4200 Project Peer Tutoring Trend
P3 10 Interview and Tasks

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Conduct task analysis and abstraction:

"Tasks and Abstraction" table

Task ID#	Domain Task	Analytic Task (low-level)	Search Task (mid-level)	Analyze Task (high-level)
1	Target the **tutor** who tutored various courses.	Identify	Lookup	Discover & Present
2	Display **tutor distribution** among colleges in each class	Present	Lookup	summarize
3	Create interaction between user and visualization by showing the relevant information of specific data(course/instructor/tutor)	summarize	Explore	Present
4	Visualizing the **instructor** information among different classes (e.g. which professor taught a lot of the classes)	Summarize	Lookup	Derive & Present
++	Visualizing the **class information** in different colleges.			
5	Discover the **most popular classes** (which need more one-on-one sessions/ tutoring hours)	Identify	Explore	Discover
6	May need to find the development of the organization by exploring the time series dataset from multiple semesters	discover	Explore	compare
7	Display the numerical	Summarize	mid-level look up	Enjoy

	facts to the organization faculties and leaders			
	show how many **hours** of tutoring each college takes up per session/hour,	summarize	look up	Present

Primary stakeholder/consumer of your visualization.

The primary stakeholder is Nicole Wang, who is the Assistant Director of Online Tutoring and Global Initiatives Of Northeastern Peer tutoring Program. Her email is n.wang@northeastern.edu.

Review of Tasks

Most of the tasks we will attempt to accomplish are Discover and Present. First, we will apply this provided dataset from our partners to present their current situation and to discover where they have room for improvement. For example, we could show the courses which are in shortage of tutors and the courses that have a surplus of tutors. Second, we could present them with our insights from the datasets and guide them to make decisions. For instance, if we find that some classes have three tutors, but fewer appointments were made with the tutors than the average number of appointments, we may suggest the PTP decrease the number of tutors in these classes because the data indicated there was an excess.

Reflection

- How did the interview go?
- What did you learn?
- What were you surprised by during the interview?
- Has the interview changed your motivating questions?

- Wenting Yue

The interview goes well, we have a really happy conversation about our project, and our partner Nicole patiently answered all of our questions and gave us valuable advice. What we learn is that even though we have separate pages of the dataset, each dataset is not that connected so we need more information to connect different aspects of the data. To be specific, we have the data about how many tutorings have been held for each course taught by each professor in each college and a dataset about how many hours each tutor works. In this case, the missing connection is how we can know how many student tutor for each course and how many courses each student teach. Nicole agreed on this idea and promised the provide an additional dataset if needed. Then, we may be able to find out the reason why some courses have very limited tutor hours which may be caused by limited tutors or less needed. What surprised me is that we are the first group who have had the idea of making the visualization for PTP over the years. So we are looking forward to creating insightful visualization to support the growth of PTP. The interview has changed our motivating question but helped us be more sure about our ideas.

- Xiaofei Xie

The interview goes pretty well, we really appreciate Nicole's time. During the interview, we asked about Nicole's expectations about our visualization. She pointed out several interesting ideas such as she wanted to know what are the top 10 popular courses and which instructors are more responsible than others. She hoped that the visualization could give her and her team some useful insights. And wanted to improve their recruitment system. I was so surprised about their PTP dataset during the interview. There is a sheet called PTP by subject, and at first, I thought the letter in each column represents the courses. However, after we clarify with Nicole, she indicated that it's actually the name of each instructor. The interview has changed our motivation questions, but it gives us more clues to strengthen our ideas and our project.

- Yuxi Shen

The interview goes well, and our team has a great time with Nicole. Nicole is very supportive and excited about our ideas on interactive visualizations with open-mindedness. This interview meeting not only helps us to evaluate the requirements from our partner, but it also gives us the opportunities to learn about the peer tutor program over Northeastern. I learned about the dynamic of the tutoring program, and the population of faculties in this organization. I am surprised that we will be the first team to help PTP develop an interactive visualization and we could have semester-long datasets to support our visualization projects. This interview strengthens my motivations for supporting our campus - enhancing all undergraduate students' academic performance by promoting PTP development.

Interview notes:

Q: The source of the dataset?
A: The dataset being offered includes information on all peer tutors during the 2021 fall semester, and the dataset does not contain the global peer tutor program's information.

Q: The target audiences(target end-user) of the interactive visualization produced by us?
A: The director of the PTP program leader, the chancellor of Northeastern University, and the instructors/ professors.

Q: Is there any label/ program brand that we need to display within the interactive visualization?
A: No. We do not have any label representing our program.

Q: Do you have any completed visualization(that would be used as a comparison or baseline) that we could develop?
A: No. We have not done any visualization before, so unfortunately we cannot provide any prior cases. We are expecting to see your visualizations.

Q: Since we only have the dataset from last semester, it is hard to show how the PTP developed over years. Do you have any dataset from the previous two or three semesters so that we can make a time series analysis?
A: We do have datasets over semesters. Since the dataset you have now is from Fall 2021, do you want the data from the previous Fall semester or just the previous semester Spring 2021? We can provide both depending on your need, and we are expected to see the changes over years.

Q: What kind of interaction between user and visualization would you expect?
A: I haven't thought about this question yet. But it will be good if the visualization would show the related information for each course, instructor, or any notation when the user clicks on the specific data. We also would like to see which tutor contributes most to the classes he/she is touring.

Q: How many visualizations do you want to have?
A: It's better to have two visualizations, one is to visualize courses, and the other is to visualize stuff.

Q: Do you have any expectations about visualizing courses?
A: I think it might be helpful to see the top ten popular courses that students need to help with. And based on the result, we could recruit more instructors for these courses in the future.

Q: How do you want to visualize instructors?
A: We probably want to see how many times does one instructor paired with multiple students. And based on that result, we probably can improve the way we distribute our instructors to students.

Q: What does the alphabetic letter mean in the PTP by subject sheet?
A: In order to protect everyone's privacy, we hide the instructors' names for each course they taught. But basically, the same letter indicates the same person. And the other sheet Peer tutors includes all the information regarding tutors for each class.

Q: Do we have the access to the courses each tutor is responsible for? We are trying to connect each tutor to a specific course taught by a specific professor.
A: Since one tutor always tutors for multiple courses, we normally do not focus on that data, but we can provide that if it is necessary.

Q: Do you and your organization have any expectations(target) of our visualization?
A: Our mission is to offer free service to all Northeastern undergraduate students to succeed in academic performance. Therefore, we are expecting to see

1. which course would be in need to have more peer tutors to help students. From our experience, the Chemistry course is always being the most popular one.
2. which course is the most popular one during each semester(measured in the number of tutors).
3. how many times did we pair up each professor with students?