Survey Analysis Research Report

Assignment 5 - Surveys
March 27, 2020

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URL to Google Doc:
https://docs.google.com/document/d/1OyFnAtY5oujExmf4BPx1anhjnyVNQja7dFaX4PXS38I/edit#

Introduction:

The system that we researched for this project was the process of selecting courses for students at the University of Michigan. We were tasked with creating a survey for U of M students that assessed their different feelings and attitudes towards class selection, in order to gather information that could then be used in the development of an app that would aid students in this process. We based our research and analysis around two main research questions that we felt captured the current struggles of U of M students in selecting their classes:

a) What are the primary factors that influence students when deciding on which classes to take?
b) What are the main resources that students use when selecting their course schedules?

We felt that answering these research questions would provide us with some valuable insight into what the biggest issues were with the current course selection process, and allow us to see where we could suggest some general improvements to the process and come up with some new ideas that could be integrated into the app that is being developed.

Methods:

To perform our research, we first collected data by creating and giving a survey to a large group of current U of M students, and then analyzed our data by looking for trends and relationships within the survey data.

Data Collection:

To collect our data, we first needed to come up with a list of survey questions that both addressed our research questions and allowed us to see the different views that students had on the course selection process. We came up with 6 questions as a group, including demographic questions as well as behavioral questions that addressed the specific resources that students use when selecting classes as well as their current attitudes towards the process as a whole. We then submitted these questions along with other groups to create an aggregated survey of 16 questions involving the course selection process at U of M. Once this was completed, we gave the survey to a large convenience sample of 122 undergraduate students taking SI 422, in order to get a wider range of ages, ethnicities, and genders represented in our study. The general demographics of our survey respondents are summarized below:

- Academic Standing:
    - Freshman: 1
    - Sophomore: 16

- Junior: 70
- Senior: 33
- Other (5th-year): 2
- Gender:
    - Male: 50
    - Female: 70
    - Prefer not to answer: 1
    - Prefer to self-describe: 1
- Ethnicity:
    - Asian: 48
    - Black/African: 5
    - Caucasian: 50
    - Hispanic/Latinx: 1
    - Multiple ethnicities: 15
    - Other: 3
- School:
    - Literature, Science, and the Arts: 25
    - Engineering: 33
   - Information: 47
    - Ross: 1
    - Multiple schools: 16

Data Analysis:

To analyze the data from the surveys, all of the survey data was compiled into Excel and we then proceeded to use pivot tables and pivot charts to create visuals using Microsoft Excel as well.

Findings and Recommendations:

Key Findings:

Figure 1: Overall student satisfaction with the current selection process
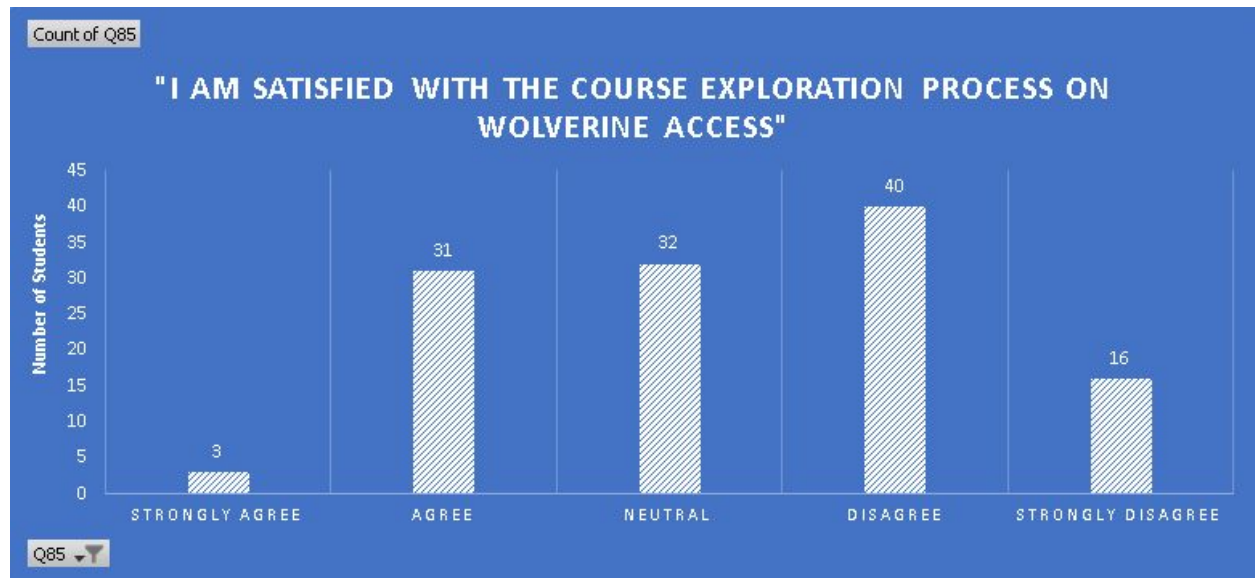
The first thing that we wanted to assess was the overall attitude that students had towards selecting courses on Wolverine Access, the main resource used by students when exploring their class options. To do this, we asked students how satisfied they were with the following statement: "I am satisfied with the course exploration process on Wolverine Access". The above results show that the majority of students disagreed with this statement, as 56 students said that they "Disagree" (40 students) or "Strongly Disagree" (16) while only 34 students said that they "Agree" (31) or "Strongly Agree" (3), leaving 32 students "Neutral". This confirms our original assumption that most students are not satisfied with the current class selection process that is in place, providing us with further motivation to improve this process and make it easier for students to decide and select which courses they are going to take.

