



# Colligating Research and Practice :An Analysis of Technology and Mathematics Education Among the Indigenous Communities of Jharkhand, India

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## ABSTRACT

As one of the three R's, "rithmetic" has always been central to education and educational research. By virtue of that centrality, research in mathematics education has often reflected and at times led trends in education research. This paper provides some deep background on epistemological and other issues that shape current research, with a primary focus on empirical research, which sprouted and flowered over the past 100 years or so. This article describes an investigation into mathematics for teaching in current teacher education practice among tribal students of Jharkhand, India. The study focuses on formal evaluative events across mathematics teacher education courses in a range of institutions. Its theoretical orientation is informed by Bernstein's educational code theory and the analytic frame builds on Ball and Bass' notion of "unpacking" in the mathematical work of teaching. The analysis of formal evaluative events reveals that across the range of courses, and particularly mathematics courses designed specifically for teachers, compression or abbreviation (in contrast to unpacking) of mathematical ideas is dominant. The article offers theoretical and practical explanations for why this might be so, as well as avenues for further research. The author begins by tracing the growth and change in research in mathematics education and its interdependence with research in education in general over much of the 20th century, with an emphasis on changes in research perspectives and methods and the philosophical/empirical/disciplinary approaches that underpin them. The article then turns to an overview of currently flourishing research and some indications of potentially productive arenas for future work.

**Keywords :** *Learning theories, Indigenous, Epistemological Frameworks, Mathematics Education, Actions, Processes, Object, Teaching Experiments, Cooperative Learning.*