Use of Digital Learning Stations to Promote Active Learning at Undergraduate Level: The Case of Building Production Systems in Architecture Education

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Active learning strategies such as project-based learning (PBL), which enables learners to take the responsibility of their own learning with student-centred approaches can be conducive to achieving successful learning outcomes and improving learner performance. Digital environments promise valuable opportunities for learning by providing various tools and techniques for engaging learners with instructional content. Paper reports empirical evidence regarding the application of the ‘Learning Station (LS)’ concept -developed by Istanbul Technical University Centre for Excellence in Education (ITU CEE)- to an undergraduate course. LS is a modular and flexible learning space that leaves a wide room for students to create and deliver their own learning content in both physical and digital environments. Building Production Systems (BPS) is a 3 ECTS-credit, theoretical, 5th semester course given in the Department of Architecture at ITU. Course content includes technological system analysis, building systems integration, comprehensive design and professional development. While more conventional methods of content delivery such as PowerPoint presentations, weekly assignments and classroom presentations were used in the previous semesters, authors used the LS...
concept to enable students to design their own learning experience. A total of 45 students were encouraged to choose a BPS topic and design LSs as group projects through the entire semester. Started in the physical classroom, the course continued in a digital environment, following the COVID-19 pandemic, which allowed authors to observe the impacts of the digital environment on student learning. Weekly feedback on LSs were provided for each project group in the form of interactive discussions as the projects were in progress. Qualitative analysis of the anonymous personal reflections of students on their learning experience shows that student satisfaction from learning significantly increased by the use of the LS concept. Findings may receive the attention for scholars who aim to encourage active learning approaches in undergraduate education.

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Emrah Acar received his PhD degree from Istanbul Technical University (ITU) Department of Architecture in 2005. He is working as Associate Professor at ITU Department of Architecture. His research and teaching areas cover various topics associated with project management and emergency architecture. He has been the Deputy Director of ITU Centre of Excellence for Education since 2018.

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