Figure 2: Most important factors when deciding on which classes to take
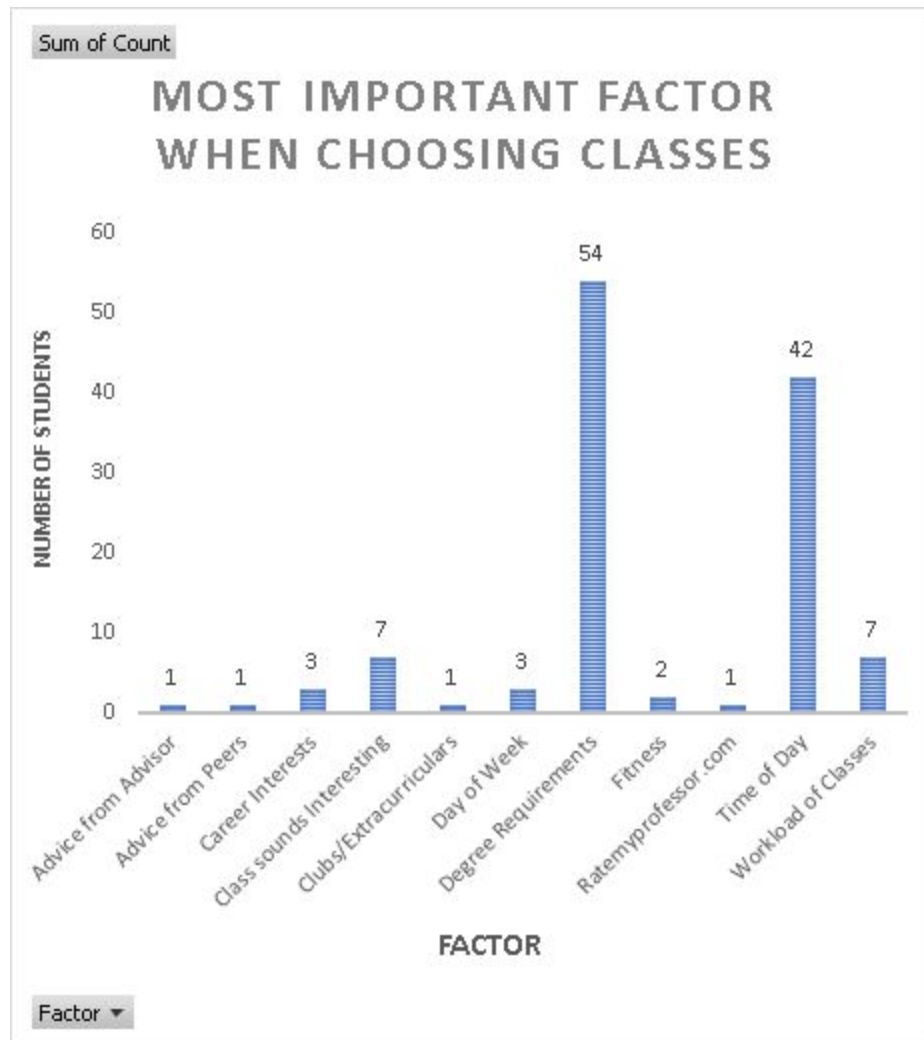
After confirming our original assumptions that the majority of students are not satisfied with the current class selection process, we wanted to know what factors were the most influential for students when picking their classes in order to get some insight into why that may be the case. We asked respondents to rank 11 of the most important factors that students consider when choosing classes, and Figure 2 shows which factors students selected as the most important overall (which factor they ranked first overall). Our results showed that the most important factor that students consider when choosing their classes was "degree requirements" with an overwhelming 54 students, followed by "time of day" with 42 and then both "workload of classes" and "class sounds interesting" with 7 each. This was valuable because it helped us understand that most students begin the selection

process by looking for classes that they need to progress in their degree, which can be very difficult when those requirements are not clearly outlined for each student, potentially explaining why the overall attitude towards selecting classes on Wolverine Access is negative. With this in mind, we thought that if we could find some way to make each student's specific degree requirements very clear, we could improve the time that it takes to search for classes and the overall stress that is caused during the process of selecting classes on Wolverine Access.

