform better than students with lower commitment. The participants in this study were 39 firstyear students selected from three calculus sections at Stevens Institute of Technology. The independent variables consisted of five components of the Rusbult and Farrell model. Students' calculus grades at the end of the semester were used as main criterion measures. Two other criteria used for comparison purpose were students' GPA scores (including the calculus grade), and their final humanities grade. Using multiple regression, findings indicated that commitment, investment, and rewards all had positive and significant correlations with students' calculus grades and GPA scores (t = 4.5, p < .01). This study targeted academically successful college students; therefore, further investigation is needed to generalize these results to academically high-risk students.

A number of studies have also found college students' problems to be careeroriented. For example, Foote (1980); Henry (1989); Latona (1989); Lent, et al. (1989); and Niles and Herr (1989) have primarily found that college students' career and academic self-efficacy beliefs relate to various indices of career choice behaviours which can be predictive of success and persistence in certain academic majors. However, similar to the motivation studies, these researchers do not specifically address the career needs of academic high-risk college students per se.

Since the majority of the literature addresses normal college students' problems in the areas of academics, socio-emotional concerns, motivation, and career, it was decided in this study to determine whether or not these research findings could be generalized to academic high-risk students.

Summary

The literature has related various significant findings with regards to the effectiveness of long-term intervention programs (30-32 > weeks) for academic high-risk college students. However, there have been fewer studies to determine whether or not short-term intervention programs (< 15-16 weeks) are as effective in addressing the needs of such students.

In assessing the effectiveness of long-term college intervention programs for academic high-risk students, a number of past studies have analyzed students' GPAs, study habits and attitudes, self-esteem, and student problems. This study, therefore, sought to further explore these four dependent variables to determine whether or not encouraging support could also be found for justifying the effectiveness of short-term intervention programs for academic high-risk college students. In order to carry out this investigation, the short-term intervention program called PASS at Mount Royal College, Calgary, was assessed through the use of exploratory data analysis. Since this is an exploratory study, research questions are suggested in Chapter Five for a future inferential study. For a true inferential study, both the experimental group and the control group, would have had to be randomly selected. Time did not permit this for the Winter 1990 session of PASS, nor for the group to be wait-listed for treatment the following fall. In addition, volunteer subjects would have been withheld treatment when they were in most need of academic remediation. Consequently, this study at best can only suggest the effectiveness of PASS. The results of this research, therefore, cannot to date be generalized to the population of high-risk students in attendance at MRC. To do so would involve the execution of a future inferential study. However, given the results of the exploratory data, there is supportive evidence that, despite the fact that volunteers comprised the PASS group, there are differences between the experimental group and the control group.

CHAPTER THREE: METHODOLOGY

The Program

The Program for Academic Success and Satisfaction (PASS) was offered by the Counselling Department at Mount Royal College in six, two-hour sessions over a six-week period from February 5, 1990 to March 12, 1990. There were four sections. Registration for the program was voluntary.

This program assists students at Mount Royal College who are either on warning or have re-enrolled after being disqualified. It is estimated that 44% of students who are readmitted after having been disqualified will be disqualified again (Miles, 1989). It is the purpose of PASS to help students succeed academically and to become more satisfied with their college experiences. The course is designed to meet both the academic and the social-emotional needs of the students and may be arbitrarily divided into these two areas. The academic aspects cover diagnostic assessments, time management, strategies for using a text book, effective ways to take notes, improving memory and concentration, test-taking, and goal setting for GPA and course grades. The social-emotional aspects of the curriculum include the formation of support groups, individual counselling appointments, group building, the buddy system, managing stress effectively, becoming an assertive learner, and pursuing excellence by staying motivated. According to Miles (1989), PASS can offer students a number of advantages by assisting them to (1) become more highly motivated, (2) develop some important skills so they can work more effectively academically,

(3) experience opportunities to meet other students with similar interests and concerns, and (4) develop a greater understanding of themselves.

PASS instructors recommend that students voluntarily attend every session, participate in group discussions, and apply what they have learned in PASS to their scholastic and personal endeavours. In turn, participants can expect that the instructors of PASS will make every effort to assist students to find answers and solutions to their concerns (Miles, 1989).

PASS is taught in groups of 10 to 15 students for maximum effectiveness (i.e., to provide an opportunity to discuss mutual concerns, share problem solving, and offer students support and encouragement). The topics are usually presented by the instructors or a guest speaker and are then discussed by the participants. Although there are different instructors, each person teaches from the same curriculum. The program leaders are usually chartered psychologists and are similarly trained in instructing the PASS program. Appendix C contains the course overview. All students are evaluated and post-evaluated on measures of study habits and attitudes, self-esteem, and student problems prior to the PASS intervention and after its completion. After students have completed the program, individual appointments are made for test interpretation with the instructors.

Procedure

In January of 1990, the Mount Royal Counselling Department mailed out 1,122 letters inviting students who either were on academic warning or had re-enrolled after being disqualified to participate in PASS (Appendix D). Included were students with an overall GPA greater than 1.00 but less than 2.00 (students are required to withdraw from the college if they have a GPA < 1.00). This population was first identified by the Mount Royal College Registrar.

During the initial PASS sessions, all participants were invited by the researcher to participate in this study. Permission to do so was obtained from Dr. Roger Tierney, the head of counselling services at Mount Royal College. Of the 38 students registered for PASS; 37 accepted the invitation to participate in the study. At this time, subjects read a covering letter outlining their participation and voluntarily signed a letter of consent (Appendices E and F). The same day each PASS instructor administered three test measures: Survey of Study Habits and Attitudes (SSHA); Self-esteem Inventories (SEI); and a non-standardized measure, Student Problem Inventory Profile (SPIP). These three measures are kept on file at MRC. Details about these instruments are given on pages 39 to 44. To avoid biasing test results, students were instructed to complete the tests in any order. On average, the testing took each student an hour.

Students were post-tested during the last session by the same instructor. Students also filled out a 10-minute demographic questionnaire. Fifteen PASS participants filled out the questionnaire.

The control group was randomly selected from non-volunteers. A computer printout from the registrar of all the students placed on academic warning was hand-coded by the researcher from 1 to 1,122. Using a randomization table (Norusis, 1988), 50 persons were selected. After being solicited by phone, 30 of these 50 subjects agreed to meet with the researcher at the Mount Royal College Counselling Centre on March 5, 1990. The purpose of the research was explained. Subjects also read a covering letter outlining their participation, voluntarily signed a letter of consent, and completed at random the SSHA, SEI, and SPIP. Of the 30 subjects contacted, only 15 kept their appointments. The remaining 15 subjects were re-contacted by phone and given their instructions for testing. They were asked to pick up their tests from the secretary at the Mount Royal College Counselling Centre on March 6, 1990 and complete their pre-tests at the Centre. The tests were packaged at random and students were instructed to answer them in any order. Six weeks later the post-testing arrangements for the control group were conducted in the same manner. Students were also instructed to fill out a ten-minute demographic questionnaire. Twenty-two control subjects completed the demographic questionnaire.

In order to conduct the study, ethical approval was given by the Faculty of Education Ethics Review Committee from the University of Calgary, and Dr. Roger Tierney of the Mount Royal College Counselling Department.

Instruments

To evaluate PASS, the following three instruments were used: (1) Survey of Study Habits and Attitudes (SSHA) (Brown & Holtzman, 1984); (2) Self-Esteem Inventories, Adult Form (SEI) (Coopersmith, 1986); and (3) Student Problem Inventory Profile (SPIP) (Miles, 1984).

Survey of Study Habits: Form C. According to Brown and Holtzman (1967, 1984):

The purposes of the SSHA are to (a) identify students whose study habits and attitudes are different from those of students who earn high grades; (b) to aid in understanding students with academic difficulties; and (c) to provide a basis for helping students improve their study habits and attitudes (p. 5).

The updated percentile norms for the SSHA Form C were derived form the SSHA scores of 4579 first semester freshmen enrolled at eight, four-year American colleges. Correlations for all pairs of the four basic SSHA subscales, delay avoidance, work methods, teacher approval, and education acceptance, were calculated for the combined eight colleges. (*Delay avoidance* is the students' promptness to complete academic assignments without procrastination and distraction. *Work methods* are the students' use of effective study procedures and efficiency in doing academic assignments. *Teacher approval* is students' opinions of their teachers' classroom behaviour and methods. *Education acceptance* is the students' approval of the stated educational objectives, practices, and requirements). The variation in the magnitude of correlation from one college to the next is relatively minor (i.e., for delay avoidance and word meaning the

correlations ranged from r = .60 to r = .77; for delay avoidance and teacher approval the correlations ranged from r = .40 to r = .58; for delay avoidance and education acceptance the correlations ranged from r = .63 to r = .73; for work methods and teacher approval the correlation ranged from r = .47 to r = .66; for work methods and education acceptance the correlations ranged from r = .62 to r = .73; and for teacher approval and education acceptance the correlations ranged from r = .66 to r = .79). Correlations for MRC students are lower (see page 71 for details).

Form C of the SSHA has been validated by 2,874 persons from ten American Colleges. The criterion used in all of these studies was the first semester grade point average. Brown and Holtzman (1967, 1984) argue that although first semester GPAs are somewhat unreliable, they provide a realistic estimate of scholastic achievement over a short period of time. The average validity coefficients between students' SSHA scores and GPAs across the ten colleges were .42 for women and .45 for men.

To obtain subscale intercorrelations for Form C, correlation averages were obtained from the same ten college samples utilized for the normative and validity analysis. The obtained weighted averages of the independent correlations ranged from .49 to .71. This reports the correlation of the four basic SSHA subscales with each other and with the total study orientation (SO) score. (The SO score combines the scores on the teacher approval and educational acceptance scales to provide a measure of students' scholastic beliefs.) Brown and Holtzman (1967) report test-retest reliability coefficients from the four basic SSHA scales to range between .87 and .89.

The SSHA comprises 100 items and is designed specifically for a pre-test, post-test evaluation of post-secondary students' study habits and attitudes. Presented randomly throughout the survey are statements such as "I seem to accomplish very little in relation to the amount of time I spend studying," "I can concentrate on a reading assignment for only a short while before the words become meaningless jumble," and "After reading several pages of an assignment, I am unable to recall what I have just read." Students respond to the statements using a five-point Likert scale. The ratings are "rarely," "sometimes," "frequently," "generally," and "almost always." Subjects are asked to record their responses on a computer answer sheet which can be scored either by hand or computer.

Form C of the SSHA has scores on four basic scales (Delay Avoidance (DA), Work methods (WM), Teacher Approval (TA), and Educational Acceptance (EA)); two subtotals (Study Habits SH=DA+WM, and Study Attitudes SA=TA+EA); and a total score (Study Orientation SO=SH+SA). Each of the seven raw scores are then assigned a percentile rank based on the 1982 updated percentile norms for college freshmen. These percentile scores are then graphed for the purpose of providing students with a diagnostic profile of their strengths and weaknesses in relation to their study habits and attitudes.

