

Comparison of Masonry Construction and Reinforced Concrete Systems with Cost-Benefit Analysis in the Process of Determining the Construction System of an Internship House Project



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ABSTRACT

The Covid-19 Pandemic has necessitated many changes in the education system all over the world. Due to the inexperience in preventing a global epidemic, it is aimed to reduce the spread of the virus by switching to distance education in Turkey as in many countries. Internships that need to be done face to face have been postponed for one year. In the process called new normalization, the sanctions were eased and the hybrid education model, in which the theoretical lessons were made remotely and the practical lessons face to face, was adopted. Within the scope, an internship house project consisting of modules in which one-person rooms and one bathroom-toilet are provided for two rooms has been developed in order for the students of architecture and engineering department to do their internships within the university campus. The aim is to analyse the performance of the masonry construction system with pumice concrete, an earthen material and reinforced concrete system within the framework of the scenario developed above. The efficiency of construction techniques will be compared with the Cost-Benefit Analysis method, which is a numerical analysis method that takes part the themes of the conference as ‘Structural behaviour; static, dynamic and numerical analysis methods’. This method consisting of different steps that will be explain comprehensively. Ultimately, it is aimed to determine which of the two construction systems is more suitable.

Keywords: Cost & Benefit Analysis, Masonry Construction System, Pumice Concrete, Reinforced Concrete System, Covid-19 Pandemic.