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Eileen Scanlon,
The Open University, United Kingdom

*CORRESPONDENCE
Stamatios Papadakis
✉ stpapadakis@uoc.gr

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Editorial: The impact of smart screen technologies and accompanied apps on young children learning and developmental outcomes, volume 2

Stamatios Papadakis* and Michail Kalogiannakis

University of Crete, Rethymno, Greece

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Editorial on the Research Topic
The impact of smart screen technologies and accompanied apps on young children learning and developmental outcomes, volume 2

Celebrating the achievements of the contributors should be the first task of any journal editorial. In reading the articles on the present issue, we encourage the reader to consider the science level concerning technology and young children. Any Research Topic is intriguing, and this one is no exception. Contributions from seven different countries reflect emerging topics which require consideration, including the role of smart screen technologies and digital learning. There are continuing research themes into understandings, beliefs, values and different models of educational relationships and the development of inclusive practice.

The first article (Bentri et al.) tried to discover the factors contributing to teachers' mastery of digital pedagogical competence and analyze their digital pedagogical competence. The findings revealed characteristics which promote instructors' ability to construct digital tools for analysis and assessment. The authors suggest that systematic training must be provided to develop digital pedagogical competency.

The second article (Fernández-Sánchez et al.) presented a systematic literature review (SLR) to analyze how the curricular integration of educational technology in classroom practice has been developed at non-university levels in recent years. The main results point to several variables that should be strengthened to promote the integration of digital technologies in the classroom, among which teacher training stands out as a determining factor, with particular emphasis on initial training. The article's conclusions open a debate about the training that future teachers receive concerning integrating digital technologies into the teaching process.

In the third article (Michaelidou and Pitri), the researchers summarized a qualitative descriptive study that took place in the context of the course Designing Activities in Kindergarten and described the results from the semi-structured interviews that aimed to find out early childhood student-teacher views on creativity providing evidence for the participants' need for a framework and strategy to guide their creative instructional design and teaching.

The following article (Hartikainen et al.) invited 13–15-year-old children to take civic action to address the serious societal problem of bullying through the design of mobile apps. The researchers discussed the design process and analyzed the applications the children designed from the viewpoint of how they aim to tackle bullying. This study showcases an alternative way educators can integrate digital technologies and apps in school settings to educate children on critical societal matters and digital technology.

The objective of the fourth article (Bus et al.) was to examine how providing access to multilingual digital picture books affected the reading habits and language development of children from bilingual families. The findings indicated that access to digital books motivated reading, with roughly one-third of the children reading a substantial number of books during the intervention. The availability of books in the heritage language did not lead to an increase in book reading. The conditions exhibited similar growth in vocabulary, but the study uncovered positive associations between the number of books and vocabulary development.

The fifth article (Falloon) analyzed critical findings from four published studies undertaken by the author between 2015 and 2021 in New Zealand K-6 schools to build an understanding of factors that contributed to the effective practices with mobile devices witnessed in the research classrooms. The analysis presented in this article attempts to identify common factors existing across four purposively selected studies that contributed to their success, as it builds knowledge of the fundamental foundations to effective educational use of mobile devices, regardless of the learning context in which they are used, and could assist teachers in designing, implementing and assessing curricular that optimizes the learning potential of these devices.

The last study (Geng et al.) aimed to investigate the potential association between ESE and suspected developmental coordination disorder (DCD) in Chinese pre-schoolers, with or without siblings. It concluded that the risk of suspected DCD was highest for screen time exposure before bed compared with average weekday and weekend exposures. Parents should be advised to prevent their children from using electronic screens unsupervised, especially in one-child families.

Well-designed educational apps can improve learning outcomes, as the articles in this volume demonstrate. This calls for more research on app design and how it can shape learning environments and outcomes. In this regard, longitudinal approaches may be appropriate.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

Conflict of interest

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