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Survey of Major Selection Programs

An Interdisciplinary Qualifying Project Report

submitted to the Faculty

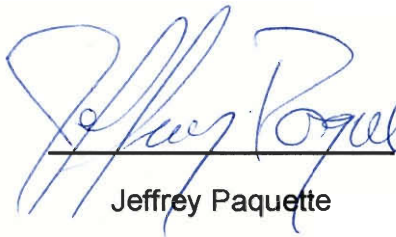
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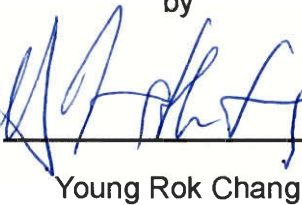
WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the

Degree of Bachelor of Science

by


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Abstract

The goal of this project was to compare the WPI Insight program with the more traditional major selection assistance offered by the Academic Advising office and the Career Development Center (CDC). Information was gathered through interviews with WPI staff and a student survey. WPI's Insight program and the CDC's Major Selection Program were compared against best practices to determine their effectiveness. Overall, WPI's major selection system is satisfactory because the system shows a high rate of student satisfaction and comfort with their selected major, although some adjustments could be made to further improve upon it.

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1 Introduction

Academic advising is a very important component of modern college life. The decisions made, and the assistance received in making them early in students' career can have effects that last for the rest of their college experience, and ultimately their entire lives. One of the most important decisions that students must make is their major declaration. The urgency of this declaration varies from college to college. At WPI our rather unique scheduling and projects system makes an early commitment to a major very advantageous, while other schools have course tracks that don't require a major declaration until much later. Regardless, major selection is an important part of any college program, and one that has garnered more attention in recent years.

WPI has two programs that guide major selection. The first is the Insight program, which helps all freshmen with academic advising needs and major selection assistance for their first two terms. Programs like the Insight program, with very close-knit student to faculty relations, are rare and very new at this point, so there is ample opportunity for study in this regard. WPI also has the Major Selection Program, run by the Career Development Center.

This program is available to any student who wishes to partake in it.

Our goal was to perform a study of the procedures and effectiveness of the major selection process at WPI and compare the effectiveness of the Insight process with the more traditional major selection process at WPI. To that end, we interviewed WPI staff involved in the Insight program and the Career Development Center and administered a survey to the WPI student body.

There is also a large amount of research on academic advising available today. Detailed advice on dealing with certain types of students, studies on what methods are more effective, and student and faculty evaluations of many of these topics and programs are included in the research that we have uncovered. Previous research on major selection and academic advising provides a historical context against which to compare and contrast what we find in Insight and the Major Selection Program at WPI.

2 Background

2.1 The Project

The project involved two steps. The first was interviews with WPI staff both at the Academic Advising office and at the Career Development Center. Once completed, a survey was distributed to the students at WPI who were asked to submit answers to questions measuring their level of comfort with the programs currently available to them and how helpful they thought the programs were. These two sources of information were used to determine the overall effectiveness of current major selection assistance at WPI.

2.2 Theory

2.2.1 The John Holland Career Theory

Most of the current theory and practices for career planning and major selection began to develop in the 1960's. One of the first, and still most cited, is the work of John Holland (Career Clinic, 2002). The basic theory of Holland's Career Theory is summarized in the following six points.

1. Almost all people can be described as one of six personality types (sometimes referred to as Holland types)
 - Realistic: Prefer practical and mechanical environments, like to work

with tools, mechanic and electrical diagrams, and animals.

-Investigative: Tend to be precise, scientific, and intellectual, like math and problem solving.

-Artistic: Expressive and independent, tend to be good at creative writing, drama, music, and art.

-Social: Helpful and friendly, tend to excel at teaching, giving information, solving social problems.

-Enterprising: Energetic and ambitious, good at politics, leadership, and salesmanship.

-Conventional: Orderly and like following set plans, then to like working with written records and numbers in a systematic fashion.

2. People of one personality type tend to be attracted to making friends and working with other people of the same personality type.

