



A case study of the Ready, Set, Go! program : a pre-vocational education course
by William C Kuba

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University

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Abstract:

The purpose of this study was to investigate the effects of the Ready, Set, Go! program based on eight week sessions offered throughout the academic year. The program was developed in response to an overwhelming number of individuals residing in Lincoln County, Montana seeking and not being adequately prepared for retraining after being laid off from the logging and mining industries. Funding for the program was procured through a State of Montana block grant from the Displaced Homemakers program. The study had three purposes. The first was to describe the outcomes related to self-esteem, locus of control attitudes, and depth process established by the students at the Lincoln County Campus in the Ready, Set, Go! program. The second was to study and explore the relationship between levels of self-esteem, locus of control, and depth processing. And the third was to establish whether there were identifiable groups of individuals in the program and to explore the similarities within groups as they relate to possible curriculum development.

The data was collected from (a) the ASSET, (b) Inventory of Learning Process -Revised (ILP-R), (c) a focus group with participants who did not complete the program, and (d) a biographical questionnaire. The ASSET was used to measure the mean differences in pre/post scores on reading, writing, and mathematic skills. The ILP-R was used to measure the mean difference between the pre/post scores for self-efficacy and depth processing in relation to locus of control. The biographical data was used to determine the possible effect of outside influences such as age, gender, income, or level of education.

Data for the study was obtained from 78 individuals enrolled in the Ready, Set, Go! Program on the Lincoln County Campus of Flathead Valley Community College during the 1994/95 academic year. Results showed that reading, writing, and mathematic skills can be improved significantly within an eight week period. One significant finding was the increase in self-efficacy and motivation. Interestingly the cluster analysis produced a two cluster result with age being the determining factor.

It was concluded that the eight week Ready, Set, Go! Program (a) did have a positive influence on increasing participants skill level in reading, writing, and mathematics; (b) it appears that the level of an individual's self-efficacy may be increased within a relatively short period of time; and (c) that age may have an effect on that development of self-efficacy and motivation. Recommendations are to continue the program and lower the expectation of increasing an individual's level of depth processing and shorten the program sessions to six weeks. To facilitate retention, a longitudinal study to track participants' future learning experiences may be effective.

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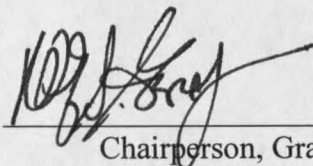
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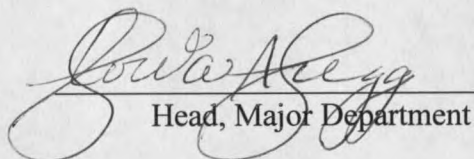
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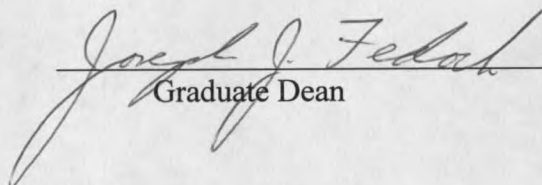
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ABSTRACT

The purpose of this study was to investigate the effects of the Ready, Set, Go! program based on eight week sessions offered throughout the academic year. The program was developed in response to an overwhelming number of individuals residing in Lincoln County, Montana seeking and not being adequately prepared for retraining after being laid off from the logging and mining industries. Funding for the program was procured through a State of Montana block grant from the Displaced Homemakers program. The study had three purposes. The first was to describe the outcomes related to self-esteem, locus of control attitudes, and depth process established by the students at the Lincoln County Campus in the Ready, Set, Go! program. The second was to study and explore the relationship between levels of self-esteem, locus of control, and depth processing. And the third was to establish whether there were identifiable groups of individuals in the program and to explore the similarities within groups as they relate to possible curriculum development.

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Data for the study was obtained from 78 individuals enrolled in the Ready, Set, Go! Program on the Lincoln County Campus of Flathead Valley Community College during the 1994/95 academic year. Results showed that reading, writing, and mathematic skills can be improved significantly within an eight week period. One significant finding was the increase in self-efficacy and motivation. Interestingly the cluster analysis produced a two cluster result with age being the determining factor.

It was concluded that the eight week Ready, Set, Go! Program (a) did have a positive influence on increasing participants skill level in reading, writing, and mathematics; (b) it appears that the level of an individual's self-efficacy may be increased within a relatively short period of time; and (c) that age may have an effect on that development of self-efficacy and motivation. Recommendations are to continue the program and lower the expectation of increasing an individual's level of depth processing and shorten the program sessions to six weeks. To facilitate retention, a longitudinal study to track participants' future learning experiences may be effective.

CHAPTER 1

INTRODUCTION

The Changing Work Force

The American work force is aging. Estimates by the Bureau of Labor Statistics have the median age of workers rising from that of 34.6 years in 1988 to 38.9 in the year 2000 (AARP, 1988). With the increase in workers' age comes a prediction of a decline in the annual growth of the gross national product (Kutscher et al., 1992). This decline is expected to trigger a slowdown in the labor force, especially in occupations that employ workers who do not have education beyond high school. As pointed out by Lankard "Post-secondary education will be increasingly important for gainful employment and good wages" (1993, p.1).

Education and training for the 1990s and beyond will need to be more focused on lifelong learning and training efficiency (Cohen, 1991). Cohen states that "nearly two-thirds of all training dollars are spent on travel and lodging" (1991, p.32). It then makes sense to facilitate the training as close to the work place as possible. Therefore the locally-based community college, which is prepared and able to meet the needs of a changing work force, is the logical location for this training to take place.

Community Colleges: A Place of Learning and
Training for the Changing Work Force

Historically, it was expected that two-year colleges would serve a different demographic mix than that which filled the universities (Cross, 1982; Witt et al, 1994, p. 9). As the Second World War ended, an influx of veterans accounted for more than 43% of the students enrolled in two-year (then junior) colleges. For the most part, these returning veterans were not prepared for the academic rigors of the university, and a large proportion attended the two-year colleges as vehicles for opportunity and advancement (Witt et al., p. 127). In later years poverty-burdened inner city youth, mature women, and retired men added to the numbers in community colleges. Post-secondary institutions have gone from a predominantly traditional-age student population to that of a population of older and more community-rooted students. The mean age of students attending American colleges and universities has increased steadily since the 1970s. In 1974, 25% of the undergraduate population consisted of students 25 years and older (Kasworm, 1980, p. 32). In 1985, this same group comprised 43% of the student populations, and projections for the future showed an even greater increase (Lace, 1986, p. 10). The American Council on Education (ACE) reported that in 1989 4.7 million of the 12.5 million students attending post-secondary institutions were enrolled on community college campuses. The Almanac (Chronicle of Higher Education, September 1995) reported that the number of students in colleges and universities had grown to 14.3 million by 1993. Over 5.4 million of those students were enrolled on two-year campuses.

As Lacey predicted, the non-traditional student population was at 58% (Chronicle of Higher Education Almanac, September, 1995, p.14).

With the changes in student populations it is important to note that during the academic year 1992-1993, first time freshman students attending the two-year campus had lower ACT scores and came from lower ranks in their high schools than did those first time attending freshmen on the four-year campuses (ACT, 1992). Furthermore, an inverse relationship was noted between the grade point average of the students and their ages when starting their post-secondary experience (ACT, 1992). This may help explain why there are more stop-outs on the community college campuses than on the four-year campuses (Grosset, 1993).

Student Success in College

Student preparedness has been a concern of educators since the 1970s. A program was developed in the 1970s at the University of Wisconsin-Oshkosh to reduce the attrition of underachieving students and to help students develop positive attitudes toward self, others, and school (Bowman, 1971, p. 1). A group of 250 students was randomly selected from freshman students who were placed on probation or had dropped out. The study showed that, when compared to non-probationary students, the students involved had poorer academic preparation for higher education and held a less-motivated attitude toward higher education and career choice.

Theoretical models pertaining to student attrition describe a multitude of reasons

for student disengagement, whether it is voluntary or non-voluntary. Studies done by Ernest Pascarella and Patrick Terenzini (1980), Vincent Tinto (1975,1982), and Joseph Bean (1980,1981) suggest that motivational attitude may be even more critical to college success rather than financial aid or academic preparedness. In Tinto's (1975) words:

Given individual characteristics, prior experiences, and commitments... it is the individual's integration into the academic and social systems of the college that most directly relates to his continuance in that college. (p. 96)

Thus, it is vital that an individual feel comfortable with his/her college placement and how he/she fits into the educational process.

Julian Rotter first published a book in 1954 in which he explained his theory on social learning. Rotter's Social Learning Theory (SLT) attempts to combine two diverse trends in learning theory. One trend was the reinforcement theories from Adler, Kantor, and Lewin while the other was the cognitive theories of Thorndike and Hullian (Rotter et al, 1972). Rotter's basic assumption is that personality is the interaction of the individual and his/her meaningful environment (Rotter, 1954).

Out of this concept, Rotter (1966) developed the locus of control construct. The basic tenet of this construct states that people vary in the ways in which they process the experiences of their actions and the outcomes from the resulting reinforcements.

Individuals fall into one of two categories, external or internal. Research has shown that an individual's ability to succeed academically may depend on the degree to which his/her locus of control is externally or internally defined (Brandit, 1975; Gilmore & Reid, 1978; Otten, 1977; Taylor & Boss, 1985). Just as locus of control may influence

academic success, it may also affect an individual's sense of personal efficacy (Hurlbut, 1988; Schunk, 1985, 1988).

This self-referent thought mediates the relationship between knowledge and action. Knowledge, experience, and skills may not sufficient for successful completion of a goal. Individuals may know what to do to be successful in a given task, but they may not function optimally. How an individual self-refers personal motivation and behavior affects the experience of the actions outcome (De Charms, 1968; Lefcourt, 1976; Rotter, Chance, & Phares, 1972). According to Bandura (1982), perceived self-efficacy is "concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122).

Any individual, especially as an adult learner, can be influenced by perceived abilities and past experiences. Darkenwald and Merriam (1982) listed eight principles of learning. They surmise (a) that adults' readiness to learn depends on the amount of their previous learning; (b) that intrinsic motivation produces more pervasive and permanent learning than external motivation; (c) that positive reinforcement is effective; (d) that the material to be learned should be presented in an organized fashion; (e) that learning is enhanced by repetition; (f) that meaningful tasks and material are more fully and easily learned; (g) that active participation in learning improves retention; and (h) that environmental factors affect learning (p. 110).

Research done by Conti (1985), James (1983), and others has helped to establish the concept of teaching styles and to indicate how the educator can be more effective in facilitating the learning experience for adults. Suanmail (1981) established a 10 item

inventory of educator's practices in curriculum and program development:

1. Progressively decrease the learner's dependency on the educators;
2. Help the learner to understand how to use learning resources--especially the experiences of others, including the educator, and how to engage others in reciprocal learning relationships;
3. Assist the learner to define his/her learning needs--both in terms of immediate awareness and of understanding the cultural and psychological assumptions influencing his/her perceptions of need;
4. Assist learners to assume increasing responsibility for defining their own learning programs and evaluating their progress;
5. Organize what is to be learned in relationship to his/her current personal problems, concerns and levels of understanding;
6. Foster learner decision-making and select learner-relevant learning experiences which require choosing, expand the learner's range of options, facilitate taking the perspectives of others who have alternative ways of understanding;
7. Encourage the use of criteria for judging which are increasingly inclusive and differentiating in awareness, self-reflexive and integrative of experience;
8. Facilitate problem-posing and problem-solving, including problems associated with the implementation of individual and collective action; recognition of relationships between personal problems and public issues;

9. Reinforce the self-concept of the learner as a learner and doer by providing for progressive mastery; supportive climate with feedback to encourage provisional efforts to change and to take risks; avoidance of competitive judgment of performance; appropriate use of mutual support groups;

10. Emphasize experiential, participatory and projective instructional methods; appropriate use of modeling and learning contracts. (pp. 31-32)

Using these tenets, a program was developed to facilitate the transition of the adult population in Lincoln County, Montana, from manual labor to technically employable individuals.

Lincoln County Campus and Students

The Lincoln County Campus (LCC) is a public two-year college and was established as a service district in 1984 through special legislation passed by the 1983 Montana Legislature. LCC is fully accredited by the Northwest Association of Schools and Colleges and provides an educational curriculum in the areas of academic transfer, occupational and adult education. Approximately 450 students attend courses in all areas per year.

As individuals enroll at LCC they are given an evaluation instrument to ascertain mathematical, reading, and writing skill levels. Lincoln County Campus uses the ASSET instrument by American College Testing for credit level courses and the Test of Adult Basic Education (TABE) for adult basic education courses. Through this testing

procedure, it became evident almost immediately that the majority of the new student population was under-prepared academically for their post-secondary education. It also became apparent that there was a segment of the service population whose skills were so limited that they would not be able to immediately pursue any funded retraining programs. Although funding was made available for retraining through the North American Free Trade Agreement (NAFTA), none was established for the implementation of pre-vocational education. In order to meet this group's needs, a Carl Perkins grant was applied for and received by the Lincoln County Campus beginning the 1993/94 academic year. The grant was to fund a pre-vocational skills program called the Ready, Set, Go!-- Skill Building for the 90's.

