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ABSTRACT

A study was conducted to determine whether the adult basic education environment improved the educational outlook of at-risk students. The research was conducted using a 25-question survey with 100 students enrolled in the Nicolet College Alternative High School program for at-risk students in northern Wisconsin, from January through December 1998. The study was designed as a pretest-posttest to ascertain student's attitudes toward education at the beginning and the end of their enrollment in an alternative high school program that was conducted similarly to adult literacy programs. The survey results indicated an improvement in student attitudes regarding education in alternative high school programs. The study concluded that attitudes of at-risk students can improve through attendance in alternative high school programs with more teacher-student contact than traditional high school programs. It was recommended that at-risk students be given more opportunities to enroll in alternative high school programs. The student attitude questionnaire is appended to the report. (Contains 20 references.) (KC)

AN EXPERIMENTAL DESIGN SURVEY OF ATTITUDE CHANGES TOWARDS EDUCATION BY AT-RISK STUDENTS PLACED IN AN ALTERNATIVE HIGH SCHOOL PROGRAM

by Jane Wood Karl and Luis C. Karl

February, 2000

It was unknown if Nicolet College's Alternative High School programs for at-risk high school students provided added value to a high school diploma program by improving their attitudes toward education. The purpose of the study was to determine if the adult basic education environment improved the educational outlook of enrolled at-risk students. This study was designed to ascertain attitudes toward education by students when placed in an alternative high school program and survey their attitudes at the end of their enrollment.

The research question was, "Can an alternate high school environment improve at-risk students' attitudes toward their education?" An inferential study was conducted on local district at-risk high school students enrolled in an alternative high

school program from January, 1998 through December, 1998, to test the prediction that an alternative high school program would improve the negative attitudes that at-risk students have toward education.

The results of the surveys indicated an improvement in student attitudes regarding education in alternative high school programs. The null hypothesis was rejected through a one-tailed t-test for nonindependent samples at the .05 level. The critical value for 99 degrees of freedom was 1.666, based on a student sample of 100, with a t-value of 32.20. The results of the study concluded that at-risk student attitudes can improve through attendance in alternative high school programs with more teacher-student contact than traditional high school programs. It was recommended that at-risk students have increased opportunity to enroll in alternative high school programs.

TABLE OF CONTENTS

Page

TABLE OF CONTENTS (Cont.)

Page

TABLE OF CONTENTS (Cont.)

Chapter 1

INTRODUCTION

Nicolet Area Technical College (NATC) is one of 16 vocational/technical colleges in the State of Wisconsin. It is located in the northern area of Wisconsin and covers a six county area near the Michigan border. Serving a small population, NATC struggles to provide 2.5% of the vocational/technical services in the State. The adult basic education (ABE) program serves approximately 1,200 clients, annually, reaching only 12% of those who could benefit from ABE services. Adult basic education services also include alternative high school programs to at-risk students.

Nature of the Problem

The number of at-risk students had been increasing on an annual basis in the NATC district. Local district high schools increased their dependence on NATC services to accommodate the educational needs of at-risk and expelled high school students. Wisconsin Statute 118.15 (1)(b)/(1)(c)2 provided for alternative high school programs to be offered through local community and technical colleges. The purpose of NATC services in this regard was to provide programs leading to a high school diploma for at-risk high school students and programs leading to a high school equivalency diploma (HSED) for at-risk and non-at-risk students seeking alternative high school programs.

There was a need to determine if the alternative high school environment improved the educational outlook of enrolled alternative high school students. This need was based on the fiscal impact that the program had on the district operational budget. In addition, increasing numbers of enrolled at-risk students in alternative high school programs throughout the state of Wisconsin had prompted officials at the Department of Public Instruction to hold statewide meetings to discuss the quality of such programs.

The alternative high school program was designed to be a self-contained learning environment, including instructors, support staff, a program director and supplies. The question was, "Was the program providing value beyond the academic portion of the educational process?"

While the alternative high school program was designed to benefit the students academically, the possibility of the program benefitting the college and community in other ways relied upon the probability of students improving their attitudes about education. Indicators of program academic quality were considered through another local study that resulted in recommendations regarding educational offerings to respond to the State Plan (Wisconsin Technical College System Board, 1997).

The preliminary study included a student population of 24 subjects from the main NATC campus. As the program offerings

expanded to five other local learning center locations, the number of subjects was expanded over a period of three semesters to include a sample of 100 total subjects. These subjects consisted of all alternative high school students entering the program and remaining in the program for at least one semester.

Purpose of the Study

The purpose of this study was to survey students enrolled in the alternative high school program regarding their attitudes on the value of their education. A follow-up questionnaire was administered to the same students to determine if their educational outlook improved through attendance in NATC's alternative high school program. This information was important in learning about the value of alternative high school programs at Nicolet College campuses, beyond the academic goal of earning a diploma.

Significance to the Institution

The adult basic education programs serve not only adults but students in the alternative high school program options listed in Public Instruction Law 118.15 (WI Stats). With growing numbers of at-risk students leaving high school, the community college had the opportunity to increase its service to the community by enrolling these students and providing an education that allowed students to become a contributing member of society, rather than being a drop-out with skill levels below minimum standards for

employability. At-risk students who developed improved attitudes regarding education may be more likely to continue their education beyond 11th grade or a high school diploma.

Relationship to Seminar

This practicum was directly related to the Research Methodology seminar, in that the survey study for at-risk students was conducted according to the research methodology involving statistical analysis. A significant portion of the Research Methodology seminar focused on quasi-experimental research, which was used in this study.

Relationship to Concentration

This practicum was appropriate to the counseling concentration in higher education. This research can be applied to planning for future educational components in the adult basic education and alternative high school programs by administrators and counselors in a community college setting. Basic Education program evaluations indicated a need to further study the at-risk population's attitudes toward alternative educational programs. Counseling is an integral component of administering alternative high school programs, when considering the personal problems that each student brings to their educational environment. The results of this research study may assist counseling approaches to serving the at-risk student population.

