

Abstract Submitted
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Modular Curriculum Approach (MCA) for teaching of introductory physics: Tablet PCs and flexible instructional space to stimulate active learning TIKHON BYKOV, McMurry University, Department of Physics, YELENA KOSHELEVA, McMurry University, Departments of Psychology, Curriculum and Instruction — Modular Curriculum Approach is an innovative model designed at McMurry University and adopted for teaching of introductory physics courses. In MCA, traditional lab/lecture structure is converted into a system of flexible instructional modules, with lecture, lab, and discussion being merged into one technologically and collaboratively rich experience. Different elements are integrated with Tablet PCs as a single unifying platform to improve continuity among module components. A technology suite incorporated with tablets includes: Physlets, tablet-adapted personal response systems, data acquisition systems, and tablet-based note-taking tools. The MCA has been further reinforced by creating a new instructional space with movable partitions, allowing for easy transformation between lecture and lab modes. The space is supportive of small peer- group activities with easy-to-reconfigure table clusters, multiple white and black board surfaces, multiple TVs and projection screens.

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