

Personalised Learning

Personalised learning journeys are educational systems that cater to individual needs and learning styles, adapting to the learner's strengths and weaknesses. They're part of a wider trend in education (one that dates all the way back to the 1960s) away from an institutional "one size fits all" model. A classic example is 1-1 tutoring, where teaching develops to meet the needs of a specific student. Historically, this kind of education has been both time and resources intense, making it hard to deliver at scale. However, with the advent of AI, personalised learning journeys are increasingly common, simpler to deliver, and online-based through adaptive, data-driven Educational Technologies (EdTech)

In this month's trend debrief, we look at the landscape, key features, interesting players, potential drawbacks, and speculate on the future of personalised Edtech.

It's growing.

Adaptive learning is becoming big business. According to a recent survey 1 in 3 American teachers have used AI in their teaching at least once. The global education market is worth more than \$6T and is on track to balloon to \$8T by 2030, and within that, personalisation is on the rise. It's predicted to be worth \$549B by 2033.

It's forward facing.

We're not sure what the jobs of the future will look like. But we do know that they are likely to require skills like problem solving and self motivation, which learner-led programs can strengthen.

It's changing fast.

AI-led tools have been around for a while, but the quality and competency of tools are developing at a rapid scale and place. New tools for personalised learning launch and update all the time.



Key Features

Adaptive content

The lessons adapt to challenge the learner and reinforce concepts that they may be struggling with. Several studies have shown that this type of content is an effective way to learn, but it's not perfect—some studies have also revealed that their impacts are limited.



Self paced learning

Learners progress at their own speed.

Personal goal setting and reflection.

Personalised learning encourages students to reflect on their abilities and challenges. This self-assessment ties in with increased autonomy and self-motivation.

Continuous feedback

Personalised learning provides iterative feedback, quickly reacting to students' successes and pinpointing areas for growth. Online assessment provides easy access to analytics, which can be leveraged to improve learner outcomes.



Student choice and autonomy

Adaptive content, self-pacing, and flexibility means that students have more control over what/how they learn. This can increase motivation and self-directed study.

Flexibility

and suitability for varied learning styles. This can be especially helpful for learners with special needs.

Potential Drawbacks

It's too individual.

Ideally, you'd want to combine personalised learning with activities that include the whole class. There is a sweet spot: you get the automation/autonomy from personalised EdTech, and the collective learning that comes from skilled teachers and being part of a group.

It's (still) hard to implement well.

Finding that "sweet spot" where learners can use EdTech for what it's good at, get the benefits of an experienced teacher, and the community learning from a peer group is a challenge.

You need both well-designed EdTech and skilled teachers with time and resources to cater to the groups' needs.

It's too online.

First, there is a risk that even though Edtech may be cheaper and more accessible than hiring more staff, not all children have good access to devices in schools or at home. Second, if personalised Edtech is all a student has access to (ie. it isn't balanced with a robust, real life student experience) they're missing out on all the soft skills that are learned through being part of a cohort: leadership, teamwork, cooperation etc.

It creates a lot of data.

Data can be a good thing (if used well). It can be a useful tool to help teachers understand where cohorts are at, and for students to monitor their progress. However, there are privacy and security concerns.

It has the potential to be biased and affect students' self-perception.

Personalised learning programs are trained on data sets which have their own implicit biases. If we're not careful (in both training the algorithms and in how we use the AI) these biases can affect learner's progress and have a negative impact. Over reliance on a program's predictive analytics can do the same thing. Predicting a student's performance can change how they'll do, i.e., being told they'll fail makes them more likely to fail. But the flip side, or Pygmalion effect, is also possible i.e., that students who are told they'll succeed are more likely to succeed.

Ones to Watch

Duolingo

is a personalised language-learning app that combines AI, language science, and a famously persistent owl mascot.



Knewton

is a brand from the learning giant, Wiley. Over 40 million students globally have used Knewton powered courses.



Khan Academy

is a non-profit that offers courses from pre-K to university level with adaptive learning paths and resources.



Edmentum

provides learning journeys based on evidence and ongoing research. They've won the adaptive technology solution award 2 years



The Future

The best case...

We end up with children who leave school with the best possible outcomes for them. Some might end up with doctorates, others with trade qualifications, and all with the skills to pursue whatever they'd like. Those who aren't academically inclined have completed a self-paced program that supports them and their needs instead of being "held back" by current standards. Every child can become the best versions of themselves and have a proactive, positive approach to learning.

And the worst...

On the flip side, if personalised digital learning systems become cheap and widely available, there is a risk that children miss out on a whole suite of other skills needed to be a functional member of society. With tight budgets and unsupported teachers we could end up with warehouse of AI-driven, factory-like schools that pump out graduates with few collective learning experiences and social abilities.

While all this is speculative, there is no way to put the metaphorical AI genie back in the bottle. Many institutions are already using personalised Edtech. Overall, there is a need for more research for a nuanced, empirically grounded conversation about how it's best placed for future use.

