

Evaluating Visual Representation Strategies for Use in the Writing Center

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Have you ever feared that your role as a writing center coach is inconsequential? Or that the writer you coach will not see an improvement in their grade, paper, or writing skills? One main goal of our writing center at Minnetonka High School (MHS) is to create lasting writing habits and skills for the writers who come in. Specifically, we as coaches aim not only to fix their singular assignment but also to teach them to apply their own critical thinking skills after we give them direction on their paper in our sessions so they can continue to hone their writing afterward. In our writing center, we have forty student coaches who serve roughly 3,500 students. Under normal circumstances, our writing conferences are thirty minutes long. This means our role as coaches is limited by time and also editing limitations because we do not want to overextend ourselves and do the writer's work for them; we need good ways to provide feedback to the writers to allow them to improve their writing skills and be influential in creating lasting writing habits.

To ensure our writing center's goal of creating lasting writing habits and skills is met and to also provide students with more direction, one possibility we decided to explore was providing notes, or visual representations of edits, for future reference after the coaching session. The notes would allow students to reference the different types of strategies available and when they would be most applicable. These visual representations can include anything from observations about the piece of writing from the coaching session, strategies written down for use afterward, or a visual plan for the next steps after the sessions.

Previously, to provide the writer notes from the session, our writing center gave coaches a sheet of paper with overwhelming amounts of information to fill out during a coaching session.

Commented [IE1]: The authors open with a hook directed to their audience: fellow SSWC tutors

Commented [IE2]: Here, they skillfully contextualize both their center and their central question/problem/challenge

Commented [IE3]: Now that we have some context, they can get into the intervention they tried out

The notes were then handed back to writers for their own use after the writing session, as shown in figure 1. These notes, which we coined “the teacher notes sheet,” asked for information, such as the goals of the session, feedback on parts that could be improved, steps the writer should take to move forward, etc. This not only made the coaching session feel like an interrogation but also strained the writer-coach relationship and created more work for both the writer and the coach. Coaches did not use this notes sheet, and since it was not required, it was mainly introduced at the beginning of the school year and then forgotten about. This meant many coaching sessions were finished without visual representations and easy-to-follow steps that the student writers could pursue.

Often, verbal communication is easily forgotten, and digital comments can be confusing to interpret in the bigger picture of a piece of work. Therefore, the problem we wanted to solve was the insufficient knowledge given to writing tutors regarding visual representations that writers can reference later. The primary purpose of a visual representation map is for the coach and writer to collaborate in a visual space, such as a blank piece of paper, on solutions that address the writer’s goals for that coaching session and steps that can be taken in the future. Thus, for a coaching session to be improved by a visual representation note-taking technique, the writer’s goals must be met more comprehensively than in coaching sessions that do not use visual representations. Moreover, these notes should still be used after the tutoring session is over.

Commented [IE4]: The authors are giving us a really clear idea here of the problem they came in with

Commented [IE5]: And here they're defining their problem even more clearly!

Commented [IE6]: Now we know what we're looking for: are students actually going to use these visual representations?

 <p>The Writing Center</p> <p>Endowed by the Minnetonka Public Schools Foundation</p>						
		9	10	11	12	
Writer (you)		Grade (circle one)				
Assignment you're working on		H	G	AP	IB	ALP
		Level (circle one)				
Class		Due Date				
Teacher for this assignment						
Should we let your teacher know that we met (via email)?		Yes	No	Don't Care		
You are encouraged to take notes or audio-record the conference for your reference!						
Writing Coach Use Only						
Walk-in						
Onboard						
Date						
Time						
Writing Coach						
<small>Please WAIT TO COMPLETE below until AFTER the end of the conference</small>						
You are encouraged to take a picture of this form to help you remember your next steps!						
Based on our discussion, what will you do next when you sit down to write? Be specific!						
When I sit down to write or revise, I will....						
What skill or strategy did you discuss today that you will use in future writing? Be specific!						
For future writing tasks, I will....						
Writing Coach notes:		q Prewriting q Drafting q Revision q Editing q Other				

Figure 1. This teacher notes sheet was previously used in coaching sessions.

To increase knowledge about and use of visual representations in our study, we conducted a study to evaluate different visual representation strategies and their use in coaching sessions. We used the results to identify a range of visual representation strategies for different writing goals that could be taught to tutors and used as an alternative to the old cumbersome form. We hoped that evaluating the usefulness of writing plans for different writing goals in cooperation with the writer would help establish a better relationship between the coach and the writer. This would lead to more insightful feedback as the coach and writer pair assess the work

Commented [IE7]: Transitioning into the lit review

together. While conducting our research, we made conclusions about the benefits of each type of visual representation and for what type of coaching session they could be used.