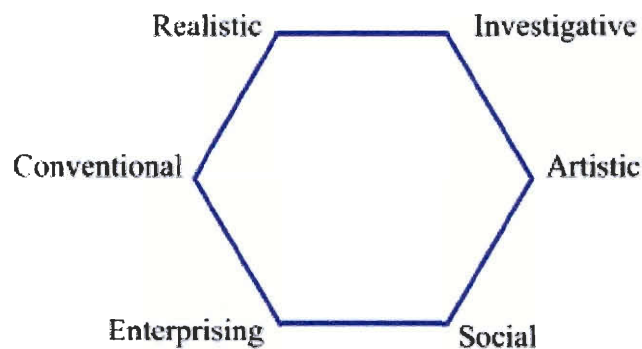
3. People of the same personality type tend to work better together and create an environment more suited to other people of that personality type.

4. There are six main types of working environments that match the six main personality types.

5. People who work in an environment that matches their personality type tend to be satisfied and successful in their career.

6. How people act and feel is largely affected by the relationship between of their personality and their workplace environment (Holland's Theory and Career Choice, 2002).

Holland also created a relationship model between the personality types, as shown on the hexagon below. The closer the personality types, the better the compatibility. For example, Realistic is closely compatible to Investigative and Conventional, but far removed from Social.



The application of this theory to major selection is that certain personality types lend themselves to certain careers and areas of study. If a student's personality can be determined, it may be a useful guide to his advisors on what type of majors they could suggest. Holland's Career Theory,

as well as other personality tests, is one of the tools used by academic advisors in helping undecided students find out what majors, and hence careers, might best suit them.

There are several tools for that can be used to determine someone's Holland Type. Two methods developed by Holland for determining what personality type someone is are the Vocational Preference Inventory and the Self Directed Search. The Vocational Preference Inventory is a test in which a person is given a list of professions of various types. They are asked to identify their feelings toward each profession as interesting or appealing, uninteresting or dislike, or no opinion. Each occupation is assigned a Holland type. A score is calculated for the number of professions under each type that is chosen. A person's Holland type is considered to be the type that has the highest score.

The Self Directed Search is a more comprehensive test devised by Holland. It measures someone's self-assessment in three areas: Activities, Competencies, and Self-Estimates. The activities section lists several activities under each type. The test taker must evaluate each action as something that they would like to do, or something they would dislike, or are

indifferent too. Examples from each type to give an idea of the type of questions:

Realistic – Repairing cars; shop class; driving trucks and tractors

Investigative – Reading scientific magazines; building model rockets

Artistic – Sketching; playing music; reading plays and popular fiction

Social – Writing letters; going to parties and other public events

Enterprising – Discussing politics; selling things; supervising

Conventional – Typing; taking business and bookkeeping classes

The Competencies section of the test asks about the person's ability to perform many of the actions from the previous section, i.e. can you repair cars, play a musical instrument. The final section of the test asks the person to assess their mechanical, scientific, artistic, teaching, sales, and clerical abilities. The results of these three sections are tallied, and the 'type' with the highest score is the person's Holland type. Next we can expand the Holland types into Holland codes. Because there are only six types and each type contains many vocational choices, not all of which will be appealing to everyone of that type, the Holland code is the combination of the top three types that the person is associated with. For example someone that got a Holland code of RSI on the

Self Directed Search scored highest for the Realistic Type, second highest for the Social type, and third for the Investigative type. Holland then associated numerous vocations with these codes, to help people find out what sort of professions they might be interested in (Holland, 1973).

2.2.2 The Myers-Briggs Type Indicator

Another type of career/major indicator is the Myers-Briggs Type Indicator. The Myers-Briggs Type Indicator (MBTI) rates people based on four main classifications: extroversion (E) or introversion (I), sensing (S) or intuition (N), thinking (T) or feeling (F), and judging (J) or perception (P).

Extroverted people generally turn their attention to the world around them. They tend to care more about events in the world and want to be a part of them. Introverted people, in contrast, tend to ponder more on the concepts that explain what goes on in the world.

