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Profiling the Insight Student

An Interactive Qualifying Project Report

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by

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Abstract

This report describes the profiling of the freshmen involved in the Insight Program to see if they adjust better to college life than students who do not participate in this program. Extracurricular activities and courses selected by Insight students in the 1999-2000 school year were compared to those of the control students. The students in the Insight program have adjusted so well within their small group that they did not get as involved in extracurricular activities as the control students.

Executive Summary

During the 1999-2000 academic year at Worcester Polytechnic Institute (WPI), a completely new program called Insight was implemented. The program is designed to aid students in adjusting to their turbulent first year in college. The purpose of this Interactive Qualifying Project was to profile the Insight students and to compare them to a sample group of peers. The results obtained from this profiling and comparing, along with the results of another analysis currently being performed on academic progress, will be invaluable to the future design of the Insight program.

Currently there are a plethora of programs at universities all over the country designed to improve a student's first-year experience in college. Although each program is different, they all share the same under underlying desire to help freshmen adjust to college life. Many first-year students do not successfully complete this year because of the challenges they face.

There are three main types of first-year experience programs. The first type of program includes special courses taken for credit, coupled with special living arrangements. The second type of program is designed to fit within a normal curriculum, with no special course, but it does include special living arrangements and a special section of a required freshman English course. The last major type of program is the special seminar designed to help orient the incoming students over a period of several weeks, without a special residential component.

The Insight Program at WPI was first implemented in the fall of 1999 to help students make the necessary adjustment to college life. It has a residential component but

it does not include any special course. It does include a number of extracurricular activities to help foster a sense of community among the students involved. The Insight program for the 2000-2001 academic year will incorporate some changes from the previous academic year, including an overall doubling in size. There is a good possibility that the program will one day include the entire WPI freshman class.

The overall objectives of this project were to see if the students involved in the Insight program were more academically and socially confident than their peers at the end of their first year at WPI.

Before these objectives could be tested, a control group of students was chosen. The control group is a randomly selected group of freshmen that I assumed to be comparable to the Insight group. To validate this assumption, I compared high school information about the participants in the Insight program to that of the students in the control group. The data used for this comparability test was primarily obtained from the Worcester Polytechnic Institute Projects and Registrar's Office. A t-test was used to test the validity of each of these comparisons. There was no statistically significant difference between the Insight and control groups in terms of the amount of incoming college credit, the age of the students, the SAT I math score, the SAT I verbal score, and high school grade point average.

To test the first of the two objectives, academic confidence, I developed the Challenge Index (CI) as a measure of the level of challenge associated with each specific course. Then, I compared the average CI for the courses taken by the Insight and control students for each term in the 1999-2000 academic year. Overall, there was no difference

between the Insight and control groups in the students' academic confidence based on the CI.

To answer the question, "Has the Insight group adjusted better socially than students who are not involved in Insight?", I developed the Social Index (SI), the number of reported hours of extracurricular activity per term including the Insight program. To measure SI, I added a page of questions to a survey that was planned to be administered to the students in the Insight and control groups at the beginning of D-term 2000. These results showed that the assumption that the two groups had approximately the same SI is not valid and that there was a significant difference in the amount of time each group spent on extracurricular activities. The control students spent significantly more time on extracurricular activities than the Insight students. This was the only significant difference that I measured between the control group and the Insight group.

It is possible that the benefits of the Insight program may not become totally apparent until the current Insight and control freshmen have become sophomores, juniors, or maybe even seniors. These two groups of students should continue to be analyzed each academic year to observe the possible long-range impact of the Insight program.

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1. Introduction

The Insight project is a new program implemented at Worcester Polytechnic Institute (WPI) for the first time in the 1999-2000 academic year. This program is designed to help incoming freshmen adjust to college life both academically and socially, and to increase WPI's retention rate from freshman to sophomore year.