Visual Representation Overview

To begin our study of various methods for writing coaches to provide visual representations to writers and enhance their writing sessions, we decided to look at three possible visual representations that varied in layout. Specifically, we identified tutorial mapping, mind mapping, and reverse outlining as visual representations used in other writing centers or writing tutoring scenarios.

The first of these strategies is mind mapping. Mind mapping is done by writing the goal of the coaching session as a nucleus on a sheet of paper. The writer and coach generate ideas about how to address the goal, which branch out from the center (see figure 2). In 2017, Ali Al-Zyoud et al. published a study in which they instructed students to use mind mapping to plan their essays in a classroom setting. The classroom was in Jordan and consisted of forty male eleventh-grade students. This study found that mind mapping enabled students to generate unique ideas and make connections between ideas to better achieve their writing goals. Because many students come to the writing center for brainstorming, mind mapping also has applications in writing centers.

Commented [IE8]: They're giving us the basics of the study...

Commented [IE9]: ...explaining a few of its relevant details...

Commented [IE10]: ...establishing its findings...

Commented [IE11]: ...and showing us why this is relevant!

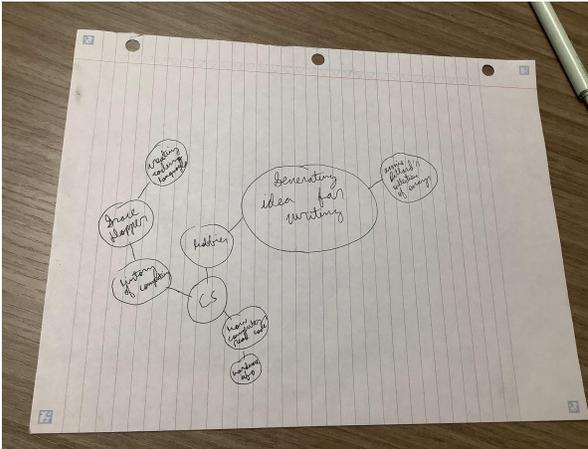


Figure 2. An example of a mind map from our study.

Another strategy that applies to writing centers is tutorial mapping. In Macauley's discussion of the importance of collaboration between coaches and writers in a coaching session, he highlighted tutorial mapping as a linear path of phrases, similar to a flow chart, detailing the action items to be addressed during a coaching session or revisions to be made after the coaching session. The mapping allows the coach to better provide and visualize edits with the writer. The purpose of the tutorial map varies from that of the mind map, as tutorial maps can provide feedback outside of brainstorming in writing coaching settings. Specifically, tutorial mapping helps give writing feedback when the writer has a nearly finished essay or piece of writing. The coach can then diagnose issues in the writer's work and provide a visual representation of steps suggested for future revisions. The tutorial map's layout is conducive to suggesting feedback, as it has a flow chart style, meaning that steps can be organized chronologically (figure 3).

Commented [IE12]: The authors clearly explain the strategies they're discussing but also make use of figures to help us understand what's going on

Commented [IE13]: They're not just listing sources here—they're showing us how they relate, how they're different, and how they build on each other to create a cohesive body of research

Commented [IE14R13]: Tutor to Tutor articles can have a widely varying number of sources, so your lit review might look different than theirs. Even if you have less time for each source, make sure you're establishing relevance and comparing the sources you've found!

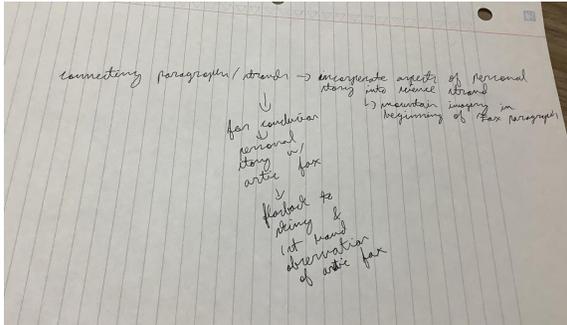


Figure 3. An example of tutorial mapping from our study.