The program established three priority areas. The first of these was individual pre-vocational assessment, career counseling, and preparation for vocational education and training programs for non-traditional occupations. The second was computer literacy and office skills to prepare trainees for immediate employment and/or continuing education or training. The third priority was the elimination of curriculum anxiety and improvement of computational skills, self-esteem, and confidence.

Ready, Set, Go!

Historical Background

In 1993, two events occurred which created lasting effects on the economy of Lincoln County, Montana. The first occurrence was in April when the ASARCO Troy

Project, a mining operation, closed resulting in the elimination of over 300 permanent jobs which equated to the loss of over \$13 million dollars in payroll. The second occurrence took place in October when the Champion lumber mill was sold. The purchasing company, Stimson Lumber, quickly began to downsize and dismantled the mill. The result was the loss of over 350 jobs. Unemployment for Lincoln County jumped to 14% compared to the 4.9% experienced throughout the rest of the State of Montana.

Since the employment prospects in Lincoln County were uncertain, it was concluded that there would be a significant number of individuals eligible for training. This training would increase employability by expanding the awareness of job and training opportunities and building self-confidence to pursue employment and/or further education. The Gender Equity Coordinator from Lincoln County Campus / Flathead Valley Community College (LCC/FVCC) was given the task to establish a list of priorities that would be used to address these needs. Three sources were used to gather data to assess the local needs and set program priorities.

The three sources used for gathering data were a community based focus group, interview of selected key informants, and a community business needs survey. The focus group was made up of ten individuals of whom seven were members of the targeted population. The group recorded their thoughts separately and then listed them on a blackboard, discussed their ideas, clarified thoughts and came to seven consensus statements of need.

Those statements of need were:

- 1). More awareness of educational opportunities and career counseling.
- 2). Assessment and testing to match interest and skills with available job opportunities and educational programs.
- 3). Non-traditional job awareness.
- 4). Classes in communication and speech skills, self-esteem, decision-making, assertiveness, and image awareness.
- 5). Classes in office machines and procedures; i.e. computers, fax, copiers, electronic cash registers and telephone systems.
- 6). Instruction in a wide variety of computer programs: i.e. word processing, spreadsheets, databases, desktop publishing, computer-aided drafting and more.
- 7). Instruction in basic skills such as math, English, and reading.

The key informants were the managers or directors of Lincoln County social services; North West Montana Human Resources Development Council, LCC/FVCC Adult Education Program and Student Service Department, Women's Help Line, and Literacy Volunteers of America. All key informants stated there were needs in the areas of job readiness and work skills. The third source of information was gathered from the business owners and leaders throughout Lincoln County, Montana who completed a survey.

The results of the survey pointed out that computers were heavily used in all the local businesses. Seventy-eight percent of the businesses responding to the survey used a computer in their business with an average of 6 employees using those computers. Fifty percent of those businesses not using computers reported that within the next year they would be purchasing computers and will need to hire individuals to process data entry. Fully, 92% of all the respondents acknowledged that a computer is necessary or would be helpful in their daily business operations.

Employers were asked to list their impression on the applicants' attitudes that influenced the interview and hiring process. Ninety-two percent of all employers responded with concerns about the applicant's lack of language skills or inappropriate language, inappropriate dress, poor attitude, and lack of confidence. Using a scale of 0 to 4 with 4 being the highest rating, employers were also asked to judge the computer, mathematic, reading, and writing skills of prospective employees, i.e. persons interviewed or considered for hiring that were not hired. The results are as follows: word processing, 2.3; spreadsheet skills, 1.6; database skills, 1.4; payroll and accounting skills, 1.1; basic computer knowledge, 1.7; basic arithmetic, 3.3; higher mathematics, 0.9; reading ability, 3.1; and writing ability, 2.1.

Assessed Need and Objectives

All three assessments of local need produced consistent results. Four issues surfaced as a result of the assessments made. The first issue that surfaced was the need for pre-vocational education and assessment. This included career counseling, preparation for vocational education, and establishing training programs for non-traditional occupations. The second issue was the need for computer literacy and office skills training to enable individuals to seek immediate employment or training. It was also made clear that the program be designed to improve math skills, mediate math anxiety and improve attitudes toward science as the third issue. The fourth issue was that of facilitating access of the Ready, Set, Go! Program to the rural population of Lincoln County, Montana.

Four program objectives were established to address the issues that surfaced through data collection. Those four objects were:

- 1). Provide computer literacy and vocational computer skills to 42 displaced homemakers.
- 2). Increase basic math skills in pre-vocational training to reduce math anxiety.
- 3). Provide job search skills training to 42 displaced homemakers.
- 4). Provide sexual harassment/gender equity in education and employment awareness skills training to 42 displaced homemakers.

Program Activities

The next step in the development of the Ready, Set, Go! Program was the formulation of the program activities. Based on the four program objects; seven activities were designed to facilitate the learning process. The first activity was to provide clerical services, documentation, record keeping services and determine eligibility and need for dependent care and transportation assistance. The next two activities were the pre-vocational and career advisement for the program participants. This was accomplished on and off campus through individual career counseling and the use of the Strong Vocational Interest Inventory. This segment was structured to take place seven hours per week. The Job search skills training , forth activity, was accomplished through the use of existing social service agencies. The fifth activity included six hours per week of classroom and individual instruction was also offered in basic math. The sixth activity was developed to address the need for computer literacy, instruction in business software was offered 12 hours per week for 5 weeks of each session. The seventh and last activity programed was gender equity awareness and employment skills. This was programed in

two sessions lasting 3.5 hours each.

Evaluative Criteria

In order to fulfill the grant requirements, six evaluative criteria were established.

1. Forty two single parents and displaced homemakers would complete documented placement test, vocational assessments and career advisement.
2. At least 80% of the participants would increase math skill scores on standardized adult educational tests at least two grade levels or to the 12th grade level.
3. At least 80% would be able to successfully boot the computer; word process documents such as letters, essays and simple reports; and perform basic math functions on the electronic spreadsheet. Eighty percent of those completing the course would improve their keyboarding rate by at least 30%, or would achieve 30 wpm efficiency as demonstrated on instructor produced competency examinations.
4. Eighty percent of participants would be placed in employment or regular vocational education programs.
5. At least 38 participants are able to attend 90% of the classes and keep advising and evaluation appointments.
6. Eighty percent of the participants would receive sexual harassment/gender equity awareness training. Pre and post-testing would be used to evaluate increased awareness.

Problem Statement

Much of the research that applies to vocational education has been based on easily defined outcomes. Little if any research has been done on measuring the levels of success in developing self-esteem and skills of locus of control through curriculum development in pre-vocational education. One such project is the Ready, Set, Go! program which deals with the individual's affective and cognitive domain. But, in order

to make any judgments about the program an evaluation was needed. Knowles (1980), Birnbrauer and Tyson (1985), and Newstrom and Luykusit (1979) emphasize the necessity of evaluating outcomes for a variety of reasons. One major reason is to better meet the needs of the individual served. Learning is a dynamic process in which learners process the knowledge through acquisition and organization of the information (Holt, 1992). As the process continues, it becomes a series of increasingly complex understandings that is influenced by context. "Assessment is to educational and instructional goals as maps are to travelers and their destinations" (Rickard et al, 1991). When the educational purpose is clear and explicit to the learner and directly related to the learner's goals, then learning can take place. It is as important for the learner's cognitive and meta-cognitive development be evaluated and assessed through out the learning process. The learning process may than be restructured to facilitate the optimum learning experience.

Purpose of the Study

The purpose of this study was to investigate the effects of the Ready, Set, Go! program. This was done by (a) describing outcomes related to self-esteem and locus of control attitudes established by the students at the Lincoln County Campus in the Ready, Set, Go! program; (b) studying and exploring the relationship between levels of self-esteem and locus of control, and (c) establishing whether there were identifiable groups of individuals in the program and explore the similarities within groups as they relate to

possible curriculum development.

Operational Definitions

The following terms are defined to provide clarity and understanding of their use in this study:

- (1) Andragogy: The art and science of teaching adults (Knowles, 1980).
- (2) Depth processing: The level at which learning takes place. Kirby and Woodhouse define depth processing as the "focus on main ideas rather than details, greater connection of new information with prior knowledge,..." (1994, pg. 147).
- (3) Drop-out: An individual who began a formal educational experience and did not continue on to completion.
- (4) Learning style: An individual's preferred and consistent way of becoming aware, acquiring and processing information, formulating judgments, and making decisions.
- (5) Locus of control: The control construct is considered a generalized expectancy, operating across a large number of situations, which relates to whether or not the individual possesses or lacks power over what happens to him/her (Lefcourt, 1966, p. 207).
- (6) Memory: The input (acquisition or reception), storage, and output (recall or retrieval of stimulus) (Darkenwald & Merriam, 1982, p. 108).

- (7) Profile: The characteristics of a given individual or group. This maybe biographical information or assessed levels of cognitive skills.
- (8) Reinforcement: Any event that follows a behavior and results in controlling or changing the behavior (Mercer & Mercer, 1981, p.111).
- (9) Self-efficacy: The personal judgments of performance capabilities in a given domain of activity that may contain novel, unpredictable, and possible stressful features (Schunk, 1985).
- (10) Stop-out: An individual who has encountered a period of time between post-secondary experiences.

Research Questions

This study was to investigate the relationship between levels of self-esteem, locus of control, and depth processing skills through the use of the Inventory of Learning Processes-Revised (ILP-R), and the ASSET evaluation through a pre and post measurement. Five research questions were investigated in this study:

1. What was the profile of students who entered the program? Were there common characteristics shared and if so what were they, if not then what were the differences.
2. What was the profile of students at the conclusion of the program? Were there shared characteristics?
3. What was the profile of students who drop out of the program and what did follow-up exit interviews indicate about non-completion? Were there any common characteristics for this group that can be used to evaluate need.

4. What were the measurable changes in student profiles on the ASSET and ILP data based on pre and post testing? Did math, reading, and writing increase?
5. Did distinct clusters of students exist within the program? If clusters do exist, what were their characteristics?

Significance of the Study

The information gathered in support of this research will enable educators to plan and implement advising and teaching strategies for those individuals who have become that part of the changing work force that is unprepared to obtain employment. Galbraith's (1973) perspective on higher education is one of greater uncertainty about the economy and federal support for education, performance standards dictated by state legislatures, a staggering diversity of students, and the interdependence of offices required by enrollment management. This mandates a better understanding the diversities that face the students on today's campuses. Evaluative criteria may then be established based on factual information not on hunches and historical precedence.

The information will be useful in the academic support of students-at-risk. Educators may use the information from this study to develop effective methods of program and curriculum evaluation. Students may also use the information gathered to establish adaptive strategies to enhance their learning experience.

Assumptions and Delimitations

Accurate and reliable responses were assumed due to the controlled conditions of the instrument administration. The researcher and the director of the Ready, Set, Go! Program administered the pre and post test for both the Inventory of Learning Process-Revised and the ASSET in a classroom set aside for the program. Because the participants in this case study were self-selected, it was assumed that they answered the questions truthfully and without reserve.

The research was delimited to those participants who took the pre and post test for both instruments. Participants in the study were individuals enrolled in the Ready, Set, Go! program from the 1994/95 academic year located on the LCC/FVCC campus. A number of participants in the program did not have a complete data file and were eliminated from the statistical analysis. Those eliminated were asked to participate in a focus group for further clarification on program outcomes and to define the group profile.

CHAPTER 2

LITERATURE REVIEW

IntroductionThe American Community College

The American Community College began its evolution during the early years of the twentieth century. This evolution was sparked by the rapidly growing call for social change brought about by the increasing numbers of women, immigrants and Native American peoples clamoring for equal rights and services. The greatest push came about by the abolition of slavery, the end to the Antebellum period in higher education and the establishment of the Morrill Act of 1862 . With the addition of the 13th, 14th, and 15th Amendments to the Constitution the concept of equal rights was expanded to cover equal opportunity as well (Witt, et al., p.2). Shortly after the Civil War the concept of equal opportunity was the driving force for the era of the Populists and Chautauqua (Vincent, 1959). Strangely the elitist segment of the population were a powerful force in the growth of the community college at this time also (Zoglin, 1976). The elitist were concerned over the level of academic rigor the common man could muster and how that lack of ability would reflect on the institutions' high academic standards. The concept of

developing a six year secondary curriculum was being pushed from all areas of higher education.

The concept of extending the secondary educational experience two additional years evolved into a two year college. The two year colleges were commonly called junior colleges up until the 1940's at which time the term community college was beginning to be used. As the needs of society changed so did the definition of the two-year college. The American Association of Junior Colleges defined the junior college as "an institution offering two years of instruction of strictly collegiate grade" (Bogue, 1950, p. xvii). By 1925 the Association's definition of the junior college had changed to "an institution that is likely to, develop a different type of curriculum suited to the larger and ever-changing civic, social, religious, and vocational needs of the entire community in which the college is located" (p. xvii). In the 1950's and 1960's the term junior college was used to define private two year colleges with the term community college was being used to define the publicly funded two year colleges. By the 1970's the term community college was being used to define all two year colleges (Cohen & Brawer, 1989).