Student Problem Inventory Profile. The Student Problem Inventory Profile (SPIP) is a non-published inventory designed to diagnose a list of problems which students in college often find troublesome. It is used as a pre-test and post-test measure for students enrolled in PASS at Mount Royal College.

In the construction of the SPIP, stringent criteria were used. For example, in order to provide more realistic rather than forced dichotomous responses, a standard five-point Likert scale was used. To avoid response bias, items were generated using positives and negatives. Further, vocabulary was tailored to the population. This inventory was also a key instrument used by Miles (1984) for his Ph.D. dissertation.

The student problem inventory is composed of 50 items. It was primarily adapted by Miles (1984) from the Mooney Problem Checklist (Form C) which contains 320 items (Mooney, 1950). Like Mooney's checklist, the adapted inventory examines four areas of concern. Eighteen of the items reflect students' academic concerns (e.g., "I do not know how to study efficiently"); 11 items deal with students' career dilemmas (e.g., "I am concerned about my suitability for the career I am considering"); 14 items target students' social-emotional problems (e.g., "I am bothered by feelings of inferiority"); and seven items focus on students' motivations (e.g., "I don't understand why I am not more motivated to do academic work").

Subjects are asked to record their responses directly on the inventory. On a separate scoring sheet, raw scores are given for each of the four subscales. For diagnostic purposes the raw scores are converted to percentile ranks. Any score of 50 or below on any one of the four categories is arbitrarily deemed to be

problematic. The overall test - retest reliability coefficient for the SPIP is .63. To date, other than test-re-test reliability, other psychometric properties have not been tested.

<u>Self-Esteem Inventories</u>. Coopersmith (1986) designed the Self-Esteem Inventories (SEI) to measure evaluative attitudes toward the self in social, academic, family and personal areas of experience. Self-esteem in relation to the SEI is defined as "personal judgements of worthiness expressed in the attitudes persons hold toward themselves" (Coopersmith, 1986, p. 2). Self-esteem in adults was measured by using the adapted Short Form C. This is a 25-item inventory adapted from the School Short Form for use with persons over 15 years of age. Students' responses are made using a two-way measurement of attitude toward self (e.g., like me, unlike me). To reflect individuals' self-esteem, subjects are presented with statements such as "I have a low opinion of myself," or "I'm a lot of fun to be with."

The SEI normative data was obtained from six independent studies (Donaldson, Kimball, Strodbeck, Reed, Owens, & Gustafson; Ketchan & Morse, cited in Coopersmith, 1986). The subjects consisted mainly of American caucasians, although American mexicans and natives were also included in the studies. The majority of subjects were recruited from lower and middle-upper socioeconomic ranges.

Spatz and Johnston (cited in Coopersmith, 1988) administered the SEI to approximately 600 students in rural American school districts. One hundred inventories were selected from each grade. Kuder-Richardson reliability estimates (KR 20's) were .81 for grade 5, .86 for grade 9, and .80 for grade 12. Coefficients obtained for item intercorrelation ranged from .02 to .52 (Donaldson, cited in Coopersmith, 1986). Test - re-test consistency for subjects tested at age 12 and again at age 15 was r = .64 (Rubin, cited in Coopersmith, 1986). KR 20's were not calculated for a population beyond grade 12.

Kokenes (cited in Coopersmith, 1986) investigated over 7600 school children in grades 4 through 8. Her study was designed "to observe the comparative importance of the home and school to the global self-esteem of preadolescents and adolescents" (Coopersmith, 1986, p. 13). The results of her research confirmed the construct validity of the subscales of SEI as measuring sources of self-esteem. For the school form the subscales include general self, social, selfpeers, home-parents, and school-academic.

The Adult Form is self-administered. To score the inventory, items from the subscales receive a raw score. The subscale raw scores are then totalled and multiplied by four. Using Table 5 on p. 17 of the SEI manual, percentile equivalents of the total scores are given. "The upper quartile generally can be considered indicative of high self-esteem, the lower quartile generally as indicative of low self-esteem, and the inter-quartile range indicative of medium self-esteem" (Coopersmith, 1986, p. 8).

Design

Because the subjects for the experimental group were volunteers and this research was of an exploratory nature, there is no specified statistical design. However, given that the control group were randomly selected volunteers, the present study can be said to represent a quasi-experimental design (Neale & Liebert, 1986).

Method of Analysis

Given the limitation of volunteer subjects, coupled with the fact that very few short-term intervention programs for academic high-risk college students have been evaluated in Canada, the method of analysis for this study is exploratory in nature. Exploratory data analysis is described by Tukey (cited in Breckenridge, 1983, p. 16) "as systematic detective work that needs both tools and understanding." For the purpose of exploring the data, four descriptive statistics are analyzed in this study: (1) comparisons of mean scores, (2) comparisons of standard deviations, (3) frequencies of raw scores, and (4) the skewness of the distributions. In addition, Pearson Product Moment Correlations are calculated to suggest whether or not any meaningful relationships exist between the 13 dependent variables, and the demographic questionnaire is also analyzed to obtain data information about the sample.

Based on the outcomes of the exploratory data, research questions are proposed for a future inferential study in Chapter Five. It is important to note that until a future follow-up inferential study is conducted the exploratory results of this study are <u>not</u> intended to be generalized to the population of academic high-risk post-secondary students. To conduct a true inferential study, the researcher would need time to randomly select non-volunteers for both the experimental and control group. To be ethical, the researcher would need to wait-list the experimental subjects in order to give equal opportunity for all participants to receive treatment.

The SPSS-X computer statistical package was used to analyze all of the data.

CHAPTER FOUR: RESULTS

The purpose of this study was to explore the effectiveness of the short-term intervention program PASS for academic high-risk students at Mount Royal College (MRC). Areas investigated included: (1) Grade Point Averages as measured on a 4-point scale, (2) study habits and attitudes as measured by the Survey of Study Habits and Attitudes (SSHA), (3) self-esteem as measured by the Coopersmith Self Esteem Inventory (SEI), and (4) student problems as measured by the Student Problem Inventory Profile (SPIP). Descriptive statistics are used for this exploratory study. Frequency distributions, mean scores, standard deviations, and the skewness of the distributions are reported for each of the above four dependent measures. The contents of this chapter include the results of these analyses for students' demographic information, grade point averages (GPAs), study habits and attitudes, self-esteem, and student problems. In addition, gender results, Pearson product-moment correlations and program information from the demographic questionnaire are analyzed.

Subject Information

The original sample consisted of a group of 60 volunteers out of 1,122 students who had either been put on academic warning or had re-enrolled in the college after being disqualified. The control group consisted of 23 volunteers from a random sample and the experimental group, 37 participants already enrolled in PASS. At the end of the study 15 subjects remained in the experimental group and 12 in the control group. With 27 participants remaining in the study, the total subject dropout rate was 55%. With this high rate of participant attrition it was decided to also analyze data from 12 additional volunteers who had participated in the previous PASS session from August 29 to October 15, 1989. Dr. Roger Tierney, head of the Counselling Department, had already collected the data and gave his consent to use the results in this study. According to Milliken and Johnson (1984), this strategy is legitimate providing there is similarity of group means between the two groups for the pre-test measures and that each group undergo the same treatment conditions. Both of these stipulations were met. With the data information from 12 additional PASS volunteers, pre-test data was collected from 72 subjects. This gave a total of 49 PASS participants and 23 control members. This also resulted in a total of 27 experimental subjects, 12 control members, and a total of 39 subjects from which to obtain post-test data. All subject information for this study was obtained from the students' demographic questionnaires or their transcripts. For the purpose of understanding more about academic high-risk college students this information has been arranged in Table 1.

Fifty-eight of the 72 subjects (60 from this year and 12 from last year) were full-time students enrolled at Mount Royal College, and 14 were part-time students. At the time PASS was offered, the majority of students (40) were enrolled in their first year, 25 in their second year, and 7 in their third year. Thirty-two of the participants were enrolled in the Faculty of Arts, 11 were enrolled in the Faculty of Science and Technology, eight were enrolled in the

Table 1

Sample Characteristics of Academic High-Risk Students In Attendance at Mount Royal College, Calgary

	Pre	-test	Post	-test	
Characteristics	N=72	% Sample	N=39	% Sample	
Faculty Program					
Faculty of Arts	32	45	25	59	
Faculty of Science & Technology	11	15	9	23	
Faculty of Business & Applied Arts	8	11	5	13	
Faculty of Academic Services	6	8	0	0	
Faculty of Community & Health Studies	2	3	, 2	5	
Other	13	18	0	0	
Number of Semesters					
First	25	35	13	33	
Second	15	21	9	23	
Third	16	22	7	18	
Fourth	9	13	3	8	
Fifth	4	5	4	10	
Sixth	3	4	3	8	
Enrollment Status					
Full-time (3 or more courses)	58	81	31	79	
Part-time (less than 3 courses)	14	19	8	21	
Age					
18-24	49	68	25	64	
25-31	12	17	4	10	
32-50	11	15	10	26	
Sex					
Females	39	54	19	49	
Males	33	46	20	51	

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Characteristics	Pre-test N=72 % Sample		Post N=39	-test % Sample				
Length of Time Out of School Prior to Enrollment at MRC								
0-1	35	49	17	44				
2-4	14	19	9	23				
5-7	5	7	5	13				
8-10	2	3	2	5				
10 >	16	22	6	15				
High School Education								
Grade 12	65	91	34	87				
Grade 11	3	4	3	8				
Grade 10	3	4	2	5				
Grade 9	1	1	0	0				
Employment Hours								
00 hours	27	38	15	39				
05-15 hours	13	18	б	15				
16-25 hours	14	19	6	15				
26-35 hours	4	6	3	8				
35 >	3	4	2	5				
Not reported	11	15	7	18				
Subjects Most Frequently Failed by Stu	<u>idents</u>							
Math Courses	17	24	8	21				
Administration Courses	12	17	6	15				
English	4	5	2	5				
Other (Individual Courses)	39	54	23	59				
Subjects Most Frequently Withdrawn F	From by St	udents						
Math Courses	15	21	11	28				
Administration Courses	11	15	6	15				
Computer Courses	6	8	3	8				
English Courses	5	7	4	10				
Other (Individual Courses)	35	49	15	39				

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Faculty of Business and Applied Arts, six were enrolled in the Faculty of Academic Services, two in the Faculty of Community and Health Studies, and 13 in other programs. Forty-nine of these subjects ranged between the ages of 18 and 24, and 23 ranged in age between 25 and 50. Thirty-nine participants were females and 33 were males. In terms of high school education, 65 of the subjects had graduated from grade 12, three left school in grade 11, three in grade 10, and one in grade 9.

