THEORY GUIDE

Concept: Metacognition in assessment

Brief overview of concept from Evans et al. (2021):

Metacognition, broadly defined as "the awareness of and knowledge about one's own thinking", is a critical component of self-regulated learning (SRL) – "a self-directed process by which learners transform their mental abilities into academic skills" (Zimmerman 2002, p. 65). In SRL students take an active role in understanding what is *good* academic practice, and in monitoring and improving the quality of their learning process and outcomes. This involves the development of metacognitive knowledge and strategies.

Metacognitive knowledge entails 'person', 'task', and 'strategy' knowledge (Flavell, 1979), i.e.,: (i) knowledge about how human beings learn and process information, and of one's own intellectual strengths and weaknesses in learning; (ii) knowledge about the goals and requirements of different tasks, and of the complex nature of learning; and (iii) knowledge about cognitive, metacognitive, and affective learning strategies, and how to tackle learning effectively.

As explained by Evans et al. (2021) metacognitive strategies refer to how students plan, monitor and evaluate learning, and they are closely related to the cyclical process of SRL: *forethought; performance*, *monitoring and control*; and *evaluation/self-reflection*. All these phases require a combination of cognitive, metacognitive, and affective strategies that influence how students manage learning within specific contexts, and individuals may combine strategies in different ways to achieve similar and/or different outcomes. Key metacognitive strategies include:

(i) *Planning:* ability to discern the important elements and requirements of a task, to design action plans aligned with personal and institutional goals, to prioritise activities to support goals, and to take responsibility for learning;

(ii) *Accuracy and flexibility of self-monitoring:* ability to understand how task performance compares to learning goals, to activate effective strategies to manage progress, and to use strategies flexibly to achieve goals (adaptive control);

(iii) *Social interaction:* ability to engage in constructive learning conversations with educators and peers (explicitly verbalise knowledge, compare views, and find perspective).

Metacognitive knowledge does not necessarily result in the use of self-regulatory strategies given the mediating effect of individual (e.g., motivation) and task characteristics (e.g., nature of assessment) (DiFrancesca et al., 2016; Dresel et al., 2015). The students' learning patterns depend largely on how they perceive learning contexts, and those patterns are a predictor of variance in learning outcomes (Vermunt & Donche, 2017).

The development of high level self-regulatory skills requires adjusting instructional approaches to situational demands by designing learning environments *with* students that promote their

active engagement (Boekaerts & Corno, 2005; Dörrenbächer & Perels, 2016; Peeters et al., 2016). It is important to enhance their assessment literacy by helping them understand the requirements of the discipline, the demands and standards of assessment, how assessment elements fit together, and what their/the educators' role in assessment is. It is also important to provide (in)formative and constructive feedback to help them make sense of and improve learning (Evans, 2013).

Developing the students' metacognitive ability will foster their agentic engagement (Reeve, 2013), i.e., the use of self-initiated, proactive, intentional, collaborative, and constructive approaches to learning, and this can have a positive impact on the quality of learning processes and outcomes. Understanding the barriers to, and the facilitators of, self-regulatory assessment practices is important to enable educators and students to move forward together (Evans, 2016, 2022).

References

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Co-funded by the
Erasmus+ Programme
of the European Union

This project has been funded with support from the European Commission (Grant Number: 2020-1-UK01-KA203-079045). This Web site reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.