Exploring the Field of Computational Thinking as a 21st Century Skill

Abstract:
Computational Thinking, which entails using analytic and algorithmic approaches to formulate, analyse and solve problems, has increasingly gained attention in the educational field in the past decade, giving rise to a large amount of academic and grey literature, as well as to numerous public and private initiatives to implement it. Despite such widespread interest, its successful integration in school curricula is still facing several open issues and challenges. In order to contribute to the field development, we are carrying out a desk investigation to draw a comprehensive overview of recent findings produced by academic research, grassroots initiatives and policy actions addressing the development of computational thinking in primary and secondary school, as well as to highlight major implications for policy and practice. In this paper we describe the project methodology and a classification of the comprehensive corpus of documents collected. We also present a preliminary picture of the field as it is emerging from our analysis.

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