

Mathematics in the eyes of academics and students of engineering faculty

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Abstract: Engineers are known as the people who have knowledge about mathematics, science, and technology and as the people who solve the problems with their knowledge in real life situations. They define *mathematics* as *the language of engineering*. Although the importance of mathematics in *engineering education* is widely accepted, it has been determined in recent studies that engineering faculty students, especially those who start their educational processes in recent years, do not have sufficient mathematical knowledge. This problem has been emphasized that some academics do not attach enough importance to the basic sciences (mathematics, physics, chemistry, and so on) [1-3]. Studies about engineering show the relation between the daily life and engineering education. So, mathematics is related with daily life. For this reason, the views of engineering faculty on mathematics and the benefits of it are important for engineering education. The aim of the study is that examining and determining the views of the academics and students from different departments of the engineering faculty on mathematics and its benefits in terms of different variables (mathematics as a discipline, mathematics in daily life, mathematical knowledge and the applications in students' own fields and relations among them). In this context, a literature-supported questionnaire contains three sub-dimensions. It was applied to 123 academics from different departments of Faculty of Engineering at Gumushane University and to 648 students of the same department. Then, semi-structured interviews were performed with three academics and students from each department. Most of the academics and students consider that mathematics is a beneficial field as a problem solving technique and a mental activity to develop the mental skills. Academics and students from different departments made use of different skills to define mathematics; like mathematical, mental, communicational, practical skills, etc. It has been determined that participants generally preferred the skills relevant with their own fields, their learning areas, applications and benefits of mathematics. While most of the students think that "mathematics was discovered by human beings while they were trying to understand the world they lived in", less students think that "mathematics was developed by human beings to cover their practical needs". The academics, in general, stated that both points of views are true, but most of them chose the second one. Except for the academics and students from the mathematical

engineering department, academics and students from other departments consider mathematics as a “tool.”

Keywords: mathematics, academics and students thoughts, engineering faculty.

References:

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