Sensing and Intuition both relate to a how a person tends to perceive the world. A person who tends to use sensing over intuition is concerned more with perceiving the situation using their five primary senses. However, a person who uses their intuition tends to be more concerned with perceiving the possibilities in a situation.

A Thinking person will tend to judge a situation logically, using just the facts to come to a conclusion, whereas a Feeling person tends to make decisions based on their values and without logical analysis.

Finally, a Judging person will tend to use a judging mental process (T or F) over a Perceiving (S or N) mental process. A judging type will view his or her surroundings based on fact. They will see everything objectively and act on their factual interpretation of the situation. A perceiving type will view his or her surroundings based on how they perceive the situation to be. This is much less critical than the judging type. (McCaulley, 1995)

It is important to note that none of these classifications is significant by itself. It is only when all of the classifications are made that conclusions can be drawn. Myers-Briggs types are usually represented as a four-letter acronym, such as ISTP, indicating which of each of the above classifications the person is more inclined to use and develop.

The MBTI type is determined by using a test made up of many multiple choice questions. Each question is designed to test some aspect of the MBTI, for example to test the Thinking/Feeling aspect. Then, each question consists of answers which are at the extremes of each aspect. For example, one

answer would strongly indicate a Thinking type, while the other would strongly indicate a Feeling type. The test taker is instructed to choose the answer that they prefer most. If there is no strong preference to either answer, the user is encouraged to omit answering that question. The test only works if the user has a strong preference for one answer, and not if the user randomly chooses answers if they do not have a preference. The answers the taker gives will determine their preferences towards each of the 4 aspects and will provide a composite MBTI.

MBTIs should generally not be used as the sole indication of a possible major or career for a particular person. While the MBTI will give a good indication of the type of major or career that a particular person may be more inclined to prefer, it does not provide the type of specific results that would be needed to produce a specific major or career for a given MBTI type.

Holland and MBTI are two different types of tests that were developed independently. While it is difficult to judge if one is really 'better' than the other, they give different types of information about a person. The MBTI is used as a general indicator, while Holland codes are much more specific about what field someone may find interesting.

2.2 WPI's Insight Program

The Insight program started at WPI in 1999. "The first three years of the program were funded through Davis Education Foundation and now the program is fully funded by WPI," (Dale Snyder, personal communication). The program exists to give incoming freshmen more personal academic advising in the first two terms of their time at WPI.

In the academic year of 1999-2000, a pilot group of 37 students were randomly chosen for the program. They were housed by orientation group in Stoddard. Each group was assigned a resident advisor, peer advisor and faculty mentor. Meetings for many special events and community gatherings were held with students and advisors.

In 2000-2001, the program's second year, the 108 students involved were housed in Daniels. The major difference between the first year and the second year was that in the second year the faculty mentor was their academic advisor until the end of B-term. After B-term, the students were asked to declare their major and were assigned to an academic advisor related to their field.

Every Insight student was randomly selected for participation in the first

two years of the program. The students did not receive any extra programs except for the ones that resident advisors planned. In the spring of 2001, an advising satisfaction survey was administered to compare the results of satisfaction surveys for first year students from the past five years. On the whole, the results of this survey showed that Insight students were more satisfied with the Insight academic advising process than with the traditional process, although the differences were not statistically significant. In addition, the percentage of first year students on academic warning after the first two semesters was 10.7% for five years of 1995-1999 (inclusive) and fell to 8% in 2000. The sample size itself was not large enough to make judgments and conclusions about the Insight Program but it did show that students had done better than in the past.

In between B and C terms, the students made a change from the Insight program to the more traditional academic advising model and were assigned an advisor in their major. The students then only met with their Insight faculty mentor when they felt that they needed help. The faculty mentor was no longer responsible for advising the students academically.

Dale Snyder says that the program made the students more comfortable

with faculty, advisors and peers. The students were more satisfied with the Insight Program than the traditional academic advising system. The 2002-2003 school year marks the Insight program's fourth year, and the Insight program is now fully funded by WPI.