Incoming students at Worcester Polytechnic Institute face specific challenges, especially academic, that must be overcome. Since WPI focuses mainly on engineering disciplines, a strong foundation in math and science is essential for any freshman. If a student does not have a strong academic background coming into WPI, especially in calculus and basic physics, then he must work even harder to make up for the lack of foundation. This can often cause an incoming student additional stress that, once compounded with the stresses of adjusting to life away from home, trying to meet new people, and being in a new and uncomfortable environment, can be more than a student is able to handle on his own.

The Insight Program prevents students from having to deal with this turbulent time alone. This year the program consisted of 37 freshmen who went through freshman orientation together and were all housed together in Stoddard Hall. This group is divided into two separate sections each having its own resident advisor (RA), faculty advisor, and orientation/Insight leader who were the students' orientation leaders for Freshman Orientation. During the academic year 1999-2000, they have participated in activities within the community; they have attended programming sponsored by the school for the entire WPI community; they received special tutoring; and they completed their own

projects and went on a few trips. All of these activities were designed to help foster a sense of community among the students involved.

The purpose of this Interactive Qualifying Project was to profile the Insight students and compare them to a sample group of peers. First, I verified that the control group and the Insight group were comparable groups, based on high school GPA, SAT I scores, and age. I investigated the academic confidence of the Insight students by examining each student's choice of courses based on a Challenge Index that I have developed. In order to determine how well adjusted these students were, I have compared the number of hours each student in the Insight group and the control group spent on extracurricular activities. The results obtained from my profiling along with the results of another analysis currently being performed on academic progress will be invaluable to the design of the Insight program in years to come. For example, one of my results is a lower degree of outside social interaction for the Insight group when compared to that of the control group. To increase the amount of extracurricular involvement of next year's Insight students, the program will be including joint activities with other on-campus groups like LEAP, a student group aimed at improving students' leadership skills. By profiling the students involved in the program, program developers will know if the results experienced this year will most likely be repeated in the future.

2. Background

2.1. Overview

Currently there exist a multitude of programs at universities across the country designed to improve a student's first-year experience in college. These programs range in scope and depth from the programs that include special living arrangements and special courses to regular courses with special sections for incoming students. All of these programs are based on the premise that there is a major adjustment period when students leave home and go off to study, and that colleges can implement programs to ease this adjustment by getting students to know each other and develop a strong support system away from home.

2.2. Reasons for Leaving

2.2.1. General

Due to the difficulties encountered by freshmen during this challenging adjustment period, there are multiple interrelated reasons why some students leave college after the first year. Tinto (1996) outlined what he called the "seven causes of student withdrawal". These reasons included academic difficulty (30% to 35%); adjustment difficulties affecting various academic ability levels; goals that were either uncertain, narrow, or new; commitments that were weak and external; financial difficulties; an inability to fit in; and isolation. All seven of these causes are interrelated. Often isolation and feelings of rejection from groups will lead to poor self-esteem and

poor overall academic performance. Also, if a student is attending college only because his parents made him go, then the student will not have the drive and determination required to excel or even get by at most colleges.

2.2.2. WPI

The causes cited by Tinto (1996) for why students leave college are to some extent the same ones experienced here at Worcester Polytechnic Institute. WPI has a very high retention rate from freshman to sophomore year (around 90% for the class that entered WPI in the fall of 1997). Approximately 75% of all students who leave WPI do so as a result of academic difficulty, mainly in the calculus sequence, (Garvin, personal communication) that often results in the loss of financial aid. After academic difficulty, the greatest loss of students results from a change in focus (Garvin, personal communication). In contrast to most state schools, WPI does not offer a wide variety of majors, and as a result, there will always be some unavoidable loss due to students changing their minds about which careers to pursue.

2.3. First Year Programs

2.3.1. Overview

Most first-year experience programs are designed to combat the problems that result in a loss of students from that specific university. All, or nearly all, of the programs involve only a part of the freshman class. This may be due to the cost or logistical difficulty of creating an institution-wide program. Also, all of the programs are voluntary; no student is forced to participate in the program, but most freshmen are

encouraged to join the group. Although the details vary by school, the programs fall into a few distinct categories.

