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**Secondary school students' construction and use of mathematical models in solving word problems.**

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Summary: This study focussed on how secondary school students construct and use mathematical models as conceptual tools when solving word problems. The participants were 511 secondary-school students who were in the final year of compulsory education (15-16 years old). Four levels of the development of constructing and using mathematical models were identified using a constant-comparative methodology to analyse the student's problem-solving processes. Identifying the general in the particular and using the particular to endow the general with meaning were the key elements employed by students in the processes of construction and use of models in the different situations. In addition, attention was paid to the difficulties that students had in using their mathematical knowledge to solve these situations. Finally, implications are provided for drawing upon student's use of mathematical models as conceptual tools to support the development of mathematical competence from socio-cultural perspectives of learning.

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