2.3 WPI's Major Selection Program

The Major Selection Program (MSP) is open to any student who is unsure of their major choice. The program and activities include MSP Seminar, The Majors Fair, Academic Counseling, self-assessment inventories, peer advisors, professionals-in-action, WPI Alumni presentations, and a Career Resource Library, all of which are voluntary and free of charge.

There are usually about 30 people registered for the MSP seminar, which occurs in C Term each year. The seminar is a not-for-credit course open to the entire WPI community and coordinated by Jeannette Doyle. The program provides information about the majors offered at WPI and career fields associated with each major. Ann Garvin, director of Academic Advising, usually speaks at one or two of the classes in the seminar.

In addition to the seminar, students are encouraged to take one of the many tests that are available to see what career areas they are strong in. One

test in particular is the Myers-Briggs Type Inventory, which is described in further detail in an earlier section of this proposal.

2.4 Change of Major

This is one of the benchmarks that we are measuring in this study. While major change rate alone is not indicative of any flaws in a major selection system, if it is correlated with other data, such as satisfaction with final major selection, it can be a good first indicator of overall success. The reason that we think that this metric needs to be compared with satisfaction data is the vast differences in how and when majors are selected at other schools. When students select their major very early, or even before they arrive for the first semester, it is much more difficult to make an informed decision. This makes it more likely that students will change their major when they get more information.

We found that WPI has a surprisingly high rate of major change: estimated at somewhere between 30% and 50% students in any given class change major at least once according to Jeanette Doyle.

2.5 Project Objectives

The objective of this project was to evaluate the WPI Insight program through comparison with other approaches to major selection and an analysis of student satisfaction.

3 Methods

3.1 Project Approach

The ultimate completion of this project is the result of two co-dependent lesser objectives. First we gathered information about academic advising and major selection programs at WPI via interviews with staff and a survey of the students at WPI. Using this information we made a comparison between the two programs utilized at WPI and drew a conclusion on their effectiveness based on the gathered data.

3.2 Survey Design

Our first step was to create a survey that measures student knowledge of and satisfaction with the major selection process at their college. The questions on the survey were generated from a combination of information gained from interviews with WPI staff associated with academic advising and major selection, literature on academic advising, and other surveys of similar topics.

One of the techniques that we found useful in designing our survey is what is referred to as the 'six significant questions' the basic why, what, when, who, where, how. Although a basic lesson, the chapter 'Six Significant

Questions' in *Proving and Improving: Strategies for Assessing the First College Year* (Swing, 2001) goes into detail about how to determine the answer to each of these questions in relation to our topic. The 'why' refers to why you are asking a particular question. It strengthens the point that all the questions we ask need to be justified. The 'what' asks what you intend to do with the results of the question you are asking. An example in our survey would be the questions about major change rate and student satisfaction with their selected major. We intend to use these as metrics to compare different major selection programs. This also ties in as our justification of these questions under the 'why'. The 'when' is considering the timing of your questions. When measuring improvements over time, a single data point will most likely not be adequate. We also need to consider when certain points of the major selection program we are studying take place compared to when we are administering our survey. The 'who' refers to the people involved in our data gathering process. In our case we have to consider the students taking the survey and the administrators that we will be interacting with. The 'where' refers to the location of the data collection. In our case that would be the web program that we are using to gather information from our survey, as well as the colleges that

we visit to interview Academic Advising staff. The last section, 'how', includes the organization of the data as it is collected, which is very important for later analysis.

The design of questions dealing with students' evaluations of the advising programs also were helped by a previous survey conducted by WPI (*Survey of Academic Advising for Worcester Polytechnic Institute Trend Report*). This work was a useful example of surveys that seek to gauge student perceptions on topics that are similar to our own. We used the questions in this survey as a model for creating the range of responses to our questions that try to determine how the student feels about their major selection program.

The final input for our survey was the interviews we conducted. Dale Snyder (Director of Academic Resources), Ann Garvin (Director of Academic Advising), and Jeanette Doyle (Assistant Director of the Career Development Center), helped us to understand specific programs available at WPI and information to help us customize the survey to the specific program that WPI has to offer.

