A Comparison of Retention Rates between Students Who Took the Student Development Seminar and Students Who Did Not, at Tunxis Community-Technical College.

In order to conduct the study, a review of the literature was conducted to identify preparatory seminar and workshop results at other institutions, and retention rates attained. Historical retention rates for Tunxis Community-Technical College also were compiled to serve as a comparison/base mark. Two sample groups, one group that took the seminar and one group chosen by random selection, of 45 students per group, were extracted from the fall 1997 enrollment records and compared with enrollment records for the spring 1998 semester. The results, analyzed by means of a Chi Square test, determined there was no difference in re-enrollment rates between the two groups of students. Despite the null hypothesis, the student development seminar will be continued for another semester to obtain a more longitudinal perspective. Appendix includes seminar syllabus. (Contains 20 references.)
A COMPARISON OF RETENTION RATES BETWEEN STUDENTS WHO TOOK THE STUDENT DEVELOPMENT SEMINAR AND STUDENTS WHO DID NOT AT TUNXIS COMMUNITY-TECHNICAL COLLEGE

Research Methodology

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A practicum report presented to Programs for Higher Education in partial fulfillment of the requirements for the degree of Doctor of Education

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A COMPARISON OF RETENTION RATES BETWEEN
STUDENTS WHO TOOK THE STUDENT DEVELOPMENT SEMINAR AND
STUDENTS WHO DID NOT, AT TUNXIS COMMUNITY-TECHNICAL COLLEGE

By
Nanette J. Miner
March 1998

Tunxis Community-Technical College implemented a Student Development Seminar in the fall of 1997. The intention of the seminar was to orient new students to college expectations and experiences. Because Tunxis had experienced a turnover in enrollment of 50% in recent years, the purpose of the study was to determine if those students who enrolled in the Student Development Seminar were more likely to re-enroll for the spring semester than those students who did not take the seminar. There was one research question for this study: "Did Tunxis Community-Technical College students who completed the Student Development Seminar in the fall of 1997 have a higher retention rate in the following semester than those students who did not complete the seminar?"
Three procedures were employed in conducting the study: (a) a review of literature was conducted to identify preparatory seminar and workshop results at other institutions, as well as to determine an acceptable level of retention; (b) historical retention rates for Tunxis Community-Technical College were compiled to serve as a comparison/base mark; (c) the results were analyzed by means of a Chi Square test.

Two samples of 45 students each were extracted from the Fall 1997 enrollment records. These samples were then compared to enrollment records for the Spring 1998 semester. The study determined that there was no difference in re-enrollment rates between the two groups of students. The outcome of the Chi Square analysis was zero and, based on a region of rejection value of 3.84, the null hypothesis was accepted. It was recommended that the study be continued for another semester to obtain a more longitudinal perspective and that no decision regarding the success of the Student Development Seminar be made at this time.
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CHAPTER 1
INTRODUCTION

Tunxis Community-Technical College (TCTC) is one of twelve public, two-year colleges in Connecticut. It serves a population base of over 300,000 residents. Current enrollment exceeds 3,000 students. TCTC experiences a drop-out rate of 1,500 students per year.

A new course titled "Student Development Seminar" (Appendix) was offered for the first time during the Fall 1997 semester. The intention of the seminar was to acclimate new students to the college environment. Topics covered in the seminar included study skills, time management, interacting with professors and staff, and available services such as the library and computer lab. It was hypothesized that those students who took the Student Development Seminar would have a higher rate of retention than those students who did not take the seminar.

Nature of the Problem

The poor retention rate experienced by TCTC impacts the institution in a number of ways. Marketing must be done constantly in order to replace half the student population each year; this is a costly endeavor. Also, funding from the State of Connecticut is dependent on the enrollment and retention levels attained by the college. On average, it takes a TCTC student seven years to earn a two-year degree. Because of frequent withdrawal and re-enrollments (stop Outs), the student's education is inconsistent; as students leave and return, a lack
of continuity exists in their choice of courses. The problem is that it is unknown whether students who take the Student Development Seminar have a higher retention rate than those students who do not take the seminar.