Historical Overview

Just after the Revolutionary War, Thomas Jefferson asked Pierre-Samuel du Pont de Nemours to look into the establishment of a university preparatory system. DuPont de Nemours suggested the formation of a higher level of secondary school that he called a "college" (Campbell, 1929, p. 13). This elitist's view of higher education was based on

the German system called the "gymnasium" which fit comfortably in their desires not to be responsible for educating the common student (Domonkos, 1989). Campbell (1929) in his address to the 1929 American Association of Junior Colleges made note of a book written by Pierre-Samuel du Pont de Nemours at the request of Thomas Jefferson just after the American Revolution. In his book Dupont de Nemours once again suggested the formation of a higher level of secondary school that he called a "college" (Campbell, 1929, p. 13). It is believed that the first serious attempt to form a "junior college" was made by Henry Tappan in 1852 (Ratcliff, 1987). Tappen suggested the formation of a junior college in 1851 and in 1852 as the president of the University of Michigan he attempted to form a lower division and was subsequently fired for views (Ibid). In 1870 William Folwell, president of the University of Minnesota, proposed an extended high school system that was ultimately called the Minnesota Plan. The Minnesota Plan established a preparatory curriculum that would certify students prior to entering degree level programs. The Minnesota Plan was accepted by the Board of Regents but went never implemented due to the lack of faculty support (Gerber, 1971). It was not until 1892 that William Rainey Harper, the founder and president of the University of Chicago, actually divided the university curriculum into upper and lower divisions. The lower division was known as the "Academic Colleges" and the upper division known as the "University Colleges" (Storr, 1966, p. 113). Shortly after Harper's establishment of the lower divisions at the University of Chicago in 1906, private two-year colleges started to form. These early two year colleges were predominantly technical institutions (Brint & Karabel, 1989). It was from these roots that the two-year collegiate institutions sprang.

By 1922 there were 207 institutions in thirty seven states and by 1930 there were 450 junior colleges in all but 5 states (Cohen & Brawer, 1989, p. 10). As the growth of community colleges started to peak enrollment began to grow (Cohen, 1975).

The passage of the Serviceman's Readjustment Act, commonly known as the G.I. Bill of Rights, in 1944 became the accelerator for the growth of attendance in the community colleges. At the end of World War II thousands of young men were released from active duty only to find themselves unemployed and under skilled (Reed, 1971). This influx of students was preceded by a drastic drop in enrollment due to number of younger men enlisting or being drafted into military duty during World War II. It was from this experience community colleges feared the same drop in enrollment at the onset of the Korean War. Community colleges found themselves developing marketing strategies and public relations programs. One of these strategies was to actively recruit adult students. Courses were designed to offer new hobbies, better jobs, and self-improvement (Witt et al., 1994, p. 142). The community colleges also found themselves in dialogue with the Selective Services Board over the acceptability of a two-year degree for Draft deferred status. In 1953 the Selective Service Director cleared the way for two-year programs to qualify for military service deferments (Reed, 1971, p. 108).

The 60's ushered in a new era of enrollment growth in the community colleges. Enrollment nationwide grew 13.4 percent in 1962 (American Association of Junior Colleges, 1965). By 1970 there was 1,091 junior colleges. Some of these junior colleges had over 20,000 students enrolled (Holt, 1969/1970). This tremendous growth was brought on by the conclusion of the Korean War, influx of Vietnam veterans, and

individuals seeking student deferments from active military duty. It was at this time that "open enrollment" became the accepted standard for admissions into the community college (Thornton, 1972).

Enrollment in the 80's increased by 7.5 percent largely due to the recession in the national economy. It was becoming cheaper to attend a two year college than the four year college/university (Gernholt, 1981). The changes made in the Pell grant program in 1987 and the passage of the Title III section of the 1987 Higher Education Act sparked the growth of older, part-time, community bound students attended local colleges. The 90's began with a decline in enrollment numbers in post-secondary education that was expected to continue due to the growth of jobs in the technological fields and a strengthening economy.

Community Colleges in Montana

The State of Montana currently has four community colleges located in the communities of Glendive, Kalispell, Libby, and Miles City. The Montana Community College system began in 1939 as the state legislature established an extended high school program (Montana Code Annotated, 1995, p. 314). As the law was written, sixteen through nineteen year olds were allowed to attend junior college while still in high school. Courses were taught by senior high faculty. Miles City and Glendive were the only communities to fund the new system through passage of a local mill levy and began operation in the fall of 1940. In 1966 the Montana State Legislature passed legislation

that allowed the creation of community college districts (Montana Code Annotated, 1995, p.314). The community college districts received state funding based on full time equivalency (FTE) of attending students and were give authority to set their own mill levy. Miles City and Glendive moved quickly to establish them selves as community college districts. Flathead Valley Community College based out of Kalispell, Montana became the third community college district formed in 1967. During the early 80's community members from Lincoln County started the process of establishing a community college district in their region. Before they could complete the process the Montana State Legislature created a Service Region provision in 1983 (Montana Code Annotated, 1995, p. 326). These service regions were to set their own mill levy and receive funding from the state based on FTE. For accreditation purposes, the community colleges that formed as service regions were required to affiliate themselves with an existing post-secondary institution. In 1984 the Lincoln County Campus was formed with accreditation ties to Flathead Valley Community College.

Adult Learners

Definition

Adult educators tend to define the adult learner as a catalyst of the learning process, in motion, and continually at change. Other adult educators use the term non-traditional to define the adult learner (Gould, 1978; Kegan, 1982; Kolberg, 1984) and most post-secondary institutions use 25 years old as a base age to define the adult learner for administrative purposes (Kasworm, 1980; Lace, 1986). Hiemstra (1979) believes the

adult learner is any adult who engages in some type of activity, formal or informal, in the acquisition of knowledge or skill, in an examination of personal attitudes, or in the mastery of behavior. Knowles sees the adult learner is an individual moving from dependency toward self-directedness but at different rates for different individuals at different times in life (1980, p. 43). The author defines the adult learner as an individual who is in the act of "learning what they live" rather than that of a child who "lives what they learn". This definition is congruent with Grundtvig's philosophy on lifelong learning (Warren, 1989), Freire's (1989) thoughts on social ignorance, and Knowles (1980) assumptions on pedagogy and andragogy.

Adult Learning

A review of the literature provides us with a body of knowledge about adult learning. From this knowledge three basic elements can be shown , 1) the things known about adult learners and their motivation, 2) what is known about developing curriculum for adults and 3) what is known about the dynamics in the classroom (Kreitlow, 1978; Seaman & Fellenz, 1989).

Adults seek out learning experiences in order to cope with life changing events; i.e., marriage and divorce, changes in employment, or birth and death (Clark & Wilson, 1991). The more life changes an adult faces, the more likely the adult will seek out opportunities to cope with those changes. The learning experience that the adult seeks out will directly relate, as perceived by the individual, to the event/s that prompted the need

to learn (Boshier & Peters, 1978; Brookfield, 1986). Adults are generally willing to participate in the learning experience at the onset or any other stage of the change if they are convinced that the learning experience will help with the transition of the change. The motivation to seek out a learning experience is sustained due to the need of the knowledge or skill being sought. The adult learner sees the learning experience as a means to an end and is not necessarily concerned with the final outcome (Boshear & Albrecht, 1977, p. 175). An adult may also find secondary motivations in the increase of his/her sense of self-esteem and pleasure (Barsch, 1981). It is important to point out that there are barriers to participation in the learning experience as well as motivations. Some of these barriers may be lack of time, money, confidence, scheduling, "red tape", child care, and transportation (Easton, 1990; Cross & McCartan, 1984). It is therefore, natural for an adult to feel anxious or nervous when faced with a new learning situation (Cranton, 1989; Rogers, 1989, Vella, 1994).

Adult educators must remember that learning occurs within each individual throughout life at different stages using different styles and strategies. Learning style can be defined as "the characteristic way in which a learner operates within the learning situation" (Bonham, 1989, p. 29). There are three domains that foster the learning process; cognitive, affective, and physiological. Cognitive styles are "information processing habits representing the learner's typical mode of perceiving, thinking, problem solving, and remembering" (Messick, 1976, p.). Affective styles capture the personality traits that have to do with attention, emotion, and valuing (Keefe, 1987). Factors that take in physical traits, environment, stimulation and sensation are found within the

physiological domain.

Most, if not all, of the learning style theorists argue that an individual will learn and enjoy the learning experience more if they are allowed to use their preferred learning style. Some theorists believe that teaching style should be matched with the individual's learning style and others believe that the individual should understand their own style in order to adapt to the existing teaching style (Pintrich & Johnson, 1990). Conti's (1990) studies on learning styles has shown that individuals will learn no matter what teaching style is used as long as the instructor is consistent within their teaching style. There is no argument that the adult learner needs to be aware of his/her learning style and understand how this awareness may be used successfully. In order to adapt, an individual must develop a learning strategy (McKeachie, 1988).

Mayer (1988) has defined learning strategies as "behaviors of learners that are intended to influence the learner's processes of information" (p. 11). Learning strategies may be developed from three basic concepts. The first of these concepts deals with the selection of material. The learner needs to know what information is important. The second concept is that of building internal connections. In other words, how does the material to be learned fit or relate to the perceived outcome. The third concept is that of building external connections. This is the relationship between learned information and information to be learned.

Research and theoretical studies have made clear the need for knowing the characteristics and patterns of those learners involved in the educational process (Reed, 1986 & Claxton, 1990). The challenge for educators is to balance the perceived needs of

the learner and the practical aspects of meeting those needs (Noel & Levitz, 1982; Mayer, 1988; McCombs, 1981). To be effective the adult educator must keep in mind four basic elements of learning; 1) motivation, 2) reinforcement, 3) retention, and 4) transference (Brookfield, 1991).

As stated earlier, if the participant does not recognize the need for the information an instructor's efforts to present information will be wasted. The instructor must establish a friendly and open atmosphere that shows the participants that the instructor is there to help them learn. The most difficult part in motivating the learner is establishing the levels of difficulty and the levels of importance of the material to be learned (James, 1985; Seaman & Fellenz, 1989). The adult educator must be responsive to the needs of the content in order to establish the levels of importance or difficulty of the material to be learned.

Content needs involve the mode of delivery; i.e. video/audio tape, electronic, lecture, workshop; and the "nature of the content itself" (Seaman & Fellenz, 1989, pg. 15). Content nature is defined and established through a mutual agreement or understanding between the learner, the educator, and the presenting organization. Seaman and Fellenz (1989) view this as a relationship among preferences. The preferences are those of learner, teacher, and administration. Adults enter into the learning experience with established ideas on what they want to learn and expected outcomes.. Educators prefer to use teaching methods that are comfortable for them and produce their expected outcomes. While organization expect measurable outcomes and are required to justify the curriculum content. One example of this may be an individual

desires to obtain an degree in engineering. The student's preference would be to complete all the course work at his/her location with a limited amount of time and expense involved. The presenting organization has a specific curriculum developed for completion of an engineering degree and must maintain the structure for accreditation purposes and the instructor's preference will depend on the course and the desired outcome. The organization and instructor may be able to meet the student's preference for the general core degree requirements but unable to find a solution to meeting the lab requirements due to institutional accreditation. Adults also learn best under low to moderate stress and if the instructor is not careful the stress can become a barrier to learning. Once motivation is established the learner will need specific knowledge of his/her learning results. These results or feedback need to be specific and point toward a reward that fits the learners understood preference (Gazda, et al, 1995, p. 44)

The reward should demonstrate the benefits to be received from the learning experience. It is this reward that keeps up the interest in learning for the participant. The adult learner must see the benefits from learning in order to motivate themselves to continue participating in the learning process (Hiemstra & Sisco, 1990). The second element necessary for the learning to take place is reinforcement (Boshear & Albrecht, 1977; Thorndike, 1932). It is through reinforcement that the desired behavior and/or performance is obtained and can be pursued in a positive or negative manner. Positive reinforcement is effective in teaching new skills or information while negative reinforcement is best used to change existing knowledge or behavior. Adults learn best through the use of positive reinforcement so if negative reinforcement is used it is

important to follow up as soon as possible with some positive feedback. Retention and transference are the final two elements and are an important part in the support of the reinforcement pursued in the learning process (Gazda, et al., 1995, p. 14).

Adults must retain information from the learning process in order to benefit from the learning. If the adult sees no benefit from learning then it is difficult to maintain motivation to continue in the learning process. The adult learner must see a meaning or purpose for the information and must also understand, interpret, and apply the information (Seaman & Fellenz, 1989, p. 10). Part of this includes the ability to establish the correct degree of importance to the material learned. Once the desired skill or knowledge is learned the adult learner will need to transfer the information gained into practice. Howard (1989) describes the transfer of learning into use as the desired outcome of an adult's motivation to learn. This transference is most likely to occur through the association with something that they already know, something they are familiar with, the extent of learning that they obtained and whether the information learned contains elements that are beneficial to them (Etheridge, 1978). Gazda (1995) address this transference as the "transition dimension" (pg. 15). The educator facilitates the transition of learning through three critical response to the learners concerns or preferences.

