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## Exploring the Function of Member Checking

Amber G. Candela

University of Missouri-St. Louis, [candelaa@umsl.edu](mailto:candelaa@umsl.edu)

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## Exploring the Function of Member Checking

### Abstract

Member checking is commonly used in qualitative research as a means to maintain validity; however, little has been published about the effects the member checking process may have on participants. In this article, I provide the experiences of two participants in a qualitative case study and argue how member checking should be used as a reflective space for participants.

### Keywords

Qualitative Research, Methodology, Member Checking

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## Exploring the Function of Member Checking

Amber G. Candela

University of Missouri, St. Louis, USA

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*Member checking is commonly used in qualitative research as a means to maintain validity; however, little has been published about the effects the member checking process may have on participants. In this article, I provide the experiences of two participants in a qualitative case study and argue how member checking should be used as a reflective space for participants. Keywords: Qualitative Research, Methodology, Member Checking*

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Member checking is an integral part of creating trustworthiness in qualitative research (Creswell & Miller, 2000; Lincoln & Guba, 1986; Stake, 1995); despite its ubiquity, there is very little written about member checking outside of it being an item to be crossed off a research project's task list (Hallett, 2013; Koelsch, 2013). Although member checking is commonly used as a means of maintaining validity in qualitative research (Creswell & Miller, 2000), researchers should also consider how the member checking process might impact participants (Hallett, 2013) especially when during the course of a study, the researcher creates a relationship with their participants. In this article, I share my experiences as a researcher, as well as the experiences of two of my participants with the member checking process. The participants were classroom teachers who partook in my qualitative research study on mathematics teachers' perspectives when implementing cognitively demanding mathematics tasks (Candela, 2016, 2017). In conducting the member check, I was surprised at how much I uncovered and also the extent to which my participants' experiences differed during the study. I argue member checking should be more than a procedure to maintain validity and researchers should consider participants' experiences including how the member check could be used as a reflective experience.

### Member Checking in the Literature

Qualitative studies are useful when trying to deeply understand a participant's lived experiences, the significance of those experiences, and potentially a phenomenon that the experiences illustrate (Morrow, 2007). When engaging in qualitative research, researchers use many sources of evidence to increase the validity of the study (Yin, 2014). Freeman, deMarrais, Preissle, Roulston, and St. Pierre (2007) describe validity as the trustworthiness of the data and claim the quality of evidence needs to be apparent throughout a study. Triangulation, or cross-checking data, involves using multiple data sources to verify themes (Lincoln & Guba, 1986; Maxwell, 2005; Patton, 2015; Stake, 1995; Yin, 2014). Patton (2015) notes studies with only one source are more vulnerable to errors including loaded interview questions or bias from the researcher. Maxwell (2005) concurs, saying triangulation "reduces the risk that your conclusions will reflect only the systematic biases or limitations of a specific collection method" (p. 93). One important aspect of triangulation is engaging research participants in the member checking process. Lincoln and Guba (1986) describe member checks as:

The process of continuous, informal testing of information by solidifying reactions of respondents to the investigator's reconstruction of what he or she has been told or otherwise found out and to the constructions offered by other respondents or sources, and a terminal, formal testing of the final care report with a representative sample of stakeholders. (p. 77)

Member checking provides a way for the researcher to ensure the accurate portrayal of participant voices by allowing participants the opportunity to confirm or deny the accuracy and interpretations of data, thus adding credibility to the qualitative study (Creswell & Miller, 2000; Lincoln & Guba, 1986; Stake, 1995).

Hallett (2013) cautions member checking “has become part of qualitative research courses and discussions of ‘best practices’ without much theorizing concerning how participants experience this practice” (p. 29). Buchbinder (2011) warns that member checking may not actually help with validity of the study due to the power dynamic between researcher and participant where participants may just agree with the analysis as they perceive the researcher as having power and do not want to disagree with the findings. If participants just agree with the researcher, the member check would not support the validity of the study.

