# How can a video-based learning tool contribute to meaningful and inclusive student learning?

EXECUTIVE SUMMARY

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## Problem and context

EdPuzzle is a digital educational tool designed to enhance learning through the use of interactive videos. It allows teachers to enrich video content with embedded questions, notes and assessments, enabling students to engage with material in a more dynamic and personalised manner. Through the collection of student performance data, EdPuzzle provides teachers with actionable insights, facilitating formative assessment, differentiated instruction and greater autonomy for students. Widely used in both private and charter schools across Spain, EdPuzzle has become an integral part of many educational institutions' digital strategies, although its adoption in public schools remains limited due to administrative restrictions. The tool's ability to support meaningful learning, however, depends largely on teachers' pedagogical approaches and their understanding of inclusivity in educational practices.

In the context of inclusive education, it is essential to recognise that technological tools like EdPuzzle are not neutral instruments; their impact on student learning is mediated by the expectations, beliefs and practices of teachers. Research underscores the critical role of teacher expectations in shaping student outcomes, particularly in socioeconomically disadvantaged contexts. Low expectations can lead to cycles of academic failure, diminished self-esteem and the reinforcement of systemic inequalities. Conversely, high expectations and a strong sense of agency among teachers, students and families can foster resilience, engagement and academic success.

The Spanish educational system has historically struggled with issues such as high repetition rates and social inequality in education. Factors like learned helplessness—where students and even teachers feel powerless to effect change—pose significant barriers to learning. In this context, digital tools must be implemented with an explicit equity perspective. Without such a focus, they risk reinforcing existing disparities, particularly when teachers perceive that structural challenges preclude meaningful educational outcomes for their students.

The use of EdPuzzle can thus either mitigate or exacerbate inequities depending on how it is integrated into the learning process. Effective implementation requires structured pedagogical planning, high expectations for all students, and an inclusive approach that actively works to dismantle barriers to learning. Teachers' belief in their students' potential and their own capacity to foster learning are pivotal. If teachers view digital tools merely as technical add-ons without integrating them into a broader strategy of equity and meaningful engagement, these tools will likely have limited or even negative effects.

## Lessons learned

To support an inclusive use of EdPuzzle, several key strategies have been identified:

- Ensure that tasks are meaningful, motivating, and provide sufficient time for completion, fostering autonomy and organisational skills.

- Use the tool to deliver personalised feedback and differentiated learning paths, particularly for students who require additional support.
- Provide students with explicit instruction on how to use the tool effectively, recognising that apparent digital fluency may mask significant skill gaps.
- Adapt instructional sequences based on the performance data collected, using metrics not as an end but as a guide for pedagogical decisions.

Additionally, equitable access to devices and internet connectivity must be considered, although the interviewed teachers in Spain noted that the digital divide has significantly narrowed since the COVID-19 pandemic. Nevertheless, ensuring that all students receive personalised support outside of school remains a pressing challenge. Tools like EdPuzzle can help address this gap by offering asynchronous, tailored resources that students can access independently.

Finally, to make a truly meaningful and inclusive use of digital tools like EdPuzzle, teacher training is essential. Such training should integrate two core elements: a focus on pedagogical integration—ensuring that the use of technology is aligned with clear learning objectives—and a deliberate emphasis on equity and inclusion frameworks. This dual approach is vital to ensure that educational innovation promotes real improvements in student learning outcomes for all students, particularly those in disadvantaged contexts.

In conclusion, while EdPuzzle presents significant opportunities to enhance teaching and learning, its success as an inclusive educational tool ultimately depends on the pedagogical and inclusion literacy of the teachers who implement it. Only by grounding technological innovation in strong pedagogical practices and a firm commitment to equity can the transformative potential of such tools be fully realised.


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