

Identifying Students' Transitional Conceptions Regarding the Bell Curve

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Abstract

An understanding of students' transitional conceptions can provide instructors valuable information on how to adapt lessons while students make sense of new mathematical concepts. The purpose of this study was to identify any transitional conceptions that existed as students constructed their knowledge about the bell curve and the normal distribution. Responses from 79 pretests and 64 posttests were analyzed for a group of college students enrolled in a mathematics course for liberal arts majors. Results showed that students tended to use prior knowledge when attempting to make sense of new information and that recently learned knowledge may affect transitional conceptions. While some students eventually demonstrated an accurate understanding of specific concepts of the bell curve, others seemed to need different experiences in order to fully make that transition in the sense-making process.



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