The final visual representation strategy we looked at was reverse outlining. Reverse outlining helps the writer and coach identify specific goals for connecting the thesis to the main points of each paragraph of the writer's paper. It gives students a visual representation of edits needed to improve thesis connectivity to the main points of each paragraph. The University of Wisconsin Madison Writing Center explains how reverse outlines work effectively in a writing center setting, stating that reverse outlining allows a writer and the writing coach to work together to determine points of weakness in the piece of writing, specifically regarding the overall connectivity of the topic sentences to the main argument. This form of simplifying the paper's main points into a bulleted list allows the writers and coaches to visualize the structure of the arguments in the writing. This bulleted list can be placed on one side of a T-chart, with the other side being designated to how each bullet point connects to the thesis.

In figure 4, the two main arguments from two body paragraphs in a writer's essay were placed on the left side of the column, and comments from the writing coach about connecting the two ideas were placed on the right column. The essay's thesis was placed at the top to remind the coach and writer of the main arguments they needed to connect. Our school offers many English classes that focus on writing synthesis essays, where reverse outlines can be useful. It can help

Commented [IE15]: Once again, they contextualize their school and center. One thing they could've done here is mention what a synthesis essay is, since that won't be a term used in every school. Every school and center has a different vocabulary, so keep that in mind when you're writing your article!

with analyzing lines of reasoning, reviewing a paper's chronology, and evaluating paragraphs for their place in the main argument. Therefore, reverse outlining provides writers with a greater understanding of current errors in their papers, how to improve their pieces of writing, and how to improve their writing abilities in the future.

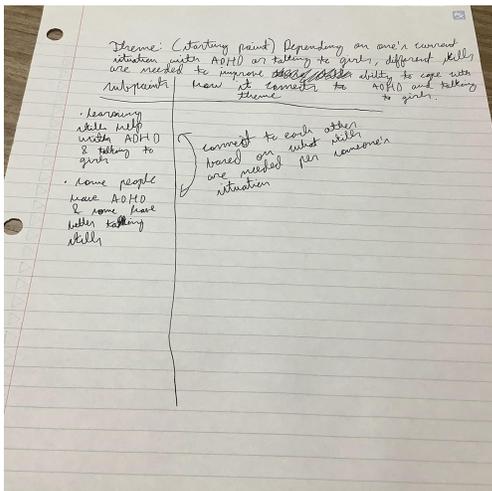


Figure 4. An example of reverse outlining from our study.

Methods

To understand the implications of different visual representation strategies and how they are currently understood and used in our own center, we surveyed other coaches at our writing center who had not received training on these strategies before taking the survey. We aimed to determine if they had used visual representations in coaching sessions before and to what degree they found them effective. We collected this information by sending out an initial “*Coach Knowledge*” Google Form survey to our fellow forty peer writing coaches at MHS’s writing center. The survey asked on the first page if tutors had used a visual representation before (see Appendix A). If a coach answered no, the survey ended, and their submitted answer was

Commented [IE16]: Notice the subheadings. Tutor to Tutor articles are more similar to research papers than Voices from the Center articles are; because you're trying out an intervention in your center, you're essentially performing an experiment and recording the results

collected as data. If the coach answered yes, the survey continued to a second page, which asked what type of visual representation strategy (mind mapping, tutorial mapping, or reverse outlining) the coach has used and the success of the coaching session on a scale of 1 to 6, with 1 being Very Ineffective and 6 being Very Effective. Then, we asked why using a visual representation strategy made their coaching session more or less effective in a free-response question.

At the time, we planned to evaluate the effectiveness of the visual representation strategies, not how the strategies could be employed. Based on the responses, we found that the most beneficial application of these strategies was providing feedback to the writers. So, we decided to change our wording and research question accordingly: What are the different types of visual representations, and how are they helpful in coaching sessions? Furthermore, we did not gather enough data from the “*Coach Knowledge*” survey to obtain conclusive results about the best use of each type of visual representation. Therefore, we decided to do an additional study to determine when each type of visual representation could be best used in a coaching session. This study included a “*Student Reflection*” survey, which was given to writers after coaching sessions, and collected data about how writers felt about different visual representation strategies.

At MHS, the writing center staff often visits English classes when students are writing papers and may need help from writing coaches. Therefore, we reached out to an English 9 Communications Honors course to coach students on their creative nonfiction essays. We recruited three writing coaches to help with this study, and fourteen students from the English 9 Communication Honors course were coached. Before the coaching sessions, we showed the three

Commented [IE17]: Not everything will go the way you expect throughout your intervention. You can totally make adjustments and change course--just include those changes in your article

Commented [IE18]: Another great moment of contextualization

writing coaches an instructional video we made detailing the specifics of the different visual representation note-taking techniques (mind map, tutorial map, and reverse outline).

