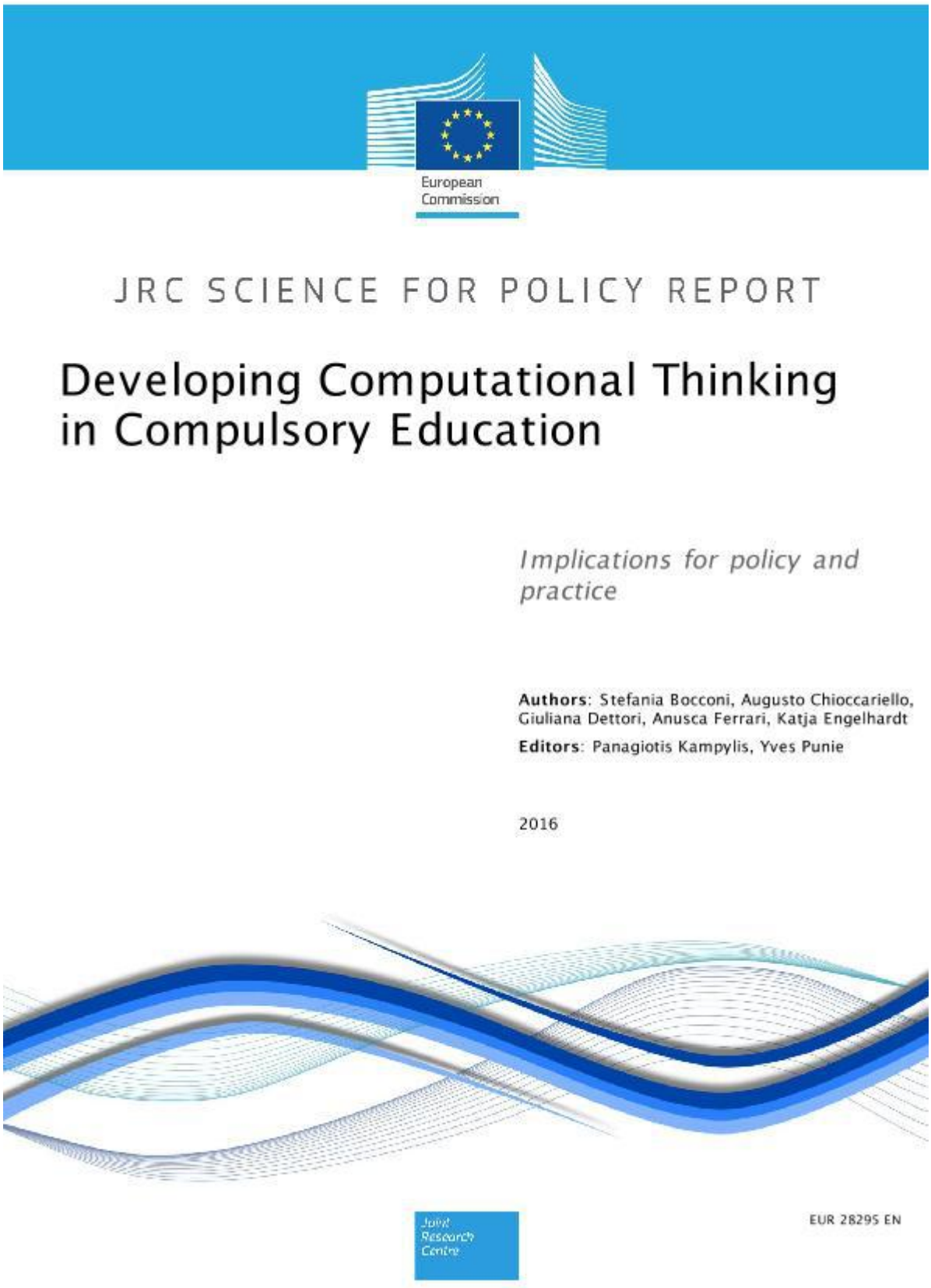
Developing Computational Thinking in Compulsory Education - Implications for policy and practice



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Abstract:
In the past decade, Computational Thinking (CT) and related concepts (e.g. coding, programing, algorithmic thinking) have received increasing attention in the educational field. This has given rise to a large amount of academic and grey literature, and also numerous public and private implementation initiatives. Despite this widespread interest, successful CT integration in compulsory education still faces unresolved issues and challenges. This report provides a comprehensive

overview of CT skills for schoolchildren, encompassing recent research findings and initiatives at grassroots and policy levels. It also offers a better understanding of the core concepts and attributes of CT and its potential for compulsory education. The study adopts a mostly qualitative approach that comprises extensive desk research, a survey of Ministries of Education and semi-structured interviews, which provide insights from experts, practitioners and policy makers. The report discusses the most significant CT developments for compulsory education in Europe and provides a comprehensive synthesis of evidence, including implications for policy and practice.

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