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EGID3 PROJECT: PRIOR KNOWLEDGE OF FUTURE TEACHERS IN GEOMETRY

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In this paper we intend to present and discuss knowledge about geometric concepts and procedures developed by students, future teachers, during their non-higher education path. The identification of this knowledge is carried out in the context of the research project "EGID3: Geometry teaching, investing in diagnosis, difficulties and challenges", developed within the Geometry curricular unit of the Undergraduate Degree in Basic Education of a higher education institution, involving the teacher (first author) and the students of her class in a context of investigation about their own professional practice, of a reflective and collaborative nature.

The project aims, among other objectives:

- (i) to investigate students' perceptions about Geometry and its teaching; and
- (ii) to verify the contribution of diagnostic assessment practices to the learning of Geometry.

For the construction (or consolidation) of new learning it is crucial to build on the knowledge that students have been previously developing, in order to enhance more significant learning. For a student to achieve significant learning, he needs to mobilize and restructure his previous knowledge in order to establish connections between what he already possesses and the new content to be learned. Valuing a student's prior knowledge allows the teacher to map and develop planning strategies that take such knowledge into account. In this sense, data collection used, in the first class of the curricular unit, a ten-question open-ended questionnaire involving geometric concepts and procedures that students had worked on in their basic education. Subsequently, a content analysis of the answers given was performed. The results reveal that there are concepts in which the students feel more secure (triangle). They also reveal that many of them use inaccurate language when communicating their ideas about some concepts and procedures (angle, rectangle, bisector) or do not recognize them (convexity).

keywords: prior knowledge, future teachers, geometric concepts, geometric procedures.