

Submission for an invited session, organized by João Araújo

Misunderstandings about Understanding in Math

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The issue of balance between procedural fluency and conceptual understanding in mathematics has served as a dividing line in education. Some believe that understanding of a procedure or algorithm must precede the procedure/algorithm itself—and if it doesn't precede it, it should come about quickly. Failure to do this results in students who some call “math zombies”. Others believe that procedural fluency and conceptual understanding is an iterative process where one feeds the other. This talk explores what understanding is and what it isn't, as well as how misunderstandings about understanding affect students.