

## Discursively Examination of 8th Grade Students' Geometric Thinking Levels

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**Abstract :** Geometric thinking levels created by Van Hiele are used to determine students' progress in geometric thinking. Many studies have been conducted on geometric thinking levels and they have taken their place in teaching curricula over time. It is thought that geometric thinking levels, which have become so important in teaching, can be examined in depth. In order to make an in-depth analysis, it was decided that the most appropriate management was discourse analysis. In this study, the focus is on examining the geometric thinking levels of 8th grade students from a discursive point of view. Sfard (2008)'s "Commognitive" theory will be used to conduct discursive analysis. The "Global Van Hiele Questionnaire" created by Patkin (2014) and translated into Turkish for this research will be used in the research. The "Global Van Hiele Questionnaire" contains questions from the sub-learning domain of triangles and quadrilaterals, circles and geometric objects. It has a wider scope than many "Van Hiele Questionnaires". "Global Van Hiele Questionnaire" will be applied to 8th grade students. Then, the geometric thinking levels of the students will be determined and interviews will be held with two students from each of the 1st, 2nd and 3rd levels. The interviews will be recorded and the students' discourses will be examined. By evaluating the relations between the students' geometric thinking levels and their discourses, it will be examined how much their discourse reflects their level of thinking. In this way, it is thought that students' geometric thinking processes can be better understood.

**Keywords :** mathematical discourses, commognitive framework, geometric thinking levels, van hiele

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