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ADAPTIVE LEARNING TECHNOLOGIES
IN THE 21ST CENTURY EDUCATION

The growth of adaptive educational technologies presents new opportunities for education research that can advance our understanding of student learning and performance. The full participation of the education research community is necessary to create the conditions that will guarantee that the promise of adaptive educational technologies is fully realized for research as well as practice.

Adaptive learning refers to the technologies monitoring student progress, using data to modify instruction at any time [1]. Adaptive learning technology uses algorithms to track student performance and modify the presentation of material based on this tracking. It's built on the understanding that we all learn differently. Analysing trends in online behaviour, it adapts the way e-learning is delivered to better suit individual needs. Adaptive learning technologies dynamically adjust to the level or type of course content based on an individual's abilities or skill attainment, in ways that accelerate a learner's performance with both automated and instructor interventions [2].

Adaptive learning first and foremost provides insight into which students are working hard and when. If students are asked questions that are too easy or too hard, learning is not optimised. All effective learning happens when you're working hard. With an adaptive learning solution, teachers can access real-time data empowering them to pin-point who needs assistance and how. This is the real and most immediate impact of adaptive learning. One more benefit is adaptive learning's ability to challenge the student to gauge their understanding of the material and to then challenge them further on from that. Stretching a student's understanding while ensuring learning is thoroughly embedded is in the algorithmic DNA of adaptive learning.

Adaptive learning strategies create a student experience that is modified based on a student's performance and engagement with the course materials. At its heart is an approach to instruction that relies on technology and data about student performance to adjust and respond with content and methodologies that develop a pathway to the student's mastery of a particular learning objective.

Adaptive learning technology allows instructors to engage with students more as a coaches, mentors, and leaders. According to the McGraw-Hill Education study, it enables instructors to spend 72% less time on administrative tasks and 90% more time on active learning experiences, and with the kinds of insights it offers up, that means much more dynamic semesters [3].

However, adding education technology to a learning environment doesn't guarantee better learning. Using education technology to replace teachers or to scale ineffective practice guarantees poorer learning outcomes. When it comes to teaching and learning, it's not what you use, but how you use it that counts.

References

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