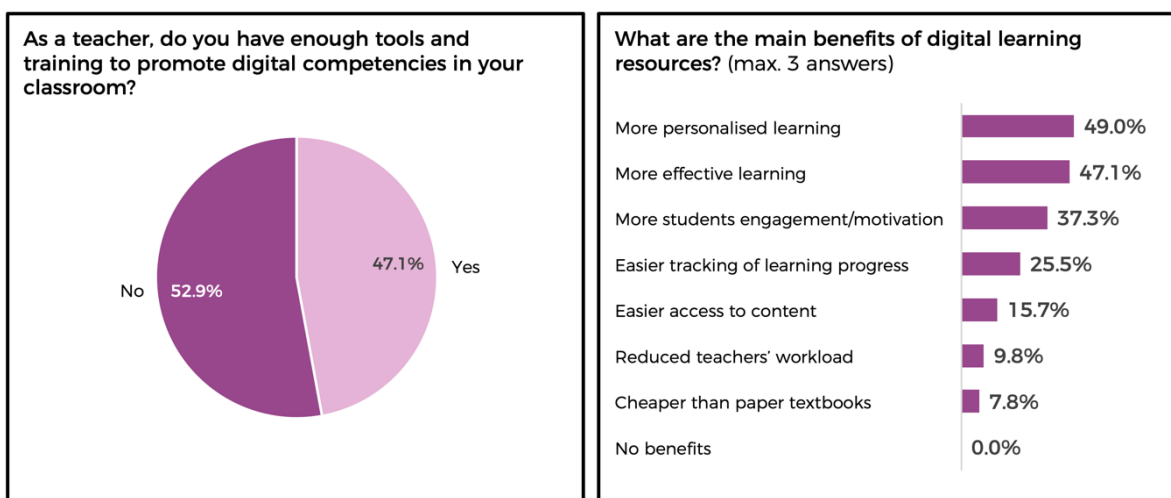


There is no future without digital skills. How schools can prepare their students for the digital revolution.

RE.SCHOOL proposes through these reports a more efficient teaching model based on the conceptualisation of curricular content and learning objectives.

The digital revolution requires adaptation in the field of Education; the pandemic has accelerated the process, but it started years ago. Are we prepared to face the necessary changes? 52.9% of teachers attending the RE.SCHOOL symposium *There is no future without digital skills* admit not having enough tools and training to promote digital skills in the classroom.



Source: RE.SCHOOL Bite "There is no future without digital skills"
December, 2nd, 2020

Three Education experts from different backgrounds analyse the role of educational technology, the advantages it offers, and how it transforms the teacher-student relationship and the assessment of the knowledge acquired throughout the learning process.

Speakers:

Richard A. Carranza. Chancellor at NYC Department of Education, managing the city's public school system with over 1.1 million students in over 1,800 schools. He believes that a great education changes lives.

Paul Jackson. Headteacher of Manorfield Primary and an accredited Local Leader of Education. Paul, a regular speaker at conferences, is passionate about creative education and inspiring learning experiences.

Hannah Margrett. Head of English of St Paul's School and advocate for literature in the English language classroom. She was part of the team which brought iPads into the St Paul's classrooms, one of the first schools in Spain to do so.

21st century skills

The three experts have agreed on the so-called 4C's as the skills that students in the 21st century need to be successful in work and life in general.

- **Critical Thinking.** In the era of fake news and excess information, students must develop the ability to compare, interpret, synthesise, analyse and evaluate the information that surrounds them. The teacher guides the student to make good use of technology in the search for information, learn to discern between what is real and what is invented, and use this knowledge in their decision-making capacity.
- **Creative Thinking.** Automation and artificial intelligence have replaced many blue-collar jobs. The professions of the future, more than ever, will demand entrepreneurial and transformative skills.
- **Collaborative Thinking.** In the global world we live in, students must learn to collaborate with others while respecting diverse knowledge, cultures and points of view. Today's connected world makes this collaboration easier than ever.
- **Communication.** It implies the ability to articulate the three previous types of thinking in multiple languages and situations.

Finally, the ability to **learn to learn** is transversal to the four mentioned skills. The world in which we live forces us to constantly learn throughout life: we never stop learning. In this sense, students must be taught to investigate and reflect. Jackson sums it up as follows: "We should be teaching our students resilience skills, to be creative thinkers, to be problem solvers and to have good verbal and written communication. If we succeed, they will become more effective in using digital technology, whatever it looks like in the future."

The role of EdTech

The figure of a well-trained, caring teacher cannot be replaced by education technology. It has to be conceived as a tool that supports the learning process to impart knowledge. "Technology is a golden opportunity to make teaching and learning better than it's ever been," considers Margrett, who in turn affirms that with planning and balance, maximum performance is achieved.

