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Mathematics teachers' ideas about mathematical models: a diverse landscape.

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Summary: This paper describes the ideas that mathematics teachers (grades 5–9) have regarding mathematical models of real-world phenomena, and explores how teachers' ideas differ depending on their educational background. Participants were 56 United States in-service mathematics teachers. We analyze teachers' written responses to three open-ended questions through content analysis. A varied landscape of ideas was identified. Teachers referred to different entities as constituting models, expressed different ideas about whether data points can be part of models, and whether models convey more information than data. Interesting differences according to educational background are identified, especially between teachers with and without mathematics backgrounds.

Classification: M19 D39

Keywords: educational background; mathematical models; mathematics teachers; modeling

[http://www.pna.es/Numeros2/pdf/Bautista2014PNA9\(1\)Mathematics.pdf](http://www.pna.es/Numeros2/pdf/Bautista2014PNA9(1)Mathematics.pdf)