Thirty-four of the subjects in this study were employed (e.g., 13 worked between 5-15 hours per week; 14 worked between 16-25 hours per week; four worked between 26-35 hours per week; and three worked more than 35 hours per week). Twenty-seven of the subjects were not employed and 11 did not indicate whether they were working.

Thirty-five of the 72 subjects were out of school one year prior to enrolling at Mount Royal College. Fourteen students were out of school 2-4 years prior to enrollment, seven between 5-10 years, and 16 for more than ten years. The same subject patterns for the 72 participants who initially volunteered for the study are true for the 39 remaining subjects (see Table 1).

Of the 34 subjects who completed the demographic questionnaire (Appendix I), the following were the most important self-reported academic and personal factors contributing to students being put on academic warning: poor time management skills, insufficient time spent with assignments, and exam anxiety. Secondary factors contributing to students' difficulties were too many other commitments (including part-time or full-time jobs and family responsibilities), memorization difficulties, inefficient study strategies and concentration, lack of readiness or desire to be a student, lack of motivation, and boredom or apathy. The academic and personal factors that least concerned students in academic difficulty were insufficient academic background, inappropriate course selection, poor reading, writing and/or math skills, note taking, career uncertainty, financial difficulties, low energy, lack of exercise, poor diet, insomnia, social and recreational conflicts, drug and alcohol abuse, lack of assertiveness, emotional difficulties, personal crises, difficulties with relationships, self-defeating attitudes, high levels of stress, and physical illness (Appendix G).

The 34 students who completed the demographic questionnaire were asked to indicate the aspects of their academic and social interactions they were most satisfied with while in attendance at MRC. Students' responses were then rank-ordered into three categories by the researcher. These categories included most satisfied, moderately satisfied, and least satisfied. The findings suggest that academic high-risk students are most satisfied with their courses and the relationships with their instructors; moderately satisfied with their ability to read textbook information, their self-esteem and friendships at the college; and (3) least satisfied with their study habits and attitudes, their ability to manage time, and their ability to be an assertive learner (Appendix H).

Exploratory Data Analysis for Dependent Measures

Grade Point Averages

Grade point averages from pre-test assessment to post-test assessment for the experimental group rose from a mean score of 1.45, SD=.71 to 2.07, SD=.99. The control group, on the other hand, dropped slightly from a GPA mean score of 1.39, SD=.64 to 1.29, SD=1.15. Mean scores and standard deviation results are shown in Table 2 and Figure 2. The skewness of the distribution for the post GPA scores was -.25 for the experimental group and .29 for the control group (Figure 3).

Table 2

Mean Scores and Standard Deviations for Students' GPA Pre-test and Post-test Results

Dependent Variable	Group	N	N	Pre-test Variable		Post-test Variable		Skewness
		Pre	Post	x	SD	x	SD	,
GPA	Experimental	41	25	1.45	.71	2.07	.99	25
	Control	22	12	1.39	.64	1.29	1.15	.29

	Pre-test	Post-test
Experimental Group	N=41	N=25
Missing Cases	N= 8	N=24
Control Group	N=22	N=12
Missing Cases	<u>N= 1</u>	N=11

Total



Figure 2. Students' GPA pre-test and post-test mean score results.

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Figure 3. Histogram for data of Table 2. Grade point average post-scores for 37 academic high-risk students.

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Study Habits and Attitudes

Study habit and attitude mean scores for PASS students almost doubled between the pre-test and post-test assessments on all seven dependent variables. In contrast, the mean scores between pre-test and post-test assessments consistently dropped over time for the control group. Mean scores and standard deviation results are shown in Table 4 and Figure 4. The skewness of the distribution for the SSHA post-test observations ranged from -.40 to 0.76 for the experimental group and from .94 to 2.05 for the control group (Figure 5).

Table 3

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Mean Scores and Standard Deviations for Students' Study Habits and Attitudes Pre-test and Post-test Results

Dependent Variable	*Group	*Group N		Pre-test Variables			Post-test Variables	
Survey of Study Habits and Attitudes		Pre	Post	x	SD	x	SD	
Delay Avoidance	12	42 22	26 12	32.48 27.68	27.37 24.28	62.19 19.17	29.40 15.52	76 .94
Work Methods	1 2	42 22	26 12	28.79 41.64	24.35 30.06	59.23 24.00	25.76 22.56	40 2.05
Study Habits	1 2	42 22	26 12	28.60 33.40	25.58 26.78	61.35 21.50	26.74 22.94	61 1.37
Teacher Approval	1 2	42 22	26 12	62.48 46.64	25.75 34.44	71.65 40.33	25.94 30.23	76 1.13
Educational Acceptance	1 2	42 22	26 12	47.29 41.86	30.33 33.39	64.92 27.00	29.57 24.98	56 1.62
Study Attitudes	1 2	42 22	26 12	54.21 42.95	27.41 33.72	68.81 31.75	28.42 29.15	74 1.53
Study Orientation	1 2	42 22	26 12	38.95 36.55	27.98 29.74	66.04 24.92	27.73 27.36	69 1.63
1 = Experimental Group 2 = Control Group	Experimental G Missing Cases Control Group Missing Cases Total	roup	$\frac{\text{Pre-ter}}{N} = \\ N = \\ N = \\ \underline{N} = \\ N = $	<u>st</u> 42 7 22 <u>1</u> 72	$\frac{Post-test}{N = 26}$ $N = 23$ $N = 12$ $N = 11$			

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Figure 4. Pre-test and post-test mean scores for students' study habits and attitudes.

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Figure 5. Histograms for data of Table 3. Survey of Study Habits and Attitudes post-test results for 38 academic high-risk students.


Figure 5 Continued. Histograms for data of Table 3. Survey of Study Habits and Attitudes post-test results for 38 academic high-risk students.

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Self-Esteem

The mean scores for both the experimental group and the control group increased slightly between time one and time two. For example, for the experimental group the pre-test mean score was 45.11, SD = 29.61 and the posttest mean score was 54.86, SD = 30.42. Similarly, the control group pre-test mean score was 45.87, SD = 32.80 and the post-test mean score was 51.64, SD = 29.23(Table 5 and Figure 6). The skewness of the distribution for the self-esteem posttest scores was -0.04 for the experimental group and .12 for the control group (Figure 7).

Table 4

Mean Scores and Standard Deviations for Students' Self-Esteem Pre-test and Posttest Results

Dependent Variable	Group	x	N	Pre Var	Pre-test Variable		t-test iable	Skewness	
		Pre	Post	x	SD	x	SD		
GPA	Experimental	46	28	45.11	29.61	54.86	30.42	04	
	Control	23	11	45.87	32.80	51.64	29.23	.12	

	<u>Pre-test</u>	Post-test
Experimental Group	N = 46	N = 28
Missing Cases	N = 3	N = 21
Control Group	N = 23	N = 11
Missing Cases	$\mathbf{N} = 0$	N = 12
Total	72	



Figure 6. Students' self-esteem pre-test and post-test mean score results.

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Figure 7. Histogram for data of Table 4. Self-Esteem Inventory post-test results for 39 academic high-risk students.

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Student Problems

Student problem mean scores for the experimental group decreased by approximately one-half on all four of the dependent variables from pre-assessment to post-assessment. For the control group, with the exception of a slight decrease in academic concerns, mean scores in the other three areas rose marginally. The pre-test and post-test mean scores for each group are shown in Table 5 and Figure 8. The skewness of the distributions for the SPIP post-test scores ranged from .97 to 2.74 for the experimental group and from .14 to .43 for the control group (Figure 9).

Table 5

Mean Scores and Standard Deviations for Student Problem Pre-test and Post-test Results

Dependent Variable	Group*	N		Pre-test Variables		Post-test	Skewness	
Survey of Study Habits and Attitudes		Pre	Post	x	SD	Ŧ	SD	
Academic	1	43	20	9.93	3.63	4.70	3.67	1.10
	2	23	12	8.17	3.60	7.50	3.78	.43
Social Emotional	1	43	20	4.47	3.14	2.15	3.01	2.74
	2	23	12	4.17	3.28	4.42	3.42	.21
Career	1	43	20	4.50	2.87	2.95	3.20	.97
	2	23	12	4.50	3.54	5.58	3.63	.14
Motivation	1 2	43 22	20 12	3.40 3.08	2.07 2.02	1.35 3.25	1.93 2.80	1.60 .35

*1 = Experimental Group 2 = Control Group

Experimental Group
Missing Cases
Control Group
Missing Cases
Total

Pre-test		Post-test
N = 43		N = 20
N = 6		N = 29
N = 23		N = 12
N = 0		N = 11
	72	

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Figure 8. Mean scores for Student Problem Inventory Profile pre-test and post-test results.

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<u>Figure 9</u>. Histograms for data of Table 6. Student Problem Inventory Profile post-test results for 32 academic high-risk students.

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Gender

The overall post-test results for gender indicated very little mean score differences between the sexes on all four dependent measures (GPA, SSHA, SEI and SPIP) (Table 6). The mean score gender results for each measure are as follows: the GPA post-test mean scores was 1.60 for males and 1.90 for females. The post-test mean score gender differences for the Survey of Study Habits and Attitudes ranged from .50 to 3.00 for all of the seven dependent variables with the exception of delay avoidance. With this variable the females had a considerably higher mean difference. Post-test self-esteem mean scores for both males and females were in the low inter-quartile range. For example, $\bar{x} = 55.16$ for males and $\bar{x} = 53.32$ for females. The mean score differences for the sexes on the post-test measure for the Student Problem Inventory Profile were marginal. However, there was a slight increase in the mean score for males regarding career. With the exception of career, mean score differences ranged from .44 to 1.68 for the SPIP measure.

Table 6

Overall Gender Means for The Thirteen Post-Test Variables

Dependent Variable	\overline{x} for Gender						
	Male \overline{x} (n=20)	Female x (n=19)					
GPA	1.60	1.90					
Survey of Study Habits and Attitudes							
Delay Avoidance	43.84	51.64					
Work Methods	48.58	45.83					
Study Habits	47.00	48.61					
Teacher Approval	62.42	59.00					
Educational Acceptance	52.26	51.11					
Study Attitudes	57.16	54.72					
Study Orientation	52.16	51.67					
Self Esteem	55.16	53.32					
Student Problem Inventory Profile							
Academic	5.69	6.13					
Social/Emotional	2.25	3.93					
Career	5.06	3.00					
Motivation	1.81	2.47					

Further Analysis of Data

Pearson Moment Correlations

The correlations found in Table 7 suggest that academic, social-emotional, career and motivational problems have a meaningful relationship with academic high-risk college students' study habits and attitudes.

When self-esteem was correlated with student problems, the following correlations were found: self-esteem and academic problems r = .33, self-esteem and social emotional problems r = .65, and self-esteem and motivational problems r = .39. Furthermore, when self-esteem was correlated with study habits and attitudes, two correlations were found: self-esteem and work methods r = .31, and self-esteem and study habits r = .24. These correlations suggest that academic, social emotional and motivational problems, coupled with work methods and study habits, have a meaningful relationship with academic high-risk college students' self-esteem.

