AN INVESTIGATION OF SOCIO-MATHEMATICAL NORMS BARRING THE TRANSITION FROM HIGH SCHOOL MATHEMATICS TO UNIVERSITY MATHEMATICS

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This study is a research carried out within the scope of project number 220K339 supported by The Scientific and Technological Research Council of Turkey. The aim of the study is to determine the socio-mathematical norms that prevent the transition from high school mathematics to university mathematics. The language used in the learning process, the discourses that take place in the classroom, some rules that are agreed upon during the acquisition of knowledge and social interaction constitute the social norms specific to that class (Lopez & Allal, 2007). Analyzing and revealing social norms is very important in terms of explaining the details of individuals' learning process. In the related literature, it is suggested that there are sociological, cultural and didactic changes as well as epistemological and cognitive difficulties in the transition process from high school mathematics to university mathematics (Yackel ve Cobb, 1996). This situation creates a need for research on the learning of the student community, which is in the process of transition from high school mathematics to university mathematics, in terms of factors that dominate classroom culture as well as cognitive aspects.

The participants of the research are secondary school mathematics teacher candidates who have just started university. Observations were made in the Calculus-I and Foundations of Mathematics courses taken by these teacher candidates during the 2021 fall semester. Interviews were held with both the instructors who taught these courses and the teacher candidates. The analysis of the data obtained from the observations and interviews was interpreted through the method of continuous comparative analysis. The norms determined as socio-mathematical norms that prevent the transition to university mathematics are grouped under main themes such as *definition*, *mathematical language*, *making connection, reasoning and proof.* The socio-mathematical norms under these themes, which have the potential to prevent the transition to university mathematics, will be explained with examples.

References

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