Furthermore, researchers have argued that despite member checking being a validity measure, the member checking process could cause harm to the participants (e.g., Goldblatt, Karnieli-Miller, & Neumann, 2010; Hallett, 2013). Therefore, it should either be omitted from the research process or instituted judiciously, depending on the circumstance of each participant. Member checking could cause harm during research studies looking at experiences of marginalized populations or participants who have experienced trauma. Hallett (2013) speaks of the discord between wanting to create trustworthy data and doing no harm to the participants in the study, especially because he worked with a marginalized population of homeless adolescents. There is a counter argument to member checking as causing harm where researchers have found the member checks and participant interviews to be similar to therapy for the participants (e.g., Doyle, 2007; Harper & Cole, 2012; Koelsch, 2013; Ortiz, 2001). In a study of women’s heterosexual experiences that were nonconsensual, confusing, or problematic, Koelsch found the member checking experience to be reflective for participants. Koelsch gave participants an individual analysis and an analysis of the group. Each participant reflected on her individual experience, and some found comfort in knowing there were others in similar situations. Similarly, in a study with older women on the impact of receiving community care packages, Doyle (2007) found the member checking process to be therapeutic for her participants who were able to see their stories from new perspectives and increase their self-understanding of their experiences with community care packages. As qualitative researchers gain an understanding of those involved in their study, they should consider the context of their study while thinking through how the member checking process could ultimately affect participants.

### **Guidelines for Member Checking**

In regards to the procedure for completing a member check, several researchers give guidance on how to complete a member check (e.g., Creswell, 2005; Stake, 1995; Yin, 2014). Stake (1995) refers to participants as “actors” and speaks of the member checking process as requesting the actor to look at the rough draft in which he or she is featured. The purpose is for the actor to check for accuracy and possibly to encourage an alternate interpretation. Although the actor’s feedback can be helpful, whether the actor disagrees or agrees with the analysis, the researcher does not guarantee that interpretation will end up in the final draft. Stake cautions often actors will not acknowledge the request from the researcher, however research has been improved upon by engaging in the member checking process. Creswell (2005) describes the member checking process as follows:

Member checking is the process in which the researcher asks one or more participants in the study to check the accuracy of the account. This check

involves taking the findings back to the participants and asking them (in writing or in an interview) about the accuracy of the report. You ask participants about many aspects of the study such as whether the description is complete and realistic, if the themes are accurate to include, and if the interpretations are fair and representative. (p. 252)

There is no accompanying mention of what to do if participants disagree or how to incorporate the member check into analysis or the final draft of analyses.

Yin (2014) refers to member checking as reviewing the draft case study claiming returning the draft to participants can help corroborate findings and evidence as well as produce new evidence the participant may not have given during initial data collection. Yin cautions the participants may “cling to their own perspectives and disagree with your conclusions and interpretation, but these readers should have the opportunity to challenge a study’s key findings” (p. 199). Yin does say if a disagreement does occur, the researcher may need to consider the report as unfinished until the disagreement can be settled with further evidence.

### **Context and Methodology of the Study**

According to the National Council of Teachers of Mathematics (2014), “to ensure that students have the opportunity to engage in high-level thinking, teachers must regularly select and implement tasks that promote reasoning and problem solving” (p. 17). This type of task can be classified as having high cognitive demand (Smith & Stein, 2018). However, it was my experience in classrooms that this was not always occurring. While research exists on teachers who chose and enacted high cognitive demand tasks (Boston & Smith, 2009; Henningsen & Stein, 1997; Stein, Grover, & Henningsen, 1996), the researchers did not include teachers’ perspectives on the process of selecting and implementing cognitively demanding tasks to their students. Thus, my goal was to give voice to middle school mathematics teachers who attempted to implement high cognitive demand tasks. I wanted to gain their perspectives on factors affecting their selection and implementation of tasks. I sought to inform those working with teachers how best to support the selection and implementation of high cognitive demand mathematical tasks in classrooms. By offering the teachers’ perspectives, those working with teachers can anticipate possible roadblocks and successes teachers may have when implementing tasks in the classrooms.