Purpose of the Study

The purpose of this study is to determine whether students who take the Student Development Seminar have higher retention rates than those who do not take the seminar.

Significance to the Institution

Increased levels of retention would benefit the institution by enhancing the college's financial position. Fewer professional and financial resources would be needed to persuade students to stay enrolled in school. Finally, the students would benefit by experiencing a more continuous educational process.

Relationship to the Seminar

This research project is directly related to the Research Methodology seminar because an experimental problem-solving approach is best used to determine the impact of the Student Development Seminar on re-enrollment rates. A Chi Square test will be used. This nonparametric test was chosen because the study is concerned with the relationship between the categorical variables and is not concerned with the characteristics of the population. This technique is addressed in the seminar text, Research in Education: A Conceptual Introduction by McMillan and Schumacher (1993, p. 359-360).
Research Question

There was one research question for this study: "Do Tunxis Community-Technical College students who complete the Student Development Seminar in the fall of 1997 have a higher retention rate in the following semester than those students who do not complete the seminar?"

Research Hypothesis

It is hypothesized that students participating in the Student Development Seminar will have a higher frequency of re-enrollment than those students who do not participate in the seminar. The independent variable is participation in the seminar. The dependent variable is retention rate.

Definition of Terms

For the purposes of this study, the following terms need to be defined.

Attrition. The percentage of students lost over the course of a period of time (semester, year) is known as attrition.

Drop-out. An individual who withdraws from college and has no intention of returning is a drop-out.

Retention Rate. Determined by Spring 1998 enrollment, retention rate will be determined by the number of students enrolled who were also enrolled during the Fall 1997 semester.

Stop-out. A student who withdraws from college for a period of time with the intention of re-enrolling at a later date is considered to be a stop-out.
Student Development Seminar. The Student Development Seminar is an elective, three-credit course, intended to acclimate new students to the college, its rules, regulations, and services.

Student. A student is an individual enrolled for the Fall 1997 semester and taking at least one, for-credit course.
CHAPTER 2
LITERATURE REVIEW

Introduction

"More than 40% of all college entrants leave higher education without earning a degree, 75% of these students drop out within the first two years," according to authors Gerdes and Mallinckrodt (1994) citing Tinto's 1987 study of attrition (p. 281). The figures presented were arrived at by examining enrollment rates of four-year institutions. The situation within community colleges may be quite different. Unfortunately, little research has been done in the area of retention and attrition at two-year institutions, and, more specifically, little attention has been paid to the issue within community colleges. What data has been collected regarding community college retention rates has been inconclusive (Feldman, 1993, p. 503-504).

The transition to college is marked by challenges in emotional, social, and academic adjustment. One of the most common issues during this transition is a lack of self-confidence on the part of the student. Many students are simply scared of college life (Cvancara, 1997, p. 10; Hodum & Martin, 1994, p. 3). An orientation seminar may help to alleviate some of the pain of transition.

Prepatory and Orientation Seminars

Many colleges attempt to impact retention rates by better preparing students for college life. The preparation takes the
form of preparatory or orientation seminars. The expectation is that better prepared students will be more likely to re-enroll and thus enhance retention rates.

Many institutions refer to the orientation seminar as the "freshman seminar." The term, freshman seminar, brings to mind young students, which is not the typical population at a community college. Fully 50% of students who are over the age of 40 are enrolled at a two-year, public institution (Education Resources Institute, 1997, p. 17). Because of this unique demographic, the term, freshman seminar, will not be used in this report; and instead the terms "preparatory" or "orientation" seminar will be used.

There has been an increased amount of attention given to retention and attrition rates as of late because of an alarming rate of first-to-second year attrition (Barefoot & Fidler, 1994, p. 1). While there has been little research to validate the importance of an orientation seminar (Cook & Stearns, 1993, p. 111), many colleges that provide the seminar during the student's first term have reported a marked increase in student retention and performance (Brawer, 1996, p. 1; Ellis, 1993, p. 3; Rice & Coll, 1991, p. 6). Approximately 67% of colleges and universities have some type of orientation seminar. This number has stayed constant since 1988 (Barefoot & Fidler, 1994, p. 5).

