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**Developing evaluative judgement: A self-regulated learning perspective.**

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## **Developing evaluative judgement: A self-regulated learning perspective.**

Self-regulated learning is defined as “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (Zimmerman, 2000 p.14). The attainment of SRL is nowadays considered a crucial educational goal because of its key impact on students’ learning (Panadero, 2017). The use of SRL strategies has been found to predict academic achievement in both face to face (Richardson, Abraham, & Bond, 2012) and online learning environments (Broadbent, *in press*; Broadbent & Poon, 2015). Self-regulated learning provides a framework to explain how students learn and what we, as teachers, can do to intervene to promote it (Panadero, 2017).

Evaluative judgement is the ability to assess a piece of work (one’s own or that of others) while attending to the context, quality, standards and criteria built upon previous experience. That is, to make an accurate and appropriate judgement the student needs to: (1) consider the context in which the performance is to be evaluated (e.g. considering the audience, the required genre, etc.); (2) have an understanding of what a quality performance looks like; and (3) consider the different standards and (4) assessment criteria. Thus, evaluative judgment does not develop in a vacuum, but is based in previous experience as an assessor and/or assessee as from these two roles students gain more knowledge about the four above mentioned aspects. Why is it important to develop evaluative judgement? As claimed by others (e.g. the opening chapter of this volume) to be able to assess one’s own work and that of others is a crucial skill not only in higher education, but also for life-long learning capacity, as well as the ability to become a capable and successful professional (Boud & Falchikov, 2007; Cowan, 2010; Nicol, 2014; Sadler, 2010). Therefore, developing evaluative judgement should be then a major educational aim and as a result, an outcome. For example,

students who graduate from higher education programmes should enter the workforce having acquired such ability, which can be further developed at their workplaces.

Why is it then interesting to frame evaluative judgment from a SRL perspective? There are three basic shared tenets between the two theories: students' autonomy, expertise and interrelation. First, regarding autonomy, understood here as the ability to take care of one's own learning, both SRL and evaluative judgment promote it, and in turn both capacities develop as a consequence of autonomy. That is, students that know how to self-regulate and to judge their own work can be autonomous, and because they act autonomously they have more opportunities to enhance their SRL and evaluative judgment capacities. A second tenet for the connection between SRL and evaluative judgement is that both aim at developing students' expertise within a given task or discipline. That is, both require training through practice to develop expertise, however as expertise is developed in one, so too is expertise developed in the other. In fact, to be fully strategic in either capacity, requires both capacities to be actualised. And third, SRL and evaluative judgments are highly interrelated, that is, to develop one the other must be present. To be able to self-regulate appropriately the student needs to be able to self-assess to ensure strategies are being applied appropriately (Panadero & Alonso-Tapia, 2013; Paris & Paris, 2001), and to do so successfully with accuracy, evaluative judgement is key. And at the same time, to be able to develop such evaluative judgement capacity over time, the student needs to activate a significant number of self-regulatory learning strategies. Students with self-regulated profiles that have high motivational regulation and high adoption of self-regulated learning strategies have been shown to be academically more beneficial (Broadbent & Fuller-Tyszkiewicz, *under review*). Moreover, those students with higher self-regulatory skills are able to produce better internal feedback which will amplify their evaluative judgment capacity (Butler & Winne, 1995).

Because of these three shared tenets, it is crucial to analyse how, from SRL theory and models, we can help students develop evaluative judgement capacity.

In this chapter, we will characterise the (SRL) concepts that can help us develop evaluative judgement in our students. Based in the multi-level model of SRL (Zimmerman & Kitsantas, 2005) we will explore how such a model can be applied to enhance our students' expertise in evaluative judgement. The structure of the chapter will be as follows. First, the SRL multi-level model will be presented theoretically. Each level of the model will be analysed, while presenting specific examples of how we can promote the development of evaluative judgements through pedagogical practices. Secondly, as peer- and self-assessment are the classroom activities with most potential to enhance evaluative judgement capacity (Nicol, 2014), these will be analysed as a way to enhance students' evaluative judgment.