2.3.2. Special Living and Special Courses

The first type of program includes special courses taken for credit together with special living arrangements. This type of program attempts to address more than just academic adjustment; it is generally designed to foster a strong sense of community within a small group of students in order to overcome isolation. The College of the Holy Cross in Worcester, Southeast Missouri State University, and Northern Illinois University all fit into this group. At Holy Cross 160 incoming freshmen chosen from those who apply for the program live in a single dorm together and take a specific course designed to replace one of the four regular freshman courses. The program is based on the question that some feel is central to the liberal arts education: "How, then, shall we live?" (The College of the Holy Cross). Southeast Missouri State University allows incoming students who wish to participate in their program to choose a program focused on any one of eleven different topics. Each group is limited to 25 students. On-campus living is preferred but not required; students who participate and choose to live on campus are housed together (Southeast Missouri State University). Northern Illinois University offers another program of this type. Participating freshmen are grouped together in dorms and have one advisor, who could be an upperclassman, a teacher, or a faculty member, to provide one-on-one counseling as needed. There is also a one-credit course entitled University 101 (Northern Illinois University).

2.3.3. Special Living and a Special Course Section

The next type of program is designed to fit within a normal curriculum, with no special course, but it does include special living arrangements. One example of this type of program exists at Case Western Reserve University. To participate in this program, students must enroll in a specific introductory-level English course in which a special section was created for the students participating in the program. Another requirement is that participating students must be housed on a specific floor. Students who would like to participate in the program but who scored a 4 or 5 on the AP English exam, and therefore will not be taking the introductory English course, are permitted to participate in the special program, but they are housed on a different floor in that dorm. The students who participate in this program go on trips and have study skills workshops, gender relation seminars, and other special programming designed to ease their adjustment to college life (Case Western Reserve University).

2.3.4 Special Course Only

The last major type of program is the special seminar designed to help orient the incoming students over a period of several weeks, without a special residential component. Most of these programs include topics such as gender issues, study skills, relating to other people, problem solving, and other topics relevant to life at the specific university. Loyola College and the University of Connecticut are just two of many schools that offer such a program. Each school offers the course for the same amount of credit as any other course, but it does not attempt to develop the sense of a small close-knit community the way some of the other programs are designed.

2.3.5. Insight Program

2.3.5.1. 1999-2000 Academic Year

At Worcester Polytechnic Institute, the Insight Program, which has a residential component but no special courses, was first implemented in the fall of 1999 to help students make the necessary adjustment to college life. During the 1999-2000 academic year, there were 37 freshmen, 24 males and 13 females, in the program, all of whom were housed in Stoddard Hall. This group was divided into two separate groups each having their own resident advisor (RA), faculty advisor, and orientation leader, later called Insight Counselor, who was the students' leader for freshman orientation.

These groups went through freshman orientation together and have been meeting on a weekly basis. They have been participating in activities within the Worcester community such as the annual diabetes walk to raise money for charity; they have been attending programming sponsored by the school for the entire WPI community; they have received special tutoring for Maple mathematics software as well as academic tutoring from tutors in their dorm; and they have been completing their own projects and going on trips. All of these activities are designed to foster a sense of community among the students involved. Over the Spring 2000 semester, the students continued to learn more about themselves and develop their leadership skills. They also participated in activities such as a skiing trip, a ropes course, white water rafting, and a number of small workshops that the students requested.

2.3.5.2. 2000-2001 Academic Year

The Insight program for the 2000-20001 academic year will incorporate some changes from the previous year. It will more than double in size from this year, so that approximately 109 students will be involved compared to the 37 who participated this year. Each group will have one resident advisor (RA), one Insight community advisor (ICA), and one faculty advisor. The student staff (the RA's and ICA's) will be chosen via the normal application process for resident advisors and orientation leaders, with the exception of the inclusion of a special section on the application form to state an interest in the Insight Program and an additional interview if selected. The faculty advisors will also be the academic advisors for their Insight students for the duration of the year. As in 1999-2000 the Insight students will be housed together in one dorm. (Proposed year two model for the Insight Program, unpublished)

2.3.5.4. Future Plans

If the Insight program works as intended, there is a good possibility that the program will one day include the entire WPI freshman class. As the program continues to grow in size, issues of cost, especially in regard to trips and activities, will need to be addressed. Also, for the program to continue to work once the entire freshman class is involved, students will still need to feel like they are a part of a special group and must still want to be a part of it. All of these issues and more will be dealt with as they arise.