Research Question

A study was conducted to determine if the adult basic education environment improved the educational outlook of enrolled at-risk students. The research question for this study was, "Can an alternate high school environment improve at-risk students' attitudes regarding their education?"

Research Hypothesis

At-risk students who attend alternative high school programs may improve their attitudes regarding education.

Definition of Terms

Adult Basic Education (ABE). Adult Basic Education is instruction offered to adults on a continuum, beginning with elementary levels and culminating with competencies equivalent with grade 12.9 (graduation equivalent). See Basic Education.

ADVANCE program. The ADVANCE program is a name applied to the alternative high school program at NATC. This program is designed to serve at-risk students in pursuit of a high school diploma from their high school, while enrolled in the alternative program at NATC.

Alternative high school program. Alternative high school programs are secondary school with a nontraditional curriculum.

Attitudes. Attitudes are a relatively persistent tendency to sustain a predisposition toward behavior; a mental feeling or

opinion toward a fact or state; a prevailing attribute of at-risk student personality that leans toward negativism and pessimism.

At-risk student. An at-risk student is a learner whose personal history or circumstances make him/her unlikely to satisfactorily complete his/her education or become a contributing member of society. At-risk students are identified as a result of being one or more years behind the class in which they attended, or would have attended, grade nine. Wisconsin school districts have formulas for determining levels of credit deficiency for each successive year in high school. In addition to being at least one year behind the student's class, one or more of the following criteria must also apply: (a) at least one or more years behind in estimated readiness or ability for grade placement, (b) habitually truant, as defined by district formulas for regular attendance, (c) incarcerated, or adjudicated during high school, and (d) is, or is expecting to be a single parent (may apply to both genders). At-risk students are eligible to attend alternative high school programs in Wisconsin, without school board approval, upon attaining the age of 17 years.

Basic Education (B.E.). Basic Education is a division of general education offerings that focus on all academic skills below college level. It includes the alternative high school program used for this study.

Degrees of Freedom (df). Degrees of freedom is a mathematical concept that denotes the number of independent observations that are free to vary. For each statistical test there is a corresponding number of degrees of freedom that is calculated, and then this number is used to estimate the statistical significance of the test. In the distribution of a *t*-table, the number at the intersection of the degrees of freedom row and the level of significance column is the relevant theoretical value of *t*. If this critical t is less than the *t* value calculated by the *t*-test equation, it means that the observed difference in means is greater than could have been expected under the null hypothesis, so the hypothesis can be rejected at that level of significance. For the purpose of this study, 100 subjects provided 100 sets of scores, which determined the degrees of freedom to be 99.

General Education Development certificate GED). The GED is a diploma issued through the American Council of Education, to all U.S. citizens, upon qualification by achieving a passing score in basic skill subject-area testing.

High School Equivalency Diploma (HSED). The diploma issued through the State of Wisconsin, similar to the GED. The HSED includes additional requirements, which equates the value of the diploma to high school diplomas issued through Wisconsin high schools.

Level of Significance. The level of significance relates to the level of confidence the researcher has that the difference which has been observed between the two samples studied was due to the treatment applied and not to chance. All error and/or extraneous variables in quasi-experimental research cannot be controlled. Even though the objective is to design a study in which the only variable affecting the dependent variable (outcome) is the independent variable (treatment), other limitations or variables are present that cannot be controlled. Therefore, there is a probability that the observed outcome was due to chance and that something other than the treatment caused the observed differences. This probability is called the level of significance, or the probability that an error in the decision to reject the null hypothesis was made. The value assigned to the level of significance in this study was .05, with 99 degrees of freedom.

Quasi-experimental Research. In quasi-experimental research, the researcher investigates possible cause-and-effect relationships by exposing one or more groups to one or more treatment condition(s) and by comparing the results to one or more control groups not receiving the treatment. Experimental research must be comparative or investigate relationships, have a formal research hypothesis, test a null hypothesis, establish a decision rule determined by the level of significance, and use

inferential statistics. In quasi-experimental research, the researcher manipulates the treatment condition(s), or independent variable(s), but lacks control of other relevant variables. In this study, the subjects could not be randomly assigned into groups because they were already an existing group. There was a lack of control of other relevant variables, such as personal issues. Due to the lack of control of extraneous variables, it was determined that the subjects in this study were drawn from the same population (at-risk, local high school students). It was assumed, for this study, that the subjects had equal variability. In quasi-experimental research, it was assumed that inferences could be drawn and generalized to the studied population.

Region of Rejection. The region of rejection (one- or two-tail) refers to that portion of a sampling distribution of the test statistic in which a null hypothesis is rejected. The region of rejection is defined by two previous decisions made by the researcher: the level of significance and the predicted direction of the outcome of the results. The size of the region of rejection is determined by the level of significance (.01 or .05); and the location of the region of rejection is determined by the direction stated in the alternative hypothesis (one- or two-tail). The researcher in this study made a decision on one

direction of the difference (positive to the right), which was one-tail.

Retention. Retention is the ability to keep; as to keep students in an alternate school program until they graduate.

t-test. The *t-test* is the most common statistical procedure for determining the level of significance when two means are compared. The *t*-test is a formula that generates a number, and this number is used to determine the probability level (*p* level) of rejecting the null hypothesis. A *t*-test was used in this study to compare the means of two samples of high school students' attitudes toward education.

Traditional high school student. For the purpose of this study, traditional high school students are 17 or 18-year-old students who are determined to not be at-risk of failure in their high school program.

