Impact of intensive programming training on the development of Computational Thinking in prospective teachers

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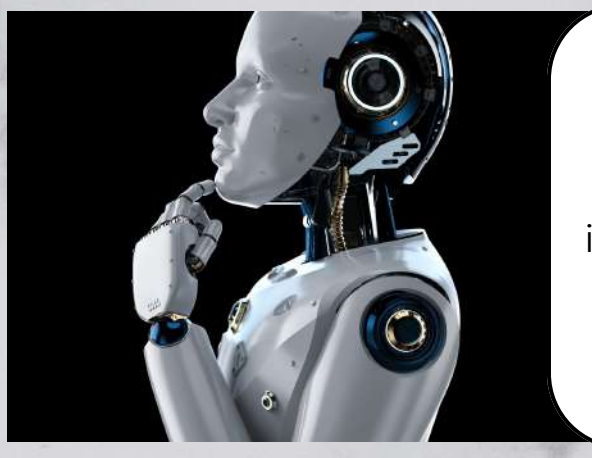
Training in CT

Training trainee teachers in their own computational thinking (CT) is essential to build with them the discourse of CT didactics and its inclusion in the classroom with children in early childhood and primary education.

Solutions

This research proposes possible solutions to this challenge and analyses the results of an intervention carried out with 71 students from two different cohorts of 2nd year teacher training students.



Proposal

This intervention is based on the intensive practice of programming by visual blocks in a Scratch project during the first part of a semester subject.

Results

After analysing the previous and subsequent levels of CT (pre-experimental strategy) by means of a standardised test for its measurement (CTt), it is confirmed that the intensive training experience allows all future teachers to reach a sufficient level of CT, regardless of their previous experience in programming and their initial level of CT (they all end up learning, either by increasing their level of CT, or by improving their efficiency).

Confirmation

On the other hand, measuring the learning outcomes in the Scratch project, we see a clear relationship between a high resulting CTt level (POST) and a good performance in the block programming learning task, which is evidence that the Scratch project helps to develop the future teachers' CT.

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