2.4. Analysis of the Insight Program

2.4.1. Control Group

A control group of students was chosen so as to compare the progress of the Insight students to that of their freshman peers. This control group was chosen from among freshmen living together in Institute Hall who were not oriented together. From this group, 37 students were chosen at random to match the gender of students in the Insight group.

2.4.2. Assessment of Needs

The Insight students were given a survey to ascertain what academic, social, and personal development needs each student thought he had before the program began. Based on these self-reported needs, topics for Insight workshops were chosen. However, when the program began the students began to realize different needs (Quinn, unpublished data). To determine how much these needs changed, a survey was administered in D-term to the students in both the Insight group and the control group. This survey also included questions asking about collegiate extracurricular activities to aid in my assessment of the Insight program regarding the level of adjustment made through the level of activity.

2.4.2.1. Background on Surveys

The first survey was administered on paper, but that is not the only option currently being considered for the distribution of future surveys. An Interactive Qualifying Project completed in 1996 (Brennan et al., 1996) studied survey

administration through three different mediums. The first was distributed by campus mail, the next was on the campus-wide UNIX program, and the third type of survey was placed on the World Wide Web. This IQP found that surveys administered on-line, especially via the web, had a doubled response rate and longer, more thought-out essay answers. These results did show a bias in the type of people who would respond over the web; females were much less likely to respond to the survey over the web than by mail. The findings from this IQP were taken into account when it was determined what type of survey would be best for the Insight program.

2.5. Project Objectives

The objectives of this project are to see if the students involved in the Insight program are more academically and socially confident than the control group of students. Before these objectives could be met, it had to be determined that the Insight and control groups were comparable. I also examined the 1999-2000 courses for which the students in the program and in the control group registered. I also looked at the amount of involvement in extracurricular activities of the students in the Insight group, including the Insight program itself, and of the control students. Through the profiling of the students involved in the Insight program in comparison to a control group of freshmen, a better understanding of the overall results from the implementation of the Insight program will be gained.

3. Methods

3.1. Sampling

3.1.1. Control Group

It is important that the control group is a randomly selected group that is comparable to the Insight group. This assumption was verified before the project objectives could be completed. All students in the freshman class filled out the CIRP survey, which included a request for release of records during mandatory orientation testing. Permission from the students in both the control and Insight groups was thus obtained to ensure that the records necessary for the analysis, especially students' grades, would be available to the people who were performing that analysis. The students in the control group were not aware that they were in the control group. This secrecy was to prevent possible biases in survey responses.

3.2. Dimensions of Interest

The first question that had to be answered when analyzing the Insight Program was, "Are the Insight and control groups comparable?" To answer this question, I compared high school information about the participants in the Insight program to that of the students in the control group. This information included self-reported high school GPA and SAT scores (verbal and math). An external evaluator doing Insight analysis, Paula Quinn, examined the number of incoming credits each student had received, either from previous college courses or from Advanced Placement credit. This analysis was

done to make sure that all of the students were at roughly the same starting point when entering WPI. That way one of the two groups of students should not have an academic advantage over the other group which could cause problems when analyzing grades or courses selected. I tested whether the groups were matched with respect to gender and age. This gave me an overall understanding of the demographics of both groups of students.

The original data used for this comparability test was primarily obtained from the Worcester Polytechnic Institute Projects and Registrar's Office. My project advisor, Dr. Judith Miller, emailed Nikki Andrews at the Registrar's Office in early December of 1999 with the data request. High school GPA; high school class rank (in percentile); SAT I (math) score; SAT I (verbal) score; SAT II (math) score; AP Math test and score (either AB or CB type of AP calculus exam and score); C'00 and D'00 courses registered for, including Aerospace Studies (Air Force Reserve Officer Training Corps (ROTC) course), Military Science (Army ROTC), and Naval Science (Navy ROTC); declared major; date of birth; race; religion; citizenship; and gender were included in the data requested. In the middle of C term 2000, I received most of this data over email in a Microsoft Excel 1997 format that was coded with a number for each student to prevent confidential information (social security number and grades) from becoming known to any other student including myself. Each student was assigned a random number that became the second column in the data, in place of the student's name and social security number, followed by the information for each student.