Chapter 2

REVIEW OF THE LITERATURE

Overview

The most significant priority of Nicolet Area Technical College's adult basic education program has been to prepare its clients for work. Emerging trends and information gathered from a recent environmental scan (Nicolet College Environmental Scan, 1997) indicated a need for community colleges to partner with outside agencies in economic development endeavors. This partnership included increasing educational involvement for minorities, disadvantaged adults, and preparing non-college bound students for employment. The disadvantaged population includes high school students who potentially drop out of school, may be expelled from high school, or be placed in alternative high school programs.

Although the NATC district is a rural area of northern Wisconsin, the drop out rate, pregnancy rate, drug usage rate, incarcerated rate, child abuse rate, and suicide for high school students was listed above the state average in the 1995 Environmental Scan. The number of at-risk students is increasing, partially due to migration of families from cities to the north woods (Wisconsin Population Estimates, 1998). As the provider of alternative high school programs and the source for preparing basic education students for employment, it is the

basic education programs' responsibility to evaluate alternative high school programs and make recommendations for continued operation or change to meet the needs of the future.

Theoretical and Conceptual Thinking of Experts

"The goals that students pursue have a powerful influence on the quality of their learning," write Collopy and Green (1995, p.37) in their research on learning-centered schools and goal achievement. Sanacore (1994) confirms their work in his article titled, "Treat At-Risk Learners as We Treat All Learners," which makes a case for all students achieving success. Sanacore concludes that we must value every learner and what the learner has to contribute. "This profound recognition can stir learners' emotions, raise their energy levels, and give them the impetus to continue their journey toward successful lifetime literacy learning," continues Sanacore (1994, p.239).

All students include the at-risk learner, a term that has come to describe students who have histories of doing poorly in school settings. Glasgow (1996) refers to the term "at-risk" "... to be a euphemism used to describe students who exhibit a wide range of educational problems" (p. 358).

Glasgow, further, gives examples of students who could not respond to teacher instructions, could not behave in a socially acceptable manner, were unable to keep up academically with other students, and were unlikely to continue their educations or

fit into the work force. Glasgow maintains that these students will join 60 million other Americans who cannot get or keep jobs. A more disturbing statistic Glasgow cites is a 50% dropout rate among urban youth. In a globalized work society, low-skilled American workers will compete for jobs and wages with low-skilled workers around the globe (Judy & D'Amico, 1997).

Review of Research

Work by McMillian and Reed (1994) of the Virginia Commonwealth University reveals an alarming increase in the numbers of at-risk learners. They note underachievement and social maladjustment as the major contributing factors leading to students dropping out of high school. Further, they maintain that 81% of at-risk students do not succeed in school.

The question that arises again and again is why is it so difficult to reach and teach the at-risk student? Researchers are consistent in their responses. Curwin writes, "At-risk students are continually confronted with failure and told they are worthless." He maintains that educators "... inadvertently give them the wrong message that they are in an inferior position" (Curwin, 1993, p.36).

Bluechardt (1995) refers to at-risk students as abuse victims, inactive students, and from dysfunctional families. Glasgow (1996) characterizes the at-risk students as non-readers, unmotivated, and having low self-esteem.

At-risk students have very few successes in school. "The instructional methods teachers use often reinforce the socially maladjusted behaviors of at-risk students, thereby creating opportunities for failure" (Sparks, 1993, p.74). Sparks suggests that at-risk students haven't learned to adjust to their environment as their adjusted peers have. He believes that at-risk students' behavior, which ranges from hostility to arrogance to expecting to fail, is contempt for authority who have failed them.

Present Status of Topic

With the increasing number of children labeled at-risk, educators are concerned. This trend is forcing the profession to examine itself. Through committed staff members changing their school climate and providing motivation for their students, Lamperes describes his school's success in dealing with its at-risk population. "The bottom line, success, required us to do business in a different way" (1994, p.68).

In an article titled, "What We Must Do for Students Placed at Risk," (Rossi and Stringfield, 1995), the authors cite three incentives for schools meeting the needs of students at risk of failure. The authors believe that it is crucial to a society's survival that its citizens are able to read. They go so far as to state that a society is endangered if its people cannot read and be knowledgeable. Secondly, the authors question if a

democracy can survive when its citizenry is unable to interpret information or question. Rossi and Stringfield express a concern that a global economy and the high technology literacy required in today's job markets will be devastating to those who fail at school. They go on to stress the challenge we have as a nation to serve the at-risk population. It is a strong case.

Compelling, also, is the information provided by the National Council of State Directors of Adult Education in their Education Act for the 21st Century (1995). The report points out that adults on public assistance lack educational foundations at twice the rate of the rest of the population, and that service for the adults who had already dropped out of the system be a goal. "What is at stake is nothing less than the next generation, particularly males, who in growing up are especially vulnerable to such disruptive forces as the devastating effects of divorce, poverty, and unemployment" (Goleman, 1995, p.234). Dropping out of school is a risk our society and our nation cannot afford if one reads carefully the words of the researchers.

Glasgow (1996) reminds us that at-risk students need to understand why they are doing a particular task and learn so that they can move forward in a career. Zhang (1994) writes that a positive attitude and then a sense of one having control over one's own life contributes to even greater academic interest and

achievement. Grimes (1995) explains it in a different way. According to Grimes, new knowledge increases a student's attitude and influences their control over their own lives. He believes that if a student truly understands what being a drop out will cost him/her, the choice will be reconsidered. Deshler and Schumaker (1993) tell educators that students must value their goals. "When students are involved in planning and goal-setting, they gain the perception of control and influence over their own learning" (Deshler, Schumaker, 1993, p.161).

Summary

Finally, at-risk students are not only a risk to their own lives, but they create a risk for our society. Growing numbers of the at-risk population are not preparing to be a contributing component to the workforce (Parnell, 1990). How can colleges and universities better serve this population in achieving basic education and basic work place survival skills?