Each coaching session within our study naturally varied in the session's writing goal, allowing us to identify which visual representations were most helpful for different writing goals. When asked for their goals for the session in our "*Student Reflection*" survey, all writers submitted goals under the categories of brainstorming ideas for their writing, connecting ideas to their theme, and structuring ideas throughout their essays. In the survey, we also asked writers to report the type of visual representation they used in their coaching sessions. This helped us determine the correlation between the writer's goal and what worked best for the coach to help the writer achieve their goal.

Because the "*Coach Knowledge*" survey showed that coaches were not already using mapping strategies, the participating coaches watched a short instructional video on utilizing visual representations in a coaching session. In this study, coaches asked writers about their goals for the coaching session. Then, based on the coach's discretion, they chose the type of visual representation to use according to these goals. After the coaching session, the visual representations created were given to the writers for future reference while writing, and photos were submitted to us by the writing coaches (figure 2, figure 3, figure 4).

After the coaching session, coaches were asked to issue writers the "*Student Reflection*" survey electronically, using a QR code linked to the Google Form (Appendix B), which asked about their goal for the session, the type of visual representation they used, and if they thought that their goal for the session was addressed. We wanted to gain insight into what type of visual representation is helpful for different goals and purposes and whether students believed these visual representations were helpful.

The language in the “*Student Reflection*” survey also varied slightly as we asked writers what “meeting plan mapping” strategy was used. At the time we wrote this survey, we were still trying to determine which type of visual representation was most effective overall. However, after gathering the visual representation note sheets from the coaches, we were able to determine that these notes were not used for planning the coaching session but for providing feedback to the writer. We also decided that there would not be just one visual representation that is the most effective, as all three serve different purposes for different types of coaching sessions.

Therefore, we decided to switch our focus to examining the general problem, which we identified as a need for more knowledge about effective strategies for providing written feedback to writers. Examining the visual representation techniques for their helpfulness in coaching sessions supported the ultimate goal of increasing the use of visual representation strategies in our center. We used the collected data about writers’ goals and the visual representation methods used to analyze the types of goals each visual representation was most helpful for.

Results

In the first “*Coach Knowledge*” survey we sent to writing coaches at our writing center, we received eleven responses out of the forty total coaches it was sent to. Nine of the coaches who responded stated that they had never used a tutorial map, mind map, or reverse outline to provide feedback to writers. This means that 89.9% of the writing coaches surveyed were not adequately prepared with strategies to provide feedback to writers during the coaching session that writers can reference afterward. The fact that most coaches at our writing center have not used visual representations such as tutorial maps to aid coaching likely means that they were unaware of such strategies or did not deem using visual aids as important to their coaching process. The two coaches who responded to our survey stating that they have used a tutorial map,

mind map, or reverse outline indicated that they found these strategies helpful; one said that they were able to “collect [their] thoughts and . . . think through connections better” by using these visual revision representations.

The “*Student Reflection*” survey sent out to coached writers in the English 9 Communications Honors class received responses from all fourteen of our participants (see Appendix B). Within the survey, when asked if the goals for their session were addressed, thirteen writers said Yes, and one writer said Somewhat. Most of the students coached asked for technical assistance with their writing or help brainstorming and organizing ideas. This correlates with most coaching sessions held in our writing center, as most students come in for feedback on technical skills or idea formulation.

We gathered from the “*Student Reflection*” survey that all six of the coaching sessions focused on brainstorming used mind mapping. A student who received feedback through mind mapping during their coaching session stated that it helped them “see [their] connections and ideas on paper and in front of [them].” This shows that mind mapping can be a good way for writers to get their ideas out of their heads and visualize them on paper, which may help them generate ideas and start the writing process.