The survey has several branching paths, so not all the questions will be asked of all students taking this survey. The accompanying graphic (Appendix

A – Survey Map) shows the tree that the online survey followed.

3.2.1 Background Information

1. Are you a full time or part time student?
2. What year did you begin attending your current college?
3. Did you participate in the Insight program at WPI?

These questions are designed to give us background information about the student, and allow us to correlate later answers with specific types of students.

3.2.2 Personal Information and Reactions

4. Have you declared a major yet?

How comfortable did you feel with the following items of the major selection process?

5. Information provided to you about major selection

Very comfortable/ Mostly comfortable/ Mostly uncomfortable/ Completely uncomfortable

6. Paperwork required to complete major selection

Very comfortable/ Mostly comfortable/ Mostly uncomfortable/ Completely uncomfortable

7. Certainty that you selected the right major

Very comfortable/ Mostly comfortable/ Mostly uncomfortable/ Completely uncomfortable

8. How many times have you changed you major since you first declared it?

0 times / 1 time / 2 times / 3 times / 4 or more times

Question five is useful in comparing when students select their major to when the college wants, or requires, them to select their major. Questions six through eight try to measure the comfort level of the student as they go through the major selection process. This is one of the metrics that we are using to measure how well WPI's program is doing. High levels of student comfort

would indicate that the college program is well adapted to student concerns.

Question nine is another measurement we are using to judge the effectiveness of major selection programs. If a high number of students are changing their major frequently it would seem to indicate that the initial guidance for major selection was inadequate.

3.2.3 Major Selection Programs

9. Are you aware of any programs at your college, other than Insight, that assist students in selecting a major?

10. Have you ever utilized any programs to assist you in selecting a major?

11. How helpful do you feel your major selection program is in assisting you to select a major that fits your needs and likes?

Very helpful / Somewhat helpful / A little helpful / Not helpful at all / Harmful, steered me to the wrong major

12. How helpful do you feel the Insight program is in assisting you to select a major that fits your needs and likes?

Very helpful / Somewhat helpful / A little helpful / Not helpful at all / Harmful, steered me to the wrong major

Question 10 is intended to determine how many students are aware of the WPI Major Selection Program. Question eleven is asked to determine what other questions will be asked later. If a student has not taken part in any major selection programs, then we will not ask them to evaluate those programs. Question twelve tries to measure how well the student feels the assistance they received helped them to select a major that suits them. Question thirteen meant to gauge student perceptions of the Insight program compared with

normal advising and other programs.

3.2.4 Perceptions

13. When did your college expect you to first select your major?

1st Semester / 2nd Semester / 3rd Semester / 4th Semester / 3rd Year / 4th Year

14. When did you first select your major?

1st Semester / 2nd Semester / 3rd Semester / 4th Semester / 3rd Year / 4th Year

15. How do you feel about your college's timeline for selecting your major?

Should be later / Ideal / Should be earlier

16. How satisfied are you with your chosen major?

Completely / Mostly / A little / Not at all

17. If you are unsatisfied, what reason or reasons prevent you from selecting a different major?

Time constraints / Money / Class load / Employment Opportunities / Other (specify)

Questions fourteen, fifteen, and sixteen are another measurement of students' knowledge and perceptions of the major selection against what the college actually expects in terms of a timeline. Question seventeen is another attempt to measure the effectiveness of the major selection program that we are studying. A program that effectively communicates major options to students should have a higher satisfaction rate. Question eighteen tries to see what are the potential things that stand in the way of students changing their major.

3.2.5 Feedback

18. If you could change any part of the major selection process, what would you do differently?

This is our only really opened-ended question. With this question we hope to identify things that students believe are weaknesses in how WPI's

major selection program operates, and what some potential solutions exist from the students' point of view.

3.3 Administer Survey

Once the final version of the survey was completed, we administered the survey via a website to WPI students. We had the assistance of the WPI Academic Advising office in advertising this website. The results were tabulated by a web program for ease of interpretation.

