Thinking and education

Challenges and opportunities in times of pandemic

by Begonya Oliveras
and Conxita Márquez

Begonya Oliveras is Doctor in Didactics of Mathematics and Experimental Sciences by the UAB and Extraordinary Doctorate Award (2013-2014). Associate Professor of the Department of Didactics of Mathematics and Experimental Sciences of the UAB. Member of the LIEC research group at the UAB (Language and Teaching of Science). She has been one of the authors of the book "*Aprender ciencias aprendiendo a escribir ciencia*".

Conxita Márquez is an associate professor at the Autonomous University of Barcelona. She has taken part in several research projects, most of them focused on scientific practices. She has been part of research groups, such as the Grup de Recerca Consolidat LICEC.

Schools, like the rest of society, have been fully affected by the pandemic. The pandemic has generated a great deal of information, often contradictory where it is difficult to discern the fundamental from the accessory, and the contrasting data from the increasingly frequent fake news. It has also led to an avalanche of rules and slogans that call for concrete actions in our daily lives and cause a certain amount of confusion and mistrust. This situation has once again made clear the need to develop strategies for citizens to think in terms of assessing the credibility of information and making informed decisions.

The school cannot be isolated from the real problems that affect our society. The crisis that the pandemic has generated should be used to highlight the need for activating critical thinking in the classroom, which cannot be dissociated from creative and careful thinking (Lipman, 2016). In order to understand, decide and act in complex and controversial situations, students must have a set of knowledge, strategies and dispositions (attitudes) which they must acquire throughout their schooling.

CRITICAL, CREATIVE AND CAREFUL THINKING

There are different views on the meaning of critical thinking and how to promote it. Critical thinking is a competence that involves reviewing and evaluating ideas and arguments to make judgements about different problems or situations and to be able to make decisions and take action. These judgements are to be based on specific criteria: ethical, scientific, social, economic..., are activated with the development of skills: interpreting, analysing, evaluating, inferring, explaining and self-regulating (Facione, 1990), plus thinking

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dispositions: open-mindedness, flexibility, empathy... Critical thinking needs to be self-correcting: detecting errors in the way others think and in the own thinking itself (Lipman, 2016), and also should take into account relevant knowledge (McPeck, 1990) and metacognitive competencies (Kuhn and Weinstock, 2002). Critical thinking is sensitive to context.

Creative thinking is the ability to think in an original, genuine and effective way, seeking alternative solutions to problems or situations that arise. Creative thinking cannot be dissociated from knowledge; generating new content requires prior knowledge. The creative possibilities increase according to the information and data available to us.
Critical and creative thinking is closely linked to careful thinking, linked to values. A careful thinker is perceptive, observant, caring and interested in the world around him, and this translates into higher, more precise and elaborated creative, critical thinking.

ENCOURAGING THINKING FROM THE SCHOOL

The impact of the COVID-19 offers us the opportunity to rethink how to contribute from the school to promote critical thinking, which is essential for active and committed participation in our society.

Confinement is one of the consequences pandemics has caused, and with it, among many other things, a decrease in student interaction and participation in the life of the classroom. Communication and the exchange of ideas and opinions are fundamental for learning, and therefore, for developing critical thinking. Traditional models based on transmission do not allow for this much-needed interaction.

Conversation and dialogue are essential in the classroom. So the school must encourage this dialogue by helping to formulate open and productive questions such as: "what do you base yourself on to say, to believe...? Why do you think your reason is better than that of...? How have you reached this conclusion? What criteria have you used to justify your choice? What are the implications of your decision?" We teachers must not forget the essential role of interaction, seeking, if necessary, original and creative strategies to promote it in any format.

The pandemic is clearly a learning context. We understand "context" as a real situation/problem that directly involves students and allows them to connect the different knowledge to make decisions and act. Real issues are always complex, interdisciplinary, and require real choices. From the school, we have the opportunity to escort the students understanding, analysing and evaluating the pandemic by identifying and treating the aspects of the pandemic linked to each area of knowledge and looking for connections between them. It will be necessary for students to ask the right questions, make hypotheses and thus be able to develop good arguments.

The avalanche of often contradictory information generated by the pandemic highlights the importance of knowing how to select input and analyse it (a vital element of a critical thinker). Teaching critical reading must be done in schools, using news items from the press or information from the internet. Students must be helped to identify the main statements of the discourse, the assumptions and the author's point of view, the credibility of the sources... (Oliveras, Márquez and Sanmartí, 2013) to be able to argue opinions in a well-founded way, and with the capacity to debate and negotiate points of view.

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The pandemic allows us to work from school on the coherence of our actions, which are often closely linked to emotions. Training critical citizens requires training people to make judgements that are consistent with their way of acting. It is necessary to have a highly developed interdisciplinary knowledge to make these judgements, and also to activate skills (interpretation, analysis, etc.) and dispositions (empathy, open-mindedness, flexibility, etc.) in thinking. For example, in the face of the avalanche of rules and instructions with which students feel directly involved, they must be helped to identify different criteria because they themselves may acquire a position that will have to be consistent with their actions. The school could promote questions to activate critical, creative and careful thinking on such a complicated issue ("Why is the use of the face-mask so crucial at school?" "And outside the school?" "How does wearing face-mask affect others?" "Should I take this into account?" "What criteria do I need to prioritise to make a decision?" "What effect does the face-mask have on the transmission of the virus?" "Interpret the chart of confirmed cases of infection and explain it?"). Answering these questions must activate metacognitive skills (thinking about what one assumes) to be aware of one's own thinking and acting. It is imperative to verbalise these metacognitive competences.

There are different research lines on the methodology of teaching thinking: some question whether it should be worked on explicitly (verbalising actions) or implicitly (working on it in the classroom students will acquire it naturally); and whether it should be unlinked or included in the areas of knowledge (Ennis, 1989). Each school will have to agree among its teachers on how to promote thinking and decide on the method of instruction best suited to its context and needs.

We still have a lot of work to do and many challenges to overcome, but a door has been opened for us to bring the school closer to life.

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