When attendance was correlated with study habits and attitudes, three correlations were found: attendance and teacher approval r = .46, attendance and educational acceptance r = .54, and attendance and study attitudes r = .49. These correlations suggest that attendance in a treatment program has a meaningful relationship with academic high-risk college students' study habits and attitudes (Figure 10, Attendance Graph). The above relationships have potential use for the design of a revised PASS curriculum (see Appendix K).

Table 7

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Pearson Moment Correlation Coefficients for SSHA, SEI, and SPIP

Instrument	Variable	Delay Avoidance	Work Methods	Study Habits	Teacher Approval	Educational Acceptance	Study Attitudes	Study Orientation	Academic	Social Emot'l	Self Esteem
SEI	Self Esteem								r = .33	r = .65	
	Attendance				r = .46	r = .54	r = .49				
SPIP	Academic	r = .40	r = .47	r = .47		r = .29	r = .27	r = .39			
	Soc./Emot.	r = .26	r = .37	r = .33			r = .30	r = .35			r = .39
	Career	r = .25									
	Motivation	r = .64	r = .49	r = .63	r = .39	r = .65	r = .57	r = .66			

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Weekly Attendance

Figure 10. Attendance graph for 37 PASS participants from February 5, 1989 to March 12, 1989.

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Summary of Results of Demographic Questionnaire

<u>Personal information</u>. This study initially included 72 subjects: 33 were males (45.8%) and 39 were females (54.2%). The mean age for the participants was 36.5 years.

Educational and career interests. The mean high school grade completed for the subjects was 11.8, and the mean time students had been out of school prior to attending Mount Royal College was 2.3 years. Forty-five percent of students were enrolled in the Faculty of Arts, 15% in the Faculty of Science and Technology, 11% in the Faculty of Business and Applied Arts, 8% in the Faculty of Academic Services, 3% in the Faculty of Community and Health Studies, and 18% in miscellaneous programs. The average number of semesters that students had been in attendance in these programs was 2.80 semesters. Forty percent of the academic high-risk students in this study were first year freshmen. Students in this research also averaged an 11.19 hour employable work week.

Academic success and satisfaction. Sixty-nine percent (N=23) of the 34 respondents for both the experimental group and the control group indicated that they were "very" motivated to improve academically. Twenty-five percent (N=9) were "moderately" motivated to improve and six percent (N=2) were "not at all" motivated to improve. Of the original 12 PASS participants, 73% thought that the program would help them improve "a lot" academically as measured by GPA. Twenty-seven percent thought it would "moderately" help them, and no one believed that it would "not be of much benefit." Of the 22 control group subjects,

9% thought that PASS would help them improve "a lot" academically, 68% believed it would "moderately" help, and 23% thought it would "not be of much benefit."

Participants enrolled in PASS for the following reasons: (1) to improve their grade point averages, (2) to avoid being disqualified from MRC, (3) to improve their study habits and attitudes, (4) to gain support from other persons in academic jeopardy, and (5) to learn more about the resources at the college.

Subjects belonging to the control group decided not to enroll in PASS for the following reasons: (1) respondents didn't think that PASS would benefit them; (2) they did not hear about PASS, despite invitations being mailed out; (3) subjects were unable to attend PASS due to employment, family or class conflicts; and (4) some subjects felt unmotivated to seek assistance. (Appendix I shows questionnaire).

The following chapter will discuss the results of this study.

CHAPTER FIVE: DISCUSSION

The findings of this exploratory study indicate encouraging support for short-term intervention programs enabling academic high-risk students to succeed in college. The data results show support for PASS improving students' GPAs, enhancing their study habits and attitudes, and decreasing their student problems in the areas of academics, social-emotional concerns, career uncertainty, and motivation. There was little support to suggest that PASS enhanced students' selfesteem. There were very few gender differences among the volunteers. This chapter will discuss the outcomes of the study, the limitations of the study, recommendations for future research, suggestions for future programming, and a model for addressing the needs of academic high-risk college students.

Outcomes of the Study

Grade Point Averages

The finding that the GPAs of academic high-risk students appear to improve over the course of an intervention program such as PASS was in agreement with the literature reviewed (Belcher, et al., 1986; Stupka, 1986; Donnangelo, et al., 1982).

Academic high-risk students who participated in PASS had a greater chance of remaining enrolled at MRC than did students in the comparison group. For example, a GPA of 2.00 or greater enabled 18 (65%) of the 27 PASS participants to continue their course of studies, whereas only 4 (33%) of the 12 control group members were able to continue. During the introductory sessions of PASS, the participants set their GPA goals for the end of the semester. Having a GPA goal to work toward may have partially contributed to the higher GPA results of the PASS students.

Study Habits and Attitudes.

PASS participants almost doubled their mean scores on all seven of the dependent variables for the Survey of Study Habits and Attitudes (delay avoidance, work methods, study habits, teacher approval, educational acceptance, study attitudes and study orientation). The control group, on the other hand, consistently decreased their mean scores for each of these dependent variables.

It could be argued that other extraneous factors such as motivation, effect of teacher, situational factors (e.g. the end of the semester), influenced PASS students to improve their study habits and attitudes. However, because the course curriculum includes specific strategies for improvement in these areas, and since the PASS participants scored twice as high on their post-tests in comparison to the control group, the results of this study show encouraging support for the short-term intervention program PASS improving academic high-risk students' study habits and attitudes. These findings support the research of Rice (1984). Self-esteem

In this study it was thought that the self-esteem of the academic high-risk students might improve due to the PASS program. However, the results indicate that over the course of the program the self-esteem scores of both groups improved similarly. Students completed the self-esteem inventories at the beginning and again at the end of the semester. With classes soon to be over, students' self-esteem scores may have been situationally inflated. Therefore, it is difficult to attribute the improvement of the PAS participants' self-esteem to treatment. In addition, since the PASS students' self-esteem scores rose only minimally, it may be that the six-week interval between pre- and post-testing was insufficient for participants to substantially change their self-perceptions.

Student Problems

Results from the Student Problem Inventory Profile indicate that academic problems of students in the experimental group decreased by one-half, whereas the academic concerns of the control group only marginally decreased. It would appear that the reductions in students' academic problems for the PASS group correlate with their increased GPA scores. Social-emotional concerns for the experimental group also decreased by one-half. There were no apparent differences for the control group. It may be that PASS students found some emotional stability by having weekly contact with concerned peers and faculty.

Career concern scores and motivational scores decreased by almost one-half for the PASS participants, and rose slightly for the control group. It may be that the experimental participants were more motivated to work and less apprehensive about their careers, as a result of the encouragement they received from peers and faculty in the PASS program. Conversely, it may be that the control subjects, as a result of possibly feeling more isolated, felt less motivated to work, and more anxious about their careers. For example, at the end of the semester 2/49 (4%) of the experimental group, and 8/23 (35%) of the control group voluntarily withdrew from the college. It would appear that PASS participants felt a greater sense of affiliation to the college. The findings in this study concur with the research of Hulrich and Higginson (1989), and Potter and McNairy (cited in Upcraft, et al., 1989). Both of these studies found that academic high-risk students who participated in intervention programs coped better with their personal problems than subjects in their respective control groups.

Gender Differences

The overall post-test results for gender indicated very small mean score differences between the sexes on all four dependent measures (GPA, SSHA, SEI, and SPIP). However, there were some slight deviations for each measure. These are as follows. For the Survey of Study Habits and Attitudes, females had a considerably higher mean difference for delay avoidance. This mean score increase may suggest that females in this study were more apt to complete academic assignments without procrastination and distraction than were their male peers. In this study the post-test self-esteem mean scores of both males and females were in the low interquartile ranges. These results suggest that academic high-risk college students experience low self-esteem irrespective of gender. The mean score differences for the sexes on the post-test measure for the Student Problem Inventory Profile were marginal. However, there was a slight increase in the mean score for males regarding career. This may suggest that males in the study are slightly more uncertain about their careers than females. The gender mean scores in this study suggest that there are very few differences between the sexes in terms of GPAs, study habits and attitudes, self-esteem, and student problems. These results support the findings of Gigliotti and Secrest (1988). For example, in their research, they suggested that gender is not a significant variable in looking at post-secondary student success, but before these results are generalized, they recommended a future investigation. In this study, there were a number of limitations. These are highlighted in the following section.

Limitations of the Study

This study was limited by the following factors:

- (a) The small sample size for both the experimental group and control group limits the interpretation and application of the results. For example, only 3% or 39 students on academic warning out of a total of 1,122 are represented in this study.
- (b) Subjects from the control group consisted of volunteers from a randomly selected group, and subjects for the experimental group were already enrolled in PASS. When subjects are not randomly selected, the internal validity of the study is limited. However, cumulative longitudinal data with volunteers purporting consistent results over time can compensate for this limitation (Neale & Liebert, 1986).
- (c) The Student Problem Inventory Profile is a non-standardized test.Although it has a test re-test reliability score of .63, other psychometric

information is lacking. Consequently, the results of this measure need to be interpreted with caution.

- (d) Due to time constraints, a pilot study was not conducted. Such a study would have helped to estimate the high attrition rate amongst the volunteers for the PASS program.
- (e) Since it was the responsibility of the instructors to administer and collect the pre- and post-test assessments for PASS, the success of the data collection varied between sections. Consequently, in some sections not all of the data was submitted to the researcher.
- (f) There were four instructors teaching PASS during the time this study was conducted. Due to the small sample size, there was no control for teacher effect. Teacher effect may have resulted in partially biasing the results of this study. For example, it could be argued that teacher effect accounted for the changes among PASS participants rather than the treatment. Many of the changes in the PASS participants parallel the results of similar studies where subjects were randomly selected, suggesting that the PASS treatment is effective.

Recommendations for Future Research

Based upon the results of this study, this section highlights recommendations for future research. The following list indicates factors to be considered in such a study:

- (a) It is recommended that a future inferential study be conducted including the four variables used in this study: (1) GPA, (2) study habits and attitudes, (3) self-esteem, and (4) student problems.
- (b) It is recommended that the variable of gender be dropped from future research since gender results for this research indicated very few differences between the scores for GPAs, study habits and attitudes, self-esteem, and student problems.
- (c) It is recommended that multivariate analysis be implemented in a future empirical study. This suggestion is based on the skewness of the distributions being close to normal for each of the four dependent measures (Ferguson & Takane, 1989; Tabachnick & Fidell, 1989).
- (d) It is recommended that students on academic warning at MRC be randomly selected in the fall for either the experimental or the control group. The control subjects could then be wait-listed to participate in the winter PASS sections (Neale & Liebert, 1986).
- (e) It is recommended that a pilot study be conducted to estimate:(a) attrition rates, (b) subject eligibility, (c) methodology, (d) subject design, and (e) appropriate data analysis (Gay, 1987).
- (f) Because the Student Problem Inventory Profile is a non-standardized test measure and the results need to be interpreted with caution, it is therefore recommended that a standardized test to measure student problems be used in future research. The Learning and Study Strategies

Inventory (LASSI) by Weinstein, et al. (1987) is an example of such a measure.