The first of these response to the learner's needs is that of "concreteness". Concreteness refers to the educator's ability to pinpoint and establish the specific needs of the learner. This is the first stage in defining the issues to develop the mutuality of preferences. The educators next response is that of "genuineness". This is the stage

where the educator expresses his/her preference and how that may relate to the adult learner in meeting his/her needs through the learning experience. The third response is that of "self-disclosure". It is at this point that the educator may use his/her experiences to express the educator's preferences or it may be at this point that the needs of the organization is focus on and how the learner's needs can be meet with in that context.

The third element beyond motivation and transference deals with the classroom dynamics. Classroom dynamics can be broken down into the interaction of three basic factors. These factors are the student, the instructor, and the physical environment. The interaction of these three factors will direct the outcome of the learning experience (Imel, 1991, Lowman, 1985, & Seaman & Fellenz, 1989).

Darkenwald (1987, 1989) and his doctoral students developed the Adult Classroom Environment Scale (ACES). ACES looks at the teacher's behavior, interactions between teacher-student, and student-student as the key elements in the adult learning environment. Seven empirically based dimensions are measured by the ACES (Darkenwald, 1989, p. 72):

1. Involvement - the extent to which students are satisfied with class and participate actively and attentively in activities.
2. Affiliation - the extent to which students like and interact positively with each other.
3. Teacher Support - the extent to which help, encouragement, concern, and friendship are directed from the teacher toward students.
4. Task Orientation - the extent to which students and teachers maintain focus on task and value achievement.

5. Personal Goal Attainment - the extent to which the teacher is flexible, in providing opportunities for students to pursue their individual interests.
6. Organization and Clarity - the extent to which class activities are clear and well organized.
7. Student Influence - the extent to which the teacher is learner-centered and allow students to participate in course planning decisions.

Darkenwald (1989) administered the scale to both students and instructors and discovered a discrepancy in how each group perceived its learning experience. According to the results, students want a learning environment that is characterized by involvement, teacher support, task orientation, and organization and clarity. What they got was "a social climate deficient in all these attributes" (p. 72). But, instructors reported a more positive perception to the experiences when responding to the ACES (p. 73). The difference between the students' and educators' responses to the classroom climate points out the need for continual evaluation and assessment of the learning experience for the adult learner.

Adults participate in the learning process with precise expectations and at times are faced with barriers to learning. The best motivators for the adult learner are interest and selfish benefit. If they can be shown the learning experience benefits them, they will perform better and the benefits will be long lasting.

Social Learning

One of the earliest theorist of learning was E. L. Thorndike (1932) who repeatedly

wrote about the learning process as a matter of stimulus and responses; individuals react to stimulus and respond accordingly. An example of this could be an individual experiencing a stimulus such as losing control of a car on a slippery road and relating that experience to a driving behavior, then responding to that stimulus by driving slower in the future when the perceived road conditions are the same as during the original experience. The experience then becomes ingrained as a behavior. Rotter (Rotter, Chance, & Phares, 1972) expanded on Thorndike's concepts of stimulus and response in his Social Learning Theory (SLT).

Rotter first published his Social Learning Theory in 1954. His basic tenet is that social behavior is learned and should be approached as such; therefore, an individual's personality is a reflection of that individual's learning style (Rotter et al., 1972, p. 4). It is important to note that the term "causal" is not used because it often implies singularity and it is best to think of social learning as a multi variate experience. Rotter uses four basic concepts to help explain this multi variate experience; behavior potential, expectancy, reinforcement value and the psychological situation (Rotter et al., 1972, p. 11).

"Behavior potential may be defined as the potentiality of any behavior occurring in any given situation or situations as calculated in relation to any single reinforcement or set of reinforcements" (Rotter et al, 1972, p. 12). Occupance, as defined by Rotter, describes the action of occurrence once that occurrence has established learned behavior in the individual. As with most cognitive activities this occupance can be directly observed or implied and it is an individual's expectancy that gives value to reinforcement.

Expectancy can be defined as the perceived potential an individual may place on any occurrence or situation. Schwarz (1966) defines expectancy "... as the subjectively held probability that a given reinforcement will occur in a specific situation contingent upon a particular behavior" (p. 57). The psychological situation is comprised of past experiences and the outcomes. It is the amount or type of control an individual may have over the psychological situation that affects success, intent, and resolution to an occurrence (Rotter et al, 1972).

There appears to be implications of SLT's application to learning theory. Chance (1959) demonstrated how the reinforcement of specific behavior can effect the outcome of other behaviors. . Chance selected 167 students enrolled in introductory psychology courses and randomly divided them into 4 groups. Each group was given different structure and instruction on an experiment designed to refine and validate two new personality tests (p. 49). The purpose of his study was to test the hypothesis that the time between occurrences of the learning experience effects the intensity or influences of the generalization of expectations. The results established a significant pattern in which the levels of expectations are generalized to the degree that the individual perceives tasks to be similar and/or part of a larger behavior.

Locus of Control

A review of research concerned with attitude and motivation of individuals has revealed a substantial body of literature. Within this body the concepts of competence,

helplessness, mastery, and alienation have surfaced. These concepts deal with the way an individual may control important events or occurrences in their lives (Lefcourt, 1966). Adler's (Ansbacher & Ansbacher, 1956) and White's (White, 1959) concept of man's inherent inferiority and the ability to overcome helplessness and develop mastery has produced theories questioning man's ability to obtain competency and effectance over his/her environment. It is these concepts that help to better define locus of control. Locus of control is built on a construct of expectancy variables rather than the motivation variables as discussed above.

As the leading researcher on locus of control, Rotter based his concept construct on his Social Learning Theory (1954). The basic tenet of Rotter's SLT is that "the potential for any behavior to occur in a given situation is a function of the person's expectancy that the given behavior will secure the available reinforcement, and the value of the available reinforcements for that person" (Lefcourt, 1966, p. 207). The control construct that evolves out of this tenet is considered a generalized expectancy that operates across a large number of situations, which may or may not relate to the individual's control over what happens to him or her (Rotter, 1966). This control may be internal or external. Internal control refers to the perception that occurrences and the outcomes are consequences of one's own actions and therefore under personal control. External control refers to the perception that the individual lacks control over what happens to him or her (Rotter, Seeman, & Liverant, 1962).

Lefcourt wrote an article as an attempt to collectively review research pertaining to locus of control (Lefcourt, 1972). He developed five themes of importance out of the

research that appeared to have recurred with some frequency and consistency. Those five interrelated areas are: "(1) the resistance to influence; (2) cognitive activity (3) deferred gratification, achievement behavior, and the response to success and failure; (4) familial and social antecedents of locus of control; and (5) changes in locus of control" (Lefcourt. 1972, p. 2).

Odell (1959) and Crowne & Liverant (1963) established that individuals high in externality also exhibited a greater propensity toward conformity and influences. A study done by Taylor and Boss (1985) illustrates the influences of outside forces on an individual's performance on a given task. Sixty-two adults enrolled in an six month Adult Basic Education program were given a modified version of Valecha's eleven item Rotter I-E Scale designed to determine locus of control early on in the course. Data was analyzed using completers and non-completers as the independent variables. The locus of control for the adult learners who completed the course was significantly more internal than for those who did not complete. Those who completed the course were able to overcome problems of transportation, weather, conflicts in work schedules and frustration generally associated with academic learning. It is suggested by this study that the adult learning process should be designed to facilitate the adult learner's need to develop or support internal orientation.

A study by Daniels and Stevens (1976) used 146 undergraduate psychology students and selected into two instruction design groups. The study was designed to find out the difference between internally and externality controlled subjects reaction to traditional instruction -vs- self directed instruction. Both groups were taught by the same

instructor. Students in the traditional method course were required to attend all lectures and complete the assigned readings from the text. An exam was given every Friday on the material discussed in class and the required reading. The students in the self directed method were asked to complete a learning contract for grade form. The form stipulated the course requirements for various grades. The grade for the course was agreed upon based on the contract's completion. Results of the study found externally control individuals preformed better under teacher controlled methods, while internally controlled individuals preformed better under contract plan methods. Clearly this study illustrates the results of influence on cognitive activity.

A study done by Otten (1977) demonstrated the effects of locus of control on academic performance as it relates to achievement behavior. Forty five undergraduate freshman and 45 first year graduate students were part of 5-year outcome study. At the beginning of the study they were given Rotter's Locus of Control and the Autobiography Locus of Control instruments as predictor variables. After 5 years the data on each student was collected as outcome variables. These variables were grade point average, degree attained or not attained. A correlation coefficient was computed between each of the predictor variables independently. Then correlation coefficients were computed between the predictor and each outcome variable. A t-test for significance was used to establish the mean difference. The results of the study established three interesting findings; (1) locus of control appears to be an accurate indicator of grade obtainment, (2) those externally centered tend to be more persistent academically, while internals are more likely to complete the degree program in five years or drop out. In young adults

internally centered individuals exhibit a higher level of achievement than do externally center individuals.

As Lefcourt found, a multitude of studies done with college students have shown that academic success may depend on an individuals locus of control (Brandt, 1975; Otten, 1977; Gilmore & Reid, 1978; Taylor & Boss, 1985). Brown and Strickland (1972) have even suggested that internally controlled individuals are more likely to participate in student organizations than externally controlled individuals.

Self-Efficacy

Self-efficacy refers to an individual's beliefs concerning their abilities to organize and implement processes necessary to attain desired performance levels (Bandura, 1987). Bandura (1978) also believes that self-efficacy effects the perceived control an individual may have with the psychological situation or locus of control. Self-efficacy judgments place considerable control over the choices of activities and environment. The amount of effort that an individual may expend on a task is dependent on that individuals perceived self-efficacy. These choices may be based on an inflated value of one's own ability and produce a negative outcome. At some point if outcomes continue to be negative an individual will no longer set tasks to be accomplished. It is those individuals who persevere that produce significant success in task completion. The amount of stress that is felt by an individual in a learning environment is related to the perceived strength of that individual's self-efficacy (Bandura, 1982). This self-efficacy or control an individual

may have over the psychological situation was first described by Phares (1957) as internal-external control. The internal or external locus of control felt by an individual does have an affect on how that individual preforms and the outcome of that performances (Lefcourt, 1972). It is important to note that relinquishing personal control undermines self-efficacy (Bandura, 1982).

Attainment of self-efficacy is accomplished through four principle sources of information; (1) performance attainment, (2) vicarious experiences, (3) verbal persuasion and (4) the physiological state the individual is in at the time (Bandura, 1982).

Performance attainment relates to the success or failure of a learning experience. Success increases self-efficacy and failure lowers it. Learning through vicarious experiences is the bases of the majority of educational process in this country. Through text books and lectures experiences are gained based on historical rhetoric. An individual may also gain self-efficacy through the successes and failures of others. Examples of this are peer advising and mentoring programs. It is through verbal persuasion that peer advisors and mentors enable an individual to risk failure to ensure success. The more an individual succeeds, the more concrete that individual's self-efficacy becomes. The physiological state may be effected by the level of stress an individual feels, the condition of the individuals body at the time, or the weather. Studies have been done that show an individual's level of self-efficacy can be increased through intervention. Bandura (1982) showed that recovery from a heart attack can been improved by increasing the level of self-efficacy in the patient. Bandura & Adams (1977) successfully treated individuals with a snake phobias by increasing the individuals' self-efficacy levels.

In a paper presented at an annual meeting of the American Educational Research Association, Schunk (1988) discussed the role of self-efficacy in the prediction of student academic performance. Schunk's concept on self-regulated learning was derived from Bandura's social cognitive learning theory. The basic premise of Schunk's concept is that the student is an active participant in their own learning process (Schunk, 1988). It is the student's interactions between "attending to instruction, processing and integrating knowledge, and rehearsing information to be remembered" (Schunk, 1988, p. 3) along with the active participation by the student, the level of confidence, and the anticipated outcome that establishes the level of success the student may experience.

A study done by Hurlbut (1988) explored the relationship that age plays on vicarious experience. She took 93 elderly volunteers and randomly assigned them to one of four treatment groups. She then took 85 university students studying psychology and randomly assigned them to the previous four treatment groups. These four treatment groups were established from a base story presented to the subjects. The story was about an individual who had decided to further his/her education. Before the individual was allowed to enroll he/she had to receive a score of 75% or greater. Each of the four treatment groups was given different information about the outcome of the required evaluation exam. The four treatment group stories were: 1) a score above 75% was earned and was actually in the top 10% of participants or failed and scored below 75% and ended up in the bottom 10% of the participants; 2) the individual receive negative feedback from family, friends, and university personnel or receive a positive reaction; 3) the individual was either 20 or 65 years old; and 4) the individual was male or female.

