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Learner-Centered Teaching and Improving Learning by Writing Down the Statement of Problems in an Introductory Physics Course
TARLOK AURORA, University of the Sciences in Philadelphia — In a calculus-based introductory physics course, students were assigned to write the statements of word problems (along with the accompanying diagrams if any), analyze these, identify important concepts/equations and try to solve these end-of- chapter homework problems. They were required to bring to class their written assignment until the chapter was completed in lecture. These were quickly checked at the beginning of the class. In addition, re-doing selected solved examples in the textbook were assigned as homework. Where possible, students were asked to look for similarities between the solved-examples and the end-of-the-chapter problems, or occasionally these were brought to the students' attention. It was observed that many students were able to solve several of the solved-examples on the test even though the instructor had not solved these in class. This was seen as an improvement over the previous years. It made the students more responsible for their learning. Another benefit was that it alleviated the problems previously created by many students not bringing the textbooks to class. It allowed more time for problem solving/discussions in class.

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