- (g) It is recommended that control for teacher effect be achieved by:
 (a) substantially increasing the sample size so as to covary out teacher effect, (b) having each instructor teach a part of the curriculum; or
 (c) making special arrangements during the research to have only one full-time instructor teach all of the PASS sections (Neale & Liebert, 1986).
- (h) With four instructors collecting pre- and post-test data for the experimental group, data collection was not always consistent. Therefore, it is recommended that one person be appointed to administer and collect all pre- and post-test measures. In order to avoid test bias, the data collection should not be conducted by the researcher (Neale & Liebert, 1986).
- (i) Based upon the outcomes of this study, it is recommended that the following research questions be considered for a future inferential study:
 - 1. Do short-term academic prevention programs improve the academic and social integration of high-risk students?
 - 2. If multivariate analysis of repeated measures is performed on each of the four dependent measures (GPA, SSHA, SEI and LASSI), will academic high-risk students in treatment out-perform students not in treatment?

3. Will the model proposed for this study on pages 90 and 91 serve to effectively meet the needs of academic high-risk students attending Canadian community colleges?

The final section will list a number of program recommendations for academic high-risk students.

Program Recommendations

(a) According to Friedlander (1980), academic high-risk students are not inclined to take advantage of college support programs unless they are convinced that such an involvement will lead to their future success. Unfortunately, this seems to also be true for academic high-risk students at Mount Royal College. For example, of the 1,122 students put on academic warning in January, 1990, only 37 or 3% of these students volunteered to seek assistance. According to Atkinson and Birch's theory of achievement (cited in Friedlander, 1980), "the likelihood that an individual will participate in a particular activity is dependent on the person's previous experience with that learning process. If a certain activity has been intrinsically satisfying in a particular situation, then the chances of the person undertaking it will be higher than if the individual has been punished or frustrated in the undertaking in the past, thus producing an inhibitory force" (p. 24). It would appear that the 3% who came forward for PASS were the more intrinsically motivated students. Therefore, to include the remaining 97% of high-risk students who do not attend PASS, mandatory enrollments are recommended (Rouech & Baker, 1987).

(b) Noel, et al. (1983), in their research on attrition indicate that freshmen are the most academically at-risk group enrolled in post-secondary education. Their findings suggest that 30% of all students annually enrolled in post-secondary institutions will not complete their course of studies, and that approximately 50% of the students who withdraw are first-year students. Student attrition patterns at MRC are similar to those documented by Noel, et al. The Institute of Analysis and Planning Department at MRC reports that of the 7056 full-time and part-time students enrolled in the 1990 Winter Semester at the college, approximately 12% (or 24% for two semesters) did not complete the semester and 59% of the first year students withdrew. There were 2,244 first-year students enrolled at MRC in January of 1990, and in April of 1990, only about 915 students remained. (When students are originally enrolled at MRC they are given first-year status. It is at this time that a census is taken of all first-year students by the Institute of Analysis and Planning for the Department of Alberta Advanced Education. After the census has been taken, a number of students are changed from first-year status. Depending upon the college's receipt of previously unavailable transcripts, the students' status may change. With this existing caveat, the attrition rate among first-year students at MRC can only be approximated.) If mandatory enrolments for PASS are not implemented, then, better recruitment strategies will be necessary to assist the needs of academic high-risk students, particularly first-year enrollees. In this study 40% of the subjects were in their first year. Recruitment strategies could include the following:

- (i) As proposed by Friedlander (1980), academic high-risk students will not enroll in self-help programs unless they believe them to be beneficial. As a result, the benefits of PASS and other similar programs could be included in the invitations written to students placed on academic warning. These letters are mailed out by the Counselling Department inviting academic high-risk students at the beginning of each semester to participate in PASS (Appendix F).
- (ii) The benefits of PASS could also be included in a brochure for the fall orientation.
- (iii) At Dalhousie University the Counselling Department has organized "criers" to go into each freshman course and give a 3-5 minute announcement on the benefits of intervention programs for academic high-risk students. This could also be done at MRC.
- (iv) The benefits of PASS and other similar programs could be advertised in the campus newspapers.
- (v) Some students in the control group reported that they didn't enroll in PASS due to course conflicts, work schedules, or family commitments.
 Perhaps to increase student enrollments, a blank timetable could be enclosed with each invitation. Participants could then indicate the times they are available and PASS could be scheduled accordingly (Appendix J).

(vi) After students were recruited for PASS, 45% dropped out within the first few sessions (Figure 10). If the curriculum was to initially highlight the benefits of intervention programs for academic high-risk students, perhaps more students would commit themselves to staying in the PASS program.

(c) Several investigators (Spady, 1970; Stoecker, et al., 1988; Tinto, 1975, 1982) agree that "student-faculty" contact is a key component in helping at-risk students to academically succeed. They also concur that academic prevention programs should be taught by faculty who are motivated and have appropriate interpersonal and intellectual skills and attitudes. These are listed in Appendix L. In order for students and faculty to successfully interact, the commitment of several faculties is required, not just the traditional counselling or academic services. The model on pages 90 and 91 provides an example of how to involve college faculty with academic high-risk students.

(d) According to researchers Upcraft, et al. (1989), and Roueche and Baker (1987), if programs like PASS became credited, they would attract more students, and students would be less inclined to withdraw from the courses.

(e) According to Bean and Metzner (1985) there are discrepancies in the literature as to whether or not students' employment is detrimental to their grades. For example, according to investigators Yang and Gatto (1988), and Lenning, Pantages, Creedon, and Sexton (cited in Bean & Metzner), students'

employment was positively related to college students' persistence. However, in a study by Staman cited in Bean and Metzner (p. 504), "at a commuter-oriented, 4-year institution, the number of hours of employment per week was very strongly and negatively related to the persistence of continuing students under age 22, but showed no significant association for older continuing students." Most investigators, however, concurred that employment beyond 20 to 25 hours per week was negatively related to persistence. Given that 68% of the subjects in the study were between 18 and 24 years of age and that 29% of the participants worked more than 20 hours, students' employment may have been detrimental to their grades. Perhaps the PASS curriculum could address students' employment and explore financial options which may be more conducive to students' academic successes.

(f) The findings suggest that the majority of the self-esteem scores are low. Gordon, Wilkerson, and Williams (cited in Friedlander, 1980) suggest that a "policy that visibly distinguishes between the disadvantaged and the rest of the students (such as "academic warning") may give the disadvantaged a sense of separateness or inferiority which, in turn, hinders the learning process" (p. 27). Similarly, according to these researchers, many students find that enrolling in support programs tends to lower their self-concept. Perhaps if PASS instructors worked more closely with the participants in addressing these issues, the program would be in a better position to enhance students' self-esteem. In addition, although the acronym "PASS" is an apt abbreviation for the title of the program, it may cause some students to feel labelled as failures. A title which is less stigmatizing may be of more benefit to students who are already suffering from low self-esteem.

(g) The academic high-risk community at MRC includes both traditionally aged students (17-21 years) and non-traditionally aged students (22 and older). As a result, the PASS curriculum could include course content to accommodate the developmental needs of both groups. For example, the non-traditional students may want to discuss "coping with multiple role demands," whereas the traditional students may want to discuss "coping with transitions." Students could indicate on the written invitations whether or not they would like to be grouped for PASS according to similarly aged peers (Appendix J). If students did not have a preference, the different developmental needs of these two age groups could still be addressed (Noel, et al., 1985).

(h) The majority (69%), or 27 of the 39 subjects in this study were either enrolled in an unspecified program in the Faculty of Arts or had changed programs at least once. This may indicate that these students are somewhat uncertain about their career paths. Several researchers (Barak, et al., 1989; Foote, 1980; Henry, 1989; Jones, et al., 1989; Latona, 1989; Lent, et al., 1989; Niles & Herr, 1989) all concur that "career uncertainty" can contribute to students becoming academically at-risk. To date the PASS program does not address students' career paths per se. Perhaps a session on the importance of career certainty and academic success could be incorporated into the PASS curriculum. (i) At the University of Waterloo engineering and mathematics courses have an exceptionally high attrition rate, to the extent that these courses are identified as "high-risk subjects." The instructors for these identified courses offer specialized tutorials and group workshops to help students meet the challenges of the curriculum. At MRC students who participated in the study most frequently withdrew from or failed courses in math, administration, computer science and English (see Table 1). Perhaps the PASS instructors could work in conjunction with these high-risk courses to assist students experiencing academic difficulties.

(j) Upcraft, et al., (1989), indicate that first-year students are more likely to become academic high-risk students. In response to this concern a few Canadian post-secondary institutions are beginning to implement Freshman Experience Courses. Student services at MRC is considering whether to implement such a course. If it is implemented, PASS could be continued independently, be incorporated into the Freshman Course curriculum, or be offered as a supplemental credit course to students wanting the support of small groups.

Based upon the literature review, the data results, the program recommendations, and student responses from the demographic questionnaires, the following two-phase model is proposed for meeting the needs of academic high-risk students in attendance at Canadian community colleges (Figure 11). The model consists of 15 steps and relies upon the cooperation of college administration, the support of faculty and peers, and the Department of Institutional Planning and Analysis. It also highlights the components of an academic intervention program with a suggested revised curriculum for the PASS program at MRC in Calgary (Appendix K).



- Faculty and Peer Support

During the admissions assign students to faculty, counsellors, academic advisors and/or successful senior students, who are responsible for monitoring the students' progress throughout each term.

Assign students to (1) an appropriate summer bridge program, (2) a fail orientation course, and an appropriate 15-30 week intervention program for academic high-risk pupils such as PASS at MRG If necessary, have the listed personnel also refer students to appropriate services (i.e., (i.e., financial aid, tutoring, personal and/or career counselling, LD testing, or outside agencies). At the beginning, middle, and end of the semester, have faculty evaulate the students' progress. If it appears that there may be some academic difficulties, explain appeal, academic warning, and dismissal procedures to pupils.

Figure 11. A two-phase 15-step model for meeting the needs of academic high-risk students.



Figure 11 Continued. A two-phase 15-step model for meeting the needs of academic high-risk students.

Conclusions

With the advent of the open-door policy, community colleges have been struggling for the past three decades to meet the diversified needs of their clientele. Many of the admitted candidates are academic high-risk students.

