

Testing tool for investigating young school students' algorithmic thinking

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Over the last decade, continuous efforts have been made to bring computational thinking (CT) closer to K-12 education. Complementary implementational approaches for the “CT for all” initiative are introducing new computing courses and infusing CT into the existing courses. These focused endeavors implicitly suggest that current curriculums do not contribute sufficiently to the development of learners’ CT. On the other hand, since CT is a combined skill with cross-disciplinary implications, one might conclude that even without an explicit focus on CS education, students’ CT might develop latently as they advance with the current curriculum. We have proposed to test whether there are differences in how 3rd, 5th, 7th and 9th grade learners (girls vs. boys from Art vs. Theoretical school; 215 subjects without prior experience with CT) relate to learning tasks that require a certain level of CT. The testing tool has the potential to reveal different levels of abstracting.