The 1994 National Survey of Freshman Seminar Programs polled 1003 institutions. Of these, 31.8% were two-year institutions. The poll determined the following list of characteristics of
"successful" preparatory seminars. They: (a) carry academic credit, (b) are part of the first-year curriculum, (c) include academic content, and (d) the course "process" is as important as the course "content" (Barefoot & Fidler, 1994, p. 61). Other seminars include study skills training; computer training; academic counseling; and assessment of skills, interests, or attitudes. A survey of Purdue University students revealed that more important to the student than the content provided in the preparatory seminar was the knowledge that "help was available" (Dale & Zych, 1996, p. 358).

A number of studies report that it is difficult to address the problem of attrition in a universal way because there are too many independent factors and each institution's determination of "success" is unique (Braunstein & McGrath, 1997, p. 189, 199; Barefoot, 1993, p. 7). Helfgot and McGann suggest in Promoting Student Success in the Community College, that each institution conduct its own research to see who fails, based on that institution's measurement of success - then create a retention program which will address those particular shortcomings (Warner, 1996, p. 478).

Retention Rates

The first national study of retention rates was done in 1937 by McNeely. The most extensive examination of institutional retention rates was conducted in 1987 by Tinto, who determined that attrition was 34% for four-year institutions and 54% for two-year institutions (Glass & Garrett, 1995, p. 118).
Student retention greatly impacts an institution's financial viability (Braunstein & McGrath, 1997, p. 188). Grunder and Hellmich (1996) discuss a study undertaken at Miami-Dade Community College (MDCC). Those students who participated in a course called College Success, "during their first semester of college were more likely to persist and earn acceptable grade-point averages." The one-year study, conducted at MDCC during the late nineteen-eighties, led researchers to conclude that if "all first-time-in-college students in the semester studied had taken the course and received similar academic results, the college could have retained revenues in excess of $200,000" (p. 22).

Although the most common measures of an institution's success are retention level and student grade point average (Wyman, 1997, p. 29), these are not necessarily accurate descriptors of success. Especially when dealing with the community college population who tend to be older, have outside commitments such as work and family, and who frequently have no intention of degree completion (Warner, 1996, p. 477; Brawer, 1996, p. 1), the retention and GPA measures can be damaging to the institution's credibility.

Astin (1993) cautions that retention rates are often misleading. He cites a study conducted by the Higher Education Research Institute at the University of California at Los Angeles which suggests that, "a simple retention rate tells us a lot more about who an institution admits than about how effective its
retention practices are." He continues, "Regardless of where they attend college, the least-well-prepared students ... are five times more likely to drop out" (p. A37). Typically, because of their socioeconomic status, the length of time they have been removed from a learning environment, and their real-world commitments, community college students are the least-well-prepared population. Wyman (1997) further cautions that retention rate analysis is, "uniquely the result of institutional performance (and) is yet to be proven useful or even valid" (p. 31).

Acceptable Retention Rates

No definitive number or percentage can be given for "acceptable" levels of retention. As mentioned earlier, in 1987 Tinto found levels of attrition to be 34% for four-year colleges and 54% for two-year colleges (this translates to retention levels of 66% and 46%, respectively). Confusion is created, in large part, because the study of retention is inconsistent. Some studies analyze retention at the degree-level by posing the question, "How many students complete a degree?" Other studies judge retention by analyzing re-enrollment figures, or how many students return the following semester?

Braunstein and McGrath (1997) state that attrition can range from 10%-80%, and typically 75% of those students who do drop out do so in the first two years (p. 188). Throughout the 1980s Iona College in New Rochelle, New York, experienced a fairly
consistent attrition level of 21% (Braunstein & McGrath, 1997, p. 190).

