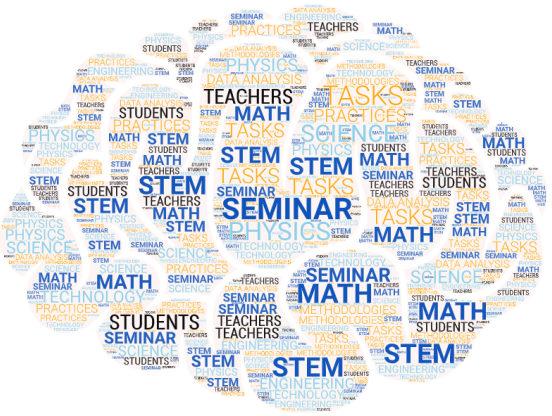
CODING AND MATHEMATICAL LANGUAGE: AN EDUCATIONAL PERSPECTIVE IN STEM SCENARIOS



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Abstract:

Through the lens of the Theory of Semiotic Mediation we will introduce and discuss mathematical learning opportunities that arise from tasks involving physical and/or digital artefacts that students can interact with through coding. Exploiting didactical potentialities of coding activities pupils can be introduced to Mathematical language and its main characteristics, fostering the production and interpretation of symbolic expressions. The core of the innovative approach consists in combining physical experiences, involving moving with or watching a robot move and draw, with virtual experiences through the mediation of a graphic code. Examples of activities will be presented, showing how they can develop in the classroom. Evidences of pupils achievements will be commented focusing on the semiotic processes triggered by both planning, programming and interpreting.