Evaluation of Technology Tools for Mathematics Instruction by Novice Elementary Teachers

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Abstract : This paper presents the finding of a research study in which novice (first and second year) elementary teachers (grades Kindergarten – six) evaluated various mathematics Virtual Manipulatives, websites, and Applets (tools) for use in mathematics instruction. Participants identified the criteria they used for evaluating these types of resources and provided recommendations for or against five pre-selected tools. During the study, participants participated in three data collection activities: (1) A brief Likert-scale survey which gathered information about their attitudes toward technology use; (2) An identification of criteria for evaluating technology tools; and (3) A review of five pre-selected technology tools in light of their self-identified criteria. Data were analyzed qualitatively using four theoretical categories (codes): Software Features (41%), Mathematics (26%), Learning (22%), and Motivation (11%). These four theoretical categories were then grouped into two broad categories: Content and Instruction (Mathematics and Learning), and Surface Features (Software Features and Motivation). These combined, broad categories suggest novice teachers place roughly the same weight on pedagogical features as they do technological features. Implications for mathematics teacher educators are discussed, and suggestions for future research are provided.

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