A study conducted during the 1990-1991 school year discovered that the retention rates at the 16 community colleges of South Carolina ranged from 36% to 60% during the students' first year of attendance. While a wide range of retention rates existed between the 16 colleges, an analysis of the data revealed that the retention rate varied only slightly across time for each college (Wyman, 1997, p. 39).

A more recent and widely encompassing study conducted in 1996 by the American College Testing Program determined that 26.9% of all college freshman do not return (Geraghty, 1996, p. A57). It is difficult to make any widespread generalizations regarding acceptable retention levels. Each college and its population are unique and should be judged according to the success factors that are applicable to the specific institution.
CHAPTER 3

METHODOLOGY AND PROCEDURES

Data Collection

Three procedures were used to complete this research study. The first procedure was to conduct a review of related literature. The review included the topics of retention rates and preparatory seminars/workshops. Answers to the following questions were looked for in the literature: (a) What results do institutions experience by providing preparatory seminars given to new students? (b) Do preparatory seminars impact the rate of retention for those individuals who participate in the seminar? (c) What is an "acceptable" rate of retention for an institution?

The second procedure used was to gather the retention rates of TCTC for past years to serve as a comparison for the retention rates being analyzed. It was hoped that the retention rates could be generated for the past three years. The database was unable to accommodate this request. A manual calculation was conducted for the fall 1994 to fall 1995 period and that year's results served as the benchmark for comparison.

The last procedural step involved analyzing the results of re-enrollment using a Chi Square test. The final sample size was 45 students. A class roster for each of the Student Development Seminar sessions was obtained from the college records office. Sample participants were identified via their social security numbers.
number. The results of the analysis are presented in both tabular and narrative form in the results section of this report.

**Description of the Population**

The population measured included all students enrolled in the fall 1997 semester at TCTC; there was a total of 3305 students. There was no demarcation between students who were full time or part time, nor was there any identification of those students who were attending their first year of classes at TCTC.

**Sample**

The sample population consisted of two groups. Sample A included those students who elected to take the Student Development Seminar. Three sessions of the seminar ran, with a total of 45 students enrolled. A similar group of students (Sample B) was chosen at random from the remainder of the student population to serve as the comparison group. The two samples were matched by student scores on the placement tests taken when they entered the college.

**Experimental and Control Group Treatment**

Sample A students attended a sixteen-week preparatory seminar entitled Student Development Seminar. The seminar provided students with information about study skills, interacting with professors and staff, student services, and time management skills. The objective of the seminar was to enable students to more quickly acclimate to working within the college atmosphere and its requirements. Sample B students did not participate in
the seminar and, therefore, did not have any preparedness training provided by the college.

**Scoring**

The level of re-enrollment was determined by manually comparing the list of student's social security numbers from the three classes of seminar participants to the database file of all students enrolled for the Spring 1998 semester. The Spring 1998 database file was converted to an Excel® file and the social security number for each student in Sample A was searched for using the "Find" utility in Excel®.

**Data Analysis**

Following the Spring 1998 enrollment which culminated on January 20, 1998, re-enrollment data were gathered and analyzed for the two samples. The data are presented in tabular and narrative form further in this report. The data were analyzed using the following parameters.

**Null Hypothesis**

There was one null hypothesis for this study. The null hypothesis was, "Sample A will not have a significantly higher rate of retention than Sample B."

**Alternative Hypothesis**

One alternative hypothesis existed: "Sample A will have a significantly higher rate of retention than Sample B."
Level of Significance

The level of significance for this study was .05. The risk of making a decision based on this research is nominal to the college and a .05 level of significance was deemed acceptable.

Region of Rejection

The region of rejection was determined by the .05 level of significance and a degree of freedom value of 1. The region of rejection was determined to be 3.84.

Statistical Test

A Chi Square test was used to analyze the data. This statistical test was chosen because of the nonparametric characteristics of the samples and the relational association of the variables. The statistical calculation was completed in Microsoft Excel®.

Assumptions

It was assumed that all TCTC students had the opportunity to enroll in the Student Development Seminar. It was further assumed that the rate of retention was a valid measure of the success of the Student Development Seminar.