3.4 Analysis of Survey Results

After the collection of the data from the survey, our next step is to analyze the data. Analyses will include trying to correlate survey responses with each other. For example: major change rate was analyzed as a function of student satisfaction with the major selection process, and of timing of major selection. We established patterns between these so we could compare the Insight program versus the traditional major selection process used at WPI. As an end result of these comparisons, we drew some conclusions on the most effective practices.

4. Tabulated Data and Analysis

Our survey was distributed via a mass email from the academic advising office at WPI to the entire undergraduate class in C-term 2003. Once the email was sent out, we allowed for three weeks for people to take the survey. The total participation was 499 students responding. As was discussed in the methods section, our survey follows branching paths, depending on answers given, not all students are asked all questions. Any table that represents a question asked on our survey will have a note underneath showing the number of students that responded to the question, and the total number of students that were asked that question.

Table 1. Results to "Are you a full time or part time student?"

Student Status	% of Respondents
Full-Time	99.6
Part-Time	0.4

497 responded of 499 asked

Table 2. Results to "What year did you begin attending college?"

Year	% of Respondents
1998	1.0
1999	20.2
2000	25.5
2001	25.5
2002	27.9

499 responded of 499 asked

Table 3. Results to “Did you participate in the Insight program at WPI?”

Response	% of Respondents
Yes	38.7
No	61.3

494 responded of 499 asked

The results of the questions that asked students to identify themselves as participants of the Insight program seems to show that some students who did go through the program are unaware of its title. All students who have entered the institution since 2001 (accounting for approximately 53.4% of our respondents) have actually taken part in Insight. However, only 38.7% of students that took out survey identified themselves as having been in Insight.

Breaking down the results of the Insight participation question yields the following results:

Table 4. Breakdown of self-identified Insight participation by student year

Yr of entry into WPI	N	% Insight participants
1999	101	11.9
2000	127	18.1
2001	125	51.2
2003	137	67.2

It would appear that since all students now participate in the Insight program fewer are aware of its title and the fact that it has only been implemented in the last couple of years.

The next thing that we were interested in was information about students' status concerning major selection, and their feelings regarding the process.

Table 5. Results to "Have you declared a major?"

Response	% of Respondents
Yes	97.8
No	2.2

499 responded of 499 asked

Table 6. Results to "How comfortable were you with the information provided to you about major selection?"

Comfort Level	% of Respondents
Very Comfortable	20.0
Mostly Comfortable	62.6
Mostly Uncomfortable	14.2
Completely Uncomfortable	3.3

486 responded of 488 asked

We broke this question down in a couple of different ways in order because we believed that it would show that students under the Insight program would have a different view on how much, and the quality of, information provided to them about major selection.

Table 7. Breakdown of Table 6 by self-identification of Insight participation

Comfort Level	% of Insight Participants	% of Non-Insight
Very Comfortable	21.3	19.1
Mostly Comfortable	65.0	60.7
Mostly Uncomfortable	10.9	16.4
Completely Uncomfortable	2.7	3.7

Table 8. Breakdown of Table 6 by Students entering in 2001 and 2002

Comfort Level	% of 2001 Students	% of 2002 Students
Very Comfortable	19.5	22.7
Mostly Comfortable	60.2	68.2
Mostly Uncomfortable	17.9	7.6
Completely Uncomfortable	2.4	1.5

The numbers for Table 7 would seem to indicate that the Insight program is having a least a moderate positive impact on information distribution. Among the students who indicated that they participated in the Insight program, there was approximately a 25% reduction of the percentage of people identifying themselves as either mostly or completely uncomfortable with the information provided to them about major selection compared to students that identified themselves as having not participated in Insight.

Table 8 focuses on students that we know must have participated in the Insight program, whether they know it or not. Within these years that we know the Insight program involved all first year students, the first year actually shows a slightly lower comfort level with information provided to them about major selection than the self-identified non-Insight group. However the next year, 2002, shows a marked improvement over the previous year, and the average

comfort level as well as a higher number of students that are aware of the name of the Insight program.

Table 9. Results to “How comfortable were you with the paperwork required for major selection?”