For the negative reaction story the stereotype was stated as the older student was discourage from returning to university because he/she was to old and the younger student because he/she had low scores. With the positive reaction, the older student was encouraged to continue and the younger were encouraged to continue because average students have much to offer in the class room (pp. 138 - 139). The subjects were then assigned a tasks. consisting of reading and answering questions to three essays. The essays covered three separate subjects; communications, money management, and a practice essay covering Canadian geese. Prior to completing the questions pertaining to the essay the subject were asked to make a pre-task performance self-evaluation based on two criteria. The first was on "prior judgement about how well one would do on a particular task (pre-task performance predictions)" and "judgements of how well one actually performed on a particular task (post-task performance prediction)" (p. 139).

Results were obtained by running data through a multi variate analysis based on repeated measures. The between variables were age, outcome, and other's reaction. The repeated variable was performance prediction for the pre and post task. Significant results were obtained for age group and outcome. The indication is that older adults gave lower predication values than younger adults. Older participants thought they had failed the task more often than not. Younger adults reported greater success than failure (p.139). Significant results pointed to the fact self-efficacy was more prevalent in the pre-outcome stage than in the post-outcome stage. The research appears to support the idea that elderly adults are not influenced by vicarious experience as are young adults. Elderly adults are influenced more by interaction with their peers. It is the author's

experience that young adults may perceive contact with their peers as a vicarious experience.

Depth Processing

The concept of depth processing originated with experimental psychology and memory research. Craik and Lockhart (1972) propose that memory is a by product of thinking and is left behind in the learning process as an occupance defined by Rotter (et al, 1972). It appears that the level and style of depth processing is an integral part of the learning continuum (Kirby & Woodhouse, 1994; Perkins & Brutton, 1992; Schmeck & McCarthy, 1982). Depth processing can be best defined through it's characteristics. Kirby & Woodhouse (1994) describes depth processing as the "focus on main ideas rather than details, greater connection of new information with prior knowledge, less reliance on verbatim recall, reordering or drawing connection between disparate sections of a text, drawing principles, and ability to apply learning to a novel task" (p. 147). It is the enhancing of recall of information and information importance that contributes to the individuals ability to establish a useful learning strategy.

Beaugrande (1984) expresses the process as being "centered on distinctive levels or depths" and that "during normal communication, the various levels are processed in parallel, not series, because the demands of the levels evidently compete. When one level is allotted processing dominance, the others are not fully shut down, but receive fuzzy processing, i.e. partial, provisional, and approximate" (p.4). Beaugrande summarizes this

as "the specialization of the memory stores can be related to processing depths. Short-term sensory memory storage would be specialized toward sounds/letters and word images; short-term memory toward syntactic phrasing and local concept/relation configurations; and long term memory toward main ideas and goals" (p. 6).

Biggs (1987) has described three similar dimensions attributed to an individuals approach to learning; Deep, Surface, and Achieving. Each of these dimensions have motive and strategy as common components. Kirby and Woodhouse (1994) have defined these dimensions as : (a) "the Deep Approach to learning is characterized by intrinsic motivation and rote learning strategies, the Surface Approach by extrinsic motivation and rote learning strategies, and the Achieving Approach by achievement motivation and task-oriented, organized strategies" (p. 149). It is important to note that individuals may have any combination of these dimensions at any one time. A study done by Biggs and Rihn (1984) found that students seeking help from a learning assistance center appeared to fall into the surface approach dimensions and after completing the centers program were found to have moved into the deeper approach dimension. Andre (1979) argued that "presented information may be processed to a greater or lesser depth along a continuum ranging from superficial processing of perceptual features to processing for the meaning of the information" (p. 280). Andre also hypothesized that the levels at which a question is presented effects the nature of the memory task. It is this level of presentation that establishes the utilization value of the memory that is stored. In support of this hypothesis, Anderson (1972) clearly believes that an individual would respond correctly to factual question without any understanding "by matching its elements with the surface

orthographic or phonological features of the original communication" (p. 100). An inferential question would require an individual "to state a relationship between elements of the passage [reading comprehension] that is implied but not explicitly stated in the passage" (Andre, 1979, p. 282).

How this is processed or facilitated depends on the research you may read.

Morris, Bransford, and Franks (1977) clearly believe that the outcome of the process must follow the intent. If you want specific results of depth processing then you must test for the depth at that same level. An example of task specific would be if a group of students are to practice taking an exam and the expected results are dependent on the depth of processing then the practice session should not express any lower processing requirements. To the extent memory "trace" has depth is dependent on its durability and appears to be task specific (Craik & Lockhart, 1972). This task specificity may relate to the encoding process used (Tulving & Thomson).

Fisher and Craik (1977) go into more detail by explaining the importance of the retrieval cue in relation to the encoding. The retrieval of the learned information is dependent on the compatibility between the level of encoded cue and the level of the depth processing (Spofford & Schmeck, 1982). This researcher believes the true importance of depth processing can be seen on the effect it has on trace memory. An individual's level of control over cue generation may have a significant relationship to the level of retrieval of learned information. Studies done by Bobrow and Bower (1969) and Slamecka and Graf (1978) suggest that the individually generated cues produce recall patterns much superior to cues generated by outside sources. This appears to be

congruent with Gazda's (et al, 1995) concept on preference.

Two studies done by Spofford and Schmeck (1982) addressed the questions of encoding and cue retrieval depth and cue generation. The first study dealt with the interaction between encoding and retrieval cues in relationship to cues being self generated. 117 undergraduate psychology students were randomly assigned to three groups; (1) incidental rhyme, (2) incidental associate, and (3) intentional learn. Each group was presented 72 words both visually and auditorally in 8 second intervals. The words were all single syllable and could be described as high on the dimensions of concreteness [the learner accepts the meaning], meaningfulness [the definition of the word relates to a know concept of the learner], and categorization [the learner can relate the word to an understandable experience] (p. 6). Two of the groups, incidental rhyme and incidental associate, were told that for the purpose of another study associative or rhyming norms were needed respectfully for each of the 72 words. The intentional group was instructed to learn the words for later recall. Subjects were then asked to recall the words based on the two cues; associate and rhyme. The results appear to support Fisher and Craik (1977) and Tulvig (1978) in that compatibility between encoding processes is the determining factor of recall. This should not be surprising based on the fact the subjects self generated cues; therefore ensuring compatibility. The second experiment was similar to the first except the experimenter generated the cues. The results were similar but, there appeared to be significant evidence to support the idea that encoding compatibilities are predominate but individuals using high levels of depth processing do have better recall over all no mater the compatibility of the encoding (Spofford &

Schmeck, 1982).

Depth Processing Preference

According to Schmeck and McCarthy (1982), individuals who scores high on depth processing tend be "calm, confident, responsible, flexible, and have considerable metacognitive insight with regard to their cognitive functioning (p. 4)". Studies done by Spofford & Schmeck (1982), Schmeck & Ribich (1978), and Meier, McCarthy, & Schmeck (in press) have indicated a negative relationship between anxiety and depth processing. These same individuals which score high on depth processing tend to relate positively to flexibility, self-efficacy and locus of control. Individuals high in depth processing also tend to remember cues of semantic nature; while individuals low on depth processing respond better to superficial and shallow cues. It is apparent that programming for skills improvement needs to strive for high depth processing levels.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study was to investigate the effects of the Ready, Set, Go! program based on eight week sessions offered throughout the academic year. The program was developed in response to an overwhelming number of individuals residing in Lincoln County, Montana seeking and not being adequately prepared for retraining after being laid off from the logging and mining industries. Funding for the program was procured through a Displaced Homemakers Grant. The investigation first described the outcomes related to self-esteem, locus of control attitudes, and depth process established by the students at the Lincoln County Campus in the Ready, Set, Go! program. Secondly, the study explored the relationship between levels of self-esteem, locus of control, and depth processing. Finally, the study sought to establish whether there are identifiable groups of individuals in the program and explore the similarities within groups as they relate to possible curriculum development.

This case study investigated the differences in attitudes about self of pre-vocational education students after completing the Ready, Set, Go! program. This was not an experimental study from which generalizations can be made. The information gathered from this case study will be used for program evaluation. A case study

examines action as it takes place in a bounded system. Merriam defines a case study as "an examination of specific phenomenon such as a program, an event, a person, a process, an institution, or a social group" (Merriam, 1988, p. 9). For this study the social group observed was the pre-vocational education students enrolled in the Ready, Set, Go! program. Approximately 60 to 80 individuals enrolled in the program each year. When an individual enrolled in the program he/she was briefed on this study and asked to sign a release of information request and acknowledge participation in the study. To establish attitudes about self, each individual was asked to complete the ASSET and the Inventory of Learning Process-Revised (ILP-R) during the first class meeting. At the end of the 8-week course, the ASSET and ILP-R were once again given. The profiles were put together as a result of looking at the frequency distribution of the students. A t-test was used in the comparison of the pretest-post tests. The value of t-test in research is amplified when the "solution of immediate practical problems where a decision must be made, and resources allocated on the basis of the decision" (Henkel, 1976, p. 7).

The Setting

Lincoln County, Montana is approximately three and half times the size of the state of Rhode Island and has a population count just under 20,000. Seventy-six percent of land in Lincoln County is a part of the Kootenai National Forest. The remaining 14% of the land belongs to two major private land owners. The county has three major communities, Libby, Troy, and Eureka.

The economics of Lincoln County revolve around the wood products and mining industries. By 1993, the mills and mines had closed or down-sized due to economic changes, leaving hundreds of laborers unemployed with no future employment envisioned. By early January 1994, federal retraining grants were assigned to the population of Lincoln County. With these grants came an opportunity for individuals to receive funding for the development of new skills and an extended living allowance. In order for these individuals to receive these funds, they were required to commit to a two-year vocational program. In Lincoln County the only institution available to meet this requirement was the Lincoln County Campus (LCC) of Flathead Valley Community College (FVCC).

Evaluation Instruments

To be useful in research, instruments must be both valid and reliable. The validity of an instrument refers to the ability of the instrument to measure what it is designed to measure (Gay, 1987; Kerlinger, 1986). There are three types of validity. Content validity is the "degree to which a test measures an intended content area" (Gay, 1987, p. 129). Construct validity is the "degree to which a test measures an intended hypothetical construct" (Gay, 1987, p. 131). Criterion-related validity establishes how well an instrument compares test or scores "with one or more external variables, or criteria, known or believed to measure the attribute under study" (Kerlinger, 1986, p. 418). Reliability is the "accuracy or precision of a measuring instrument" (Kerlinger, 1986, p.

405).

ASSET

The ASSET instrument is an educational advising, course placement, and retention planning tool developed by ACT specifically to serve students entering two-year academic institutions. The first ASSET instrument was developed in 1982 in response to a set of student retention and transfer objectives identified by the Los Angeles Community College District. In 1983, the ASSET was offered for use to other two-year institutions. The version being used in this study was revised and released for use in 1989. ACT reports the reliability of the ASSET using the Kuder-Richardson formula (KR-20) as ranging from .87 for the writing skills to .66 for elementary algebra. This is based on a sample size 2,469 subjects (ASSET, 1990). Although the ASSET is widely used by 93% of the community colleges, the company does not make any construct or content validity studies available nor does a review of the literature show any. Only criterion-related validity is reported for the ASSET. Criterion-related validity was based on a comparison of students subject grades and skill prediction made by the ASSET. ACT reports that median scores of 95 subjects were 43.5 with an overall success rate of 80%.

The ASSET instrument evaluates a student's level of competencies in reading, writing, and mathematics through the use of four, 25 minute test segments. The instrument was scored by the investigator using the institutional assessment criteria

established for the ASSET. The American College Testing program set the score range of 23 to 55 for all ASSET tests. This range of scores allows for a normative interpretation of the test scores. Approximately 95% of scores fall at or below 50, 75% at or below 45, 50% at or below 40, 25% at or below 35, and 5% at or below 30.

The reading skills are evaluated through a 24-item test that measures reading comprehension based on referring and reasoning skills. The test consists of three prose passages of about 375 words each. Each passage is followed by a set of eight multiple choice questions. Students are asked to find the meaning of words through context by referring to what is explicitly stated and to draw conclusions, comparisons, and form generalizations.

Writing skills are evaluated through a 36-item test that measures a student's level of skill in punctuation, grammar, sentence structure, organization, and style of standard written English. Items not evaluated are spelling, vocabulary, and recall of rules of grammar. The test has three prose passages with each passage followed by 12 multiple-choice questions.

Mathematic skills are evaluated through two 25-minute tests. The first test measures numerical skills through a 32-item test that evaluates a student's ability to perform (a) operations with whole numbers, decimals, and fractions and (b) basic problem-solving skills involving arithmetic and pre-algebra. The second test includes four separate mathematics segments designed to supplement the numerical skills test. These tests evaluate elementary algebra skills, intermediate algebra skills, college level algebra skills, and geometry skills. Students are asked to evaluate their own perceived

level of algebraic skills in order to select which of the four test to take. The students involved in this study all selected the elementary algebra level test and none of the participants completed the algebraic skills test.

The Asset was collected from each participant upon completion for both the pre- and post testing. The instrument was then hand scored on site by the author using the standard campus answer template. The scored responses were then entered into the data base in the individual's file identified by the participant's social security number.