The findings of researchers, the authorities in the area of at-risk education, show the strong belief in helping the learner who feels there is no place for him in the system. A structured system of goal setting, opportunities for success, and caring, not only will serve the individual, but also society. The review of the literature demonstrated a need for alternate choices and opportunities for the defeated learner. The choice is education; the opportunities endless. The research challenges

educators to meet the needs of the discouraged, defeated, and at-risk student by providing educational settings that allow the student to develop trust in authority and self-confidence through increments of academic success.

Chapter 3

METHODOLOGY AND PROCEDURES

Problem solving Methodology

The problem-solving methodology used in this inferential study was quasi-experimental research. Quasi-experimental research was appropriate to this study because a possible cause-and-effect relationship may exist between the alternative high school program and a change in the attitudes of at-risk students enrolled in these programs (see definition on page 15).

Procedures

Five procedural components were used to complete the study. First, an extensive review of related literature was conducted to investigate the reasons for, the impact of at-risk learners leaving traditional high schools prior to graduation, and recommendations for remediating at-risk student potential failure. Second, a formative committee developed a pilot survey instrument that was used to elicit responses from a sample population of high school students, regarding attitudes toward education. Third, the survey instrument was refined by the formative committee through validity studies outlined further in this chapter. Fourth, the survey was administered to all at-risk students in the alternative high school programs at NATC. The survey was administered upon each student's enrollment and at the end of their enrollment. Fifth, the results of the survey were

used to determine if the treatment of the at-risk students improved their attitudes toward education, when placed in an alternative high school program.

Data Collection

An inferential study was conducted on local at-risk high school students enrolled in an alternative high school program during the 1997-98 and 1998-99 school years. The study tested the prediction that an alternative high school program could improve the negative attitudes that at-risk students have toward the value of completing their basic education. Each student in the study completed the same survey two times. The first survey was conducted at the onset of their enrollment in the alternative high school program. The second survey was conducted at the end of their enrollment in the alternative high school program. The results of the first student sample survey were compared to the results of the second student sample survey. A mean score was calculated for total points on each student survey. All of the student "pre" (initial) surveys were totaled to arrive at a single sum of scores. The same procedure was utilized for the "post" (follow-up) survey.

Description of Population

The population for this study was at-risk students enrolled in Nicolet Area Technical College's alternative high school program for students pursuing a high school diploma or a High

School Equivalency Diploma (HSED) in lieu of continuing in the traditional high school program. These students were surveyed at the beginning and end of their enrollment in NATC's alternative high school programs, during the spring semester of 1998 and the fall semester of 1998, to gather data to indicate a change in attitude regarding secondary education.

Sample

The group studied was 100 alternative high school students in the B.E. alternate high school program located on the Nicolet College Campuses in Crandon, Eagle River, Mole Lake, Minocqua and Rhinelander, Wisconsin. All students were surveyed at the beginning of the semester in which they were enrolled, during the 1997-98 and 1998-99 academic years. All students were given a post-survey at the end of their enrollment, during the spring semester or fall semester of 1998. Enrollment duration for students is one year (two semesters), except for those who withdraw from the program.

Instrument

The research instrument that was used was a written survey consisting of twenty-five (25) questions relating to educational situations common with at-risk students (Appendix A). Each statement was designed to elicit a response in the form of an attitude concerning the statement. Provided with each statement were six different responses for the student's reaction. Each

response had an arbitrarily-assigned number value, beginning with a value of one for "strongly disagree" and extending to a value of six for "strongly agree." The number values were assigned for the purpose of data collection that could distinguish between subject agreement with the statement and subject disagreement with the statement. The choices were: "Strongly Disagree", "Disagree", "Mildly Disagree", "Mildly Agree", "Agree", and "Strongly Agree." The responses that the student would mark in their statement choices would be used to calculate a total survey score for each student. This score would be achieved by adding the values of each of the 25 survey statements. Therefore, if a respondent answered every statement with "strongly agree," a total score of 150 would be achieved (25 answers X 6 points).

The research instrument and components was designed by a formative committee consisting of five instructors currently teaching at-risk students in the alternative high school program at NATC, a counselor from NATC, and counselors from the local high schools participating in the survey. The formative committee member selection rationale is detailed in Appendix B.

Each item was evaluated for clarity and appropriateness to the survey instrument following pilot testing on a group of NATC alternative high school at-risk students who would not be part of the official survey. Some items were rewritten or deleted, depending on the readability, appropriateness, and face validity

of the statement to the study. Reliability was built into the statements by comparing common responses to each statement by the pilot study group of high school students. Statements that were unclear to the students were eliminated or rewritten to elicit a definite response. Formative committee interviews were held with the pilot study group of students who helped refine the instrument, to discuss each item provided.

An initial administration of the pilot survey instrument indicated some confusion on survey statements that made two actual statements. These items were rewritten to eliminate one of the dual statements in a particular survey item. For example, the statement, "Adults are unfair and don't give me the help I need." was rewritten to state, "Adults in school don't give me the help I need." Subsequent administrations of the improved instrument indicated more clarity in the statements by the subjects. Face validity was determined in each statement through subject reactions to the instrument that indicated an understanding of the meaning for each item and the value placed on the data gathered by the response from the subject. Subjects were asked to compare their true attitudes regarding education with the tabulated results of their completed surveys, both pre and post documents. Items that were determined to be useless by the formative committee were dropped from the survey. Items were added to replace discarded items. New items were generated

through discussions with the pilot study group and responses to these new items were compared to subjects' actual expressed attitude towards education and the alternative high school program. The final survey instrument was adopted by the formative committee in December, 1997.

