

The 'third teacher' is becoming a key figure in learning in the digital age, say researchers

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The Smart Classroom Project has redesigned classrooms at over 20 schools in the last 4 years, classrooms that serve as 'live' laboratories producing scientific evidence on the effects on learning (Image: Smart Classroom Project, UOC). Credit: UOC

Can learning and physical and psychological well-being be enhanced by redesigning traditional classrooms? The scientific evidence says they can. Traditional classrooms, which are usually organized in rows of chairs and desks in front of the teacher's desk and blackboard, no longer meet today's expectations and needs in education.

The digital age calls for new designs in learning spaces. Indeed, these innovative spaces can be considered the 'third teacher'—playing a key role that affects the students' learning experience. The Smart Classroom Project research group, in the Faculty of Psychology and Education Sciences at the Universitat Oberta de Catalunya (UOC), is now examining the relationship between innovative spaces in schools and teaching practices.

"We want to see how these practices take place there, and how they affect learning outcomes," explained Guillermo Bautista, a researcher on project entitled "The third teacher in the digital age: an analysis of the relationship between innovative school spaces, teaching practices and learning outcomes."

Previous studies by the UOC group and other international groups have defined models of spaces that help to improve learning, "but more evidence is required on how these spaces affect important factors in learning, such as the teacher's performance, collaborative learning, motivation, proactivity during learning and engagement, among other factors, as well as cognitive processes such as memory and attention," said Bautista.

A 'live' laboratory

If the [classroom](#) furniture has wheels and can be easily folded away, this helps to create a more flexible space and to change learning activities during the same session, or to create different layouts depending on the

activity. Meanwhile, circular tables foster communication and collaborative interaction among small groups. These are examples of how classroom layouts and furniture influence well-being and learning. The Smart Classroom Project research group has been able to confirm this at more than twenty schools, where in the last four years it has installed new classrooms which act as a 'live' laboratory for this project.

The teachers' impressions have so far been positive. The results of the evaluations carried out using validated instruments show that according to the teachers, the spaces are "very much better in terms of all the factors measured than those in the ordinary classrooms in which they had worked before," said Anna Escofet, a member of the Faculty of Education at the University of Barcelona and a researcher working on this project. She added that these evaluations validate both the process and the model obtained for the space, and enable some initial conclusions to be drawn. For example, there is no single classroom model that can be applied to all schools, spaces and educational projects.

Three teachers

As Escofet explained, the 'third teacher' is a concept that comes from the ideas of Loris Malaguzzi, who inspired the Reggio Emilia schools and their methodology. Through their work and by creating an educational scenario shaped by the methodology and resources, the teacher acts as the first teacher. The family, with its unquestionable influence on education, is the second teacher. Within this approach, the space has been called the 'third teacher' due to the results of research on its influence on learning and the role it can play in the teaching and learning process.

Its influence is not limited only to infants' and primary schools, where furniture layouts have often been more flexible. According to the experts, classroom design needs to be reconsidered at all levels of

education in order to improve teaching practices. "The higher the educational level, the more complicated the methodological and spatial changes become, because the idea that a traditional layout and method ensures successful learning is more deep-rooted. It is something that has not been scientifically proven, but it is ingrained in a large proportion of teachers. However, the spaces need to be reconsidered at all levels based on the factors mentioned," said Bautista.

Breakthroughs in this field are leading to improvements in the learning experience from all perspectives. However, there is still a long way to go, according to the researchers.

"There is a need for interdisciplinary studies that measure a specific way of working with or changing the space and immediate learning, as well as more interdisciplinary studies based on students' and teachers' outcomes and perceptions. These studies can be approached in many ways and by focusing on various factors that may be related to the environment, [pedagogy](#) and technology, or with two or three of those dimensions combined," said Bautista. He is one of the members of the Smart Classroom Project group carrying out the project, alongside research staff from the Universitat Oberta de Catalunya, the University of Barcelona and the Universitat Politècnica de Catalunya.

Provided by Universitat Oberta de Catalunya (UOC)

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