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Recent research on geometry education: an ICME-13 survey team report.

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Summary: This survey on the theme of Geometry Education (including new technologies) focuses chiefly on the time span since 2008. Based on our review of the research literature published during this time span (in refereed journal articles, conference proceedings and edited books), we have jointly identified seven major threads of contributions that span from the early years of learning (pre-school and primary school) through to post-compulsory education and to the issue of mathematics teacher education for geometry. These threads are as follows: developments and trends in the use of theories; advances in the understanding of visuo spatial reasoning; the use and role of diagrams and gestures; advances in the understanding of the role of digital technologies; advances in the understanding of the teaching and learning of definitions; advances in the understanding of the teaching and learning of the proving process; and, moving beyond traditional Euclidean approaches. Within each theme, we identify relevant research and also offer commentary on future directions.

Classification: G10 U70

Keywords: geometry; technology; diagrams; definitions; gestures; proving; digital technology; visuospatial reasoning

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