The official survey instrument was implemented in January, 1998. The student subjects were directed to circle one response for each question. The survey was administered twice to each enrolled at-risk student in the survey. The pre-survey was administered to all new incoming students, and a post-survey was administered at the end of the first semester to these same students. The pre and post survey items were identical. The pre-survey was administered to students during the first two school weeks of January, 1998. The post-survey was administered the week ending the spring semester (May 21-22), 1997-1998 school term. A second survey to a new group of subjects was administered during the fall semester, 1998. The same procedure was used on the subjects who were surveyed. For example, all at-risk students were surveyed upon enrollment and again at the end of fall term, 1998. No students were surveyed three times, allowing for repeated enrollments of students. All tabulations of results were completed within the two-week period following the post-survey being administered in December, 1998.

Experimental Group Treatment

The treatment of the subjects used in this study was the alternative high school environment that responded to the needs of the at-risk students that were not being met in the traditional high school. The Nicolet Area Technical College alternative high school programs are two separate divisions of programs outlined in Wisconsin Statute 118.15. Students qualifying for these programs must be currently enrolled in a district high school. The average length of enrollment for these programs is two semesters. During the two-semester enrollment, students are provided with a response to their request to attend a high school program that was different from the traditional high school environment. This acknowledgment of the student request provided a positive incentive for the student to believe that the established high school policies were designed to help students succeed. Upon receiving alternative high school approval, each student became responsible for succeeding or failing in the new environment. Added responsibility for the at-risk student provided new incentive to consider realistic consideration for their future.

Individualized instruction in a secluded environment allowed the at-risk student to be less defensive toward themselves. With fewer adults associated with the school to blame for their poor attitude, at-risk students were able to

focus on academics, which led to unprecedented success in earning high school credits.

At-risk Population

One division is an alternative high school program leading to a high school diploma for the local high school in which the qualified student is officially enrolled. Students qualify for this program by being identified as being at-risk. The high school diploma program is distinguished from the high school equivalency program by being called the ADVANCE program. The ADVANCE program is a self-contained classroom building that serves at-risk students in an alternative high school program leading to a high school diploma. The curriculum is based upon the Portable Assisted Study Sequence (PASS) program. Four licenced and certified instructors teach the students. Each student is assigned instructors according to their current subject area. Each subject packet is self-paced and is weighed at .5 credit. With one-on-one instruction, each student is able to develop a relationship with each instructor that is nonthreatening and noncompetitive. Students who have a tendency for isolation are able to work alone at their desk or on a computer that has installed PASS and other curriculum components.

The second division is an alternative high school program that prepares students for the High School Equivalency Diploma (HSED). Services for this division is available at five district

locations (Crandon, Eagle River, Lakeland, Mole Lake Indian Reservation, and Rhinelander). Students work one-on-one with instructors and prepare for General Education Development (GED) tests and competencies required for the HSED.

A common attribute to all of the students enrolled in these programs is that traditional high school environments could not meet the needs of these students. Academic ability of students enrolled in these programs varies greatly, from very low ability students to those scoring at 12th grade ability on the Test of Adult Basic Education (TABE). Therefore, failure to adapt to traditional school environments cannot be attributed to academic ability, alone.

Data Analysis

Scoring and Data Presentation

Initial scoring of the survey instruments was conducted by tabulating a total score for each item in the survey. The total score for a specific survey item was added to the score of the same item for each of the surveys in the study. This score indicated a total for all responses to each item in the survey, individually. For example, item number one would have a total score by adding all 100 responses to item number one. This score was then compared to a score from the post-survey responses, tabulated in the same method.

The problem with this application was that the scores did not provide any valuable information. The study was not designed to survey items. Rather, the study was designed to survey possible attitude changes among individual students. As a result, the process of scoring was adjusted to ascertain the total scores for individual student surveys, pre and post. The scores were then compared to elicit information regarding possible changes in attitude during a two-month enrollment in an alternative high school program.

A comparison of scores was conducted using a t-test comparing the pre-survey responses against the post-test responses. The mean of the difference between each student's pre and post survey results was determined. The *t*-test is a formula that generates a number, and this number is used to determine the probability level (*p* level) of rejecting the null hypothesis. A t-test was used because the *t-test* is the most common statistical procedure for determining the level of significance when two means are compared. A t-distribution table for a one-tailed t-test at 99 degrees of freedom with a .05 level of significance was utilized to determine the critical value for the region of rejecting the null hypothesis. Additionally, the individual mean of the difference between each student's pre and post survey results were used to calculate a group mean. The group mean was

then compared and analyzed using a *t*-test. The calculations were conducted for both comparison groups in the study.

Null Hypothesis

At-risk students who attend an alternative high school program will show no change in their attitude toward education.

Alternative Hypothesis

An alternative high school program for at-risk students will change their attitudes toward education.

Level of Significance

The level of significance was .05, calculated for 99 degrees of freedom, based on 100 surveyed students. The values for a one-tailed t-test were based on 1.666, which was indicated for 99 degrees of freedom.

Region of Rejection

The region of rejection was 1.666, based on the level of significance for a one-tailed test, at .05, for 99 degrees of freedom.

Statistical Test

A one-tailed, nonindependent samples t-test was determined to be appropriate for this study to compare the means of two surveys of high school students' attitudes toward education. One hundred pairs of scores were calculated to determine a t-value, which would be tested for 99 degrees of freedom, at the .05 level

of significance. A significant difference was determined at the .05 level.

The t-test was performed to detect the presence of a significant difference between the means of the pre-study survey and the post-study survey. If the t-value was greater than 1.666, the null hypothesis could be rejected.

Assumptions

Two assumptions were made. First, all of the alternative high school students contributing to this study were at-risk and had similar attitudes regarding traditional high school. It was assumed, for this study, that the subjects had equal variability. In quasi-experimental research, it was assumed that inferences could be drawn and generalized to the studied population. Second, the survey used in measuring the attitudes of the students measured what it purported to measure. Extraneous variables (family problems, health, weather, or personal issues) did not interfere with subject responses to the survey instrument. A comparison was conducted using a t test comparing the pre-survey responses against the post-test responses. It was assumed that the level of significance would be adequate to allow for extraneous variables.

