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The formation of area concept with the help of manipulative activities.

Summary: Examining the performance of Hungarian students of Grades 4–12 in connection with area measurement, we found many deficiencies and thinking failures. In the light of this background, it seems reasonable to review the educational practice and to identify those teaching movements that trigger the explored problems and to design a teaching experiment that tries to avoid and exclude them. Based on result we make recommendations for the broad teaching practice. In our study we report on one part of a multi-stage teaching experiment in which we dealt with the comparison of the areas of figures, the decomposition of figures and the special role of the rectangle in the process of area concept formation. The conclusion of the post-test is that manipulative activities are important and necessary in Grades 5 and 6, more types of equidecomposition activities are needed and the number of measuring tasks with grid as a tool should also be increased.

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