The literature generally identifies academic high-risk college students to be as follows: freshmen (Farrar, 1988; Noel, et al., 1985; Upcraft, et al., 1989); persons with low high school grades and/or low college GPAs (Whyte, 1978); individuals experiencing career uncertainty (Barak, et al., 1989; Henry, 1989; Jones, et al., 1989; Latona, 1989; Niles & Herr, 1989; Lent, et al., 1989); and persons from low socio-economic backgrounds (Karabel, cited in Kinnick & Kempner, 1988). Richardson (1989) also classifies the following to be academic high-risk students: first-generation college students, single parents, non-traditional students, and documented Learning Disabled students. More recently, Crombie (1989) and the provincial ministers have identified academic high-risk students to be aboriginal Canadians, visible minorities, immigrant groups, women in certain fields, and francophones outside of Quebec.

To meet the varying needs of this clientele, North American institutions have responded by offering a variety of support programs. These programs are usually based on Tinto's (1975) model and promote students' academic integration and social integration. Given that it is important for American colleges to retain students for marketing purposes, many long-term intervention programs for academic high-risk pupils have been empirically evaluated. With Canadian colleges being non-market-driven, and experiencing over-crowding problems, there is often very little incentive to empirically evaluate academic intervention programs. Yet the majority of institutions across Canada do offer such services, particularly short-term intervention programs of 15 weeks or less (Appendix A). It would appear, then, that the majority of Canadian post-secondary institutions only pay "lip service" to the needs of academic high-risk students, without ever intending to formally evaluate the effectiveness of such programs (Lane, 1990).

Attrition research by Noel, et al., suggests that 30% of students enrolled in Canadian colleges drop out annually and that the majority of these pupils are often academic high-risk students. Gomme and Gilbert (1984) suggest that, "students who withdraw may suffer losses in three forms: (1) funds paid out for fees and residence, (2) employment earnings foregone as a consequence of inadequate certification, and (3) the potential acquisition of a negative self-concept traditionally associated with failure to achieve" (p. 97). They also contend that, "financial losses are experienced by universities through the high initial planning and operation of programs for students who cease to attend" (p. 95). Furthermore, Pascal and Kanowich (cited in Gomme & Gilbert, 1984) believe that high dropout rates undermine the taxpayers' faith that post-secondary institutions can adequately meet the intellectual and vocational needs of their clientele.

To prevent these student losses, community colleges could either restrict the entrance of academic high-risk students or offer effective programming. If students were to be restricted then "distinguishing criteria" involving performance factors, skills, interest, and motivation, and not discriminating mechanisms based upon extra-educational characteristics (class, gender, ethnicity) would be necessary for screening applicants (Gomme & Gilbert, 1984).

Numerous empirical studies have been conducted in the United States to support the supposition that academic intervention programs enable high-risk students to succeed. These include Belcher, et al. (1986); Donnangelo, et al. (1982); Hulrich and Higginson (1989); Potter and McNairy (cited in Upcraft, et al., 1989); and Rice (1984). To determine if a future empirical study was warranted of the PASS program at Mount Royal College in Calgary, an exploratory study was conducted during the winter of 1990. The results of this study showed support for PASS participants successfully improving their GPAs, study habits and attitudes, and student problems relating to academics, social-emotional concerns, career direction, and motivational factors. There was little support to suggest that PASS enhanced students' self-esteem or that there were any gender differences among the volunteers. To substantiate these encouraging findings, a future empirical study is recommended.

If MRC and other Canadian community colleges are serious about meeting the needs of academic high-risk pupils, then program initiatives need to be directed toward the majority of students. At MRC only 37 out of 1,122 (3%) students enrolled for PASS during the winter session of 1990, while 1,122 students out of 7,056 (16%) were in academic jeopardy. Many Canadian community colleges are similar to MRC in that they depend on counselling or academic services to deal with the problems of academic high-risk students. As a result, this places an impossible demand on these services. For example at MRC four sessions of PASS, consisting of 10-15 students, are offered per semester. This provides a service to only 10% of the students in academic difficulty (120/1,122). If post-secondary institutions are going to seriously address the needs of academic high-risk students, then college administrators and the majority of faculty staff need to be involved. Otherwise, short-term intervention programs, although likely to be effective, are only tipping the iceberg in terms of meeting the needs of academic high-risk students. If Canadian community colleges were able to implement a model, such as the one proposed in this study, perhaps short-term intervention programs for academic high-risk students could become more than a "MASH" approach to what appears to be an epidemic problem.
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APPENDIX A

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Canadian Post-Secondary Program Offerings For Academic High Risk Students

Institution	Attrition Rates		Support Programs	Evaluation
1. Assinboine Community College	Non-Natives Natives	20.5% 54.3%	Student support services, but no centralized programming for academic high-risk students	Formally evaluated attrition rates
2. Camrose College	N/A		Student Success	Formal Evaluation
3. Camrose Lutheran University College	N/A		Student Success (10 week optional non- credit program)	N/A
4. Canestoga College, Kitchener	First semester Second semester Third semester Fourth semester	Rates for 1988: 83% 68% 62% 54%	Faculty coaches for students in programs which have high attrition rates (Faculty members are given extra time on their time tables to work with individual students as well as to provide some group activities). Considering a Freshman Orientation course.	N/A
5. Douglas College, Vancouver	N/A		Orientation sessions (short-term)	N/A
6. Durham College, Toronto	Graduate incoming students	50%	Student Success (long-term)	Undergoing formal evaluation
7. Holland College, Charlottetown	Stated in letter low dropout rate, but no statistics given		Individual Educational Plans (short- term). Academic Upgrading Programs (short-term)	No formal evaluation
8. Lethbridge Community College	N/A		No identified program	N/A
9. Mowhawk College of Applied Arts and Technology	1st year students 1st, 2nd, 3rdyear (which is consistent for colleges across Ontario and North America)	Арргох. 30% 43%	Student Success Campaign Consultative Teams for Student Success	Attrition/retention rates are formally evaluated

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Appendix A (continued)

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Institution	Attrition Rates		Support Programs	Evaluation
10. Mount Royal College	1990 student pop. 1st year (2 semesters)	Approx. 30% Approx. 24%	Program for Academic Success and Satisfaction (PASS) (short-term)	Masters Thesis done to evaluate this program
11. Okanagan College, B.C.	N/A	N/A	N/A	N/A
12. Saskatchewan Indian Federated College	'n/A		Elders on campus; Tutorial services; Exam Anxiety; English and Math clinics. (short-term courses).	N/A
13. Victoria College	Stated in letter high dropout rate, but no statistics given		High-risk students are to set up counselling appointments	N/A
14. Acadia University	N/A		Freshman course is being debated (30 weeks)	N/A
15. Carleton University	N/A		Transitions Program for high risk students (short-term)	Formal evaluation to be completed Winter 1991
16. Dalhousie University	First year Second year Third year	24% 26% 42%	 Dal Summer Welcome (3-day orientation) Campus Criers short presentations include information regarding location of services, availability of study skills programs, how to get involved in clubs, societies, and intramurals, and other programmes on campus (2 weeks) Early detection (faculty teaching first- year students are asked to identify students in academic difficulty. Students are then invited to work with an academic advisor (15 weeks) 	Formal evaluation of attrition rates. Formal evaluation in progress for specialized programs for academic high- risk students.

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Appendix A (continued)

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Institution	Attrition Rates		Support Programs	Evaluation
17. Laurentian University	N/A		Counselling and peer tutoring, but no centralized programming for academic high risk students.	No evaluation
18. Laval University	Students graduating from initial program Students will graduate from another program Students will not graduate at all	50% 25% 25%	Local initiatives (study skills, career planning, and readiness skills for university) (15 weeks)	No formal evaluation
19. McGill University	N/A		Individual Educational Programs (IEP) (15 weeks)	No evaluation
20. McMaster University College	N/A		Study skills course (duration of course not indicated)	No evaluation
21. Simon Fraser University	N/A		Program for probationary students (short-term)	N/A
22. University of British Columbia	N/A		No centrally organized system for helping academic high-risk students	N/A
23. University of Calgary	Freshmen admitted in Sept. 1988 who did not return. In Sept. 1989 this percentage rose to 35% of those with less than a 75% high school matriculation average.	27% 35%	1989 First Year Experience Program Peer Advising Committee (short-term)	Formal evaluation

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Evaluation **Attrition Rates** Support Programs Institution N/A No formal mechanism for dealing with 24. University College of Cape Breton N/A academic high-risk students Evaluate attrition rates 25. The University of Lethbridge High-risk students 91-100% High-risk students are required to attend a six-hour study success workshop and required to withdraw take adjusted course loads recommended after one semester 86-95% by academic advisors Continued spring 1989 under special circumstances Obtained a GPA of 29-32% 2.00 in second semester Continued into 3rd 27-30% semester Obtained a GPA of 15-16% 2.00 in third semester 18.8% Residence orientation program (short-Formal program evaluation First-year students 26. University of Manitoba term course, but exact duration not who attended the indicated) residence orientation Freshman Year Experience; Pilot Phase program 30.8% First-year students who did not attend the residence orientation program 27. University of Prince Edward Island N/A Tutoring services (short-term). N/A Masters thesis was done to evaluate this Entrance program which provides 28. University of Regina N/A admission for 20-year-olds who would program not otherwise qualify for admission to the university degree programs (longterm)

Appendix A (continued)

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Appendix 1 (continued)

Institution	Attrition Rates		Support Programs	Evaluation	
29. University of Victoria	First-year Graduation rate	30% 50%	Doing Well Being Well (Pilot First Year Experience Program) 1990-91 (30 weeks)	To be evaluated after April 1991	
30. University of Waterloo	Faculty of Engineering first-year students	7-9%	No centrally organized system for helping academic high-risk students. The Mathematics and Engineering depts. provide help and support for first-year students (short-term)	N/A	
31. University of Windsor	First year Third year	17% 30%	Head Start Program (a day-long orientation program)	Programs will be evaluated daily by participants, but the university does not formally evaluate the program	
32. York University	N/A		Strategies for success implemented by the Faculty of Science. Support services aimed at preventing students from becoming high risk are: (1) The Counselling Centre; (2) The Learning Skills Program; (3) Learning Disabilities Program; (4) The Writing Workshop; and (5) The Peer Support Centre (short-term programming)	N/A	

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APPENDIX B

Programs Available to Academic High-risk College Students

Academic Programs

- <u>Developmental Programs</u>: These programs are generally credited twosemester courses (30-32 weeks). Their mandate is to offer academically at-risk students remedial skills to enable them to successfully complete college-level work (Miller, 1982; Roueche & Baker, 1987).
- English as a Second Language: Preliminary English courses usually offered for one semester to students whose second language is English. The courses are often categorized as beginners, intermediate, and advanced (Scales, et al., 1979; Judd, et al., 1985).
- Individual Educational Plan (IEP) Programs: Individual educational plan programs are generally instated for students on academic warning for one semester or less. Students are then responsible for seeking out appropriate institutional resources to help them get off academic warning (e.g., time management workshops, remedial courses, tutoring, personal counselling) (Arnoff, 1989).
- Learning Assistance Programs: A service usually offered through the Learning Skills Centre for students diagnosed as learning disabled (e.g., dyslexic, hearing or visually impaired) (MRC Educational Liaison Division, 1989).

