

Área: EDU

Investigating Metacognition in High School: Report on the Implementation of a Diagnostic Questionnaire

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Highlights

- Design and implementation of a diagnostic questionnaire to identify metacognitive practices in High School.
- Focus on the core dimensions of metacognition: planning, monitoring, and self-regulation of learning.
- Findings indicate the presence of metacognitive attitudes, still occurring in an intuitive and unsystematic way.
- The instrument proved effective in supporting pedagogical interventions to foster metacognition.

Abstract

Metacognition, a concept introduced by John Flavell in 1976, refers to the ability to reflect on one's own thinking and on the processes involved in learning. It encompasses a set of cognitive operations related to planning, monitoring, control, and evaluation of the learning process itself. This competence is fundamental for the development of self-knowledge, regulation of actions, and continuous improvement of academic performance, fostering critical thinking and student autonomy¹. The research reported here describes a formative experience with Chemistry undergraduate students, focused on investigating metacognition in High School. The proposal included a theoretical study of the concept, the design of a diagnostic questionnaire composed of eight questions, and its application to a 2nd-year class in a Civic-Military school. The questions were constructed based on the main axes of metacognition — planning, monitoring, and self-regulation of learning — and grounded in theoretical references discussing cognitive strategies and self-regulation, aiming to identify behavioral patterns and study strategies adopted by students. The objective was to identify evidence of metacognitive practices among learners. The data indicate that several students already demonstrate attitudes related to metacognition, such as seeking help when needed, reflecting on their own performance after assessments, and adjusting study strategies when faced with new cognitive demands. However, these practices were found to occur in an intuitive manner, with little systematization and limited awareness of learning processes, highlighting the need for intentional pedagogical actions. The questionnaire proved to be an effective tool for diagnosing such practices and providing support for pedagogical interventions. As a further step, it is proposed to expand its application to different classes and school contexts, as well as to use the results to design strategies that intentionally foster metacognition. It is expected that this initiative will strengthen students' intellectual autonomy, encourage continuous reflection on the act of learning, and contribute to their overall development.

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References

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