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Editorial: Interactive learning environments: Fostering learning, development, and relationships for children with special needs

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Editorial on the Research Topic
Interactive learning environments: Fostering learning, development, and relationships for children with special needs

Research and theoretical developments in education and educational psychology have shown that interactions, especially communicative interactions through dialogue, have a crucial role to promote students' progress in learning and development (Vygotsky, 1978; Bruner, 1996; Wegerif, 2011). These interactions especially include learning with diverse peers in heterogeneous contexts, but also with other people in the community (Valls and Kyriakides, 2013). However, not all students have had the same opportunities to benefit from such interactive learning environments. Students with special needs have traditionally received an education based on separate attention and individual programs which often reduced learning objectives and contents and opportunities for social interaction. In this regard, it is a concern that students with special educational needs tend to leave school without adequate qualifications (European Agency for Special Needs and Inclusive Education, 2017), and that it is a group especially vulnerable to bullying and abuse (Rose et al., 2011).

This Research Topic aims to collect research that contributes to a better understanding of (1) how interactive learning environments can be implemented with students with special needs; (2) which are the characteristics of these learning environments that enhance learning, development, and relationships of students; (3) which are the positive impacts that can be achieved in students with and without special needs; and (4) how professional roles are challenged and transformed. This Research Topic contains 10 papers covering the above mentioned topics.

All papers provide evidence of the positive impacts of interactive learning environments that include students with special needs, from the cognitive to the relational domain. In terms of learning and cognitive development, the review conducted by Ugalde et al. concluded that interactive learning environments are an optimal context that promotes instrumental learning, academic involvement and cognitive development of children with a wide range of disabilities. For this to occur, it is important to encourage peer interaction in the classroom as well as learning interactions with other people from the community. Empirical studies conducted in different learning contexts add further evidence in this regard. Fernández-Villardón et al. studied the implementation of dialogic literary gatherings in special education and found positive learning impacts on students' reading proficiency and engagement, communicative and reasoning abilities, as well as students' self-esteem and confidence. Rangel-Rodríguez et al. focused on interactive home learning environments and concluded that these can promote emotional conversations for children with complex communication needs. Navarro-Mateu et al. studied the context of secondary education where interactive learning environments with students with and without special needs were implemented, which contributed to inclusive participation of students with special needs in learning activities, enhanced engagement in learning, and promoted the development of more socially adaptive behavior. Finally, Díez-Palomar et al. analyzed the implementation of interactive learning environments in an adult school attending people with (and without) special educational needs, observing both progress in learning and improved wellbeing and feeling of social inclusion as a result of the positive interactions found in the school.

These studies show that cognitive and socio-emotional progress can be promoted at the same time in interactive learning environments. Other studies focused on interventions specifically aimed at improving coexistence and reducing violence victimization. Duque et al. explored the implementation of the dialogic model of prevention and resolution of conflicts in the context of special education, and Rodrigues de Mello et al. analyzed the participation of girls with intellectual disabilities in dialogic feminist gatherings. Both studies show that these interactive learning environments promote solidary, safe and protective spaces for learning, thus creating contexts for the prevention and reduction of violence.

These different studies also show that the positive impacts promoted by interactive learning environments occur in different educational levels and contexts, including primary education, secondary education, adult education, and the family, demonstrating that interactive learning environments can be transferred and recreated into diverse learning situations. In this regard, it is especially relevant to highlight the contributions that focus on special education contexts that implement interactive learning environments such as dialogic literary gatherings (Fernández-Villardón et al.), dialogic feminist gatherings (Rodrigues de Mello et al.), and the dialogic model of conflict prevention and resolution (Duque et al.). These have been identified as successful educational actions that contribute to educational inclusion and success in general education (Serradell et al., 2019; Khalfaoui-Larrañaga et al., 2021), and can be successfully transferred to special education as these studies show. Moreover, the study by Álvarez-Guerrero et al. showed that this transference could be continued during the COVID-19 confinement, which allowed keeping in contact with academic content and contributed to quality distance learning for these students.

Finally, interactive learning environments that include students with special educational needs have an impact beyond these students, on others without special needs as well as teachers and schools. The study by Molina Roldán et al. found that when students with and without special needs share interactive learning environments, typically developing children benefit from learning interpersonal abilities related to empathy and helping, and from the cognitive effort to make themselves be understood, while acceptance and respect of difference increases and opportunities for new friendships are created. Rodríguez-Oramas et al. analyzed the impact of evidence-based dialogic teacher training and found it as a critical factor for implementing interactive learning environments, enhancing the inclusion of students with special needs, improving the overall quality of education of all students, and transforming teachers' approach to their profession.

In summary, this Research Topic contributes to the understanding of the viability and importance of promoting interactive learning environments including students with special needs and reports specific actions in which these optimal learning environments can be built. This evidence can be used to promote an interactive perspective in special education that is consistent with a social model of disability, that connects these students with general education and contributes to both educational and social inclusion.

Author contributions

SM reviewed the articles and wrote a first draft of the editorial. RM and MP revised and edited it. All authors have contributed to the editorial, read the final version, and approved it for publication.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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