

Talking in Pairs: Learning From and With Teachers Through Artifact-Based Dyadic Interviews

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Abstract: Dyadic interviews offer opportunities for participants to interact and generate rich data, but it can be difficult to interview participants about complex phenomena without grounding conversations in concrete examples. In this poster, we share our experiences of conducting artifact-based dyadic interviews with 80 PK–12 teachers about assessing creative work in computing education. We suggest that researchers should consider artifact-based dyadic interviewing as a method for understanding teacher learning and co-constructing knowledge.

Keywords: interviews, artifact-based interviews, dyadic interviews, PK–12 teachers

Background and significance

In interview projects with teachers, the majority of the work is conducted by interviewing teachers individually or in groups of teachers who are situated at the same school or have some prior connection. Focus groups, or interviews with multiple participants, can generate richer data than individual interviews through the ways in which participants interact with each other by building consensus or chiming in when their experiences differ. Dyadic interviews, a hybrid of focus groups and interviews, are rarely used in qualitative research, likely because they are difficult to organize in terms of participant availability and potential power dynamics within the dyad (Morgan, Eliot, Lowe, & Gorman, 2016; Wilson, Onwuegbuzie, & Manning, 2016).

Even in focus groups, constructing knowledge through dialogue may not come easily to all participants, particularly around challenging or complex topics, and artifacts (e.g., photos, video, or other tangible materials) can be useful for working with participants (Affleck, Glass, & Macdonald, 2013). Interviewing may also produce ethical questions of reciprocity around the ways in which knowledge is constructed between researcher and participant, as well as how individual participants benefit from their participation in the research. In this poster, we propose the use of artifact-based dyadic interviews—interviewing teachers in pairs and looking at work together. Artifact-based dyadic interviews can help researchers gain a greater understanding of the realities of classroom practice by asking teachers to ground their responses in actual student work and teacher-generated artifacts. This interview method can also support teachers in fostering much-needed professional connections and learning opportunities, addressing teachers' reports of feeling isolated in their profession (Ostovar-Nameghi & Sheikahmadi, 2016).

Methodological approach

While computing teachers report excitement about supporting creative learning practices in their classrooms, they also report uncertainty and doubt about how to assess creative programming work generated by students (Brennan, 2015). To address questions about assessment that have been surfaced by both the computing education research field and the practitioners we work with, we conducted artifact-based dyadic interviews with 80 U.S. PK-12 teachers in a year-long study about assessing creative work in computing education. The artifact-based design enabled us to ground interviews in student work and teacher-generated assessments, and the dyadic design offered opportunities for peer learning. Interviews were also designed to be virtual, over video chat, to accommodate pairing teachers from various geographic contexts.

Interviews were conducted between two teachers and one researcher and averaged 75 minutes in length. 8 interviews were individual and 38 were dyadic interviews, for a total of 46 interviews with 80 teachers. The individual interviews occurred due to technical or logistical issues that led to a participant being unable to participate at the last minute, typically because of time zone complications or video/audio challenges. After the interview had concluded, each participant received an email with a link to a \$100 Amazon gift card.

Participant interactions

One of the advantages of interviewing multiple participants is the potential for participants to interact and generate richer data about their experiences by affirming or arguing with one another. Here we describe some of the ways in which we observed participants making connections about the challenges of their profession, taking notes about practices they were interested in trying in their own classrooms, and asking questions about others' responses.

Being seen

Teaching can be a lonely profession (Ostovar-Nameghi & Sheikahmadi, 2016), but through video chat, we were able to bring two teachers together who might have never met in real life, and these conversations offered opportunities for teachers to affirm and validate one another. Ethan, one of our participants, noted that he had never spoken to another computing teacher before participating in this project. Indeed, the computing teachers we spoke with often reported being the only computing teacher in their entire school or even district, and participants empathized with one another over the challenges of teaching, even when participants taught at the opposite ends of the grade spectrum.

Taking notes

During the interview process, we took notes as participants answered our questions, but we were surprised at the number of times we observed participants taking notes as well. In multiple instances, participants were taking notes about tools the other participant used in their teaching, such as programming languages (e.g., Tracy's use of StarLogo Nova) or reflection tools (e.g., Damien's use of Screencastify). In other instances, participants were excited about specific ways to teach or assess a concept. In Lindsay's classroom, students can only receive an A on her rubrics if they act as peer tutors at some point during the process, to which Jesse responded, "I really like that. I think I'm going to use that." Participants teaching grades PK–8 also expressed appreciation for hearing specifics about what their students would encounter in high school courses, which gave them ideas about how to scaffold work for younger students.

Asking questions

In the interviews, participants would chime in with questions for the other participants; these questions suggested that they had taken on the role of co-interviewer. After Adrienne expressed her belief that assessment should be about process, Derek asked, "How do you assess your [students'] process? What kinds of things do you look for when you're looking at their process?" Teachers would also ask questions that clarified their understanding of each other's experiences. In some interviews, participants opted to ask us questions, often turning questions from the protocol back to the interviewer (e.g., "How do *you* define creativity?") or asking new questions about our opinions on related topics. In these moments, we saw participants taking seriously the idea that a research interview could be more of a conversation where knowledge is co-constructed by all participants.

Conclusion

In the computing education research community, there is a recognized need for more teacher professional development, and this research method offered opportunities for teachers to see other teachers' assessments and student work. Through conversations with pairs of teachers about their work, we were able to create opportunities for learning from and with one another.

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