Limitations

This study was limited in that it addressed only the Tunxis Community-Technical College environment and could not be generalized to other State of Connecticut community-technical colleges. A further limitation was that Sample A was non-random in that the students self-selected into the elective course.
CHAPTER 4
RESULTS

A literature search was done of the following databases for the period 1991-1997: ABI Inform, First Search, ERIC, and Periodical Abstracts. The databases were searched for the following terms: attrition, retention, persistence, orientation programs, freshman seminar, preparatory seminars, student development, student success, and intervention strategies. The results of each of the procedural steps are detailed below in chronological order.

The results of the literature review primarily highlighted what is being done at four-year institutions to orient new students to college life. This area of research is not readily extrapolated to the community college environment because most four year colleges are residential institutions and, therefore, have many different issues to address during the orientation process. Limited research has been done in the area of college preparatory seminars at two-year institutions and less still at community college institutions.

Retention rates from other institutions were gleaned from the literature. The retention rates varied widely from school to school. No generalized statement can be made regarding what an acceptable retention rate should be. There are many independent factors which make the level of "successful" retention unique to each institution.
It was impossible to determine exact retention rates for the prior three years at TCTC. The database that houses the records is old and has limited capacity. Records are purged every 18 months to allow room for the entry of new records. When the director of institutional research assumed her position in 1996 she manually calculated the retention rate by comparing the student records of those students enrolled in the fall of 1994 with the records of those students re-enrolled for the fall of 1995. After eliminating those students that graduated in the spring of 1995 from the equation, it was determined that the school had suffered a 51% drop-out rate. Therefore, a 49% retention rate was achieved. This 1995/1996 retention rate served as the benchmark for comparison of TCTC records.

Retention Rate Results

The population used was 90 students with two samples of 45 students each. Thirty-one students from each sample re-enrolled in the spring of 1998, while 14 from each sample did not. Table 1 lists the results of the retention rate for each sample.
Table 1

Re-enrollment Figures for Samples A and B

<table>
<thead>
<tr>
<th></th>
<th>Re-Enrolled Spring 1998</th>
<th>Did Not Re-Enroll Spring 1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAMPLE A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Took Student Development Seminar Fall 1997 45</td>
<td>31</td>
<td>14</td>
</tr>
<tr>
<td>SAMPLE B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not take Seminar Fall 1997 45</td>
<td>31</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>62</td>
</tr>
</tbody>
</table>

A Chi Square analysis was run in Microsoft Excel® using a degree of freedom value of one, a .05 level of significance, and a region of rejection of 3.84. The Chi Square value was zero. Since the Chi Square value of zero fell within the region of rejection, the decision was made to accept the null hypothesis: "Sample A will not have a significantly higher rate of retention than Sample B." The Chi Square analysis is presented in Table 2.
Table 2

Chi Square Analysis

<table>
<thead>
<tr>
<th></th>
<th>Re-enrolled</th>
<th>Did not Re-enroll</th>
<th>Total Rows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample A</td>
<td>31</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Sample B</td>
<td>31</td>
<td>14</td>
<td>45</td>
</tr>
<tr>
<td>Total Columns</td>
<td>62</td>
<td>28</td>
<td>90</td>
</tr>
</tbody>
</table>

Retention Rate: 0.688888889
Attrition Rate: 0.311111111

Expected:

<table>
<thead>
<tr>
<th></th>
<th>Sample A</th>
<th>Sample B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.00</td>
<td>14</td>
<td>45.00</td>
<td></td>
</tr>
<tr>
<td>31.00</td>
<td>14</td>
<td>45.00</td>
<td></td>
</tr>
<tr>
<td>62.00</td>
<td>28</td>
<td>90.00</td>
<td></td>
</tr>
</tbody>
</table>

$X^2 = \frac{90[(14)(31)]-[(31)(14)]^2}{(14+31)(14+31)(14+14)(31+31)} = \frac{0}{3515400} = 0$

The statistical outcome of zero falls within the region of rejection, therefore the null hypothesis cannot be rejected.
CHAPTER 5
DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

The purpose of this study was to determine if participation in a college preparatory course enhanced student retention. The data collected from the literature review revealed that this is a topic which is studied frequently but with few definitive answers. An issue which clouds the subject is whether or not one is undertaking a study within a four-year institution or a two-year institution.