Figure 3: Overall attitudes towards using an academic advisor
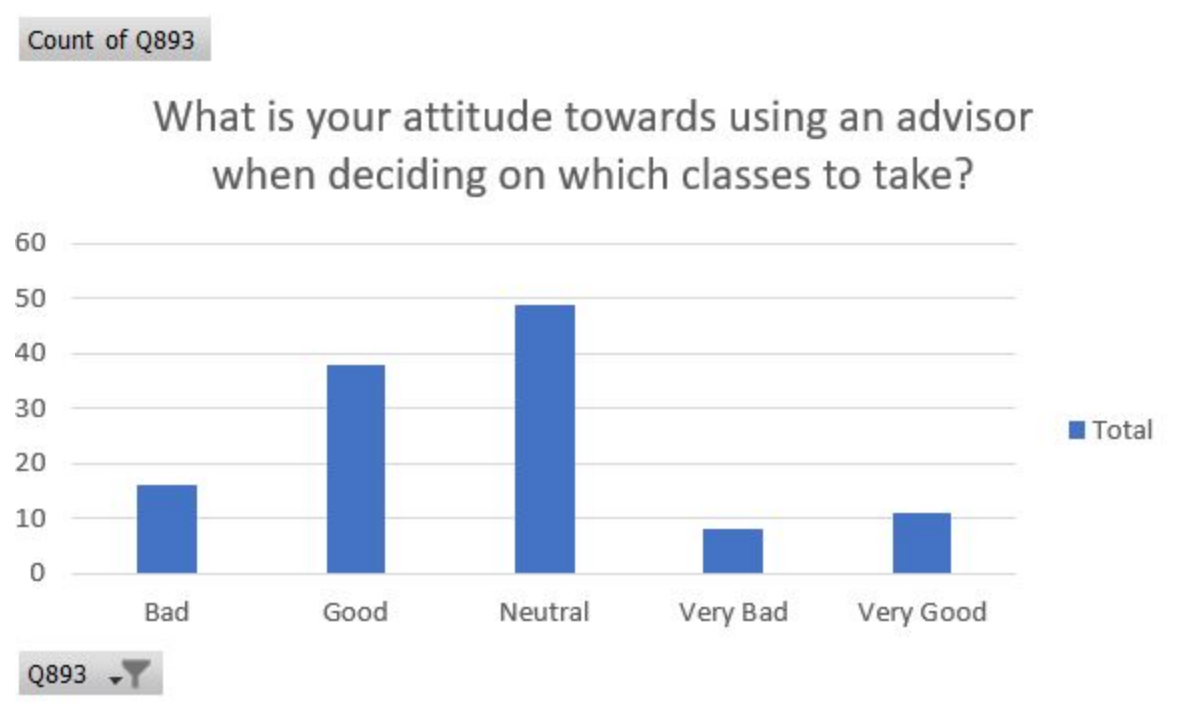
The next thing that we wanted to consider was what student's attitudes were towards using an advisor to decide which classes to take. We asked respondents to choose from a list of 5 choices about their attitudes towards asking their advisor which classes to take, including very bad, bad, neutral, bad, and good options. It appears that from the findings, the most number of students selected neutral out of all the categories, with that number being 49, with good and bad following respectively at 38 and 16. Students seem to be happy or indifferent to asking their advisors for help with choosing classes. This was valuable because it helped us determine if students consider their advisor as a helpful resource when choosing their classes.

Figure 4: Overall attitudes towards picking courses

Count of Q90

What's your attitude towards picking your courses for the next semester?

