

COMPUSEL

Computational Thinking in Enhancing Primary Students' Social-Emotional Learning Skills

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In today's world where technology has penetrated into almost all spheres of our lives, automation systems and robots have become alternative to humans in many business sectors from agriculture to industry. Many factories have already automatised, started to employ a minimum number of people and for example, about 1.7 million manufacturing jobs have already been lost to robots since 2000, including 400,000 in Europe (<https://teamstage.io/jobs-lost-to-automation-statistics/>). This has also led to the emergence of new jobs in the labour market such as product owners, customer success specialists, and sales development representatives, behaviour health technicians, etc., highlighting both cognitive and affective skills of humans in business interactions. Therefore, social and emotional learning skills have become prominent in terms of increasing employability and facilitating social relations, but in reality, these skills are always needed to maintain strong and healthy relations with others, provide resilience in difficult conditions and deal with challenges in real-life situations. Social-Emotional Learning (SEL) refers to the concept of developing social-emotional skills in order to make students more effective in learning (Guerra & Bradshaw, 2008). Therefore, SEL is the ability to be aware of one's own emotions, manage emotions, solve problems, build relationships and empathize (Waltz, 2013) and it is of great importance in students' ability to function in school settings as well as in real life. A structural approach to fostering SEL skills can facilitate teachers to help students attain these skills more effectively.

School is a learning environment where learning acquisitions and activities affecting learning, are planned and framed carefully. Therefore school is the only perfect place that may help an individual grow as a person who can comprehend and describe his/her own emotions, realize others' feelings and establish healthy relationships. In this regard, Social and Emotional Learning (SEL), as a key competence, becomes prominent not only for healthy social

interactions but also for academic achievement, since success comes from having a meaning in our lives, doing what we have passionate in and being aware of why and how we learn, that is all of these depend on our emotional conditions while doing something. In literature, one of the descriptions of SEL (SEL, 2003) is given as the ability to understand, manage, and express the social and emotional aspects of one's life in ways that enable the successful management of life tasks such as learning, forming relationships, solving problems, and adapting to the complex demands of growth and development (Cherniss, 2000).

COMPUSEL aims to improve the SEL Skills of primary students and training primary school teachers for this purpose. We will develop a curriculum and digital stories including examples of different social and emotional challenges that we will discuss and seek solutions together with primary school teachers to foster self-awareness, self-management, social awareness, relationship or responsible decision-making.

When it comes to purposeful learning and student achievement, teachers always matter most (RAND, 2012). Teachers' competencies and performances have powerful effects on student achievement: up to three-quarters of school effects on the student, outcomes can be explained by teacher effects (Rivkin, Hanushek & Kain, 2005). Teachers' efficiency during teaching activities is directly proportional to the continuous development of their professional skills and competencies.

Therefore, it is essential to equip students with the necessary skills for their future. In this project, through computational thinking, students will find an opportunity to navigate complex problems regarding SEL. Besides, the roles of teachers and schools are also changing, and so are expectations about them: teachers have been required to implement innovative teaching methods in their classrooms. Computational thinking to be administered in this project is not just a foundation for technology skills like coding, but it is instead a vehicle to generate social and emotional attitudes needed for students to be future-ready. Accordingly, this project will support teachers to use innovative approaches (such as the use of computational thinking as well as digital stories).