Limitations

In quasi-experimental research, the researcher manipulates the treatment condition(s), or independent variable(s) but lacks

control of other relevant variables. In this study, the subjects could not be randomly assigned into groups because they were already an existing group. There was a lack of control of other relevant variables, such as personal issues. Due to the lack of control of extraneous variables, it was determined that the subjects in this study were drawn from the same population (at-risk, local high school students). The scope of this study was limited by the use of 100 students admitted to the basic education alternative high school program during a three semester period. Students in the alternative high school program may not be positively responsive to assignments, such as survey instrument completion. Therefore, limitations may exist in the value of responses. Student attitudes may frequently fluctuate from negative to positive. Students may feel obligated to provide a positive response to the post-survey, indicating a "halo effect" in their response attitude. The survey response items were limited in the value of data acquired through the *t*-test analysis of the treatment provided to the subjects over a two semester period.

Chapter 4

RESULTS

This quasi-experimental study was designed to ascertain attitudes toward education by students who were placed in an alternative high school program. The study was conducted through an extensive review of literature that addressed the problems and potential impact of at-risk learners leaving school prior to graduation. The literature recommended remediation services to at-risk students, prior to dropping out of high school.

A survey instrument which consisted of twenty-five questions that addressed student attitudes about education was utilized in the study (Appendix A). The survey instrument was developed by a formative committee (Appendix B) that field tested survey instrument items that were refined to an adopted survey instrument.

A sampling of alternative high school students were surveyed at the onset of their enrollment in the alternative high school program and again at the termination of their enrollment. The responses to the pre and post survey questions for the at-risk group were tabulated. A comparison between the pre and post survey scores for the at-risk group was conducted using a t-test. The mean of the difference between each student's pre and post survey results was determined. Additionally, the individual mean of the difference between each student's pre and post survey results were used to calculate a group mean. The group mean was

then compared and analyzed using a one-tailed *t*-test for nonindependent samples and through hand-calculation of differences in scores from pre and post test data. A positive variance indicated an improvement in attitude and a negative variance indicated a decrease in positive attitude from pre to post survey. Specific survey items were compiled to achieve a score according to the following question that outlined those concerns: "Did the alternate high school environment improve at-risk students' attitudes toward their education?"

The data gathered from the pre-survey results indicated a total group score of 8,207 (Appendix C). This score was achieved by adding the values of each response in the survey. Through responses to twenty-five items in each survey, a possible score of 150 for each student survey was achievable. The total score of 8,207 for 100 participants, averaged 82.07 for each survey. This score was averaged, again, to 3.28 for each response value, overall. An average group score of 3.28 suggests a middle range, on a scale of one to six (values of possible responses).

The data gathered from the post-survey results indicated a total group score of 12,225 (Appendix C). This score was achieved through the same process used in the pre-survey, which was by adding the values of each response in the survey. Through responses to twenty-five items in each survey, a possible score of 150 for each student survey was achievable. A group mean of 122.25 was reached by dividing the total group score (12,225) by

the 100 participants in the sample. An average score of 4.89, per survey item, was calculated by dividing the group mean by the number of items in the survey (25). This score reflected a significant improvement in positive responses by the participants, from the pre to post survey results.

The differences in each participant's total survey scores, when compared, provides a variance number. The variance numbers in the survey were totaled to achieve a total survey variance between the pre-survey and the post-survey score difference. The variance total, when comparing both samples, was 4018. This total represented the increase in response value for the group, from the pre-survey to the post-survey. The mean variance for the group was 40.18. This number represented the average increase of 1.6072 points per survey item, in response value for each participant, pre-to-post survey. The pre and post survey total scores for each survey participant were compared. The number of pairs of scores was 100. The calculated t-value was 32.20 (Appendix D).

A t-test for nonindependent samples was conducted through the use of a software instrument designed to determine if a significant difference existed between the pre-survey results and the post-survey results. The t-Distribution Table, at 99 degrees of freedom, one-tail test, at .05 level, indicated a region of rejection of 1.666. The calculated t-value for the t-test for nonindependent samples in this study was 32.20. Because the

calculated t-value exceeded the 1.666 region of rejection, the null hypothesis was rejected at the .05 level of significance. Therefore, the results of the study indicated an improvement in attitudes of at-risk students toward education when placed in an alternative high school program.

Chapter 5

DISCUSSION, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

Discussion

A review of the history of at-risk high school students indicated that the students enrolled in high school programs against their will, have negative attitudes regarding education, adults in positions of authority, and very low self concepts. Many students entering school with this mind-set also brought poor health and hygiene, family crisis situations and other distraction conditions, such as adjudication, addiction, infant children, with them to the classroom. At-risk students have very few successes in school. The instructional methods teachers use often reinforce the socially maladjusted behaviors of at-risk students, thereby creating opportunities for failure. At-risk students haven't learned to adjust to their environment as their adjusted peers have. At-risk students' behavior, which ranges from hostility to arrogance to expecting to fail, is contempt for authority who have failed them.

The assignment of the alternative school program extends beyond academics for these students, to a goal of accommodating and remediating poor self-concepts and negative attitudes. As the provider of alternative high school programs and the source for preparing basic education students for employment, it is the basic education programs' responsibility to evaluate alternative

high school programs and make recommendations for continued operation or change to meet the needs of the future.

Conclusions

The research question that was asked, was "Can an alternative high school program assist in the improvement of at-risk students' attitudes toward their education?" The research indicated that the answer was "yes." The treatment group responded significantly higher in the positive range of the post survey, than in the pre survey. When compared, the score difference between the pre survey and the post survey indicated a significant increase of 1.6072 points per survey item, in the positive direction. Because the calculated t-value exceeded the 1.666 region of rejection for a one-tail test with 99 degrees of freedom, the null hypothesis was rejected at the .05 level of significance. The rejection of the null hypothesis supported the research hypothesis, which stated that students who attend an alternative high school program may improve their attitudes regarding education.

