This quarter, I learned a lot about various research methods leveraged in technical communication. At the most basic level, research can be categorized as either quantitative or qualitative. Each type of research has its own specific applications, advantages, and disadvantages.

**Quantitative Research**

Quantitative research is highly categorical and relies on numerical data to draw correlations and make conclusions. In this course, the quantitative research method that we explored was surveys.

**Surveys**

A survey is an ideal quantitative data-collection tool because it can be leveraged to ask a variety of questions to a wide range of users quickly and easily. Surveys can be administered to large groups of people at one time. In other words, a significant amount of data can be collected from users with relatively low effort. Another defining feature of surveys is that survey responses are limited and clear-cut, which is advantageous because it makes it much easier for the researcher to synthesize and evaluate data.

For example, I asked the following question in my survey microstudy:

“If you have used our IT Support chat bot, how effective was it at resolving your problem?”

1. Not at all effective
2. Not very effective
3. Somewhat effective
4. Very effective
5. Extremely effective

This question worked great in the context of a survey because it allowed me to go back and see how many people selected each response. This gives me a clear indication of how participants perceive the efficacy of chat bots. Numerically, this is easier to define than open-ended responses. If the questions were open-ended, participants would likely to give a wider range of responses, which would be more difficult to neatly synthesize. The structure of surveys minimizes room for ambiguity in data analysis. Although quantitative data allows for easier interpretation and representation of information, a drawback is that the data is somewhat simplistic and superficial. The example survey question gives me a clear answer but absolutely no context whatsoever – it does not help me to understand the reasoning behind their answers. If a user selected the option, “not at all effective”, was it because the chat bot did not return helpful information? Was it difficult to engage with? We simply cannot make a conclusion based on the data we collected. This kind of limitation can translate to a significant gap in knowledge, which is a major disadvantage of quantitative research.

**Qualitative Research**

On the other hand, qualitative research is focused on contextual, non-numerical information. This type of research is usually deeper and more insightful than quantitative research, especially in terms of individual experiences and perspectives.

**Focus Groups**

One qualitative research method we learned about was focus groups. Focus groups are discussions within groups of people and involve deep, free-flowing discussion of a topic. As a researcher, I can ask a focus group open-ended questions and observe the natural course of conversation. A defining characteristic is that these settings are highly collaborative, as opposed to interviews which are typically tailored toward a single individual. Focus groups are conducive to open dialog and offer the potential for multiple perspectives to interact at the same time. This type of humanistic material is sorely lacking in quantitative data, such as surveys with pre-categorized “canned” responses.

**Interviews**

Interviews are another method of qualitative research. Like focus groups, they involve a researcher mediating an interaction – except in the case of interviews, it is a single individual rather than a group. Interviews zero in on a single perspective in detail. In this way it is opposite from surveys, which are quite impersonal. If a researcher is looking to maximize contextual information, an interview is the way to go. For example, in an interview or a focus group, I could say, “Tell me about your first experience using Vaya (my company chat bot).” This question is great in a focus group or interview because it permits the participant to tell a story. From these stories, we can better piece together the user experience than we ever could through a survey or other quantitative method.

**Coding**

I thoroughly enjoyed learning how to label and code artifacts because it felt like a combination of both quantitative and qualitative data. Coding involves reviewing “artifacts”, which can be any source material ranging from research papers to podcasts. After reviewing many artifacts, the researcher begins to label and code keywords or ideas. This gives them an idea of themes and patterns in qualitative data. To me, coding felt like a way of transforming qualitative data into quantitative data – coded data can be evaluated systematically and numerically. This was also the most difficult microstudy for me to approach; coding is not a precise science but an art, so there is not one definitive coding method. However, once I determined my coding method, I found the actual data collection to be very useful and also quite interesting.

**Observational Research**

The last qualitative data method we learned about was observational research. I appreciated this method because of how unstructured and open-ended it is. The researcher subjects themselves to a relevant environment and simply records their observations. This seems like a great approach when you are just beginning to familiarize yourself with the research topic – it helps to contextualize an environment.

**Research Methods in the Workplace**

In technical communication workplaces, I believe that research can be highly applicable. I think that quantitative research (especially surveys) translates best into the workplace simply because it is easier to collect quantitative data in large quantities. This is especially true for employees working in remote settings, such as myself, where qualitative data is more difficult to measure. Surveys require very little interaction; a user can simply open an email with a link to a survey, fill it out independently, and the researcher can evaluate the collective results. They also provide data that is highly categorical, and that can gauge overall trends and attitudes. While survey data is not necessarily rich in contextual information, they can be used to collect an immense amount of data with relatively low effort. In technical communication, surveys can be used in the workplace to research a variety of topics. For example, if a researcher wanted to examine what documentation tools technical writers are using, they could email a survey to all technical writers within their organization. This can provide quick and easy insight into how technical writers approach their work.

