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Variables in mathematics education.

Blackburn, Patrick (ed.) et al., Tools for teaching logic. Third international congress, TICTTL 2011, Salamanca, Spain, June 1–4, 2011. Proceedings. Berlin: Springer (ISBN 978-3-642-21349-6/pbk). Lecture Notes in Computer Science 6680. Lecture Notes in Artificial Intelligence, 54-61 (2011).

Summary: This paper suggests that consistently referring to variables as placeholders is an effective countermeasure for addressing a number of the difficulties students' encounter in learning mathematics. The suggestion is supported by examples discussing ways in which variables are used to express unknown quantities, define functions and express other universal statements, and serve as generic elements in mathematical discourse. In addition, making greater use of the term "dummy variable" and phrasing statements both with and without variables may help students avoid mistakes that result from misinterpreting the scope of a bound variable.

Classification: H20 E40 E30 D40 A60

Keywords: variables; bound variables; placeholder

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