### **1. The development of SRL: a look at the multi-level model and its application to evaluative judgement**

The attainment of SRL is nowadays considered a crucial educational goal because of its key impact on students' learning (Panadero, 2017). For that reason, teachers need to design their learning activities to ensure SRL promotion. Paris and Paris (2001) developed a list of 12 principles that teachers can use to develop their students' SRL capacity. While these principles were created for a school setting, they are just as relevant in higher education.

Principle 3a deals with direct instruction about SRL, and emphasises that reflection about the regulatory processes themselves will result in major gains in SRL capacity. The claim from assessment scholars (Boud & Falchikov, 2007; Nicol, 2014) for evaluative judgement is concordant: the capacity to generate evaluations about one's own work (or that of a peer) is crucial to learning. Additionally, the model by Dreyfus and Dreyfus (2005) on how to gain

expertise in real world tasks has been applied in an evaluative judgment capacity (Nicol, 2014). Here, we will present how the SRL field has visualised the development of regulatory skills.

Barry Zimmerman, a key SRL scholar, has developed three different SRL models each with different foci (Panadero, 2017). Of interest to this chapter, his multi-level model written with Anastasia Kitsantas explains how, through practice, students can master self-regulation in a given task (Zimmerman & Kitsantas, 2005). There are two important aspects to point out before presenting the model. First, Zimmerman's work has been developed from his early collaboration with Albert Bandura (Zimmerman, 2013). Therefore, socio-cognitive theory and vicarious learning are key elements in his multi-level model. Secondly, even though the model has several levels, this does not imply that students have to go through all of them to achieve self-regulation of the task; the levels are usually sequential but exceptions can occur. The main aim here is to adapt and apply Zimmerman's SRL model perspective to evaluative judgment, in order to explore a similar developmental approach to evaluative judgment. Next, we will present the four levels (observation, emulation, self-control, and self-regulated) with classroom examples to help visualise how they might apply to the development of evaluative judgement.

*Zimmerman's multi-level model of SRL – Level 1 observation:* In this level the student observes a model practicing the activity. This observation is more beneficial if it is active, in other words, if the student pays attention to the model and tries to extract patterns and conclusions, or even attempts to visualise how s/he would perform it based on what s/he just observed.

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In this level students are learning to make judgements about their understanding of the task requirements. Teachers can help students develop this capacity through classroom activities that explain the task and/or criteria used for evaluation, or by presenting exemplars to them. Exemplars help students to increase the knowledge, understandings and skills required to meet the demands of a task, and give students a clear indication of what is expected. This can be further enhanced if explicit links are given between the assessment task and the achievement standards that are being assessed. For example, the teacher might spend time unpacking the application of standards and criteria (e.g. a rubric) to the assessment, as well as their own notion of quality (e.g. that is a good one, see how X, Y and Z stand out or this section needs work because of W), with the student (see Broadbent, Panadero & Boud, *under review*, for an example). This could be done in person, through classroom activities, in written, audio- or video-recorded format.

*Zimmerman's multi-level model of SRL – Level 2 emulation:* In this level, the student will try to perform the task, keeping in mind the example seen in the observation. As presented by Zimmerman and Kitsantas, the learners do not completely imitate the model or the model's work, but typically it is the general pattern that is followed. In other words, the learner tries to perform similarly but it is (a) usually not possible because of the lack of expertise, and (b) it would not be beneficial because the learner needs to adapt his or her behaviour to his or her capacities.

