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**A study of teaching and learning number sense for sixth grade students in Taiwan.**

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Summary: Two public schools (A and B) from two cities in southern Taiwan were selected to participate in this study. In each school, two sixth grade classes (an experimental and a control class) were studied. Number sense activities were conducted in the experimental classes through process-oriented teaching model to help children develop number sense, while the control classes followed the standard teaching method. Quantitative analyses showed that there were statistically significant differences on group tests in experimental classes for post-test and retention-test as compared with the pre-test at $\alpha = 0.01$ level. However, there was no statistically significant difference between pre-test and post-test (pre-test and retention-test) for control classes at $\alpha = 0.01$ level. Qualitative data indicated that the changes made by students in the experimental classes were apparent after the instruction and compared with the students in the control classes. There was little change found by students in the control classes after the instructions. These data demonstrated that the teaching of number sense activities is effective and helpful in developing children's number sense in the experimental classes. Furthermore, the results of retention demonstrated that the students' learning is meaningful and significant.

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