

## Metacognitive pedagogies and the construction of a dialogic forum

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During his time, Flavell (1979) identified the metacognitive process and described it with the transitive and self-reflective meaning of the verb to think, defining this process as “thinking about thinking”. If we ask ourselves today, “What is metacognition?”, we can recover the past decades of research on the topic and, together with Flavell’s definition, we can understand what “knowledge of a cognition” where “cognition x” can regulate itself and is subject to being monitored, planned, thought and directed towards specific learning tasks. This process is identified using the term metacognition. Therefore, what we call metacognition has given rise to the development of pedagogies focused on this type of strategies, where the learning process is not only a secondary thought, but is subject to regulation and self-evaluation, with systematized precedents in the psychology and epistemology of the 20th century.

For example, Polya (1949) presented a framework for understanding, developing and applying the metacognitive processes in four stages: one of them is self-reflection and evaluation of the solution to a problem, in other words, a conscious knowledge that seeks self-examination and that can be reproduced in other unfamiliar learning situations. Mörck (2008) mentions that already in Vigotsky and Piaget we can observe the importance of metacognitive processes in learning; however, Schoenfeld (1985) identified other aspects that were not previously considered and that can influence the metacognitive process, such as the complexity of the affective experience and the socio-emotional aspects implied in the process of learning something.

Another model that has incorporated applied metacognitive pedagogies into the learning and teaching of mathematics is Mevarech and Kramarski’s IMPROVE (1997). IMPROVE is described in the book *Critical maths for innovative societies. The role of metacognitive pedagogies* (IPN-OECD, 2017), where Mevarech and Kramarski present a theoretical basis and a series of techniques to incorporate metacognitive processes into the development of thinking and improving mathematics skills. These techniques place great importance on what the mathematics curriculum in Singapore has accomplished.

The first Spanish language edition and publication of Mevarech and Kramarski was a project carried out by the journal *Educational Innovation* in the Office of Academic Affairs of the IPN, that can contribute to Spanish speaking children and young people, through the translation, publication, dissemination, discussion and critical application of recent research that can cultivate a student's mathematical reasoning, in the process where educational transformation really takes place: in thinking. Considering meta-cognitive pedagogies in the thematic section of this issue of *Educational Innovation*, along with the publication of Mevarech and Kramarski's book (IPN-OECD, 2017), responds not only to a contemporary research concern, but also a transformative analogy, suggestive in the lives of institutions of higher education: thinking about themselves, "thinking about thinking" of their roots and their *raison d'être*, of who is responsible for them and what role they have in the transformation and social equality of a country.

Educational institutions, like people, have to know themselves. This maxim from the temple of Apollo in Delphi is not a mere saying; it was adopted by the philosopher, Socrates, as a method (*odos*) of knowledge and of way of life. As a method, it implied the dialogic exercise of listening and being listened to; as a way of life, it embraced the ongoing exercise of self-reflection and the self-inquiry of the limits and possibilities of human action. Indeed, institutions are the people who inhabit and construct them day by day; it is the responsibility of each of us who inhabit them to practice self-reflection.

Thus, in the analogy of "thinking about thinking" of both the roots and the *raison d'être* of an institution lies an indispensable exercise, but it is important to ask "What characterizes this exercise?" Dialogue, openness and plurality. The critical acuity required by dialogue, openness and plurality is unmistakable and stimulates the necessary presence of space—the Greek world called it *agora*, the Roman world, *forum*—in other words, the Latin term that means public space, plaza, meeting, and that today is forum (Moliner, 2007, p. 1389). But *forum* is no longer a space of encounters when plurality is absent. Plurality of ideas, of words, of meanings is made up of the temporality of discourse. This discursive plurality is time. Time is the possibility of dialogic interaction that gives life to the space of discussion, to the *forum*. But dialogic interaction vanished when a distinguishing factor is absent, which is the very heart of the Latin *forum*: openness. In its irrefutable simplicity, this openness is symbolized by the everyday presence of something common, the entrance to something: a door, object and symbol, the proto-root of the Latin *forum*. The Indo-European root *dhwer*, that means "door", is related to the Latin *forum* (Calvert Watkins, 2000). *Dhwer*, *dhwor*, not only precedes and is related to the Latin *forum*, but also the Sanskrit *dvāra*: door, passage, opening, entrance, way. Openness is the

foundation of dialogue. There is no dialogic interaction without openness and no openness without the capacity of someone to listen and to be listened to. Dialogue, openness and plurality construct *forum*, which today breathes life into the new section of *Innovación Educativa*, a confluence of space and time, of educational research and systematic contributions to the design of educational policies. This is a section without blind peer reviews, unlike the articles that comprise the journal; rather it is a section defined by its intentionality and it comes together in a space, a *forum*, but it also opens itself to discursive time, dialogue, in order to listen to the plurality of ideas, which are captured by the gaze and by the educational horizons with their historical roots, and their possibility to construct the future amidst the fragility of the present, that already exist in “a glimpse at the challenges of higher education in Mexico.”

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