*How does it enhance evaluative judgement in the classroom?*

Emulation occurs in order to determine what the standards are, what they look like in another's work, and how to meet those standards in their own work. Continuing with the previous example, students may do this by attempting to emulate the exemplar. They can use the exemplar to define a valid standard against which they can compare the development of their own work. These comparisons between their own work and that of the exemplar help students to calibrate their understanding of how their own work meets those same standards. Guidance and feedback are essential during these emulative experiences, and can lead to higher levels of understanding of what is required (Kitsantas, Zimmerman, & Cleary, 2000). As the emulative level of self-regulated learning is often social in nature, involving students in assessment exercises where they peer assess other students' work in relation to defined criteria, can enhance their judgments of quality. As will be discussed in the third section, peer assessment is the activity with most potential to enhance evaluative judgement capacity (Nicol, 2014), and can be used in both formative and summative assessment and both in and out of class. During the emulative phase, the students' ability to successfully and accurately peer and self-assess with a novel task are still at a technical and rudimentary stage with little flexibility in applying the standards.

*Zimmerman's multi-level model of SRL – Level 3 self-control:* Here the learners practice in the absence of the model. Practice must be structured and reflexive to produce better results; if students just repeat an action without further cognitive processing, the chances to fully internalise patterns and extract practical conclusions decrease. A crucial process at this level is the achievement of automaticity. Basically, this is the ability to perform the task reducing the cognitive load by the automatic activation of response patterns (Bargh, 1994; Bargh & Williams, 2007). By achieving mastery of this process, the learners decrease their cognitive

load, freeing up cognitive resources which can then be used for other actions (Kirschner, 2002).

*How does it enhance evaluative judgement in the classroom?*

As students further develop their self-regulation capacity, they enter the self-control level where they are able, and to a higher extent, to compare their efforts against the standards. That is, they can begin to make sound evaluative judgements about the quality of their work through internally generated feedback. For example, at this level students are more automatically able to make evaluative judgements about their work against that of the exemplar because of repeated reflexive practice, and have moved to refined their understanding of the standards independent of the exemplar given to them. To foster independence, teachers could build in self-assessment to their assessment practices, by asking students to assess their own work against the marking criteria, before submission for grading. As described in section two, being able to self-assess is instrumental to both self-regulated learning and the development of evaluative judgment. While self-assessment may also occur earlier in the emulation phase, this skill is refined further and becomes more sophisticated. So too, is the students' ability to assess peers' work against the standards. As students' ability to peer assess becomes more advanced, so does their ability to transfer and apply this learning to their own self-assessment of their work.

*Zimmerman's multi-level model of SRL – Level 4 self-regulated:* At this level the learners can, and should, practice in new and changing conditions to further develop the skill. Based on their repeated practice, at this point they are able to adjust the performance to achieve the desired results in more challenging and wide-ranging situations. At the self-regulated level, students (1) reflect on prior similar performances and, based on this reflection, plan their

future performance; and then (2) take the useful strategies from prior performance, and (3) apply them to novel and/or more challenging situations. Here, they are able to identify the key contextual and personal factors that will influence the result, and they are able to adjust while performing the task to achieve their goals. In other words, they are able to act strategically at this point.

*How does it enhance evaluative judgement in the classroom?*

The ability to self-regulate in this way improves the student's evaluative judgment because of the enhanced capacity to judge what quality looks like against a set of standards.

Metacognitive skills and associated monitoring allow students to repeatedly check and determine whether they are meeting those standards. The iterative nature of this process means that students are better able to understand and judge the gap between standards and performance and modify performance accordingly. To take advantage of these processes, teachers could employ iterative-scaffolded assessment that allows students to reflect on performance and adjust their understanding of the standard required for the proceeding assessment. In the same way, formative assessment also allows students to reframe their appraisal quality in low-stakes tasks. Teachers can also draw clear links between the application of judgment to a different but similar situation/assessment. For example, this might be achieved by using a standardised rubric across a program of study for similar tasks (e.g., a psychology lab report).