Inventory of Learning Processes-Revised (ILP-R)

The Inventory of Learning Processes-Revised (ILP-R) is used to measure learning styles related to cognitive psychology, and has evolved through laboratory research concerning information processing and memory (Schmeck, Geisler-Brenstein & Cercy, 1991, p. 343). The ILP was first published in 1977 and used an initial pool of 121 items (Schmeck et al., 1977). The inventory was constructed by a factor analysis of student responses to statements concerned with academic studying and related to statements constructed by describing activities and beliefs suggested by cognitive psychology, memory, and information research. This process produced the four factors of Deep Processing, Elaborative Processing, Fact Retention, and Methodical Study.

Depth processing assesses the use of dialectical and hierarchical information structuring techniques, categorizing, and critical evaluation of category placement. The Deep Processing scale contained 18 items reported to have an internal consistency of .82

and a test-retest reliability of .88 with a two week interval between testings. The second scale is called Elaborative Processing, and it assesses the use of personal experience and self involvement for the purpose of encoding information. The Elaborative Processing scale reported a .67 on internal consistency and a .80 test-retest score. The third scale is Fact Retention which assess attention given to detail and memorization of facts as a way of taking exams. Fact Retention reported an internal consistency of .58 and a test-retest of .79. The fourth scale was Methodical Study which assesses regularity and frequency in studying and the methods used necessary for earning high grades. This scale reported an internal consistency of .74 and a test-retest of .83 (Beyler & Schmeck, 1992; Gadzella et al, 1987).

The ILP-R was revised for the second time in 1991 with the addition of four new dimensions along with sub-dimensions (Geisler-Bernstein, 1995). The second revision consists of 150 items including 12 maintenance items using a 6 point Likert scale with response options ranging from strongly disagree to strongly agree. Cronbach alpha internal consistency reliability range from .72 to .87 for the main scale and from .58 to .83 for the sub-scales (Geisler-Bernstein & Schmeck, unpublished). Gadzella and others (1987) recorded similar scores. The 12 dimensions and subscales of the ILP-R are as follows (Schmeck & Geisler-Bernstein, 1995):

1. Academic Self-Efficacy--This dimension concerns the overall level of confidence or feelings of competence that students feel with regard to academic tasks. There are three sub-scales to this dimension.
 - 1.1 Self-Efficacy: Organization--This subscale concerns students' belief in their ability to put knowledge together into an orderly, functional, structured whole. This is similar to outlining.

- 1.2 Self-Efficacy: Thinking--This subscale deals with the confidence one has in his/her ability to reason, argue, or discuss information with self and others.
- 1.3 Self-Efficacy: Fact Retention--This one concerns confidence in one's memory for particulars.
2. Motivation--This dimension measures overall interest and effort in academic tasks, including the taking of personal responsibility. There are 3 subscales to this dimension.
 - 2.1 Motivation: Academic Interest--This subscale concerns curiosity and concern with school work.
 - 2.2 Motivation: Personal Responsibility--This one concerns a willingness to take personal responsibility, not overestimating the control others have over one's life, and not blaming others.
 - 2.3 Motivation: Effort--This concerns the amount of energy put into studies, having educational goals, and good attitude toward school.
3. Self-Esteem--This dimension measures pride in oneself, self-respect, or concern with what other people think.
4. Self-Assertion--This dimension measures willingness to express and assert oneself in school and to get involved in group discussions.
5. Conventional Attitudes--In this dimension, the student with high scores tend to have attitudes and principles that are traditional and conformist. This student will hesitate to question authority and cooperate with the rules of the society he/she is in.
6. Methodical Study--This dimension measures traditional study methods such as recopying notes, outlining, and studying in the library.
7. Deep Processing--This measures overall intellectual understanding, seeing things in theoretical and logical perspective. This domain is made up of two subscales.
 - 7.1 Deep Processing: Abstract/Semantic--this one measures a tendency to use language to think theoretically and logically while studying. It includes comparing explanations and/or theories with another. It concerns paying attention to how a theory works.
 - 7.2 Deep Processing: Critical Thinking--This subscale is concerned with the logical evaluation of theories.
8. Elaborative Processing--This is similar to deep processing but is especially concerned with the creative processing of information and how it relates to one's own experiences. It has two subscales.

- 8.1 Elaborative Processing: Self-Actualization--This subscale concerns the individual striving to become all that one can be, discovering emotionally what one's values are and getting in touch with one's feelings.
- 8.2 Elaborative Processing: Concrete/Episodic -- This subscale concerns using one's imagination to put together a whole picture by using life experiences in studying. An individual would be functioning in the "real world".
9. Agentic Processing--This dimension deals with getting the job done and on time. It has two subscales.
 - 9.1 Agentic Processing: Serial/Sequential--An example would be a student who goes step by step and does not like to jump from one task to another before completion.
 - 9.2 Agentic Processing: Analytical--This subscale measures rule-based processing and logical structuring.
10. Literal Repetition--This is the last of the major dimensions. It involves memorization word-for-word, learning by repeating, and not questioning.
11. Impression Management--This is one of two maintenance scales on the inventory.
12. Random Response--this maintenance scale measures the tendency to totally disregard the instructions and attempt to just answer the questions just to get the test over.

(Schmeck, 1996)

The ILP-R was collected from each participant upon completion for both the pre- and post testing. The responses to the instrument were then entered into the data base by the investigator. The responses were then scored using a statical program, SPSS. The scored responses were then entered into the data base in the individual's file identified by the participant's social security number.

Procedures

The first course offering of the Ready, Set, Go! program was during the fall

semester of 1993. The Lincoln County Campus was interested in this study for support in the continuation and procurement of Perkins Grants. Data used was from the cohort of students who were in the program during the 1994/95 collegiate academic year. A letter (see Appendix A) requesting an individual's participation and use of biographic data was distributed to approximately 85 students and asked to sign and return to program administrators. The participants were informed that the information was for educational use only, and names would not be revealed. Complete data sets were collected on 50 individuals

The ILP-R was given on the first day of the course to all students who agreed to participate in this study. The ASSET was required of all students wishing to qualify for the program. All data was entered in a relational data base (dBASE III+) and processed with a computerized statistical program (SPSS). Biographical data was obtained from a biographical survey completed by the participants during the first meeting of the class.

A t-test for correlated samples was used to analyze differences between means from the ASSET and ILP-R. The data collected was also used to investigate clusters of characteristics that may exist among the participants of the study. A cluster analysis was run on the post test data using the demographic variables to see if any particular groupings of participants formalized. A hierarchical cluster analysis was used to analyze the data. Hierarchical analysis was used due to its nature of not producing overlapping clusters (Aldenderfer & Blashfield, 1984). The final analysis produced a two cluster solution with the variable of age as the including factor. A t-test for equality of means was run in order to establish levels of significance among the factors and the two-cluster

solution. The factors consisted of the biographical data and the post test scores from both instruments.

The level of significance used was .05 with 49 degrees of freedom to establish the critical value of t (Henkel, 1976; Huck, Cormier, & Bounds, 1974; Kanji, 1993). The investigator chose .05 level of significance due to the limited ability of the study to be generalized as with any case study. Based on the limited program population it was felt that the use of .01 level would have been to great a risk to take (Henkel, 1976; Kanji, 1993).

Even though the analysis of the data did not justify the formation of focus groups one was formed from the individuals that did not complete the program to discuss possible similarities among the non-completers. Bers (1989) defines a focus group as,

A small (6-12 member), relatively homogeneous group that meets with a trained moderator who facilitates a 90- to 120-minute discussion in a non-threatening, relaxed environment about a selected topic. The goal of a focus group is to elicit participants' perceptions, feelings, attitudes, and ideas. Focus groups do not generate quantitative data, information, or numbers that can be projected to a larger population.(p. 261)

A focus group can be used to generate ideas for development of quantitative studies or used to supplement the findings of a quantitative study (Kaase & Harshbarger, 1993).

CHAPTER 4

FINDINGS

Introduction

The purpose of this study was to investigate the effects of the Ready, Set, Go! program based on eight week sessions offered throughout the academic year. The program was developed in response to an overwhelming number of individuals residing in Lincoln County, Montana seeking and not being adequately prepaid for retraining after being laid off from the logging and mining industries. Funding for the program was procured through a Carl Perkin's Displaced Homemakers Grant.

Data was collected through four sources. These were the ASSET placement test, the Inventory of Learning Process - Revised (ILP-R), a biographic survey, and a focus group. A total of 78 individuals participated in the study ending with fifty completed data sets used for analysis. Biographical data the pre-test scores for the ASSET and ILP-R were gathered at the first session of the program. On the last day of the 8 week program the ASSET and ILP-R were given once more for post text scores. A focus group of consisting of individuals who did not complete the program was formed spring semester 1996. A paired t-test and cluster analysis was used to analyze the data.

Participants

Fifty individuals with completed data sets were included in this study. The participants were self selected into the Ready, Set, Go! Program. Participants were notified of the availability of the program through local Job Service Office, Mental Health, Social Services, Lincoln County Campus student affairs office, and walk on enrollees. Upon referral the individuals chose whether to participate in the program or not. Ages ranged from 18 years old to 65 with a mean age of 39 years. Eighty percent of the group were female with approximately 50% being married. More than half the participants had dependents. Incomes ranged from \$2,400 per year to \$54,000 per year with a mean income of \$12,229 per year. Educational levels ranged from 6th grade to Master's degree and 95% were of Caucasian ethnicity . Three of the program participants continued on to become full time college students.

Procedures

Data was used from the 1994/95 collegiate academic year. A letter requesting an individual's participation and use of biographic data was distributed to 78 students with a request that they sign and return it to program administrators. Complete data sets were collected on 50 individuals. The participants were informed that the information was for educational use only, and names would not be revealed.

The ILP-R was given on the first day of the course to all students who agreed to participate in this study. The ASSET was required of all students wishing to qualify for the program. All data was entered in a relational data base and processed with a computerized statistical program.

A t-test for correlated samples was used to analyze differences between means from the ASSET and ILP-R. The level of significance used was .05 with 49 degrees of freedom to establish the critical value of t (Henkel, 1976; Huck, Cormier, & Bounds, 1974; Kanji, 1993). The data collected was also used to investigate clusters of characteristic that may exist among the participants of the study. A cluster analysis was run on the post test data using the biographical data to see if any particular groupings of participants formalized. A hierarchical cluster analysis was used to analyze the data. The final analysis produced a two cluster solution with the variable of age as the including factor. A t-test for equality of means was run in order to establish levels of significance among the factors and the two-cluster solution. Even though the analysis of the data did not justify the formation of focus groups one was formed from the individuals that did not complete the program to discuss possible similarities.

Five research questions were investigated in this study. (1) What was the profile of students who enter the program? (2) What was the profile of students at the conclusion of the program? The data that addresses these first two questions are found in tables 1,2, and 3. (3) What was the profile of students who drop out of the program and what does follow-up exit interviews indicate about non-completion. (4) What were the measurable changes in student profiles on the ASSET and ILP data based on pre and post

testing? (5) Did distinct clusters of students exist within the program? And if clusters did exist, what were their characteristics? The data addressing this question is found in table 5. The profiles for research questions 1, 2, and 3 were developed through the information gathered on the biographical survey, ASSET and ILP scores. Characteristics were developed through the use of a cluster analysis of the results of t-tests results on ASSET, ILP scores, and biographical data.

ASSET Scores

The ASSET was used as an initial evaluation for participation in the Ready, Set, Go! Program. The instrument evaluates a student's level of competencies in reading, writing, and mathematics through the use of four, 25 minute test segments. Students were asked to evaluate their own perceived level of algebraic skills in order to select which of the four test to take. The participants involved in this study all selected the elementary algebra level test. Only one individual attempted to complete the algebra segment and failed to complete it. Therefore, the algebra segment scores were eliminated from the study.

The ASSET supplied raw score and interpretive scoring for the institution to establish evaluative criteria for course level placement. All first time freshmen were required to take the ASSET prior to registration and academic advisement. One segment of the grant requirement was to establish an evaluative measurement for participation in the Ready, Set, Go Program. It was decided to use the existing instrument for skills

evaluation in the event of further tracking of participants. Form B of the ASSET was given to all the participants in the program. The American College Testing program set the score range of 23 to 55 for all ASSET tests. This range of scores allows for a normative interpretation of the test scores. Approximately 95% of scores fall at or below 50, 75% at or below 45, 50% at or below 40, 25% at or below 35, and 5% at or below 30.

A wide range of scores were obtained on the pre-test for each subject area.

Reading reported a range from a low score of 25 to a high of 50, Writing reported a low of 28 to a high of 51, and Mathematics reported a low of 26 to a high of 51. The scores for the post-test on the ASSET showed a reduction in range (see Table 1).

Table 1. ASSET Score Ranges.

Variables	Range	Low/High Mean	SD
Pre-test Reading	23 - 55	25 - 54	39.780
Post-test Reading		29 - 55	40.880
Pre-test Writing	23 - 50	28 - 51	39.340
Post-test Writing		29 - 53	41.180
Pre-test Math	23 - 50	26 - 51	36.380
Post-test Math		23 - 52	40.180

A t-test for correlated samples was used to analyze the differences between the pre-test and post-test means of the ASSET scores. The results of the analysis were used to establish whether a significant change had taken place in the skill level of the participants in the study. In all three subject areas, reading, writing, and mathematics, a significant change had occurred at a two-tailed level of .05 with 49 degrees of freedom.