Writers who came into our study’s coaching sessions with the goal of generally structuring their ideas were most often coached with the use of reverse outlining. However, mind mapping and tutorial mapping were also occasionally used, as seen in figure 4. Reverse outlining is structured so that one column can include key ideas, and the other column can include evidence to support the key ideas, meaning that the structure is naturally conducive to helping with writing organization. Therefore, many coaches were able to use this form of visual representation to help writers organize their key ideas along with supporting evidence. This

Commented [IE19]: The authors aren't quite drawing conclusions here; that's what the conclusion section is for. However, they offer some analysis of their data instead of just reciting it for readers

varies from the benefits of mind mapping, as it would be hard to use reverse outlining for brainstorming; writers should have key ideas already chosen prior to the coaching session for reverse outlining to be most helpful. A writer in our study whose goal was to improve their structuring of ideas stated that referencing a reverse outline allowed them to “divide and organize [their] outline with certain goals for each section.”

Tutorial mapping was the least used type of visual representation in our writing coaching survey, with two out of fourteen coaching sessions. Additionally, the two students who were coached using this visual representation had two different writing goals: The first student had a goal of connecting ideas to a theme, and the second student had a goal for structuring ideas within their writing. Tutorial mapping has a structure that primarily functions to help give feedback on a writer’s work after they already have a draft of their writing. This is because tutorial mapping is structured to provide chronological edit suggestions to the student, requiring the student to complete a significant amount of writing.

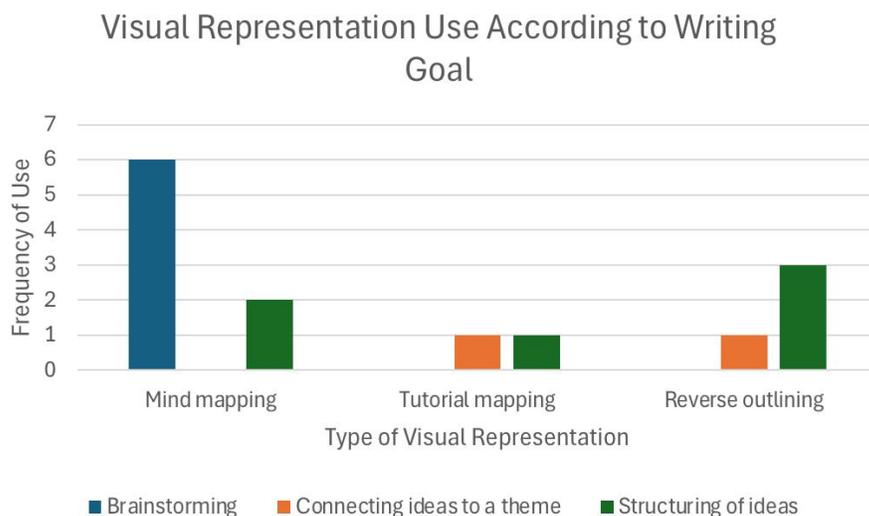


Figure 5. *The graph above shows the frequency of visual representations used in coaching sessions in our study according to writing goals. Mind mapping was most used for brainstorming, tutorial mapping was equally used for connecting ideas to a theme and structuring ideas, and reverse outlining was most used for structuring ideas.*

Conclusion

In our writing center, we observed that the teacher notes sheet (a document with several open-ended short answer questions for the coach to fill out, such as specific questions about the writer's goals and all the needed steps for the writer to improve their writing in paragraph form) was not often used by writing coaches. This is because the note sheet contained too much information for the coach to fill out and was hard to complete during a coaching session. Trying to fill out this note sheet during a coaching session led to the writer–writing coach relationship being strained because the format of this note sheet was not conducive to collaboration and instead felt like an interrogation. Additionally, our writing center class was not informed of the types of visual representations outside this note sheet, so coaches were not adequately prepared to provide writers with feedback in note format. Thus, we decided it would be important for the practice of writing center coaching to present several visual representation techniques that would expand beyond the long note document and provide a wide variety of visual representation options for different types of conferencing.

Based on our writing coaching study results, each type of visual representation has different applications and benefits for different types of writing conferences. Specifically, brainstorming writing conferences should use mind mapping, as the free-form layout is great for getting ideas from a writer's head organized onto paper and connected with other key ideas. Tutorial mapping was shown to be best used for connecting ideas to a theme and structuring

Commented [IE20]: While summarizing your paper may be helpful for readers who skip to the conclusion, most authors don't do this, and it's not necessary for your articles

ideas. Both students who were coached using tutorial mapping had a significant portion of their writing completed and were looking for specific revision steps to improve their writing. This makes sense, as tutorial mapping is mainly used to identify the primary revision needed in a piece of writing and then chronologically break down the specific steps needed to achieve the revision.