The research data showed an improvement in attitudes toward negatively-based issues. A review of the negatively-based statements that showed the most gain in positive points from pre to post test indicated an improvement in student's ability to show more personal responsibility for their current situation and

their future. A greater respect for adults and teachers was identified through relevant statements that showed higher score totals from pre to post testing. The final results of the survey showed a significant difference between the pre and post test scores for the entire survey. The results were based on a higher total score for the post test. The higher score was attained by a higher frequency of positive responses on the post survey, as compared to the pre survey. Where one statement would show positive changes from pre to post test, another statement may show a decrease in positive attitude from pre to post test. When these scores were compared, they would average-out on the total gain of score value. Part of this result was due to positive responses being stronger in the post-survey than the negative responses in the post-survey.

Students that developed a sense of responsibility and commitment to their education, during the semester that was studied in the survey, began to experience an unfamiliar lifestyle that required serious work and consistent goals. Many students became frightened by the concept of responsibility and the possibility of success. The point at which the post test was conducted was also a point of great frustration for many students, who, for the first time in their education history, were experiencing the chance for success and the equal chance for failure. New opportunities for educational advancement arise

through success, which lead to further frustration with education.

Frustration also marks the point at which solutions are put in place and alternatives are sought for success. Previous goals of the students were being questioned during this juncture of the semester, while newer and more difficult goals were being developed. Students, who had previously found comfort in the lack of possibility for success and who had found security in the ability to blame others for their lack of chance for success, were beginning to question this paradigm and also began to resent those adults who were responsible for changing the way students had enjoyed thinking negatively about themselves and life's limited possibilities.

New possibilities and options were revealed, however, through changes in the attitudes expressed from the pre to post test statement's results. The end of the semester also revealed a point of confusion and realignment of priorities and simultaneously revealed an on-set of frustration from these choices. The end of the semester was a low point in many of the students' self-confidence levels.

Implications

A pre test survey conducted at the beginning of the year and a post test taken with the same students at the conclusion of their alternative educational experience may reveal a greater

significance in the changes in attitudes of the participating students. Mid-year may be a point at which more negative feelings are manifested than at the end, where success is more easily recognized.

Although the results of this survey showed a significant difference in the effect of the alternative high school program on students' attitudes, historic data that was not included in this research has shown that many of the former students in the alternative high school program have graduated and subsequently enrolled in post-secondary programs at the local college or at other institutions. Further, many of these students have improved their personal lives and have developed a sense of respect and loyalty for the adult staff. Many of these students have demonstrated this change of attitude toward teachers by returning to the institution during the following year to visit the instructors and share recent successes and changes in their lives. Many of these students give credit to the alternative school program for their current success and positive outlook toward life. Many of these graduates believe that they would not have found success without the alternative high school experience and mostly, the environment and support provided by the instructors and approach of the program.

Recommendations

During the initial survey of at-risk students enrolled in

NATC's alternative high school program, local district high school counselors and administrators were contacted to request their participation in the study. Their participation would consist of allowing some of their "at-risk" students to complete the pilot survey. Fifty-percent of the area schools that were contacted, agreed to participate. Those that declined, did so on the grounds that, "The school did not have time." and, "We don't see how your study will help our district." For those schools that participated in the study, benefits are available to their students who may be at-risk. The high schools may use the information gathered in this study to consider alternative programs for their at-risk students, rather than expelling them or inappropriate placement in a "resource room."

It is recommended that alternative high school programs be considered for students at-risk, or exhibiting tendencies to become at-risk. Students placed in alternative high school programs at Nicolet Area Technical College learning centers have improved their attitudes toward their education.

It is further recommended that other agencies consider funding to expand services to at-risk students that facilitate their success, where failure was previously imminent. Contact with faculty, personalized learning atmosphere, and independent learning conditions apparently assist at-risk students in

adapting to learning, where traditional learning environments have allowed them to fail.

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APPENDIXES

Appendix A

Student Attitude Survey

Directions for survey completion: After reading each statement carefully, circle the number corresponding to the opinion which most accurately reflects how you feel about the statement. For example, if you " Strongly Disagree" with a statement (based on your attitude regarding the statement) circle the number 1. If you "Strongly Agree" circle number 6.

1. **I prefer course material that challenges me so I can learn new things.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

1. **If I study, I learn.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

3. **When I take a test, I wonder how I am doing compared to everyone else.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

4. **Adults in school don't give me the help I need.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

5. **I have no goals right now.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

6. **I get restless and bored in school because of the slow pace.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

7. **Even though I try to work hard, it gets me nowhere.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

8. **It is my fault I can't learn the material.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

9. **It is important for me to learn.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

(appendix continues)

10. **The most important thing I have to do right now is earning my credits so I can graduate.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

11. **It is difficult for me to learn and no one seems to understand that.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

12. **I want to do well in school (graduate) because it will be important for getting a job.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

13. **I often feel bored and so I quit before I finish what I ought to do.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

14. **When I don't understand something, I would rather ask another student for help rather than a teacher.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

15. **I believe I can graduate.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

16. **I need my job more than school.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

17. **Studying has never gotten me anywhere.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

18. **I have never gotten along in school.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

19. **Grades don't mean anything important.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

20. **Education is the best investment I can make right now.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

(appendix continues)

21. **Being a parent is more important than school right now.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

22. **School is more of a waste of time than anything else I could be doing right now.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

23. **Right now I don't feel like I'll ever get anywhere.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

24. **I believe I can succeed even though I have failed before.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

25. **I don't have much chance for success because everything is against me.**

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree
1	2	3	4	5	6

Appendix B

Formative Committee

- The five basic education instructors were selected for the formative committee because of their direct involvement with at-risk student instruction in the alternative high school program. Their knowledge of student attitudes in the program could serve as an advantage in interpreting attitude changes in enrolled students.
- The basic education counselor was selected as a member of the formative committee because of the background, training, and experience in working with at-risk students in the specific learning environment.
- The counselors from participating local area high schools were selected as members of the formative committee because of their involvement in the process of placing at-risk high school students into the alternative high school program at NATC.