To do this, I conducted a multiple case study (Yin, 2014) to answer questions about teachers’ perspectives with respect to the phenomenon of implementing cognitively demanding tasks in a mathematics classroom (Candela, 2016; 2017). In particular, I was interested in teachers’ perceptions of their challenges and successes when selecting high cognitive demand tasks as defined by Smith and Stein (2018). As I tried to understand each teacher’s experience, each represented his or her own case, and cases were then analyzed to determine themes. I then looked across all the cases for common themes. The research questions guiding the study were as follows: What are teachers’ perspectives of their classroom practice as they implement high cognitive demand tasks and how do teachers’ perspectives compare to the researcher’s perspective? What obstacles and successes do teachers identify when attempting to implement high cognitive demand tasks?

During the 2013-2014 school year, I worked with three 7<sup>th</sup> grade mathematics teachers—Mr. Cone, Mrs. O’Neill, and Mr. Fielder—at a public middle school in the southeastern United States. The school was a Title 1 school and had approximately 730 students. As reported by the participants, roughly 60% of the students were African-American, 25% were White, 7% were Latino/a, 4% were Asian, and 4% were multi-racial. About 75% of

students were eligible to receive free or reduced-price lunches, and about 4% of students were English language learners.

Mr. Cone was a mathematics and social studies teacher in his fifth year of teaching. Mr. Cone explained that he added mathematics certification because he enjoyed mathematics and found many students did not. He wanted the challenge of teaching the subject. Mrs. O'Neill was a mathematics teacher in her third year of teaching. Mrs. O'Neill said that she never thought she would be a teacher because her parents pushed her in every direction except teaching. After 25 years of being a stay-at-home mother and working as a substitute teacher, she decided she liked being in the middle school and pursued a teaching degree. Mr. Fielder was a first-year mathematics teacher who had been a student teacher in Mr. Cone's room the year before and was certified in middle school mathematics and social studies.

I started working with the teachers during their pre-planning days in July and continued through December of that year. I provided a four-hour professional development session before the start of the year and engaged the teachers in activities regarding the nature of high cognitive demand tasks, including how to classify and select high cognitive demand tasks, how to plan collaboratively as a team, and how to implement tasks in their classrooms.

I collected data through classroom observations, teacher interviews, and audio recordings of team meetings. Throughout the semester I attended team planning meetings with the three teachers where we discussed the implementation of high cognitive demand tasks. I completed three classroom observations of each teacher implementing high cognitive demand tasks. To analyze data, I utilized the Mathematics Task Framework (Stein, Grover, & Henningsen, 1996), the Instructional Quality Assessment (Boston, 2012), and the Five Practices (Smith & Stein, 2018) as the basis for coding interview transcripts and classroom observations. The goal for data analysis was to gain teachers' perspectives of implementing high cognitive demand tasks in order to answer both research questions. Once I completed my analysis, I engaged each participant in the member checking process.

### **Engaging in the Member Check**

Using the guidelines of Creswell (2005), Stake (1995), and Yin (2014), I supplied the participants with copies of the completed analysis. Specifically, I wanted to find out if the teachers agreed with the factors I identified as influencing the implementation of high cognitive demand tasks in their classrooms, whether I had omitted any important factors, or if I had misrepresented the teacher's experience in any way. I emailed each teacher a copy of the analysis, which included each teacher's individual analysis and a write up of common themes across all teachers and asked if each could respond with a time to meet and discuss thoughts on the analysis. Mr. Fielder responded he read over the documents and was fine with my analysis; he provided no further comments. As such, the focus of this manuscript will be on how Mr. Cone and Mrs. O'Neill participated in the member check. I set up individual interviews with Mr. Cone and Mrs. O'Neill and audiotaped those interviews. I transcribed each interview and analyzed the interviews coding line by line using my original framework. When I realized there were themes outside of the original framework, I went back through each teacher's member check interview line-by-line and found instances where the teacher made a comment about the member checking process. In a separate document, I created narratives of these instances, separating the data into instances where the teachers reacted negatively or positively to the member checking experience. I coded each teacher's member checking interviews individually first and then looked for common themes across both cases, making note of where the teachers had common experiences. I wrote up the analysis of each teacher's member checking experience with the themes I found.