The main advantages offered by technology-based learning solutions are:

- **Personalisation.** It allows building individual learning patterns adapted to the different needs, learning styles and rhythms of the individual student.
- **Participation/motivation.** Digital resources bring knowledge to students in an attractive way and facilitate capturing their attention. "Technology allows all students to use their creativity and imagination," says Margrett.
- **Efficiency.** Although implementation of EdTech solutions requires time and resources, in the long run, it helps to improve efficiency in the classroom, both in the teaching process (making it more interactive) and in the evaluation.
- **Connectivity, collaboration and coordination.** Digital learning resources allow collaborative thinking to be developed more easily. "Technology can actually shrink the world," says Carranza. Despite the current pandemic situation, thanks to technology, this collaboration and connection has been achieved between schools around the world to share knowledge and practices.

- **Diversification.** Teachers have many resources at their disposal; they can select those that are useful to meet any established learning objectives.

These advantages coincide with those identified by the audience. The most valued benefits of digital learning resources are personalisation (with 49.0% of the votes), more effective learning (with 47.1%), and greater participation and motivation of students (37.3%). Nobody considered that technology in the classroom had no benefit.

Teacher-student relationship

Although we are talking about new learning methods and tools, the goals of teachers and students remain the same. However, we must take advantage of new dynamics that arise between the two, adapting their roles to this new reality.

- **Teachers:** Education technology offers teachers a greater variety of options for imparting their knowledge. The teacher's role is no longer related to teaching students how to use technology, but to using technology to achieve previously set learning goals.
- **Students:** Occasionally, students may have superior skills to their teachers when it comes to using technology in the classroom. "Teachers have to be open-minded and ready for that. Even so, these tools are only going to work in our classrooms if our teachers are given the right level of training and are encouraged to use them," concludes Margrett.

Assessment

"We have long used evaluation in the wrong way," stress the three experts. The speed of technological progress in the classroom is not reflected in the current assessment systems. In addition, all students continue to be evaluated in the same way. Carranza speaks of a **paradigm shift in student assessment** to achieve greater effectiveness and adapt the evaluation methods to include the previously mentioned 21st century skills.

As an example, Carranza states that, since March and as a result of the pandemic and remote learning, New York schools have dispensed with any standardised numerical assessment. "What's important is that students master the body of knowledge that we want them to master, but respecting the different learning rhythms, giving time and support when necessary," he says.

Along the same lines, **technology allows individualisation and personalisation** of learning: it helps the teacher to obtain a diagnosis of where the student stands in the learning process and can even project possible future development. "This information is incredibly important to make decisions about the pedagogy and can be very useful if utilised correctly in our schools," explains Carranza. Assessment is not only used to identify learning difficulties, but to adapt teaching practice with the aim of closing knowledge gaps.

Challenges

52.9% of the audience pointed out not having enough tools or the necessary training to promote digital competence in their classes. Faced with the technological revolution in the classroom, several specific challenges are identified that directly affect schools, teachers, students and families.

- **Lack of time to prepare classes, collaborate with other teachers and personal training.** The digitisation of schools requires prior reflection to allow the immersion to be progressive and planned.
- Although **the time investment at the beginning is very high**, in the medium and long term, technology facilitates the work of teachers. **Training must be constant** in today's changing world; therefore, schools have to incorporate training plans for teachers.
- On **planning**, Jackson recommends "being creative about the way that we manage teachers' workloads to **ensure that their work is concentrated on the areas that are important.**"
- **The ratios.** A high number of students per class makes skill-based assessment difficult, affects the relationship between teachers and students, and has a **direct impact on academic progress and results.** During the pandemic, many schools have reduced their ratios to maintain the safety distances required by the protocols. This is a positive impact of the current situation, improving teacher-student relationships and results.
- **The relationship with families.** Schools play a vital role in helping to close the social and emotional gaps students may suffer. Communication with families must be improved to ensure that children come to school with a willingness to learn.
- **Legal and political barriers** in Education. Government policies should be aligned with the pedagogical objectives and not impose restrictions or limitations. A balance must be found between the national curriculum (the general guidelines set by governments) and the school curriculum (designed by each school according to local needs and context).
- **Connectivity** (digital divide). It is essential to ensure equity between students and teachers. Carranza points out that in New York there are still "deserts of connectivity, an educational issue of the first order that must be solved at the government level."

In any case, and as everyone points out, these challenges should not serve as an excuse for not moving forward. We must find a way to overcome these barriers and take advantage of the lessons learned during the pandemic to be more connected and united than ever.

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