ELEARNINGNEWS ARTICLE

Year 7 - number 254 Wednesday 5 July 2023

The differences between adaptive and personalized learning

More and more we hear about adaptive and personalized learning as the future of eLearning, but what exactly are these learning methodologies? And what do they consist of?

Adaptive learning and personalized learning are two approaches that on the surface look very similar to each other but are actually very different. Indeed, although they have many similarities, some key differences can have a significant impact on student learning outcomes. In this article we try to clarify between adaptive and personalized learning by looking at what they are, what they consist of, how to put them into practice by looking at some examples, looking at the pros and cons and identifying the main differences between the two approaches.

Adaptive learning and personalized learning

Let's start by understanding the difference between these two approaches to training starting from understanding what they are.

Adaptive learning is an approach that uses **data** and **analytics** to **automatically adjust** individual students' learning experience based on their performance and behavior. In other words, the system adapts to the needs of each student, providing personalized recommendations for learning materials and activities, based on their strengths and weaknesses.

For example, adaptive learning is like a car navigator: it gets you to your destination in the most efficient way. To avoid traffic or accidents, a navigation application can make you detour several times. Like the navigator, adaptive learning adjusts your (learning) path based on where you are in your learning journey.

Personalized learning blends adaptive learning with the ability to change curriculum. In particular, it allows the learner to **customize the experience** based on his/her preferences: goals, skills, career path and more. Customizing a learning path is very similar to setting preferences when creating a playlist in a music app. When the app starts suggesting songs based on the preferences you set, you're personalizing your listening experience.

Personalized learning is a continuous learning journey. Constantly adapts content, thanks to adaptive learning technology, and to user preferences. While the adaptive learning process focuses on individual learning needs by determining them with data analytics, which extract insights from real data.

In other words, adaptive learning relies heavily on data and analytics to provide data-driven recommendations, while personalized learning relies on students' preferences to shape their learning experience.

Adaptive learning

Examples of activities

In an adaptive learning environment, students can engage in various activities designed to help them develop their skills and knowledge. While most modern adaptive learning technologies use software for data collection and profiling, you don't need to be equipped with advanced technologies to integrate this approach into a course. An example of adaptive learning without the use of technologies is when a student is struggling and a teacher provides 1:1 tutoring. The problem is that without the use of technologies this approach is feasible in classes with few students, otherwise it can become a burden for the teacher. Probably the most useful solutions for those who want to integrate adaptive learning into their courses are adaptive learning platforms that use data analytics to personalize student learning content and create personalized lesson plans based on student performance.

Examples of tasks

Assignments in an adaptive learning environment should be designed to provide students with focused and performance **feedback**, enabling them to identify areas where they need to focus their efforts. For example, students may be required to complete a self-assessment that identifies their strengths and weaknesses, or to complete a series of practice exercises designed to help them master specific skills.

Evaluation examples

Assessments in an adaptive learning environment can be designed to provide students with immediate feedback on their performance, enabling them to identify areas where they need to improve. For example, students may be asked to complete a series of quizzes or exams designed to assess their understanding of critical concepts and skills.

Pros and cons of adaptive learning

Pros:

- Provides recommendations for learning materials and activities tailored to the needs of individual students.
- It can help students identify areas where they need to focus their efforts, enabling them to improve their skills and knowledge more quickly.
- Can be more engaging and interactive than traditional classroom learning.

Cons:

- Requires a significant amount of data and analysis to be effective, which can be challenging to implement and maintain.
- Can be expensive to develop and implement.

Personalized learning

Personalized learning is an approach that focuses on students' **individual needs** and interests, enabling them to design their own learning experiences and pursue their own goals. In other words, unlike adaptive learning, the student takes an **active role** in shaping their learning experience according to their interests and needs.

Examples of activities

In a personalized learning environment, students can engage in various activities designed to help them pursue their goals and interests outside the classroom. These can include independent research projects, collaborative group projects, self-paced learning modules and learning activities that build an experience, such as when using virtual or augmented reality for teaching.

Examples of tasks

Assignments in a personalized learning environment can allow students to explore topics that interest them or pursue their own goals. For example, students may be required to develop a research project on a chosen topic or to design their own learning module around a specific skill or topic.

Examples of personalized learning

- Learning Management Systems (LSM) that track student progress and provide personalized feedback and recommendations.
- Tutoring programs that create customized lesson plans for individual students.
- Online courses that allow students to set their own pace and choose from a variety of learning materials.
- Virtual reality and augmented reality offer interactive and personalized learning experiences.
- Personalized learning plans that fit each student's specific needs and interests.

Evaluation examples

Assessments in a personalized learning environment can be designed to allow students to demonstrate their understanding of a specific topic or skill in a way that is beneficial to them. For example, students may be asked to create a video or multimedia presentation on a topic of interest to them, or to design an assessment tool that fits their learning needs.

Pros and cons of personalized learning

Pros:

- Enables students to pursue their own goals and interests, which can be more motivating and engaging than traditional classroom learning.
- Can be more flexible and adaptable than traditional classroom learning, allowing students to learn at their own pace and in their own way.
- Can foster creativity, critical thinking and problem solving skills.

Cons:

- May be difficult to implement in large classrooms or with limited resources.
- Requires significant planning and preparation to ensure students have access to the resources and support they need to pursue their learning goals.

Comparing Adaptive vs. Personalized Learning: Key Differences

Comparing adaptive and personalized learning, we find that while they have similarities, the two approaches have several key differences.

- The main difference is the **student's role** in shaping their own learning experience. In an adaptive learning environment, the system adapts to the needs of the student, making recommendations for learning materials and activities, based on their strengths and weaknesses. While in a personalized learning environment students actively shape their learning experience according to their interests and needs.
- Another key difference is **the data and analytics** needed to support each approach. Adaptive learning relies heavily on data and analytics to monitor student performance and behavior and provide personalized learning materials and activity recommendations. On the other hand, personalized learning relies more on student inputs and feedbacks to shape the learning experience.

In conclusion

Adaptive learning and personalized learning are two approaches that are becoming increasingly popular in the online learning environment. These approaches create a lot of confusion among the less experienced because they share many similarities; however, they have some essential differences that can impact student learning outcomes. Adaptive learning relies heavily on data and analytics to provide personalized recommendations, while personalized learning allows students to shape their learning experience. Both approaches have their strengths and weaknesses, and the choice depends on a number of factors, including students' needs and preferences, available resources and course learning objectives. Ultimately, the key to online learning success is to choose the approach that suits each student's needs and provide the necessary support and resources to be successful.