Remote work is becoming increasingly predominant, and it poses challenges to some forms of qualitative research, especially observational studies, interviews, and focus groups. While this type of research can still be accomplished remotely, it is not easy. For example, it is difficult to observe workplace dynamics while working remotely – a Zoom call or screen share may be leverageable for observation, but these tools are limited in scope. Focus groups could be held over a Zoom call, but communication can feel clunky and awkward due to technical issues and delays. This type of research does not feel quite as organic as it would in person.

**Growth as a Writer**

Throughout this course, peer review has helped me to make substantial improvements as a writer in the following ways:

* 1. **Understanding the criteria (or expectations) for the assignment**

Peer review was incredibly helpful for my understanding of assignment expectations. If I overlooked or misinterpreted a detail of the assignment, someone would often point it out to be in peer review. One example of this was during our coding microstudy. Originally, I did not directly relate my codes to terminology from our readings. A classmate suggested to do so, and even offered specific terminology that they found applicable to my study. If I had not received this kind of specific feedback, my final draft would likely have had more gaps. Providing feedback to peers was also helpful because it challenged me to evaluate their draft by the assignment criteria, which made me even more familiar with the assignment expectations. Based on this knowledge, I could then revisit my draft and make improvements. Additionally, reading other people’s drafts challenged me to look at the assignment through a different lens, and promoted ideas that I had not considered. This sometimes inspired additions or modifications to the content in my own draft.

* 1. **Offering more specific suggestions in your feedback**

Peer review challenged me to be more specific and detailed in my feedback to others. I came to this realization through the feedback I received about my own assignments – the more in-depth and specific the feedback was, the more constructive it was towards my final draft. Specific feedback was incredibly useful because it forced me to think outside of the box and shift my perspective. For example, I received the following input from a classmate about my survey: “I think you might benefit from wording that question in a way where people can also answer ‘no.’ Maybe like, ‘Would you like to see other types of bots integrated in our workplace environment? If yes, please elaborate.’ This way people can answer no, but those who want to say yes still have an opportunity to elaborate on what other types of bots they want to see integrated.” This feedback was especially helpful because it identified a specific weakness while also providing a suggestion for how to fix it. This type of feedback encouraged me to try and be more detailed in the feedback I gave to peers. Generic, non-specific feedback is not conducive to creating a cleaner draft. Here is one example of relatively unhelpful (but encouraging) feedback I received about my coding microstudy: “The excel spreadsheet looks really good. The word count is really useful. I can quickly see which pros/cons are addressed most frequently.” Although complimentary feedback is always an ego boost, it is not particularly helpful. This realization encouraged me to try and be as constructive as possible in my evaluation of other people’s work.

* 1. **Having a respectful tone**

Although offering constructive feedback is ideal, it can also be challenging. Depending on the approach, constructive feedback can come across as insulting or highly critical. This is something I have trained myself to be mindful of. The intention behind constructive feedback is *not* to insult the writer; it is to offer helpful suggestions and guidance so that they can improve. It can be difficult to toe the line between “constructive” and “offensive”. It is all in the presentation.

Here is an example that illustrates the difference:

* “You don’t include any evidence for your claims.”

**Versus**

* “I think it would help strengthen your message if you provided more direct evidence to support your claims.”

Both of the above messages have the same sentiment: the writer needs to include more evidence. However, the first bullet can read as insensitive or critical, while second bullet is much more professional and digestible.

Regularly peer-reviewing assignments gave me the opportunity to practice this art. For example, here is one of my more balanced peer reviews: “I would adjust some of the interview questions so that they are more open-ended, and further explain how interview data contributes towards your research goals. Looks good overall!” I think that this feedback was helpful because it offered specific suggestions for improvement, while also remaining polite and complimentary of the writer’s work.

* 1. **Being more motivated to improve as a reviewer**

Overall, peer review has helped me become more familiarized with the review process and develop a successful approach. It has challenged me to become more thorough and conscientious about the material I am reviewing. Another major takeaway is that it taught me to welcome criticism, not become defensive by it, and to use feedback to my advantage. I appreciate having had the opportunity to practice peer review because it has made me more confident about how I want to communicate my critiques – always maintaining a respectful, professional tone while providing specific and useful feedback. I feel like I have more of an appreciation for the peer-review process after completing this course, which motivates me to continue giving and receiving feedback in my future work.