

A LEARNING BY DOING APPROACH IN TEACHING THE FUNDAMENTALS OF THE STRUCTURAL DESIGN OF TRUSSES

Assist. Prof. Dr.Gökhan YAZICI
Istanbul Kültür University
İstanbul, TURKEY

Dr. Edip SEÇKİN
Istanbul Kültür University
İstanbul, TURKEY

ABSTRACT

This paper reports the findings of a study, conducted with second year students of civil engineering enrolled in the course of Engineering Mechanics at the Civil Engineering Department of Istanbul Kultur University, to improve the understanding of fundamental concepts related to the structural design of trusses. Students were asked to build truss systems from Balsa wood loaded with small weights, analyze the truss member forces and indicate whether the members are under tension or compression. At the final stage of the workshop, a group discussion was held on the factors effecting the design of trusses with references to the structural models prepared by the students. In addition to supplementing the theoretical concepts related to the analysis and design of truss systems, preparation of the physical models and experimentation with the educational analysis software have also increased the motivation of the students towards the course of Engineering Mechanics.

Key Words: Civil Engineering Education, Trusses, Learning by Doing.