Comfort Level	% of Respondents
Very Comfortable	41.4
Mostly Comfortable	50.2
Mostly Uncomfortable	7.0
Completely Uncomfortable	1.4

486 responded of 488 asked

Table 9. Results to “How comfortable were you with the major you selected?”

Comfort Level	% of Respondents
Very Comfortable	42.4
Mostly Comfortable	51.3
Mostly Uncomfortable	2.3
Completely Uncomfortable	3.9

384 responded of 488 asked

Table 10. Breakdown of Table 9 by self-identification of Insight participation

Comfort Level	% of Insight Participants	% of Non-Insight
Very Comfortable	37.7	46.1
Mostly Comfortable	55.6	47.8
Mostly Uncomfortable	4.0	1.3
Completely Uncomfortable	2.6	4.8

While there is a surprisingly large difference in the very and mostly comfortable answers, the overall positive response is about the same in both

groups, with about 92% of students reporting that are very or mostly comfortable with their major choice.

Table 11. Result of "How many times have you changed your major since you first declared it?"

# of Major Changes	% of Respondents
0	68.8
1	20.8
2	7.9
3	2.0
4+	0.5

202 responded of 488 asked

Table 12. Breakdown of Table 11 by Student Year of Entry into WPI

# of Major Changes	% 1999	% 2000	% 2001	% 2002
0	62.5	43.5	67.2	89.4
1	21.9	35.1	23.4	9.1
2	12.5	16.2	7.8	1.5
3	3.1	5.4	1.6	0.0
4+	0.0	0.0	0.0	0.0

Jeanette Doyle, Assistant Director of the Career Development Center, said that on average 50% of students will change their major once. This seems accurate when you consider the students included in that average that change their major more than once.

These numbers seem to show that most people have settled on a major by their junior year, as evidenced by the fact that our survey shows the

percentages of students who have changed their major stops increasing after the student's junior year. This makes sense, giving that changing your major after that would make it extremely difficult to graduate in a four year program. On the other hand, it seems to be fairly rare for a student to change their major after initial selection during their first year at WPI.

Table 13. Results of "Are you aware of any programs at your college, other than Insight, that assist students in selecting a major?"

Response	% of Respondents
Yes	22.6
No	77.4

106 responded of 499 asked

The percentage of respondents that answered positively to this question is already very low; however when you also consider the number of people that took the survey as a total, out of 499 people surveyed only 24 answered yes to this question. This seems to make the point that there is not enough visibility of the major selection programs available at WPI.

Table 14. Results of "Have you ever utilized any programs at the CDC to assist you in selecting a major?"

Response	N	% of Respondents
Yes	17	70.8
No	7	19.2

24 responded of 24 asked

Table 15. Results of “Do you feel that the Insight program was/is more or less helpful than the traditional major selection process (utilizing the WPI Academic Advising office and your traditional academic advisor)?”

Response	N	% of Respondents
More helpful	4	66.7
Same	2	33.3
Less helpful	0	0.0

6 responded of 24 asked

Table 16. Results of “When did your college expect you to first select your major?”

Time	% of Respondents
1 st Semester	35.3
2 nd Semester	52.9
3 rd Semester	8.8
4 th Semester	2.0
3 rd Year	1.0
4 th Year	0.0

102 responded of 499 asked

This question was to find out what the students thought the college expected vs. what is actually expected. The vast majority of respondents (88.2%) got an answer that could be considered correct; since WPI expects a decision at the end of B term (between semesters 1 and 2) either answer could be considered “correct”. The percentage of correct answers was higher for Insight students (91.2%) and lower for non-Insight students (82.5%). This

tends to support other findings (In Table 7) that showed that Insight participants felt that they were better informed. However, much like the question that asked if they knew of major selection programs, there was also a very large segment of the students who took the survey that declined to answer this question.

Table 17. Results for "When did you first select your major?"

Time	% of Respondents
1 st Semester	69.1
2 nd Semester	26.8
3 rd Semester	4.1
4 th Semester	0.0
3 rd Year	0.0
4 th Year	0.0

97 responded of 499 asked

Table 18. Results for "How do you feel about your college's timeline for selecting your major?"