3.2.1. Statistical Methods

To compare the Insight and control groups, I primarily used a t-test. A t-test is used to compare sample means from two sets of data to see if there is any statistical difference between the two sets by determining a p-value. A p-value is the level of significance that indicates how rare a t-value must be before the hypothesis is rejected at a given level of probability. My hypothesis when computing the p-values for each t-test is that there is no difference in the mean values for the Insight and control groups. If this hypothesis is incorrect, the p-value will be less than or equal to .05, which indicates that there is less than a 5% probability that the means of the two groups being compared are the same. If the p-value is greater than .05, then there is no statistically significant difference between the two means. For example, for a comparison of the mean SAT I math score of the Insight group to that of the control group, if the results of the t-test indicated a p-value of .75, then the two groups have the same mean SAT I math score. The t-test, which is integrated in the Microsoft Excel 2000 software package, was the main statistical test performed in all parts of the analysis. For all analyses, statistical significance was defined as p less than or equal to .05.

3.2.2. Analysis of High School Information

To compare the high school information obtained from the WPI Registrar's office, High School GPA, SAT I scores, and ages, a universal scale had to be put into place. For the students' ages, the age itself was the standard used for the t-test. The same is true for the SAT I scores. Since both SAT scores and ages are based on a universal scale, they did not need to be modified. The high school GPA, however, was a different

case. Since this data was obtained by the CIRP surveys and from my portion of the D-term survey, and since GPA scales are not universal, a system for analysis had to be created. In this case I assigned GPA values for each of the letter ranges on the surveys. An A+ or an A was a 3.87 since it is the mean value between 4.0 and 3.75, an A- was a 3.5, a B+ was a 3.25, a B was 3.0, a B- was 2.75, a C+ was 2.5, a C was 2.25, a C- was 2.0, a D+ was 1.75, a D was 1.5, a D- was 1.25, and an F was worth 0 points. After this scale was applied, a t-test was used to test whether the Insight group was comparable to the control group.

3.2.3. Challenge Index

My first project objective was to determine academic confidence. I developed the CI to evaluate the level of challenge associated with a specific course. This index was based on the number of courses recommended to give a student the necessary background for a course. Since Worcester Polytechnic Institute does not have required courses or prerequisites for any course, I had to develop a way to separate the courses that were recommended from the ones that had the possibility of being helpful. Courses deemed "helpful", "suggested", "desirable", "preferred", and "advised" were not counted in the CI. Courses that were described in the 1999-2000 Worcester Polytechnic Institute Undergraduate Course Catalogue with words such as "recommended", "necessary", "college level", "assumed knowledge of", "familiar with", "mastered", "ability to", and "recommended preparation" were all counted as recommended courses for the CI. For example, a course that had one recommended course by my above description would have a CI of one. If a course had two recommended courses that in turn had one

recommended course each, then the CI would be a four. A CI was determined for each course for which the students in either the control group or the Insight program completed in A, B, and C terms or had registered for during D term. I compared the average Challenge Index (CI) of courses taken by the control and the Insight students for A'99, B'99, C'00, and D'00.

3.2.4. Social Index

The next question I asked was, "Has the Insight group adjusted better socially than students who are not involved in Insight?" To answer this question, I added a page of questions (Appendix A) to the survey administered at the beginning of D-term 2000 to the students in the Insight and control groups. The questions I asked included a chart for the students to fill out listing activities in which they participated during A'99, B'99, C'00, and D'00 terms at WPI, and approximately how many hours per week they spent on each activity. I created the Social Index as a means of quantifying each activity. For example, if an activity required approximately five hours per week, then its Social Index score would be a five. I calculated each student's SI for each term. Then I compared the mean SI for each of A'99, B'99, C'00, and D'00 of the Insight group to that of the control group using a t-test.

