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A guided note taking strategy supports student learning in the large lecture classes

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In higher education, lecturing has been found as the most prevalent teaching format for large classes. Generally, this format tends not to give the effective learning outcomes. Therefore, to support student learning in the large lecture classes, we developed guided notes containing quotations, blank spaces, pictures, and problems. A guided note taking strategy was selected and has been used in our introductory physics courses for many years. In this study, we investigated the results of the implementation of the guided notes taking strategy to promote student learning on electrostatics. The samples were three groups of first-year students from two universities: 163 and 224 science students and 147 engineering students. All of them were enrolled the introductory physics course in the second semester. To assess students' understanding, we administered the pre- and post-test to the students by using the electrostatics test. The questions were selected from the conceptual survey (CSEM) and some leading physics textbooks. The result of students' understanding was analyzed by the average normalized gains. The normalized gain of each group was 0.61, 0.55, and 0.54 respectively. Furthermore, the students' views on learning with the guided note taking strategy were explored by interviews. Most students perceived that the strategy helped support their learning engagement in the lectures.

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