Response	% of Respondents
Too Early	26.0
Ideal	69.8
Too Late	4.2

96 responded of 499 asked

These numbers don't change much when Insight/non-Insight is taken into consideration. A sizable proportion of the WPI undergraduate student population seems to think that the end of B term is too early to declare a major. Some of the comments we received also complained that not enough

information is presented in the first two terms to make a decision on major selection.

Table 19. Results to "How satisfied are you with your chosen major?"

Comfort Level	% of Respondents
Completely	36.1
Mostly	50.5
A Little	10.3
Not At All	3.1

97 responded of 499 asked

It is difficult to draw any hard conclusions from this question, since many people chose not to answer this question, how it seems to show that while there is room for improvement, the large majority of WPI students are happy with their chosen major.

On the whole, towards the end of the survey, there is a higher percentage of people that chose not to answer certain questions. We attributed this to two factors. One, people may have gotten tired of answering our questions, and secondly, many of the later questions asked for the students personal opinion on some subject, and they may not have felt like divulging this information.

Comments of interest:

These are comments from students in response to the open ended question “If you could change any part of the major selection process, what would you do differently?” at the end of the survey:

- find out more about what each major involves
- I don't know. Probably provide opportunities for Freshman to discuss possible major selection with successful students in those majors. Probably a Peer Major Advising Day.
- I needed more information on what each major has to offer and what the job opportunities were for each major. In order for me to choose my major I went to the admissions office and took some of the pamphlets that are usually sent to high school seniors regarding the majors at WPI, to get the info I needed to select a major
- info, info, info—we want to know all opportunities!
- I would like if the school would have all freshman take a class which goes over the careers and what is involved in each major. I know that Northeastern University does it, having the class meet once a week where you are taught and presented by professors and professionals in your major. This class should be taken Term A, I am taking a Intro to Civil Engineering class Term D, but I believe it is too late since I had to make a decision at the end of Term B.
- more intro courses should be offered, or a class that covers many different majors, so students can actually learn about that major.

Many of the services requested already exist as part of the CDC major selection program, which seems to support our other data (Table 13) that the student body is unaware of the programs that are offered.

- I felt that more emphasis on the actual classes required for each major would be beneficial. I took classes that were unnecessary and I was completely unaware.
- Make major selection help and programs better known to students.

The information that the students who left these comments seek is in the undergraduate catalog that all students should either have, or look up on the web. This seems to indicate that there needs to be clearer communication to the student on where to get this information.

-We should be given advisors that correspond to our interests in the beginning of the year to assist in choosing classes instead of getting the same advisor as the rest of your floor. Mine had no idea what classes I should take.

This person seems to want to go back to the old advising system; this raises questions about how well Insight works with students that have a pretty clear idea what they want to study when they arrive at WPI.

5. Conclusion

Based on the information that we gathered from the survey, and the analysis presented, we have come to several conclusions about major selection assistance at WPI.

First, most students are completely unaware of the Major Selection Program (MSP) offered by the Career Development Center (CDC) or the services that this program provides to students. Many students that took our survey made suggestions for the major selection process that involved services already in place at the CDC. An effort should be made to make this program known to a larger percentage of incoming freshmen.

Second, while the Insight program provides many benefits to students that need assistance in selecting a major, it appears to lower the overall satisfaction of students that have a clear goal of what it is they wish to study here at WPI. These students seem to feel that the traditional major selection program would be more effective for their needs. It would be prudent to look into ways to make an advisor from a student's selected major available for advice prior to the switch out of Insight that occurs between the first and second semesters at WPI.

However, overall the WPI major selection process appears to be adequate in assisting students to select a major. Nearly ninety-two percent of Insight students at WPI are at least mostly comfortable with the major selection process that WPI offers. This is twenty-five percent higher than for students who did not have the opportunity to participate in the Insight program. This is a very encouraging increase, and with some minor changes this number has the potential to grow even higher.

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Appendix A – Survey Map