4. Results and Discussion

4.1. Comparability of Insight and Control Groups

There was no statistically significant difference between the Insight and control groups in terms of the amount of incoming college credit, the age of the students, the SAT I math score, the SAT I verbal score, and high school grade point average. The p-value of the difference in the mean incoming credit was greater than 0.05 although the actual value obtained from this test was not available (Quinn, personal communication). This meant that the Insight and control groups had the same amount of incoming credit. For the analysis of the difference of the mean ages (the mean for the Insight = 18.2 years and the mean for the control = 18.4 years), the t-test I performed gave a p-value of 0.09 (Appendix B). Therefore, the students in the Insight group were the same age as the students in the Control group. The p-values for the SAT I math and verbal sections I analyzed were 0.21 (with means of 660.3 for the Insight and 647.1 for the control group) (Appendix C) and 0.29 (Insight M = 633.2 and control M = 627.7) (Appendix D) respectively. So neither group performed better than the other in term of SAT I scores. After I applied the GPA conversion system described in the Methods section, the t-test of the difference of the GPA means resulted in a p-value of 0.16 (Insight M = 3.41 and control M = 3.32) (Appendix E) that validated my hypothesis that the two groups had the same high school academic performance. All of these parameters examined show that the Insight group and the control group are comparable.

4.2. Challenge Index

The first question asked was, "Are the Insight students more academically confident than the students in the control group?". After applying the Challenge Index (CI) to A'99, B'99, C'00, and D'00 terms, the t-tests resulted in p-values and means listed in the chart below (Appendix F). Since the data on registered courses for C and D terms was obtained at the beginning of C term, not all of the courses for D term were listed. It is also possible that some of the C term courses actually taken by the students were not the same ones for which they were listed as being registered. Overall, there was no difference between the two groups in the students' academic confidence based on this CI.

	A'99	B'99	C'00	D'00
P-value	0.31	0.37	0.23	0.06
Insight M	1.8	4.6	3.5	4.8
Control M	1.6	6.6	3.9	3.4

4.3. Social Index

"Has the Insight group adjusted better socially than students who are not involved in Insight?" To answer this question, I examined the number of hours each student spent in extracurricular activities including the hours spent participating in the Insight program. This was labeled as the Social Index (SI). Since the only means of obtaining this type of data was directly from students, a survey was administered (Appendix A). At the time of this report, only 20 of the 37 students in the control group and 14 of the 37 students in the Insight group had returned the survey. From the data

obtained, a t-test was performed with the assumption that the two groups had the same SI. For A'99 term, the p-value was 0.19 (Insight M =8.1 and control M =11.3), which meant that the assumption was valid. B'99 (Insight M =8.0 and control M =14.5), C'00 (Insight M =6.4 and control M =18.3), and D'00 (Insight M =10.0 and control M =19.3) terms had p-values of 0.03, 0.003, and 0.03 for the same assumption (Appendix G). These results show that this assumption is not valid and that there was a significant difference in the amount of time each group spent on extracurricular activities. Surprisingly, the control group spent more time doing activities outside of courses than the Insight group. It is possible that by the end of the year the Insight group no longer felt that it was necessary to spend more time outside of their Insight circle of friends.

5. Conclusions

The objective of this project was to answer the question, "Has the Insight group adjusted better to WPI in their freshman year than students who are not involved in Insight?" To answer that question I asked two other questions, "Are the Insight students more academically confident than the students in the control group?" and "Has the Insight group adjusted better socially than students who are not involved in Insight?" I found that there was no difference between the two groups with respect to academic confidence based on the Challenge Index. However, there was a difference between the two groups based on the Social Index. After A term 1999, the control group got more involved in activities than did the Insight students. These included getting involved in things like fraternities and sororities as well as other campus organizations. Since the survey response rate was so low, this finding of social involvement needs to be examined further to determine if a representative group of students responded. It might be useful to administer a survey similar to that in appendix A at the end of next year to these same two groups of students and offer more than the $5 offered to each student who completed the survey this year. By doing this, further trends in the students' social confidence will be observable.