Mrs. O'Neill responded in an email saying, "Honestly, I am not thrilled at how we come across. It is very negative and that is not how I had intended for my part to sound." She commented that my writing was repetitive related to the teachers' lack of time and lack of planning, and thought the overall tone was too negative. However, she did not believe it really mattered what she thought at that point and expressed how excited she was for me to finish the research process. I replied in an email that it was not my intention for the teachers to come across as negative, but the results indicated lack of planning and lack of time contributed to the teachers choosing to not implement high cognitive demand tasks. I clarified that her opinion did matter, as the purpose of my research was to accurately portray the teachers' voices and asked if she would meet in person and discuss her comments further. When I met with Mrs. O'Neill in person, she explained:

I know that we expressed to you often our lack of time that was just ours alone for planning and that kind of thing. So that filtered out into we didn't have time to research, to find tasks and all that, and having you do that was awesome. But, I felt like when you wrote it out, it came across as extremely negative. It [the analysis] didn't come out in a very flattering way for the county, for the school, or for us.

She did not identify any specific parts of the text that were negative; rather, she said she felt the overall tone was negative. She agreed with my statement that due to the teachers' many responsibilities there was not time in the day for quality planning, and she elaborated on her many roles within the school which included team leader, data team leader, and having a prospective teacher intern. Mrs. O'Neill commented she was just putting in her "two-cents' worth" and wanted to make sure I realized the negative tone of the analysis, but ultimately she said it was up to me if I wanted to change anything. During the member check she revealed a more deficit perspective of her students as a cause for not implementing tasks, and I wove that into the analysis, as it was more evident from her member checking interview than from her original interviews. In response to Mrs. O'Neill's comments, I fixed some repetitiveness when talking about lack of time and lack of planning, but overall, I felt the tone of the analysis was accurate. I also added to the data to support themes around deficit perspectives of students as a cause to not implement high cognitive demand tasks.

When I met with Mr. Cone in person, he related the member checking experience to being videotaped saying it was "good and bad at the same time, and very, very honest." He commented it was interesting to read my perspective of him in the classroom, even if it was not exactly how he wanted me to perceive him, but he recognized my perception of his classroom was helpful in helping him think about how he wanted his classroom to be. He acknowledged what Mrs. O'Neill had said about the analysis being repetitive but saw the repetition in my writing as highlighting what the teachers did over and over again and how that helped him see his ways of being in the classroom and his practices when implementing high cognitive demand tasks. He remarked on how he was going to use the analysis from the second research question to help him in the future:

When I read about myself saying I altered things I was like "Oh, I did do that, lowering the cognitive demand or having lowering expectations for [the students]." It was something that I say I am going to reread in August before the first day of school, and maybe every month, to remind myself that I shouldn't be doing those things.

The session concluded with Mr. Cone affirming what I wrote was an accurate portrayal, and therefore I did not change any part of my analysis. During the session, I was able to see how Mr. Cone reflected on his teaching and took the feedback as a way to improve his teaching. Through the member-checking interview I was able to collect more data on his experience engaging in the professional development and his perspective on his teaching (Yin, 2014). I corroborated the findings from the member check with Mr. Cone and incorporated Mr. Cone's reaction of the member check being reflective on his teaching in my analysis.

## Discussion

My research focused on teachers' perspectives and representing the experiences of my participants; therefore, the member checking process was critical to an accurate representation of the participants' voices. As a novice researcher, I thought primarily about taking steps to create trustworthy data and did not take into account how this experience would affect my participants. When going about the member check, I knew I needed to provide the teachers with a copy of my analysis and elicit their reactions to how I represented their experiences, but my thinking ended at the mechanics of the process.

