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The International Handbook of Physics Education Research: Special Topics

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BOOK CHAPTER

Chapter 25: Qualitative Methods in Physics Education Research



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We provide an overview of qualitative methods used in physics education research, along with numerous illustrative examples from the literature. We outline the connection between broad research ideas and more specific research questions, and discuss how they both guide the study design. We describe various forms of interviews used in PER, along with detailed illustrations of each type drawn from both older and newer research literature. We examine other data sources such as surveys, artifacts, electronic sources, and observations, and briefly discuss the initial processing of the research data. We describe in considerable detail various approaches to coding and analyzing qualitative data, with another set of illustrative examples from the PER literature. We provide a brief overview of theoretical perspectives in PER, along with a summary discussion of validity and reliability in qualitative research.