This analysis of the effectiveness of the Insight group is by no means complete. The results obtained in this project are only for the 1999-2000 school year. The benefits of the Insight program may not be fully seen until the students who have been involved in this program over this past school year have become sophomores, juniors, or maybe even seniors. One potential benefit of this program may be higher retention rates of the students involved from freshman to sophomore year and from freshman year to

graduation. Another potential benefit of the Insight program that should be examined in future projects is to see if the students who were involved in the program take on more leadership roles than the control students do. This is something that may not be seen until the students are in their junior and senior years of college.

Since the Insight program will be doubling in size for the 2000-2001 school year, new challenges will be faced trying to make each of the students feel special and trying to collect vast amounts of data. Automation may expedite the collection and analysis of various types of data. For example, automation may include electronic surveys that will automatically insert the students' responses into a spreadsheet. Also, automating the Challenge Index will save the data analyst much time and effort.

As of the end of the 1999-2000 academic year, the Insight program has had an effect on the students involved in that program. They were not any more or less academically confident than their peers. However, they were less socially active in extracurricular activities than the control students. The students were so comfortable within the Insight group that they did not feel the need to get involved in other activities. Next year's Insight program has been modified to correct for this social inequality. As this program continues to evolve, perhaps it will prove truly helpful to first-year students adjusting to college life.

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Appendices

Appendix A: D-term 2000 Student Survey

Appendix B: Age Analysis

Appendix C: SAT I Math Analysis

Appendix D: SAT I Verbal Analysis

Appendix E: High School GPA Analysis

Appendix F: Challenge Index Analysis

Appendix G: Social Index Analysis

Student ID # _____

Which activities have you participated in during each of the listed terms (be sure to include sports, jobs (including work study), ROTC, fraternities, sororities, clubs, any volunteer work, and any other activities)?

Also, how many hours a week did you spend doing these activities?

A'99-term hours	B'99-term hours	C'00-term hours	D'00-term hours

If you have 2 or more activities a term, why do you participate in each of them?

_____

_____

_____

If you are involved in 2 or more activities, why are you involved in so many activities?

_____

_____

_____

Appendix B: Age Analysis

t-Test: Two-Sample Assuming Equal Variances		
	Insight	*Control*
Mean	18.22857143	18.40625
Variance	0.299159664	0.248991935
Observations	35	32
Pooled Variance	0.275233516	
Hypothesized Mean Difference	0	
Df	65	
t Stat	-1.384700995	
P(T<=t) one-tail	0.085439406	
t Critical one-tail	1.668636287	
P(T<=t) two-tail	0.170878812	
t Critical two-tail	1.997136678	

Appendix C: SAT I Math Analysis

t-Test: Two-Sample Assuming Equal Variances		
	Insight	*Control*
Mean	660.2702703	647.1428571
Variance	5141.591592	4773.94958
Observations	37	35
Pooled Variance	4963.022614	
Hypothesized Mean Difference	0	
df	70	
t Stat	0.790268483	
P(T<=t) one-tail	0.216020053	
t Critical one-tail	1.666915068	
P(T<=t) two-tail	0.432040106	
t Critical two-tail	1.994435479	

Appendix D: SAT I Verbal Analysis

t-Test: Two-Sample Assuming Equal Variances		
	Insight	*Control*
Mean	633.2432432	621.7142857
Variance	7772.522523	7967.563025
Observations	37	35
Pooled Variance	7867.256481	
Hypothesized Mean Difference	0	
df	70	
t Stat	0.551247992	
P(T<=t) one-tail	0.29160951	
t Critical one-tail	1.666915068	
P(T<=t) two-tail	0.58321902	
t Critical two-tail	1.994435479	