While many colleges are judged as "successful" or not successful based on their ability to retain students, retention is a questionable measure of success for a two-year institution. The population of students who attend two-year institutions is significantly different from the traditional college student. The two-year college student is, on average, a decade older than the traditional college student. In addition, the two-year college student is typically a commuter, holds a job, is responsible for a family, and is not necessarily seeking a degree but rather is seeking to enhance his/her skills. Lastly, one of the most significant differences between the two-year college student and the four-year college student is that the two-year college student frequently stops-out. One of the attractions of the community college education is the fact that one may stop-out and re-enroll without penalty. While this does disrupt the
continuity of the student's education, it also allows the student to obtain an education within the framework of his/her personal needs. Given the stop-out factor, it is difficult to judge retention from semester to semester and even more difficult to judge the success of the institution based on its ability to retain students. Wyman (1997) sums up the retention issue:

Does retention rate measure an institution's effectiveness? If so, does a high retention rate portray an institution particularly effective at retaining students by shielding them from the pernicious grasp of attrition, or does it simply reflect the selective admission policy of the institution? Conversely, is retention rate not a function of an institution's policies, management, and performance at all, but solely a function of the demographics of the population from which students are drawn, students' reactions to economic forces, or both (p. 32)?

There was an expectation, prior to analyzing the re-enrollment data, that those students who took the seminar would re-enroll at a higher rate than those students who did not. It was expected that because of the increased attention given to the participants regarding their ability to succeed in school, and because the students were proactive in selecting the elective course, the re-enrollment figures would be positively skewed. The outcome proved these expectations to be wrong. Sixty-nine percent of each sample re-enrolled. This percentage is significantly higher than the retention rate benchmark of 49% during the 1995/1996 school year. It is not known what contributed to this increased retention rate in the overall population.
Conclusions

The analysis of the data reveals that there is no difference in re-enrollment levels between students who take the Student Development Seminar and students who do not. However, the data used could have been more controlled in a number of areas.

The methodology could have been improved by: (a) matching samples according to course load, so that each student was taking the same number of courses, (b) matching only first-time college students so there would have been no preconceived notions (on the part of the students) regarding how college "works," (c) matching students regarding age, sex, race, and income to decrease the influence of each of those variables, and (d) continuing the study over a longer period of time (one year to the next) or to graduation to determine if early intervention influences students to persist to degree completion.

Implications

Providing the student with a process to speed orientation to college life and assist him/her in working within the framework of an institution of higher education may encourage the student to maintain enrollment because of better preparation to deal with the requirements--both academic and institutional. If the student is better able to operate within the "system" and encounters increased success in academic endeavors, the positive effect on the student may translate to the desire to continue to be successful. This, in turn, should enhance the college's retention rate. An increase in retention rate will translate
into an increase in revenue for the institution, thus enhancing its position within the community college network. No positive or negative implications can be determined as a result of this study. It is unknown whether or not educational practice has been improved as a result of the Student Development Seminar.

Recommendations

This study influences a number of recommendations: (1) No decision regarding the success of the Student Development Seminar should be made at this time; (2) The study should be undertaken again for those students enrolled in the Spring 1998 offering of the seminar; (3) Two additional criterion for determining the success of the seminar should be examined--one criterion is to examine the drop-out rate between students who participated in the seminar and those that who not and the second criterion to examine the GPA of students who took the seminar compared with those students who did not; (4) An additional study should be undertaken at the close of the 1997/1998 school year to determine if, in fact, the retention level has increased 20 percentage points for the entire population since the 1995/1996 school year--the present sample of 90 students (2.7% of the population) is too small to extrapolate the outcome to the entire student population.
REFERENCES


APPENDIX
Appendix

Student Development Seminar Syllabus