(see table 2).

Table 2. Means and *t*-test for ASSET scores

Variable	Pre-test Mean	Post-test Mean	SD	<i>t</i> value	<i>p</i>
Reading	39.78	40.88	1.529	5.09	.001
Writing	39.34	41.18	1.434	9.07	.001
Mathematics	36.38	40.18	4.768	5.64	.001

The greatest increase in individual scoring was achieved by women in all three areas with the men showing the least amount of improvement on the mathematics. One of the male participants scored lower in mathematics on the post-test than on the pre-test. Twenty seven participants' pretest scores fell in the lower 50 percentile range in reading skills. Of that 27 participants 3 tested into the lower 5 percentile. On the reading post-test 22 participants scored in the lower 5 percentile with only 1 participant remaining in the lower 5 percentile. Thirty participants scored in the lower 50 percentile in writing skills with 1 of the participants in the lower 5 percentile. Post-test scores for writing reported 27 participants in the lower 50 percentile with one participant remaining in the lower 5 percentile. Mathematics scores produced the most pronounced change between pre and post-test scores. Thirty seven participants scored in the lower 50 percentile with 11 of that group scoring in the lower 5 percentile. On the post-test only 14 participants scored in the lower 50 percentile with only 2 participants falling into the lower 5 percentile.

ILP-R Scores

The Inventory of Learning Processes-Revised (ILP-R) was used to measure learning styles in context to cognitive psychology which includes information processing and memory (Schmeck, Geisler-Brenstein & Crecy, 1991, p. 343). The inventory was constructed by a factor analysis of students responses to statements concerned with academic studying and to statements constructed by describing activities and beliefs suggested by cognitive psychology, memory, and information research. This process produced the ten major factors and 13 sub-scales used in this study to analyze the effect the program had on the participants' locus of control, self-efficacy, and deep processing.

1. Academic Self-Efficacy
 - 1.1 self-efficacy: organization
 - 1.2 self-efficacy: thinking
 - 1.3 self-efficacy: fact retention
2. Motivation
 - 2.1 motivation: academic interest
 - 2.2 motivation: personal responsibility
 - 2.3 motivation: effort
3. Self-Esteem
4. Self-Assertion
5. Conventional Attitudes
6. Methodical Study
7. Deep Processing
 - 7.1 deep processing: abstract/semantic
 - 7.2 deep processing: critical thinking
8. Elaborative Processing
 - 8.1 elaborative processing: self-actualization
 - 8.2 elaborative processing: concrete/episodic

9. Agentic Processing
 - 9.1 agentic processing: serial/sequential
 - 9.2 agentic processing: analytical
10. Literal Repetition
11. Impression Management
12. Random Response

As with the ASSET, a wide range of score were reported (see Table 3). Scores were taken on each major scale as well as the subscales.

Table 3 ILP-R Score .

Variable	Range	Low/High	Mean	SD
Pre-test Self-Efficacy: total	32 - 192	58 - 147	95.12	17.160
Post-test Self-Efficacy: total		67 - 143	98.96	16.326
Pre-test Self-Efficacy: Organization	12 - 72	13 - 43	27.74	6.292
Post-test Self-Efficacy: Organization		20 - 40	29.78	4.991
Pre-test Self-Efficacy: Thinking	11 - 66	24 - 61	41.42	7.827
Post-test Self-Efficacy: Thinking		21 - 62	43.22	8.990
Pre-test Self-Efficacy: Fact Retention	9 - 54	15 - 43	25.96	6.770
Post-test Self-Efficacy: Fact Retention		14 - 41	26.76	6.626
Pre-test Motivation: total	23 - 138	64 - 123	101.31	12.256
Post-test Motivation: total		80 - 137	103.89	12.487
Pre-test Motivation: Academic Interest	12 - 72	35 - 66	54.25	7.505
Post-test Motivation: Academic Interest		39 - 72	55.14	8.268
Pre-test Motivation :Personal Responsibility	4 - 24	11 - 24	18.28	2.970
Post-test Motivation: Personal Responsibility		13 - 24	18.86	2.836
Pre-test Motivation :Effort	7 - 42	11 - 38	28.78	5.300
Post-test Motivation: Effort		20 - 41	29.89	4.092
Pre-test Self-Esteem	9 - 54	17 - 43	31.16	6.022
Post-test Self-Esteem		12 - 44	32.13	6.819
Pre-test Self-Assertion	10 - 60	17 - 54	32.79	7.201
Post-test Self-Assertion		10 - 46	33.11	7.912
Pre-test Conventional Attitudes	6 - 36	12 - 31	21.74	4.716
Post-test Conventional Attitudes		13 - 33	22.96	4.836

Table 3 ILP-R Score Continued

Variable	Range	Low/High	Mean	SD
Pre-test Methodical Study	12 - 72	23 - 68	44.38	10.656
Post-test Methodical Study		25 - 63	46.84	8.993
Pre-test Deep Processing: total	18 - 108	31 - 84	64.95	10.310
Post-test Deep Processing: total		48 - 92	66.67	9.218
Pre-test Deep Processing: Abstract/Semantic	9 - 54	15 - 48	35.65	6.460
Post-test Deep Processing: Abstract/Semantic		24 - 51	36.33	5.950
Pre-test Deep Processing: Critical Thinking	9 - 54	16 - 37	29.30	4.514
Post-test Deep Processing: Critical Thinking		23 - 41	30.34	4.255
Pre-test Elaborative Processing: total	17 - 102	52 - 93	74.12	9.075
Post-test Elaborative Processing: total		52 - 94	74.88	9.356
Pre-test Elaborative Processing: Self-Actualization	9 - 54	32 - 51	42.30	4.037
Post-test Elaborative Processing: Self-Actualization		31 - 52	42.40	4.751
Pre-test Elaborative Processing: Concrete/Episodic	8 - 48	18 - 43	31.82	6.127
Post-test Elaborative Processing: Concrete/Episodic		17 - 46	32.48	5.863
Pre-test Agentic Processing: total	14 - 84	27 - 68	52.76	8.900
Post-test Agentic Processing: total		32 - 69	54.54	7.276
Pre-test Agentic Processing: Serial/Sequential	8 - 48	16 - 39	28.60	5.552
Post-test Agentic Processing: Serial/Sequential		18 - 38	29.48	4.999
Pre-test Agentic Processing: Analytical	6 - 36	9 - 32	24.16	4.533
Post-test Agentic Processing: Analytical		14 - 32	25.06	4.108
Pre-test Literal Repetition	7 - 42	11 - 33	23.54	4.239
Post-test Literal Repetition		17 - 32	23.76	3.560
Pre-test Impression Management	5 - 36	5 - 26	12.02	3.42
Post-test Impression Management		13 - 33	22.96	4.836
Pre-test Random Response	4 - 24	3 - 12	6.10	2.243
Post-test Random Response		4 - 13	6.40	2.339

A t-test for correlated samples was also used to analyze the differences between the pre-test and post-test means scores on the ILP-R. The results of the analysis was used

to establish whether a significant change had taken place within the participants' learning structure. Only three of the scales; Self-efficacy Total, Methodical Study, and Impression Management showed significant change had occurred at a two-tailed level of .05 with 49 degrees of freedom (see table 4). It is interesting to note that one of the three scales showing significant change, Impression Management, dealt with instrument management. It appears that the subjects of this study learned to be more effective or comfortable with testing.

Table 4. Means and t -test for ILP-R Scores

Variable	Pre-Mean	Post-Mean	t value	p
Self-Efficacy: total	95.12	98.96	2.76	.008
Self-Efficacy: Organization	27.74	29.78	2.50	.016
Self-Efficacy: Thinking	41.42	43.22	1.41	.223
Self-Efficacy: Fact Retention	25.96	26.76	1.08	.287
Motivation: total	101.31	103.89	1.51	.137
Motivation: Academic Interest	54.25	55.14	.84	.403
Motivation :Personal Responsibility	18.28	18.86	1.23	.226
Motivation :Effort	28.78	29.89	1.63	.109
Self-Esteem	31.16	32.13	1.05	.301
Self-Assertion	32.79	33.11	.37	.710
Conventional Attitudes	21.74	22.96	1.71	.0
Methodical Study	44.38	46.84	2.73	.009
Deep Processing: total	64.95	66.67	1.38	.174
Deep Processing: Abstract/Semantic	35.65	36.33	.81	.424
Deep Processing: Critical Thinking	29.30	30.34	1.83	.073

Table 4. Means and t-Test for ILP-R Scores Continued

Variable	Pre-Mean	Post-Mean	t value	p
Elaborative Processing: total	74.12	74.88	.60	.554
Elaborative Processing: Self-Actualization	42.30	42.40	.14	.890
Elaborative Processing: Concrete/Episodic	31.82	32.48	.80	.426
Agentic Processing: total	52.76	54.54	1.66	.103
Agentic Processing: Serial/Sequential	28.60	29.48	1.30	.200
Agentic Processing: Analytical	24.16	25.06	1.39	.740
Literal Repetition	23.54	23.76	.33	.740
Impression Management	12.02	13.20	2.88	.006
Random Response	6.10	6.40	.83	.409

Cluster Analysis of ASSET, ILP-R, and Biographic Variables

Cluster analysis is a generic term used to describe a wide variety of statistical assessments used to create classifications. Cluster analysis classifies highly similar variables groups. "A clustering method is a multivariate statistical procedure that starts with a data set containing information about a sample of entities and attempts to reorganize these entities into relatively homogeneous groups" (Aldenderfer & Blashfield, 1984, p. 7). For this study cluster analysis was used to establish if distinctive learner groups existed in the Ready, Set, Go! Program. This information would then be used to evaluate and possibly restructure the program.

A hierarchical cluster analysis was processed containing all the post-test variables

from the biographical survey, ASSET and the ILP-R. Fifty completed cases were included in the analysis. The hierarchical process did not identify any distinct cluster groupings. Therefore, a seven-cluster process was run using the quick cluster process of SPSS and the Ward technique. A two cluster solution was determined to be the most appropriate solution for this data.

Participants were distributed between the two clusters based on age. The two clusters were define as Younger Adults and Older Adults. The younger adult cluster included 27 individuals age 18 through 38 and the 23 individuals included in the older adult cluster were ages 39-65.

After the two-cluster solution was chosen, the means for each group were calculated using the scores from the ASSET, ILP-R and biographical survey. Levene's Test for Equality of Variances was performed to determine the homogeneity of the variables within the cluster group. Out of the twenty five variables from the post test scores total of 6 reported significant differences between the two clusters of young adults and older adults (see table 5).

Table 5. Significant Variables Between the Cluster

Variable	F	df	p
age	F = 3.26,	df = 2/48,	p = >.05
marital status	F = 3.32,	df = 2/48,	p = >.05
writing	F = 6.217,	df = 2/48,	p = >.01
motivation / academic interest	F = 3.36,	df = 2/48,	p = >.05
deep processing / semantic memory	F = 4.471,	df = 2/48,	p = >.01
agentic processing / serial	F = 6.91,	df = 2/48,	p = >.05

Cluster 1: Young Adults

The Young Adults group consisted of twenty one females and three males. The ages ranged from 18 years to 38. In this cluster 18 of the females were divorced or separated with dependents while all the males were married with dependents. It appears that the individuals in this group had stronger writing skills than those from the older adults group and tended to use language to think through theories and assignments. On the other hand, this group appeared to be less motivated to learn based on the ILP-R scores. Of this group, three females continued on as full time college students.

Cluster 2: Older Adults

The Older Adults group consisted of twenty four females and two males. The ages ranged from 39 to 65 years of age. Only six of the females were divorced or separated but both of the males were divorced. This cluster had the weaker writing skills and appeared to exhibit a greater motivation to learn. Based on the ILP-R scores, the older adults appeared to be more structured in their learning processes.

Non-completion Group

A focus group comprising of individuals who did not complete the Ready, Set, Go! program was used to supplement the data collected in aiding the evaluation of the program. Twenty eight individuals out of the 78 who started did not complete the program. A comparison of pre-test scores between those participants who completed the program and those of this group revealed no differences in the range of ASSET or ILP-R scores. Of that twenty eight, six were able to meet as a group to discuss why they had stopped out. Twenty eight, thirteen were reached by phone, three individuals who had

been referred to the program from Mental Health had been hospitalized for psychiatric help, and the remaining six were unreachable.

Comments heard from members in this group were:

"I dropped out because my husband thought I was wasting my time. I should stay at home even if the kids were all gone."

"I got called back to work at the mill."

"I was told I would lose my benefits if I continued."

"I was enjoying my self, learning how to learn, but I got a job."

"My husband got a job in Sandpoint and we moved."

"I just couldn't keep up. I just can't seem to learn."