- <u>Preparation Courses</u>: College preparation courses are usually one semester in duration and are offered for credit to college students who generally have not completed grade 12 or 13. Instruction typically covers (1) basic English and math courses; (2) one or two electives chosen by the student; (3) career planning and goal setting; and (4) instruction in reading and study skills. In addition, a college prep course consists of experiences needed for college success such as communication, relationship, study and organizational skills, career and life planning, and college adjustment (MRC Educational Liaison Division, 1989).
- <u>Remedial Courses</u>: These one-semester courses generally target students whose skills are so poor that they can't enroll in regular college curriculum. Remedial courses are often offered for the acquisition of both basic math and basic English skills (Kaliszeski, 1988).

Social Programs

- <u>Campus Wide Activity Programs</u>: Programs are aimed at college freshmen who commute to school and don't have the support of residence programs. Program activities may include lectures, concerts, cultural events, and orientation sessions (Upcraft, et al., 1989).
- <u>College Transition Program</u>: Short-term orientation programs which offer entering freshmen an awareness of where services, departments, and facilities are located, and the people to turn to for help if the need arises (Thompson, 1988).

- Health & Wellness Programs: Short term programs (15-16 weeks) available to freshmen students. They focus on students' emotional, intellectual, physical, social, and spiritual wellness (Leafgren & Elsenrath, 1986, cited in Upcraft, et al., 1989).
- <u>Residential Programs</u>: These are year-long residential programs offered through residence halls (Upcraft, et al., 1989).

Academic and Social Programs

- <u>Campus Cluster Programs</u>: The cluster college concept is the establishment of a small college on a large university campus for the purpose of creating a sense of community and offering alternative undergraduate education formats (Dukes & Gaither, 1984).
- Freshman Seminars: Freshmen seminar courses target first-year students, many of whom are or will become academic high-risk students (Noel, et al., 1985; Gardner, 1986, 1989). Seminars are usually offered for credit over two semesters. They can be subject-matter-oriented within the core curriculum or within an interdisciplinary course. Topics often associated with seminar courses include the following: (1) the value and benefit of higher education; (2) how to think and learn; (3) the nature of educational processes and the role and responses of students in these processes; (4) learning principles of career development; and (5) decision-making (Banziger, 1987; Cammaert, 1990; Robb & Griffith, 1988; Upcraft, et al., 1989).

- <u>Mentoring Programs</u>: This is generally a one-semester or less program, in which mentors encourage the academic and social participation of academic high-risk students. The mentors serve as role models and homework helpers for a proportion of time per week (Oestericher, 1985).
- Orientation and Retention Courses: Like freshmen seminars, orientation and retention courses target first-year students and are often credited courses offered over two semesters. They are sometimes graded on a "pass/no pass" or satisfactory/unsatisfactory basis. Content areas of an orientation or retention course often include the following:

(1) identifying the difference between high school and college;

(2) learning college survival skills; (3) time management; (4) learning college regulations, deadlines, and procedures, and understanding health needs (e.g., alcohol and drug abuse; human sexuality);

(5) becoming aware of learning styles and their applications;

(6) identifying and clarifying values; (7) learning stress and conflict management and principles of career development and decision making (Upcraft, et al., 1989).

<u>Summer Bridge Programs</u>: The aim of these programs is to help academic high-risk students succeed in college through participation in a short-term credited course. The course content focuses on (1) students' adjustment to campus life (cultural, social, and recreational); (2) career counselling; (3) study techniques; (4) math, reading, and writing skills (Annis, 1987; Talley, 1989; Thompson, 1988).

APPENDIX C

Overview of Program for Academic Success and Satisfaction (PASS)

<u>Week 1</u> General Introductory Session

- Orientation to PASS
- Assessment
- Formation of groups
- Individual counselling appointments

Getting the most out of PASS

- Group building
- Setting of GPA and course grade goals
- Weekly time commitment
- The buddy system
- <u>Week 2</u> Getting the Most Out of Your Time
 - The importance of managing time effectively
 - Personal analysis of how time is spent
 - Development of a realistic weekly schedule
 - The academic work contract
- <u>Week 3</u> Getting the Most Out of Your Textbook
 - Identifying bad habits
 - Using the textbook more effectively
 - Taking notes effectively
- <u>Week 4</u> Managing Stress Effectively
 - Understanding the nature of stress
 - Identifying the sources of stress
 - Dealing with stress
 - Taking Tests
 - Relaxing

APPENDIX C (continued)

<u>Week 5</u> The Assertive Learner

- Active vs. passive approaches to learning
- Ways of behaving assertively as a student
- Mindpower: Improving memory and concentration
- <u>Week 6</u> Pursuing Excellence
 - Staying motivated

The Wrap-up

- Closure
- Assessments

(Miles, 1986, p. 3-4)

APPENDIX D

Letter of Invitation to Students Placed on Academic Warning to Participate in P.A.S.S.

Dear Research Participants:

I am a Masters of Science Student in the Faculty of Educational Counselling Psychology at the University of Calgary. As part of my thesis requirement, I am evaluating the Program for Academic Success and Satisfaction (P.A.S.S.) at Mount Royal College. I am writing to you to determine if I can:

- 1. have you complete the pre- and post-test inventories administered through the P.A.S.S. Program;
- 2. correlate the results of your inventories with your December, 1989 G.P.A. and April, 1990 G.P.A.;
- 3. collect demographic and self-reporting information from you; and
- 4. have you sign a consent form to participate in this research.

The nature of your involvement will not go beyond steps 1, 3, and 4.

In order to conduct my research, I will be needing the consent of approximately one hundred (100) students in academic difficulty enrolled at Mount Royal College. The data for my research will be collected from two (2) groups:

- 1. P.A.S.S. participants;
- 2. a control group.

I will be randomly selecting approximately 50 participants for the control group and recruiting 50 P.A.S.S. volunteers. In order to ensure anonymity, I will be assigning codes to people's names and I.D. numbers. Therefore, your names will not be released to the College or mentioned in the research. I will then be measuring the differences between these two (2) groups of students in terms of their academic successes.

To measure academic success, I will be comparing the students' results derived from their:

- 1. GPAs
- 2. Survey of Study Habits and Attitudes (SSHA);
- 3. Coopersmith Inventory;
- 4. Student Problem Inventory;
- 5. Demographic questionnaire.

Further, I will be analyzing students' results on these three (3) measures to determine what factors correlate with an increase in G.P.A. I also plan to make recommendations for improving future academic support programs like P.A.S.S.

Although I encourage you to participate in this study you are not obligated to do so. Choosing not to participate in this research will <u>not</u> affect your academic standing or your future eligibility to enroll in the College. Similarly, if you do volunteer for this project, you are able to withdraw at any time. If, however, you do choose to cooperate in this research, you will be invited to a forum in which I will discuss my findings. Further, if you wish one-to-one conferencing to explore how to be a more effective student, I will be available to meet with you.

Should you decide to commit to being a research subject your involvement will be sincerely appreciated. If you have any questions or concerns, you are welcome to contact the following persons:

- 1. Anne Pybus (researcher) 220-7565;
- 2. Dr. Hal Altmann (my Supervisor at the University of Calgary) 220-5663
- 3. Dr. Roger Tierney (Head of Counselling) 240-6362; and
- 4. Dr. Fred Miles (P.A.S.S. Co-ordinator) 240-6362.

Any further insights into how to assist post-secondary students in academic difficulty in the area of student success will be of benefit to future college students, educators, and administrators. Thank you for considering participation in this research.

Sincerely,

E. Anne Pybus (M.Sc. Student at the University of Calgary)

NOTE: Once all of the data has been statistically analyzed it will be confidentially filed in the Counselling Department at Mount Royal College.

APPENDIX E

Consent Form

Faculty of Education, University of Calgary

I acknowledge and have read and understood the 'Cover Letter.' I, __________ (full name), therefore, hereby consent to be a participant in the research conducted by E. Anne Pybus, a M.Sc. student in the Department of Educational Counselling Psychology at the University of Calgary.

I realize I can withdraw from my participation at any time. Further, if I do withdraw as a participant, my doing so will not be held against me in any way, including jeopardy of my academic record or future enrollment to the College.

(signature)

APPENDIX F

Letter of Invitation to Students on Academic Warning

at Mount Royal College

July 26, 1989

Dear ____:

The Disqualification Appeals Committee has recently informed me that you are being re-admitted to Mount Royal College this fall. I am sure that you are pleased with this further chance to succeed in college, and that you want to do your best. Motivation isn't necessarily the only factor, however. Sadly, we observe that 45 per cent of those students who are re-admitted are disqualified again, and a further 30 per cent remain on Academic Warning.

The Counselling Centre is providing a program which is very effective in assisting students to achieve their academic goals. The program is called the Program for Academic Success and Satisfaction (P.A.S.S.). Its objectives are simple:

- 1. To assist you to develop an accurate assessment of your strengths and weaknesses.
- 2. To assist you to develop a clear plan of action for dealing with negative factors that have prevented academic success.
- 3. To ensure that the action plan is carried out successfully.

How does P.A.S.S. work? It is a combination of small groups and individual appointments. It involves an investment of two (2) hours of time per week for eight (8) weeks. Each group leader is professionally qualified and experienced in assisting students to resolve academic difficulties and in achieving their educational goals.

Your primary task at Mount Royal College is to do your personal best. P.A.S.S. is a program which aims at helping you to do precisely this. Since your academic performance indicates you have not been performing at the level of your personal best, the college expects that you will take full advantage of this opportunity.

P.A.S.S. will be offered at three different times:

Tuesdays, 3:30 p.m. - 5:30 p.m., beginning August 29, 1989; OR Wednesdays, 10:00 a.m. - Noon, beginning August 30, 1989; OR Wednesdays, 3:00 p.m. - 5:00 p.m., beginning August 30, 1989.

Please select the most convenient time for you and arrange to register for P.A.S.S. by signing up at the Counselling Centre (2nd Floor, Kerby Wing), or by calling 240-6362.

