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Narrative inquiry, self-study, and autoethnography (i.e., self-based methodologies) are methodologies used by mathematics teacher educators (MTEs). These methodologies have opened up the field by unpacking and unearthing MTEs' work communicating findings from their practices. Building from our previous working groups at PME-NA 2018-2020, we sustain a community where MTEs can feel supported in their study design, implementation, representation of findings, and publication using self-based methodologies. At PME-NA Philadelphia, we will continue our work at PME-NA Mexico on self-based methodologies to develop perspectives on philosophical underpinnings of self-based methodologies and addressing trustworthiness and authenticity in our reports.

Keywords: Research Methods, Sustainability, Teacher Educators

We are a group of mathematics teacher educators and researchers (MTERs) committed to creating professional development spaces for MTERs to learn and conduct studies using self-based methodologies (Suazo-Flores et al., 2018, 2019, 2020). This motivates us to propose a Working Group at PME-NA 2021, where we can connect with MTERs, collaborate, and receive support on the design and documentation of studies using self-based methodologies (Chapman et al., 2020). Self-based methodologies (Chapman et al., 2020) "privilege self in the research design, recognizing that addressing the self can contribute to our understanding of teaching and teacher education" (Hamilton et al., 2008, p. 17). These methodologies include narrative inquiry (Clandinin & Connelly, 2000), self-study (LaBoskey, 2004), and autoethnography (Ellis & Bochner, 2000). A slowly growing number of research reports using self-based methodologies have been published in mathematics education journals (Kastberg et al., 2018; Di Martino & Gregorio, 2019; Goodell, 2006; Hjalmarson, 2017; Nardi, 2016; Nicol et al., 2020; Nolan, 2018; Xenofontos, 2016) with many more in teacher education journals (Brandenburg, 2021; Brandenburg & Davidson, 2011; Hourgin & Leavy, 2021; Martinie et al., 2016; Schuck, 2009; Simpson, 2019; Stoehr, 2017). These papers include a focus on identity development and practices. For instance, Simpson (2019) described ways her development as a MTER for elementary mathematics preservice teachers from a background in secondary education paralleled that of her students. Nolan (2018) shared her experiences reconceptualizing her practices supervising preservice mathematics teachers. MTERs also have used self-based methodologies to communicate people's experiences with mathematics and call for new approaches (e.g., Nardi, 2016; Stoehr, 2017). We see MTERs' studies using self-based methodology as professional development spaces they create to learn about themselves, their practice, and contribute insights about practical knowledge within the research domain of mathematics teacher education (Chapman, 2020).

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In mathematics education, calls for expanding research methodologies and methods used in published work (Cannon, 2020; Inglis & Foster, 2018), highlight the need for MTERs to gain more insight into conducting and reporting research using self-based methodologies. Addressing the current views of so-called rigor in research in mathematics education has the potential to illustrate ways the use of self-based methodologies contributes to mathematics education. In the reporting of such research, two areas of focus can help researchers communicate about their approaches: philosophical underpinnings (Ernest, 2012) and trustworthiness (Lincoln & Guba, 1985). Philosophical underpinnings of self-based methodologies illustrate how researcher's work belongs to the larger body of mathematics education research by connecting such work to the ideas about being, knowing, and feeling that have informed mathematics education. Drawing on expanded notions of trustworthiness called for by Lincoln and Guba (1985) we focus on addressing authenticity in research reports of studies using self-based methodologies (Lincoln & Grant, 2021, in press). Authenticity illustrates ways that our studies, while situated in particular contexts and not generalizable, contribute to ongoing discussions of mathematics teaching, learning, and curriculum. To support the ongoing development of research in mathematics education using self-based methodologies we endeavor to explore these factors of work in progress among the working group members using self-based methodologies. In addition, we will prepare for and organize a collection of research reports from members of the working group for submission to a special issue while also brainstorming new publication opportunities for newer members of our group.

Session Information

We have regularly met to continue creating professional development spaces where MTERs can communicate their findings and experiences using self-based methodologies (Suazo-Flores et al., 2018, 2019, 2020). MTERs are invited to join our Working Group to learn about self-based methodology studies (Chapman et al., 2020) and benefit from discussions to support the design, implementation, analysis, and representation of findings from such studies. Concerning the session activities, on Day 1, we will present literature reviews of self-based methodology studies conducted in the last five years and discuss their philosophical underpinnings. On Day 2, we will invite MTERs to present their studies using self-based methodologies to identify philosophy and Trustworthiness/Authenticity. On Day 3, we will develop action items and discuss new projects such as writing a proposal for PME-International.

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