THEORY GUIDE

Concept: Self-Regulation Domains (Cognitive, Metacognitive and Motivational/Affective)

Brief overview of concept:

Self-regulation is the ability of a learner to manage their own learning, relatively independent of another outside agency or individual. Effective self-regulation is fundamental to being an independent and agentic learner (Evans & Waring, 2021, 2024).

Models of self-regulated learning typically focus around three major '**domains**' or 'dimensions', the **Cognitive domain** (how one processes information), the **metacognitive domain** (the management and quality assurance of cognitive activities), and the **motivational/affective domain** (the goals, motivations and purposes for learning). The effective self-regulated learner has mastery of all three of these domains.

Cognitive Domain:

The cognitive domain focuses on the actual learning process, including the acquisition and application of knowledge and skills. This domain relates to information Processing: How learners absorb, organise, and retain information. Strategies adopted involve the selection and application of various learning strategies, such as summarisation, repetition, explanation, and problem-solving.

Metacognitive Domain:

Metacognition involves thinking about one's own thinking processes, and evaluating whether or not the cognitive strategies adopted are effective and sufficient, and/or how to improve them. This domain involves determining the steps needed to achieve learning objectives, and monitoring/evaluating their effectiveness through the assessment of one's comprehension and performance during the learning process. The monitoring/evaluation involves reflecting on the effectiveness of the learning strategies and adjusting them based on performance.

Motivational Domain:

The motivational/affective domain plays a crucial role in SRL, influencing the initiation, direction, intensity, and persistence of learning behaviours. The key elements of this domain are goal setting, and managing aims and expectations: Mastery of this domain involves establishing clear objectives to guide the learning process, and identifying he perceived relevance and importance of the learning content.

Stages of self-regulated learning

According to the model by Zimmerman and Campillo (Zimmerman & Campillo, 2003; also summarised in Zimmerman, 2002; 2008), SRL passes through three cyclic phases: (1) The ***Precreational*** or ***Forethought*** phase, in which goals are set and strategic planning ensues; this phase is strongly affected by self-motivational beliefs, such as self-efficacy, goal orientation and expectations of outcomes. (2) The ***Actional*** or ***Performance*** phase, the actual learning phase where the learner instructs themself, developing strategies for completing tasks, self-monitoring of knowledge and understanding gains. This phase involves self-observation as a key strategy. Finally (3) The ***Postactional*** or ***Self-Reflective*** phase where the learner evaluates their status, applying self-judgement to evaluate their capabilities and knowledge/ understanding level, and identifies how they achieved that understanding by use of metacognitive strategies.

Models of Self-Regulated Learning

Effective SRL is reliant on the self-reflective ability of the learner, a process outlined by the model developed by Lehmann et al. (2014; summarised in Table 1). In this model, each of the three domains (dimensions) has both a *Structural* component (stable, habitual, intuitive behaviours) and a *Processual* component (spontaneous, impulsive, or instantaneous behaviours or activities).

Table 1 - **Summary of the self-regulated learning model proposed in Lehmann et al. (2014)**, highlighting three dimensions of self-regulated learning, each with a structural and processual component.

	Cognitive Dimension	**Metacognitive Dimension**	**Motivational Dimension**
Structural Component	• Knowledge of the specific subject domain • Strategic knowledge of the learning activity	• Knowledge of the cognitive process • Knowledge of the task being undertaken	• Interest in the subject of the activity • Personal beliefs and perspectives • Competence in the subject
Processual Component	• Cognitive information processing • Setting of the target goals of the learning activity	• Planning of the task • Monitoring of progress • Evaluation of the outcomes	• Affective processes that support and promote learning • Strategies directed by personal will

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Another model of SRL, proposed by Boekaerts (1999), highlights the iterative nature of SRL, emphasising that SRL is a series of interacting processes which continually shape and reshape each other in the development of understanding. Boekaerts conceives this model as a series of three concentric rings (see Figure 1). The outer ring relates to processes of self-regulation and the choice of goals and resources (motivation). The middle layer is concerned with the regulation of learning as a process, and the use of metacognitive skills by the learner to direct their own learning activities (metacognition). Finally, the inside layer is focused around the regulation of modes of processing of information, and the choice of cognitive methods and strategies involved in this (cognition). It is important for these layers to interact iteratively with each other as the learner gains new experiences, and develops new strategies.

Consideration of these three major domains of SRL are fundamental to the EAT Framework. In particular the metacognitive and motivational domains are supported by the student-centred nature of the EAT sub-dimensions. The focus on student agency and students developing skills of self-understanding and self-evaluation align very strongly with these models, and so underpin the development of self-regulation. The key in applying these concepts to the development of self-regulation is in developing assessments which encourage the learner to reflect on their mastery of these three domains, and to identify ways to enhance them. The ultimate goal of such assessments is to develop learners who are able to manage and assess their own learning, and identify areas for improvement, without the support of an educator. For further discussion of how assessment can support self-regulation, see Evans *et al.* 2021.

Figure 1

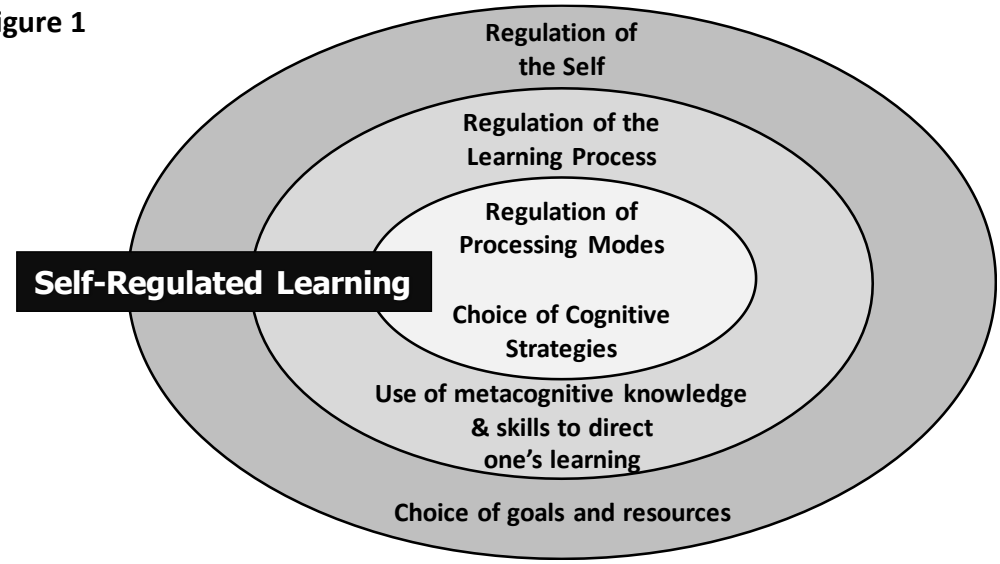

Figure 1 – The concentric model of self-regulated learning, showing the three levels of regulation and the strategies required for these (Boekaerts, 1999).

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