Finally, the majority of students coached using reverse outlining had goals pertaining to the structuring of ideas. Reverse outlining is a way to evaluate if a piece of writing has effectively connected the arguments correctly and in a way that makes sense to the reader. Thus, reverse outlining is best used when the writer is done or nearly done with their writing. It is also best used for writing that needs clear structuring of ideas or connectivity between the thesis and the body paragraphs' main ideas, such as in an essay. This varies from the best applications of tutorial mapping, as tutorial mapping allows for one main revision to be focused on via the coach's suggestion. Reverse outlining allows the coach and the student to work together to identify how well ideas are structured by filling out the two-column style note page. Coaches can then suggest edits to the writer after they use reverse outlining to evaluate the connectivity of ideas.

Providing writers with a summary of their coaching session is important so that they may make further edits after the session ends and learn how to improve their writing in the future. This is because the verbal feedback of a coaching session may often be overwhelming or easily forgotten by the writer. However, if the writer has a visual representation of the edits they need to make, they are more likely to do so for the writing they brought to the coaching session and other writing moving forward. At our writing center, we aim to not only help writers with a single writing project but also to help them improve their writing abilities in general so that they

can recognize needed edits with future work. Therefore, using visual representations is a good way to meet this goal and ensure writers' skill development.

As for the question of whether writers actually reference the visual representation notes after the writing coaching session, a few days after our coaching study, we heard from the teacher of the class we visited that students pulled out their note sheets during class to review revisions multiple times after the coaching session. This suggests that writers find these types of notes on edits helpful and valuable to their writing progress. Accordingly, we suggest that writing centers consider teaching different types of visual representation techniques to their coaches and encourage them to use these techniques. At our own writing center, we plan to dedicate one of our writing coach training class sessions to the different types of visual representations and how they can benefit coaching sessions. Because each visual representation has a unique application, teaching coaches a variety of visual representations will allow the writer to get better feedback on their writing and learn about patterns in their writing for future improvement.

Commented [IE21]: The authors conclude by answering the all-important question: so what? They give concrete advice to their audience and clearly express why that advice matters

Works Cited

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Appendix B

“Student Reflection” Survey Sent Out to Study Participants

Coaching Student Survey

Hello! We are studying the different types of meeting map planning strategies, called mapping and which is most effective. We could use your help to identify which meeting mapping strategies are most helpful and collecting data about how your coaching session went. The answers you provide here will help us with our research presentation at the end of the year.

011501@mtka.org [Switch account](#) 

* Indicates required question

Email *

Record 011501@mtka.org as the email to be included with my response

What was the name of your writing coach?

Your answer _____

What were your goals for this coaching session? *

Your answer _____

Were your goals for this session addressed? *

Yes

No

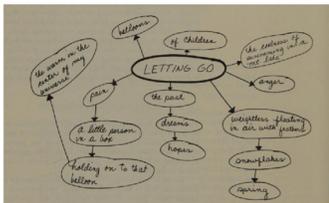
Somewhat

Other: _____

Why did you answer what you did to the previous question?

Your answer

Examples of meeting plan maps are shown below.



Think of illustration?
 Decide how Joe's main idea compares with article's → Figure out main diff → Rewrite intro
 Check quote

Thesis: Katrina Everdeen, the heroine of The Hunger Games, creates so much danger for herself as she faces from others over the course of the film.

Main idea	How it supports the thesis
Body I: She volunteers to fight in the games.	This is the root of most of the immediate danger she finds herself in, so her directly volunteering to do it definitely helped put her in front of that danger.
Body II: Shooting the apple out of the pig's mouth.	This draws more attention to her and essentially puts a target on her back the other tributes will very much want to hit.

Did you use any of the meeting maps above in your coaching session? *

- Yes
- No
- Other: _____

How did meeting plan mapping help with meeting your goals?

Your answer

Savanna Larson is a senior and third-year writing coach at Minnetonka High School (MHS). She has enjoyed learning more about writing center theory through the research and experimentation process of writing this paper. Getting to see how different approaches to coaching impacted the success of writing conferences was something she especially enjoyed during the study. Outside of the writing center, Savanna loves doing crafts and spending time outside.

Naomi Au is a senior and a third-year writing center coach at Minnetonka High School (MHS). Being a part of the writing center has taught her valuable writing and interpersonal skills. The part she enjoyed the most during the research process was observational study, where she made new connections with other writing coaches and students in the school. Outside of the writing center, she enjoys playing tennis, running, and spending time outdoors with family and friends!