Q90
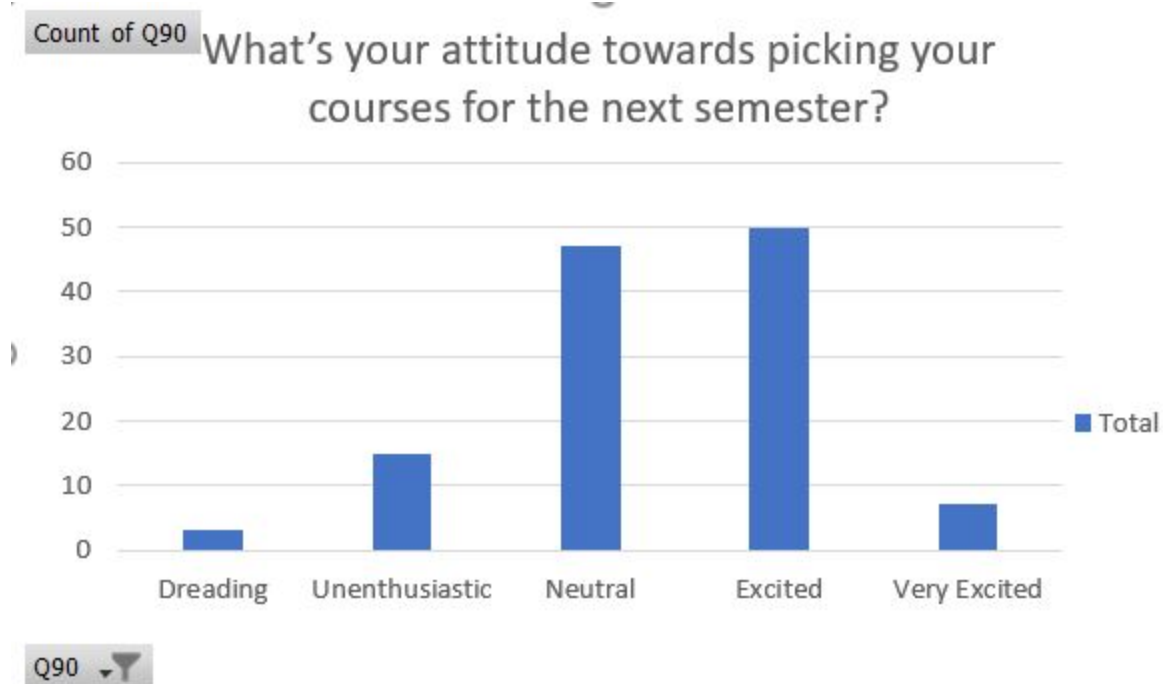
Finally, we looked at the overall attitude that students have while picking classes. We allowed respondents to choose from 5 options; dreading, unenthusiastic, neutral, excited, and very excited. This data helps us get a general idea of what students' attitudes are towards picking courses, which could affect the number of resources they use based on how excited they are, versus dreading the decision and possibly using fewer resources. The findings show most students to be mostly neutral or excited to be picking courses, with the most students out of any category being excited.

Recommendations:

1) **Make degree requirements explicitly clear for each student:**
   Our first recommendation comes from the analysis of which factors were most influential for students when selecting their class schedules. In our analysis, we found that the large majority of students value their degree requirements the most when selecting which classes to take, so we thought that if there was a way to make each student's specific degree requirements clear and explicit to them, it could potentially improve the overall negative attitude towards the selection process in general. In practice, specifically focusing on the development of an app, this could be done by having each student select their degree plan from a list of options, as well as which classes they have already taken, and then having a specific page or tab within the app that lists that student's remaining classes that are required for them to achieve their degree. This would consolidate each student's requirements in one

place, and should greatly improve the research time that each student spends on finding their requirements before they begin selecting their classes for the following semester.

2) **Improve or Replace Wolverine Access**
   Our findings show that students are not happy with Wolverine Access. More research would be required to discover what it is that students dislike about Wolverine Access. If the issues are simple problems then an update to Wolverine Access would be ideal, however if students are unhappy with the process in general, then a total overhaul might be necessary.

Conclusion:

When looking at attitude of students towards the primary method of signing up and finding classes, factors students consider when registering for classes, attitudes students have toward their academic advisor, and students attitudes in general to picking classes, we determined that students aren't unhappy with their academic advisors and have a generally positive or neutral view of choosing classes, but instead are unhappy with Wolverine Access and feel that their degree requirements are difficult to keep track of. This answers both of our questions about what factors influence students on what courses to choose and main resources that students use when choosing classes. By making degree requirements explicitly stated and improving or replacing Wolverine Access, the process of picking classes could become easier for all students.

Appendices:

Name	Contributions
Max Anderson	● Wrote introduction ● Wrote data collection and summarized demographics of respondents ● Generated Figure 1 and analysis ● Generated Figure 2 and analysis ● Came up with first recommendation based off of Fig. 2 analysis
Taylor Denby	● Wrote data-analysis ● Generated Figure 3 and analysis ● Generated Figure 4 and analysis ● Came up with second recommendation ● Wrote conclusion

| Lucas Faudman | ● N/A |