

Physics Recitations for College Physics Courses Using Breakout Rooms during COVID Pandemic

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Abstract : This paper addresses the use of breakout sessions to conduct successful weekly physics recitations for College Physics I and II at a large University in remote teaching method during COVID-19 pandemic. All breakout sessions are synchronous, conducted live, and handled by teaching assistants. A two-prong approach is used to maintain the integrity of recitations. Three different conference platforms WebEx, Zoom, and Canvas conferences, were tested, and BigBlue button using Canvas was adopted. The results and experiences of all three learning platforms are presented in this paper. Recitation questions were assigned on WebAssign learning platform and a standard five-question template developed by the instructor was used for group discussions and active peer-peer engagement. Breakout sessions feature of BigBlueButton in Canvas conferences was successfully implemented. Each breakout session consists of a team of 4 students. An online whiteboard, chat window options were used for live teamwork. Student peer-peer interactions, Teaching Assistants' interaction with students were video and audio recorded. A total of 72 students in College Physics II and 55 students in College Physics I was enrolled. 82% of students agreed that method under study is better than previous methods. The study addressed the quality of student teamwork, student attitude towards problem-solving, and student performance in the exams.

Keywords : recitations, breakout rooms, online learning platforms, COVID pandemic

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