Many of the findings in my study were negative in regards to the school and the teachers. While there were some aspects of positive elements, the overall tone of the analysis focused on the barriers the teachers faced when trying to implement high cognitive demand tasks, as there were many. Though I was interested in hearing their perspectives of the analysis, I also should have been thinking about my participants' experiences as they read the analysis. I was nervous that the teachers would not agree, but that was more in relation to this being my first solo research study and worrying about what would happen if they disagreed. I was surprised at the extent to which my participants' experiences varied. I ended up with a situation that may have caused harm to one participant, and a situation where another participant found the member checking process to be insightful and reflective.

**Member Checking as Causing Harm.** Mrs. O'Neill responded very negatively to the analysis and thought my portrayal of the teachers was not flattering for the teachers, the school, and the district. She felt I kept repeating the same sentiment over and over again with relation to the teachers having a lack of time and resources to plan and implement high cognitive demand tasks; she read the document as very negative and was concerned that was not the way I wanted to come across. The nature of the research was to identify factors that promoted or inhibited teachers' use of high cognitive demand tasks in the classroom. During analysis, I found that two major factors in inhibiting teachers from implementing high cognitive demand tasks were lack of planning time and lack of resources. While I did not set out to negatively portray the school or district, I did try to point out that many factors that constrain the use of high cognitive demand tasks stem from school and district requirements and ultimately schools and districts need to be aware of these possible impediments. In my attempt to highlight barriers so that others (e.g., school administrators, mathematics educators) could realize what affects the implementation of high cognitive demand tasks and then address those barriers, I may have caused harm to Mrs. O'Neill as I was sending back a negative analysis of her situation.

Hallett (2013) contends researchers need to question what unintended harm may befall participants by participating in the member checking process. While I would never have excluded Mrs. O'Neill in the member checking process, I should have cautioned her about the negative tone of the analysis, provided her with the space to reflect on the experience, similar to what Koelsch (2013) employed, or have been more transparent of my goals initially and not after she responded to my analyses. While I explained my purpose of trying to enlighten those who work with mathematics teachers after Mrs. O'Neill had responded to the member check,



I am not convinced she was able to see my perspective. I should have been better prepared to interact with Mrs. O'Neill in a way that would not have made the analysis seem as shocking as it must have seemed for her. I would hypothesize it was hard for anyone to read a negative portrayal of thoughts towards students and the school. I hoped her reading of the analysis would have helped her think differently about her practice, but I could not have expected this to just happen without scaffolding that process. One way I could have improved this would have been to first speak with Mrs. O'Neill and then provide an overview of the analysis in which I could have explained the negative tone of the write up and given my reasons as to why it was so negative in relation to my purpose with the research.

**Member Checking as a Reflective Experience.** When I met with Mr. Cone after he read the analysis, he explained that while it was difficult to read about his teaching overall, he thought it was productive to have an outsider's view of his teaching to reflect and try to change his practice for the better. Mr. Cone was able to take my perspective of his teaching and use that to shape how he thought about his actions in the classroom and his perceptions of students. He wanted to use the analysis as a future tool to remind himself of his habits in the classroom and how he could change those to foster the mathematical growth of his students. While researchers in the health sciences field have found member checking to be therapeutic to participants (e.g., Harper & Cole, 2012; Koelsch, 2013; Ortiz, 2001), there is a lack of research in how member checking affects participants in the field of education. According to Ortiz (2001), in-depth interviews with participants provided "cathartic opportunities for self-revelation and introspective opportunities for self-discovery, both of which may possibly contribute the potential for transformation in self and identity" (p. 193). I would argue this therapeutic benefit applies to educators and can provide a space for reflection on their practice.

