



# "Giving Students Hints"

## An investigation of improving students' problem-solving skills in high school science learning

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### Abstract

This study investigates the different effects of individual learning methods upon female and male students: learning with and without hints. It aims at exploring a way to narrow the gender gap in high physics education. Students were randomly assigned to the experimental and control group to solve the same problems. Quantitative and qualitative methodologies were used for this investigation. The questions were administered to 48 students (females=24, males=24) in Grade 11 in a high-school in Shanghai. We found that girls benefited more than males from individual learning with hints. Based on the results, some suggestions are presented.

**Keywords:** Physics learning, Problem-solving strategy, gender gap