The majority of reasons for dropping out were due to finding employment and a lack of self confidence in the ability to compete with others in the program. One underlying factor that came up in the focus group was the lack of support from family and friends to complete the program. Most felt pressured to drop out even when they felt they could do well or make themselves more employable.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The changing work force has created a need to revisit the notions on how education prepares individuals to become employable. This change is being brought about by "economic pressures, work force diversity, and advances in technology" (Lankard, 1993, p. 1). It has become even more important to prepare individuals for a multitude of skills so that they can adapt to the ever changing demands of employers. As the demographics of the work force change from a white male to an older, non-white female, it is apparent that training location is of utmost importance (Cohen, 1991). Historically this need has been and continues to be met by the local community colleges.

Studies done by Pascarella and Terenzini (1980), Tinto (1975, 1982), and Bean (1980, 1981) suggest that motivational attitude may be more critical to college success than either financial aid or academic preparedness. The critical point of success for an individual to remain diverse and current with employable skills may be the individual's perception of self.

This study investigated the effects that an eight week pre-vocational education program, Ready, Set, Go!, had on participating individuals. It was suggested that the

program would be able to facilitate an increase in the participants' reading, writing, and mathematics skill level. It was also suggested the program might influence the participants' concept of self and ability to succeed in the academic environment. The study was conducted using 50 complete data sets out of 78 initial participants enrolled in the program on the Lincoln County Campus throughout the 1994/95 academic year. Participants were informed of the program by the local Job Service Office, Mental Health, Social Services, Lincoln County Campus student affairs office, and walk on enrollees. Ages ranged from 18 years old to 65 with a mean age of 39 years. Eighty percent of the group were female with approximately 50% being married. More than half the participants had dependents. Incomes ranged from \$2,400 per year to \$54,000 per year with a mean income of \$12,229.00 per year. Educational levels ranged from 6th grade to Master's degree and 95% were of white ethnicity .

Data were gathered from several sources: (a) the ASSET, (b) the Inventory of Learning Process - Revised (ILP-R), (c) a biographical survey, and (d) responses from a focus group drawn from individuals who did not complete the program. Out of the 78 initial participants 50 completed data sets were used in the statistical analysis.

The ASSET was administered at the onset and conclusion of the eight week program in order to measure for differences between pre and post-testing on reading, writing, and mathematical skills. This instrument has established reliability and validity in evaluating reading, writing, and mathematical skill levels. To evaluate reading skills the participants were asked to find the meaning of words through context by referring to what is explicitly stated and to draw conclusions, comparisons, and form generalizations.

This was accomplished within 25 minutes on a 24-item test. The writing test was designed to measure an individual's skill level with punctuation, grammar, sentence structure, organization, and style of standard written English. This was also accomplished within 25 minutes using a 36-item test. The mathematics test was 25 minutes long and consisted of a 32-item test. The test was designed to evaluate an individual's ability to perform (a) operations with whole numbers, decimals, and fractions and (b) basic problem-solving skills involving arithmetic and pre-algebra.

The ILP-R was also administered at the onset and conclusion of the eight week program. Pre- and post-test scores were taken to establish if any significant change had taken place over the eight week period. The ILP-R has also established reliability and validity. The inventory consists of 150 items including 12 maintenance items using a 6 point Likert scale with response options ranging from strongly disagree to strongly agree. Individuals are asked to respond to questions from 12 dimensions and subscales. The intent of the instrument is to measure levels of (a) self-efficacy, (b) motivation, (c) self-esteem, (d) self-assertion, (e) conventional attitudes, (f) study methods, (g) depth processing, (h) elaborative processing, (i) agentic processing, and (k) literal repetition. The emphasis of this study made use of the self-efficacy and depth processing scales in relationship to locus of control.

Discussion of the Findings

ASSET Pre- and Post-test Scores

Pre- and post-test scores were compared to evaluate the effect the program had on reading, writing, and mathematical skills within an eight week period of time. A t -test for correlated samples was used to analyze the difference between the pre and post-test means. The analysis produced t values of significant difference. All three skill areas show a significant positive change at a $p = > .001$. It is apparent that the program facilitated dramatic positive changes for most of the participants' mathematical skills. This may be a result of an updating or review of math skills combined with a greater sense of self-efficacy.

ILP-R Pre- and Post-test Scores

Pre- and post-test scores were also compared to calculate the effect the program had on the levels of self-efficacy and depth process. A t -test for correlated samples was used to analyze the difference between pre- and post-test means. A wide range of means and standard deviation were reported. Of the 23 variables from the ASSET, ILP-R, and biographical survey items scored, only three domains (Impression Management, Self-efficacy, and Methodical Study) reported having a significant difference. The program succeeded in increasing the participants level of self-efficacy. But the program failed to produce any significant change in self-esteem or locus of control as envisioned.

Cluster Analysis

A hierarchical cluster analysis was processed containing all the post-test variables from the biographical survey, ASSET and the ILP-R. This process did not identify any distinct cluster groupings. Therefore, a seven-cluster process was run using the quick cluster process of SPSS and the Ward technique (Conti, 1996). A two cluster solution was determined to be the most appropriate solution for this data. Participants were distributed within the two groups as follows: Younger Adults--27 and Older Adults--23. The transitional age between the two clusters was 39.

After the two-cluster solution was chosen, the means for each group were calculated using the scores from the ASSET, ILP-R and biographical survey. Levene's Test for Equality of Variances was performed to determine the homogeneity of the variables within the cluster group. Out of the twenty five variables a total of 6 reported significant differences between the clusters: age ($F = 3.26$, $df = 2/48$, $p = >.05$), marital status ($F = 3.32$, $df = 2/48$, $p = >.05$), writing ($F = 6.217$, $df = 2/48$, $p = >.01$), motivation / academic interest ($F = 3.36$, $df = 2/48$, $p = >.05$), deep processing / semantic memory ($F = 4.471$, $df = 2/48$, $p = >.01$), and agentic processing / serial ($F = 6.91$, $df = 2/48$, $p = >.05$).

Conclusions

ASSET Scores

Based on the pre-test scores, returning adult students tested low on the reading,

writing, and mathematic levels compared to the scoring range of the academically prepared enrolled students. Although all the pre-test scores showed that the participants were functioning at a remedial level in some areas, the mathematics skill levels were consistently low among the participants. The positive change in ASSET scores indicate that eight week time period is sufficient for a skills review to significantly increase an individual's skill level in reading, writing, and arithmetic.

ILP-R Scores

It is apparent from the analysis of the data that an eight week program has little or no effect on an individual's learning process (referenced to table 3, pgs. 65 &66). The results of this study point out the need to revisit the value of short term educational programs intending to change attitudes and motivation. In this study the only significant dimensions to come to the surface were total academic self-efficacy and motivation. An increase in academic self-efficacy may be a result of a successful review of reading, writing, and mathematics skills. Therefore a skills review may increase an individual's ability to succeed in the academic setting. An increase in motivation is a function of age as described through the cluster analysis but shows no evidence of a relationship to self-efficacy or depth of processing. It may be that depth of processing can be effected over time. This may be a skill to be learned and refined as with most learning strategies. This follows the findings of Schmeck (1996, unpublished). The researcher believes that there may be a relationship between depth of processing and critical thinking. Therefore the expectations of developing depth processing skills in a short period time may be a futile activity.

Development of self-efficacy can be increased. For the purpose of this study the only area of significant improvement was in the domain of self-efficacy. The three subscales of organization, thinking, and fact retention report no significant difference individually. When factored together a significant difference is found in the total domain.

Cluster Analysis

Cluster analysis was used to determine whether it was possible to identify distinct groups within the study. The process identified a two step cluster as the only valid process. The two clusters identified were based on age. The clusters were broken down into young adults and older adults with a mean age of 39 used as the separating age.

Cluster 1: Young Adults: The Young Adults group consisted of twenty one females and three males. The ages ranged from 20 years to 38 years. In this cluster 18 of the females were divorced or separated with dependents while all the males were married with dependents. It appears that following the program the individuals in this group had stronger writing skills and tended to use language to think through theories and assignments. Of this group, three females continued on as full time college students

Cluster 2: Older Adults: The Older Adults group consisted of twenty four females and two males. The ages ranged from 39 to 65 years of age. Fewer of the females were divorced or separated but all of the males were divorced. This cluster had weaker writing skills than the younger cluster but a greater motivation to learn. It became apparent when discussing outcomes with the non-completion group that the older individuals stated that the time difference between their last educational experience and this one was the major factor in the use of writing and reading skills. They also appeared to be more structured in

their learning processes. The older individuals felt that their life experiences held the key to their levels of motivation. The two step cluster analysis clearly pointed out that age was the key point of differences of the factors. Older learners tend to exhibit stronger motivation to learn. It is the "life experiences" that may influence the level of motivation exhibited. The relationship of age within the depth process supports the researcher's idea of semantic memory being a learned skill. This may also be a skill learned to overcome an undiagnosed learning disability. It is the experience of the researcher as an academic advisor that adult learners experience doubt about their ability to succeed in the academic setting. After 10 or 15 weeks the adult learner has discovered his/her abilities to succeed and continue on with confidence. Age and writing skills appear to be inversely related within age. This may be due to the shorter time between the secondary and the post-secondary experience.

Non-Completion Group Discussion

Out of the twenty eight individuals in the non-completion group, six were able to meet to discuss their insights and reasons into their non-completion of the program. Five general areas of discussion were brought up; (1) motivation, (2) emotional interference, (3) employment, (4) program not necessary, and (5) physical well being.

Motivation appeared to be a difficulty for the individuals that would be defined as younger adults. This is congruent with the finding within the group of 50 individuals who completed the program. Three individuals who began the program were referrals from Mental Health Services and were not expected to complete the program by the investigator or instructor of the program due to the nature of their illness. It can be

expected that there will be an increase in the number of individuals enrolled in pre-vocational education programs as frequent welfare reform takes place. Individuals on social assistance will be required to obtain employment or the skills to be employed.

Also within this group was an individual who expressed fears pertaining to the class and one individual experienced a death in the family. The majority of this group appeared to feel that employment should take precedence over any reason for non-completion of the program. Two members of this group felt that once they got into the program they felt it was unnecessary. One of these individuals withdrew from the program and enrolled as a full time student in a two year degree program. The final group of non-completers expressed physical well being as the reason for non-completion. One member of this group suffered a head injury in an auto accident. An interesting example was that of older adult, 47, who was single, had a degree in theology, and high ASSET scores. This lady expressed fear of the program. It appears that her previous post-secondary experience was academically successful but became a social nightmare. It was the perceived attitude from her peers that tainted her success as a theologian. Her chosen vocation was not open to her and she received limited or no support for her participation in the program. The majority of the males who dropped out of the program did so to pursue employment opportunities. No women dropped out due to employment. Response from women who dropped out of the program focused on the limited emotional support they received from family.

Recommendations

Institutional

1. It is recommended that institutional funding for the Ready, Set, Go! Program be permanently established at LCC in order to continue the program at the completion of the Displaced Homemakers Grant. The evidence indicates that the program facilitated the increase in reading, writing, and mathematical skills of the adult learners.
2. It is recommended that an institutional tracking of the participants in this study be done in order to establish possible life long patterns.
3. Based on the success of the Ready, Set, Go! Program, it is recommended that a full time, permanent faculty position be allocated to the Community Education Department in order to facilitate its continuance and expansion through out all county locations.

Further Research

- 1 It is recommended that further research be done on the life long learning patterns of individuals at the pre-vocational education level
2. Based on the results of this study, it is recommended that further research on the length of time involved in developing significant affective development be pursued.
3. It is recommended that the issue of age difference among students be addressed in faculty development programs. The results of this research bring

into question the effect of age on cognitive development.

4. Based on this study, the characteristics of traditional and non-traditional aged student needs to be re-visited. The results of this study appear to validate the concept that chronological age is an invalid determinate for success. It may be that life experiences can be used to establish factor identity when group dynamics are used in the curriculum development.

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APPENDICES

APPENDIX A
STUDENT PARTICIPANT LETTER

PLEASE READ

Dear Student,

May we have your permission to contact you for further information and have access to your academic/admissions records. The information gathered beyond this inventory will help us evaluate future academic advising and program development in greater detail. Your co-operation is greatly appreciated.

I, _____, give the investigators of this study permission to access my academic and admission records. I understand that all information gathered about me will be held in confidence and destroyed after all the data is collated.

students signature

student ID number

today's date

Address: _____

Phone #: _____

APPENDIX B
BIOGRAPHICAL INTAKE FORM

Biographical Survey

ID# _____

Name: _____

Date: _____

Age: _____

Marital Status: ___ married
 ___ single
 ___ divorced
 ___ widowed

Ethnic: ___ Caucasian
 ___ Native American
 ___ Hispanic
 ___ Asian
 ___ Other

Dependent/s age/s & sex:

Income: _____

Level of Education: _____

Employment Status: _____

APPENDIX C
FOCUS GROUP QUESTIONS

Focus Group Questionnaire

1. You decided not to continue in the program. What were the factors that helped you decide?
2. Was the decision yours or someone else's?
3. What were your feelings about the decision not to continue?
4. Up to the last day you attended, was it worth while being a part of this program?
5. If you had the opportunity to participate in the program at a later date, would you?

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