Sincerely,

Dr. Fred Miles, Co-ordinator of P.A.S.S. Counselling Services

APPENDIX G

Self-Reported Factors Contributing to Students' Academic Difficulties

Primary Concerns

- Poor time management skills
- Insufficient time spent with assignments
- Exam anxiety

Secondary Factors

- Too many other commitments (including part-time or full-time jobs and family responsibilities)
- Memorization difficulties
- Inefficient study strategies
- Concentration difficulties
- Lack of readiness or desire to be a student
- Lack of motivation
- Boredom or apathy

Tertiary Concerns

- Insufficient academic background
- Inappropriate course selection
- Poor reading, writing and/or math skills
- Note taking
- Career uncertainty
- Financial difficulties
- Low energy; lack of exercise; poor diet
- Insomnia
- Social and recreational conflicts
- Drug and alcohol abuse
- Lack of assertiveness
- Emotional difficulties; personal crises
- Difficulties with relationships
- Self-defeating attitudes
- High levels of stress; physical illness

APPENDIX H

Self-Reported Factors Contributing to Students' Satisfactions

Most Satisfied With:

- Course selection
- Relationships with instructors

Moderately Satisfied With:

- Ability to read text book information
- Self esteem
- Friendships at the college

Least Satisfied With:

- Study habits and attitudes
- Ability to manage time
- Ability to be an assertive learner

APPENDIX I

Demographic Questionnaire

I. PERSONAL INFORMATION							
S.I.D. No.:	Age:		-				
Name:	Se	<u>ex:</u>	Ma (Ple	le ase (] Circl	Fema le)	ale
Address:			Rela	ation	ship	Stat	tus
Phone: Home:			Sin	gle (Ple	N ase	/arri Circ	ied le)
II. EDUCATIONAL AND CAREER INTEREST							
1. a. Last grade of High School completed:	7	8	9 (1 Pleas	.0 ie C	11 ircle	12)
b. Length of time out of school prior to enrollment at Mount Royal College.	0-1	yrs	. 2	-4 yr:	S	5-7 y	rs.
		8-: (10 yı (Plea	rs. C ase C	over Vircle	10 y e)	rs.
2. Name of College Program (i.e. General Studies, Arts and Science, Specialty Area)	<u> </u>						
3. What is your student status? Pa	art-time		F (Full-t Pleas	ime se C	ircle)
4. If you are working, how many hours do you work a week?							
5. Please indicate the number of semesters you have completed coming to Mount Royal College.	d since	1	2	3	4	5	6
6. What is your career interest?							
III. ACADEMIC SUCCESS AND SATISFACTION							
7. How motivated are you to improve academically? Ver	ry Mo	oder	atel (y Pleas	No se C	t at . fircle	All)
8. P.A.S.S. Participants How much do you think P.A.S.S. will help you improve academically? Ver	ry Mo	oder	atel	y Pleas	No se C	t at . fircle	A11

9. Control Group

How much do you think P.A.S.S. would help you improve academically?

Moderately Not at All (Please Circle)

Very

10. P.A.S.S. Participants

Why did you decide to enroll in P.A.S.S.? Please Check.

 Improve my G.P.A.
Fear of being disqualified.
Improve my study habits
Get to know other students in the same situation.
Learn more about the resources at the College.
Other - please specify:

11. Control Group

Why did you decide not to enroll in P.A.S.S.? Please check.

Didn't think it would help me.
Didn't hear about it.
The time conflicted with paid employment, courses, family, etc.
Didn't feel motivated.
Other - please specify:

12. PASS Participants

In addition to PASS, what have you done to increase your academic performance and satisfaction? Please specify:

13. Control Group

What have you done to enhance your academic performance and satisfaction? Please specify:

14. What factors contributed to you being put on academic warning or being disqualified? Please check areas applicable to you.

poor time management skills	low energy level
procrastination	Difficulties in the area of:
Too many other commitments:	regular exercise
part-time or full-time job?	healthy diet
family responsibilities	sleep
other	social/recreational activities

14. (continued)

insufficient time spent with assign	nmentsexcessive use of drugs/alcohol
insufficient academic backgroun	dproblem behaviours
inappropriate course selection	lack of readiness or desire to be
i.e. you took courses you did not	a student
want, need, or like	lack of assertiveness
	experienced a recent crisis
Difficulties in the area of:	·
reading skills	emotional difficulties
writing skills	i.e. depression, anxiety
math skills	difficulties with relationship
memorization	experience high stress levels
exam anxiety	self-defeating attitudes/beliefs
note taking	i.e. you view things negatively,
inefficient study strategies	especially yourself
concentration	physical illness
career uncertainty	lack of motivation, boredom, or apathy
financial difficulties	

Other problems not covered by this inventory. Please explain:

Of all the problems you identified, which problem would you say interfered with your progress the most?

15. What are you most satisfied about with regard to being a student? (Please Check)

my study habits and attitudes	my self-esteem
my courses	my friendships at the college
my relationship with my instruc	torsworking toward my career
my ability to read text book	my ability to manage my time
information appropriately	my ability to be an assertive learner
my ability to memorize and con	centrate

Other (please specify):_____

- 16. I would like to meet with Anne Pybus to discuss my pre-test post-test results. (Please Check)
 Yes _____ No _____
 - All of the above information will be treated confidentially. Informati
- NOTE: All of the above information will be treated confidentially. Information will be discussed generally in the thesis but no names will be mentioned.

Thank you for your participation.

E. Anne Pybus

APPENDIX J

*Sample Letter of Invitation to PASS Participants

Dear ____:

It has been brought to my attention by the Registrar that over 1,122 students have been put on academic warning this semester. As a result, you are not alone in finding yourself as part of the total student population at Mount Royal College in academic difficulty.

Friedlander (1980) suggests that students in academic difficulty do not participate in self-help programs unless they deem them to be personally beneficial. The Counselling Department at Mount Royal College believes that their Program for Academic Success and Satisfaction (PASS) is likely to benefit academic high-risk students. For example, Pybus (1991) in a recent Exploratory Masters Thesis found encouraging support to suggest that PASS at Mount Royal College is more likely to improve students' study skills and attitudes, their grade point averages, and their student problems than are students on academic warning who do not attend PASS. Other researchers have also found this type of course brings positive results to students. Based upon the outcomes of these studies the Counselling Department at Mount Royal College believes that PASS could also be to your benefit.

PASS is a six-seek intervention program whereby students meet once a week for two hours. Topics covered include: (1) time management; (2) how to read textbook information; (3) stress management; (4) test anxiety; (5) the assertive learner; (6) pursuing excellence; and (7) staying motivated. Courses are taught by counsellors from the Counselling Department in supportive small group settings.

We are endeavouring to make PASS available to accommodate students' time schedules. To do so, could you please indicate on the enclosed time table the times best suited to you.

We trust you will find enroling in PASS to be to your benefit. To register, please mail in the attached form. We will do our best to accommodate you. To find out which section you are in please see the posted schedules in the Counselling Department on, e.g., January 7, 1992. All sessions will be starting, e.g., January 15, 1992, and ending March 13, 1992. Thank your for considering your future success at Mount Royal College. We look forward to hearing from you.

Sincerely,

Roger Tierney (Ph.D.) Head of Counselling Services

*This letter: (1) normalizes the person's experience of being put on academic warning and attempts to reduce their possible feelings of embarrassment; (2) provides a rationale as to why PASS may be of benefit to students; (3) emphasizes success versus failure; and (4) shows that the institution is trying to accommodate students' individual needs. According to Friedlander (1980), these are some of the aspects which encourage students' enrollments in self-help programs.

APPENDIX J (continued)

Pass Registration

Date:	Name:		
Address:			
Phone:		Age:	-
Program			

×

Please indicate on the attached time table (in 2 hour blocks) when PASS would be the most convenient for you.

If possible, I would prefer to be in a section with peers of similar age (please circle) yes no

	Mon.	Tues.	Weds.	Thur.	Fri.	Sat.
9:00 a.m.						
10:00 a.m.						
11:00 a.m.						
12:00 p.m						
1:00 p.m.						
2:00 p.m.						
3:00 p.m.						
4:00 p.m.						
5:00 p.m.						
6:00 p.m.						
7:00 p.m.						
8:00 p.m.						
9:00 p.m.						

APPENDIX K

*A Revised overview by the researcher of the Program for

Academic Success and Satisfaction (PASS)

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Week I	 General Introductory Session Orientation to PASS Benefits of Intervention Programs for Academic High-Risk Students cite research) Rapport Building Between Faculty and Peers Formation of Groups Individual Counselling Appointments 	
Week II	Getting to Know College Resources• Counselling services• Academic Services• Library Services	
Week III	 Improving Your GPA Setting of GPA and course grades Peer support Tutoring Assessments 	
Week IV	 Getting the Most Out of Your Time The importance of managing time effectively Personal analysis of how time is spent Development of realistic weekly schedule The academic work contract 	
Week V	Managing Stress Effectively• Dealing with stress• Understanding the nature of stress• Dealing with stress• Identifying the sources of stress• Taking tests• Dealing with transitions and/or multiple role demands• Relaxing	
Week VI	 Improving Self-Esteem Process students' thoughts and feelings with regard to academic warning, probation, disqualification, and/or failure, etc. 	
Week VII	 The Assertive Learner Active vs. passive approaches to learning Ways of behaving assertively as a student Faculty-student contact 	

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Week VIII	 Improving Study Habits and Attitudes Delay avoidance Work methods Teacher approval Educational acceptance 	
Week IX	 Getting the Most Out of Your Text Book Identifying bad habits Using the textbook more effectively Taking notes effectively 	
Week X	Writing EffectivelyStrategies for writing term papers, essays, etc.	
Week XI	Staying Motivated• Group building• The buddy system• Mentors	Field experience Weekly time commitments Career certainty
Week XII	 Improving Memory and Concentration Relaxation Visualization mnemonics 	
Week XIII	 Choosing a Career Counselling Assessment Research; volunteer work 	
Week XIV	 Choosing a Career continued Field interviews Appropriate faculty and course selection Work experience programs 	
Week XV	The Wrap Up Closure Assessments Party 	

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*The revisions to the PASS program are based upon the literature review, the data results of this study, and the feedback from students' demographic questionnaires. (It is thought by the researcher that 45% of the students drop out during the first two sessions of PASS as a consequence of students being assessed before they have had a chance to establish a rapport with faculty and peers. According to Friedlander (1980), Gardner (1989), Pascarella (1986), Spady (1970), and Tinto (1975), faculty and peer rapport are two of the most important factors in enhancing the success of academically high-risk students. Therefore, it is recommended that assessments not be conducted until at least the third week of this revised program.)

APPENDIX L

Roueche and Baker (1987, p. 147) Proposed Overview Of the Skills Necessary to be a Successful College Instructor for Academic High-Risk Students

Motivation

- 1. Be committed to students and subject matter.
- 2. Set appropriate goal orientations.
- 3. Provide a holistic view of both students and subject matter.
- 4. Be able to take positive actions.
- 5. Be able to administer appropriate student rewards.

Interpersonal

- 6. Be objective.
- 7. Be an active listener.
- 8. Have an appropriate rapport.
- 9. Be empathic.

Intellectual

- 10. See students as individuals.
- 11. Use appropriate teaching strategies.
- 12. Have appropriate knowledge.
- 13. Use appropriate innovations.