My participants had differing experiences with the member check; however, I would argue they both experienced a reflection on practice as a result of the member checking process. While Mrs. O'Neill found my overall tone to be too negative, I hope that reading the analysis did provide some space for reflection in her teaching. It may not have been a positive reflective experience, but reading my analysis on her teaching could have been reflective. Mr. Cone used the member check experience to reflect on his teaching. He was able to take the criticism and reflect on how to change his practice. In thinking of this as a reflective experience for Mr. Cone, he was comfortable reading about his teaching, even though parts were not positive, and took these parts to help him change his teaching. While I have not followed up with Mr. Cone to see if he has used the analysis each year as a reflective tool, this helps me to think about using the member check as a reflective tool for teachers.

**Member Checking and Power.** In the end, Mrs. O'Neill said it was up to me if I wanted to change the write up, allowing me, the researcher, to make the decision of what was written. This aligns with prior research on the power dynamic between participants and researchers (e.g., Buchbinder, 2011) where participants ultimately agree with the researcher because they see the researcher as the authority. In thinking about my role as researcher in this experience, and the power dynamic between the teachers and myself, this experience will shape future member checking interviews. Researchers should be diligent to emphasize to participants that the interview is a place where they can share their ideas and co-construct the analysis. Buchbinder (2011) recommends the member check interview should "enhance reciprocity, equality, and openness, which in turn may allow the communication of more abundant in-depth data" (p. 119). This happened more with Mr. Cone; however, I caution all researchers to make this a priority with all member-checking experiences.

## Conclusion

I should have focused on how to create a positive, reflective experience for my participants, and contend other researchers need to do the same, especially in research where one develops a relationship with participants over time. To do this we need to be more mindful of how engaging participants in the member checking process will affect them and prepare for an experience that supports participants' own development. I contend we need to first assess whether or not the member checking process could be harmful to participants and if the member check is essential to the validity of the study. If it is determined the member check would be beneficial to the research but the process could be harmful, the researcher needs to find a way to engage in the member check with the participant that will dampen the harm and provide a more positive experience.

In education research, member checking could be used as a platform for reflection to help participants think through their experiences and how they can look forward to integrating what was learned in their classrooms. Koelsch (2013) suggests the member check was not just a place to determine if the researcher got the analysis right, but also a place where the participants reflected on their participation in the study and how their participation affected their thoughts and behaviors. Along with the checking back in with participants, Koelsch had the participants write a reaction to reading the analysis. Koelsch interviewed participants of sexual assault and found participants were able to reflect on their experiences and see it in relation to others' experiences with sexual assault. In turn, this helped participants seek out dialogue with others after the study concluded. In the future, I plan to have participants react to the member checking process and use that reaction to help them reflect on their participation.

Member checking can also be used to help the researcher capture the voices of the participants. As one of my research questions was to gain participants' perspectives, member checking was more than just checking off boxes (Birt, Scott, Cavers, Campbell, & Walter, 2016); it was about making sure I was true to the perspectives of my participants. It was uncomfortable for me as a researcher to give my participants analysis and solicit feedback, especially when the results highlighted negative aspects of teaching; however, I do think it helped contribute to a stronger study because I was able to take their feedback and reactions to the process and integrate that into my findings.

During my research, I found that many factors affected teachers' use of high cognitive demand tasks and some of those factors were not positive for the teachers. While Mrs. O'Neill found my overall tone to be too negative, I would like to think reading the analysis did provide some space for reflection in her teaching. When talking with Mr. Cone, he was able to reflect on my analysis of his teaching and turn that into a tool to help his teaching in the future. Member checking does not have to be just about checking back in with participants for validity measures; rather, it can be used as a reflective tool for those participants that may impact and improve their practice.

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### Author Note

Dr. Amber G. Candela is an assistant professor of mathematics education at the University of Missouri – St. Louis. Her current research interests are in the areas of professional development of mathematic teachers around the selection and implementation of high cognitive demand tasks in inclusive settings. Her overall research interests include the professional development of mathematics teachers at all levels and prospective and in-service teachers use and implementation of high cognitive demand tasks. Correspondence regarding this article can be addressed directly to: [candelaa@umsl.edu](mailto:candelaa@umsl.edu).

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