Appendix C

Survey Sample Score for Subjects:

"PRE" = INITIAL SURVEY "POST" = FOLLOW-UP SURVEY

S #	"PRE" TOTAL SCORE	"PRE" MEAN SCORE	"POST" TOTAL SCORE	"POST" MEAN SCORE	VARIANCE BETWEEN SCORES
1	106	4.24	134	5.36	+28
2	92	3.68	126	5.04	+34
3	91	3.64	122	4.88	+31
4	46	1.84	113	4.52	+67
5	96	3.84	120	4.80	+24
6	101	4.04	124	4.96	+23
7	90	3.60	114	4.56	+24
8	70	2.80	114	4.56	+44
9	72	2.88	116	4.64	+44
10	76	3.04	117	4.68	+41
11	91	3.64	134	5.36	+43
12	95	3.80	136	5.44	+41
13	39	1.56	109	4.36	+70
14	95	3.80	124	4.96	+29
15	48	1.92	108	4.32	+60
16	90	3.60	116	4.64	+26
17	59	2.36	102	4.08	+43
18	97	3.88	124	4.96	+27
19	90	3.60	116	4.64	+26
20	90	3.60	129	5.16	+39
21	73	2.92	113	4.52	+40

(appendix continues)

22	45	1.80	112	4.48	+67
23	40	1.60	108	4.32	+68
24	94	3.76	124	4.96	+30
25	96	3.84	139	5.56	+43
26	101	4.04	122	4.88	+21
27	94	3.76	130	5.20	+36
28	106	4.24	141	5.64	+35
29	77	3.08	110	4.40	+33
30	94	3.76	120	4.80	+26
31	75	3.00	117	4.68	+42
32	83	3.32	127	5.08	+44
33	79	3.16	127	5.08	+48
34	81	3.24	119	4.76	+38
35	76	3.04	130	5.20	+54
36	83	3.32	120	4.80	+37
37	79	3.16	113	4.52	+34
38	80	3.20	120	4.80	+40
39	88	3.52	123	4.92	+35
40	85	3.40	124	4.96	+39
41	51	2.04	96	3.84	+45
42	84	3.36	131	5.24	+47
43	25	1.00	92	3.68	+67
44	85	3.40	132	5.28	+47
45	45	1.80	107	4.28	+62
46	86	3.44	111	4.44	+25
47	80	3.20	109	4.36	+29

(appendix continues)

48	86	3.44	108	4.32	+22
49	67	2.68	118	4.72	+51
50	80	3.20	121	4.84	+41
51	46	1.84	104	4.16	+58
52	80	3.20	121	4.84	+41
53	77	3.08	131	5.24	+54
54	79	3.16	120	4.80	+41
55	82	3.28	129	5.16	+47
56	85	3.40	124	4.96	+39
57	81	3.24	138	5.52	+57
58	82	3.28	112	4.48	+30
59	65	2.60	105	4.20	+40
60	83	3.32	109	4.36	+26
61	101	4.04	121	4.84	+20
62	83	3.32	124	4.96	+41
63	102	4.08	143	5.72	+41
64	88	3.52	148	5.92	+60
65	95	3.80	141	5.64	+46
66	89	3.56	143	5.72	+54
67	98	3.92	142	5.68	+44
68	92	3.68	137	5.48	+45
69	96	3.84	140	5.60	+44
70	82	3.28	139	5.56	+57
71	104	4.16	147	5.88	+43
72	105	4.20	144	5.76	+39
73	91	3.64	146	5.84	+55

(appendix continues)

74	107	4.28	140	5.60	+33
75	93	3.72	142	5.68	+49
76	98	3.92	145	5.80	+47
77	39	1.56	91	3.64	+52
78	82	3.28	124	4.96	+42
79	86	3.44	112	4.48	+26
80	49	1.96	102	4.08	+53
81	68	2.72	125	5.00	+57
82	83	3.32	119	4.76	+36
83	86	3.44	129	5.16	+43
84	56	2.24	94	3.76	+38
85	82	3.28	104	4.16	+22
86	102	4.08	102	4.08	00
87	78	3.12	138	5.52	+60
88	46	1.84	102	4.08	+56
89	97	3.88	121	4.84	+24
90	99	3.96	122	4.88	+23
91	102	4.08	116	4.64	+14
92	93	3.72	134	5.36	+41
93	80	3.20	126	5.04	+46
94	99	3.96	137	5.48	+38
95	92	3.68	128	5.12	+36
96	98	3.92	123	4.92	+25
97	90	3.60	129	5.16	+39
98	86	3.44	107	4.28	+21
99	95	3.80	116	4.64	+21

(appendix continues)

100	**83**	**3.32**	**127**	**5.08**	**+44**
TOTALS	**8,207**	**328.28**	**12,225**	**489**	**4018**
AVE.	**82.07**	**3.2828**	**122.25**	**4.89**	**40.18**
AVE.					**1.6072***

* 1.6072 x 25 (# of survey items) = 40.18

Appendix D

t-Test for Nonindependent Samples

STATISTIC	VALUE
NO. OF PAIRS OF SCORES	100
SUM OF "D"	160.72
MEAN OF D'S	1.61
SUM OF "D" SQUARE	285.80
T-VALUE	32.30
DEGREES OF FREEDOM	99

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