Appendix E: High School GPA Analysis

t-Test: Two-Sample Assuming Equal Variances		
	Insight	*Control*
Mean	3.413928571	3.321612903
Variance	0.120402513	0.121580645
Observations	28	31
Pooled Variance	0.121022583	
Hypothesized Mean Difference	0	
df	57	
t Stat	1.017831919	
P(T<=t) one-tail	0.156529365	
t Critical one-tail	1.672028702	
P(T<=t) two-tail	0.31305873	
t Critical two-tail	2.002466317	

Appendix F: Challenge Index Analysis

t-Test: Paired Two Sample for Means			t-Test: Paired Two Sample for Means		
A-Term 1999			**B-Term 1999**		
	Insight	*Control*		*Insight*	*Control*
Mean	1.756756757	1.567567568	Mean	3.297297297	3.486486486
Variance	2.744744745	3.03003003	Variance	4.603603604	6.645645646
Observations	37	37	Observations	37	37
Pearson Correlation	0.07809848		Pearson Correlation	-0.142381549	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	36		df	36	
t Stat	0.49872935		t Stat	-0.321351204	
P(T<=t) one-tail	0.310501943		P(T<=t) one-tail	0.374901305	
t Critical one-tail	1.688297289		t Critical one-tail	1.688297289	
P(T<=t) two-tail	0.621003886		P(T<=t) two-tail	0.74980261	
t Critical two-tail	2.02809133		t Critical two-tail	2.02809133	
t-Test: Paired Two Sample for Means			t-Test: Paired Two Sample for Means		
C-Term 2000			**D-Term 2000**		
	Insight	*Control*		*Insight*	*Control*
Mean	3.513513514	3.891891892	Mean	4.783783784	3.432432432
Variance	4.534534535	6.71021021	Variance	13.50750751	11.1966967
Observations	37	37	Observations	37	37
Pearson Correlation	0.131201376		Pearson Correlation	-0.091570264	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	36		df	36	
t Stat	-0.73531602		t Stat	1.583207146	
P(T<=t) one-tail	0.233455389		P(T<=t) one-tail	0.061060517	
t Critical one-tail	1.688297289		t Critical one-tail	1.688297289	
P(T<=t) two-tail	0.466910777		P(T<=t) two-tail	0.122121035	
t Critical two-tail	2.02809133		t Critical two-tail	2.02809133	

Appendix G: Social Index Analysis

t-Test: Two-Sample Assuming Equal Variances			t-Test: Two-Sample Assuming Equal Variances		
A-Term 1999			**B-Term 1999**		
	Insight	*Control*		*Insight*	*Control*
Mean	8.071428571	11.26315789	Mean	8	14.47368421
Variance	81.87912088	115.2880117	Variance	66.19230769	113.7353801
Observations	14	19	Observations	14	19
Pooled Variance	101.2778317		Pooled Variance	93.79796265	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
df	31		Df	31	
t Stat	-0.900435699		t Stat	-1.897748497	
P(T<=t) one-tail	0.187415316		P(T<=t) one-tail	0.0335381	
t Critical one-tail	1.695518677		t Critical one-tail	1.695518677	
P(T<=t) two-tail	0.374830632		P(T<=t) two-tail	0.067076201	
t Critical two-tail	2.039514584		t Critical two-tail	2.039514584	
t-Test: Two-Sample Assuming Equal Variances			t-Test: Two-Sample Assuming Equal Variances		
C-Term 2000			**D-Term 2000**		
	Insight	*Control*		*Insight*	*Control*
Mean	6.392857143	18.34210526	Mean	10.03571429	19.34210526
Variance	55.46840659	186.0570175	Variance	104.7870879	223.1125731
Observations	14	19	Observations	14	19
Pooled Variance	131.2940517		Pooled Variance	173.4922083	
Hypothesized Mean Difference	0		Hypothesized Mean Difference	0	
Df	31		df	31	
t Stat	-2.96075112		t Stat	-2.005973331	
P(T<=t) one-tail	0.002920194		P(T<=t) one-tail	0.026826357	
t Critical one-tail	1.695518677		t Critical one-tail	1.695518677	
P(T<=t) two-tail	0.005840389		P(T<=t) two-tail	0.053652714	
t Critical two-tail	2.039514584		t Critical two-tail	2.039514584	