

# **Determination and Elimination of Misconceptions of Geomatics Engineering Students about the Relationship between Foundation and Its Real Estate: A Case Study for Conceptual Understanding Test**

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**Key words:** Curricula; Education; Land management; Young surveyor

## **SUMMARY**

Our country has a great potential in terms of foundations and foundational real estates from the past. As it is known, the land management implementations of fused foundational real estates are carried out by the General Directorate of Foundations (GDF) through the geomatics engineers in there. There is no course in the bachelor curriculum of the Department of Geomatics Engineering in our country that describes in detail the foundational real estate and reinforces it with various land implementation practices. This situation may cause the Geomatics Engineers, working in the fields related to the foundational real estates after graduation, to encounter problems, make wrong applications and implementation and take wrong decisions. The aim of the project is determining misconceptions of the senior student in bachelor programme in geomatics (sample group) on the relationship between foundation and land ownership and to develop and implement materials for the elimination of these misconceptions and evaluate the effectiveness of the developed materials. To achieve this aim, simple experimental method was used. The project consists of preliminary, pilot and main applications. Open-ended questionnaire, semi-structured interview form and conceptual understanding tests were used as data collection tools. In this study, data acquired from the "conceptual understanding test" are presented. As a result of the analysis of the preliminary and pilot studies, guidance materials for information deficiencies and misconceptions were developed in the application of Article 30 of the Law on Foundations, which includes the basic concepts related to the terminology of the foundation. In addition, validity and reliability tests of the guide materials and data collection tools prepared during the pre-application process were also performed. In the analysis of quantitative data, non-parametric analysis techniques, "Wilcoxon signed rank test" were used. Within the scope of the application of Article 30 of the Law on Foundations, it has been found that conceptual change texts, case studies and drama activities and enriched guide materials have a significant effect on the students' conceptual changes ( $z = -5,519$   $p < .05$ ). In the other words the lack of knowledge and conceptual misconceptions of the sample group were eliminated according to the

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statistical analysis of the pre- and post-test data. In the light of the data obtained from the study, developing materials in other areas related to land management and to investigate its effectiveness is recommended.

Keywords: fused foundation, foundational real estate, misconception, immovable cultural property, material design

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