## **2. Activities with most potential to enhance both SRL and evaluative judgement**

### **capacity: self and peer assessment**

In this section, we will specifically focus on self and peer assessment as a tool to enhancing students' evaluative judgment in the classroom. As has been shown in the previous section,

students have varying levels of ability to (1) self-regulate and (2) judge the quality of a piece of work. To enhance both their evaluative judgment capacity and ability to self-regulate, they need to be given plenty of opportunities to practice their assessment skills. And two crucial processes, through which both aims are achieved for students, is by providing opportunities for self-assessment and peer assessment (Nicol, 2014; Nicol & McFarlane-Dick, 2006; Panadero & Alonso-Tapia, 2013; Panadero, Jonsson, & Strijbos, 2016a).

Self-assessment involves “a wide variety of mechanisms and techniques through which students describe (i.e., assess) and possibly assign merit or worth to (i.e., evaluate) the qualities of their own learning processes and products” (Panadero, Brown, & Strijbos, 2016b p. 804). The connection between self-assessment and self-regulated learning has been largely supported theoretically (Nicol & McFarlane-Dick, 2006; Panadero & Alonso-Tapia, 2013; Paris & Paris, 2001) and also empirically (Brown & Harris, 2013). By implementing self-assessment activities in the classroom, teachers promote students’ self-generation of feedback which is crucial for students’ development (Andrade, 2010). And most importantly for this chapter aim, self-assessment practice benefits the enlargement and consolidation of more advanced evaluative judgment. Through practice, students can apply their own understanding of evaluative judgment for a particular task and test, with feedback from the teachers to reach full potential, whether they need to correct or if they have successfully self-assessed.

Peer assessment was claimed by Nicol (2014) as the activity with most potential to enhance evaluative judgement capacity, as it allows self-regulation and co-regulation (Panadero et al, 2016a) to happen. By assessing a peer’s work, the students (1) have access to another performance example that they can contrast with their own, and (2) they have to apply their evaluative judgement in order to provide explicit feedback to that peer. This is especially true

if the peer assessment is implemented with formative purposes, which has been shown to produce better interpersonal, motivational and emotional effects (Panadero, 2016).

Nonetheless, Nicol (2014) agrees with others (e.g. Dochy, Segers, & Sluijsmans, 1999) that the biggest impact of peer assessment is in the assessor capacity to self-assess. That is, the knowledge gained from peer assessment is, in turn, applied to enhance both one's own work and the ability to assess that work for quality. As argued by Andrade (2010), this ability is the definitive source of feedback.

In sum, by implementing self and peer assessment activities we are providing students with opportunities for practice. When self and peer assessment are implemented, students stop being just recipients of assessment and feedback, they become active agents in the process of creating and delivering both, and therefore their potential for learning increases. Even further, and more importantly for this chapter aim, by practicing self and peer assessment students have the opportunity to reflect, practice and amplify their evaluative judgment capacity. And as formulated in the previous section, the more they practice and develop the skill, the higher the chances they will become self-regulators of their own evaluative judgments.

As can be seen in the recommendations about peer and self-assessment given by Panadero, Jonsson, & Strijbos (2016a), the activities of self and peer assessment need to be central parts of instruction and learning. For example, the teacher needs to provide feedback about the self and peer assessments themselves, not just focussing on the task characteristics. These recommendations are important, because they emphasise the potential for students to learn how to self and peer assess which will unquestionably have an impact in the development of their evaluative judgment capacity.

### **3. Conclusions**

As proposed here, by applying a SRL perspective to evaluative judgment we are promoting a developmental approach to this skill that will help clarify how students can acquire it. By having a closer look at each of the four SRL levels and providing examples our intention was to help visualize how evaluative judgement can develop in a similar fashion as SRL does. The key implication of this approach is that students need to practice to master a new skill, and that this practice should be deliberative and would benefit from observing models and receiving feedback as it progresses. This approach, which unfortunately sometimes have not applied (e.g. Panadero et al., 2016b for self-assessment), should be a major educational goal and a salient feature of all instructional designs. As developmental approach has been proposed with success in SRL (Panadero, 2017; Paris & Paris, 2011) it is our belief that the evaluative judgment field would benefit if also adopted here.

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