Adaptive Learning. What is its future?

“We much struggle with the meaning of learning within our discipline and how best to cultivate and recognize it. For that task, we don’t need routine experts who know all the right procedures but adaptive ones who can apply fundamental principles to all the situations and students they are likely to encounter, recognizing when invention is both possible and necessary and that there is no single 'best way' to teach.” - Excerpt from What the Best College Teachers Do.

As Tom Vander, author of ‘Getting Smart’ and thought leader on innovation in education, aptly sums it up in his writing, 'The Future of Learning': “We are in the midst of a revolution in K–12 education, represented by the shift to digital, highly personalized learning. Students, educators, parents, and policymakers are finding compelling ways to use multiple modalities and technologies to enrich learning and personalize instruction.” In order to foster personalized learning, it is critical to tailor instruction and remedial teaching to individual student needs and capabilities. This is where adaptive learning and assessment fit in on the road to optimal learning.

For many traditional teachers this is nothing new as in the classroom many of them adopt the adaptive approach while dealing with different students according to their aptitudes. However, it is emerging educational technology that formalizes it at a much deeper, realistic level through the collection and processing of cognitive and non-cognitive data that is then used to build learner profiles and evaluate student proficiencies to then enable them to meet their full learning potential.

These insights allow for recommendations and recalibration in an individual students' learning curve customizing the instruction and remedial learning, using systems and products to facilitate this adaptive learning and assessment. Technology alone can deliver this, allowing teachers to precisely adjust to the individual learner. Likewise, students are able to learn at their own comfortable pace, accelerate their learning and be ready to meet challenges in a competitive world.

For teachers, constrained by the teaching time in the classroom, the adaptive approach allows them to fine tune the instruction and engagement process and the intervention required, making it unique to each individual learner. This impacts the performance of individual students and reduces the gap between the strongest and weakest student. So the learning process becomes more efficient and effective.

For the student, the adaptive approach is intelligent tutoring working for each student as a personal tutor, making the whole teaching/learning process collaborative and engaging. Users get tailored instructions enabling learners to learn at their own pace. It allows all of them to complete the learning process at their own performance levels.

Adaptive learning products are modeled on different principles with a blend of data science, psychometrics and machine learning elements and applied in a variety of ways. While the principles and features itself are on the evolution path some of the next generation systems of adaptive learning are expected to focus on the trends and features depicted in the Infographic given.
THE REAL VALUE OF EDUCATION IS BEST ACHIEVED WHEN LEARNING IS PERSONALIZED
Adaptive Learning accelerates personalized learning and technology unlocks the potential.

Enabling students meet their full learning potential. Re-inventing Learning...

1. Fine-grained observations to help determine the next step for the learner.
2. Learner engagement to accelerate understanding and critical thinking while keeping things simple and fun to do.
3. Connection to competency-based learning that must go hand-in-hand with adaptive learning, allowing students to learn at their own pace.
4. Adaptive learning will take place on mobile devices not only for K-12 but across the Postsecondary ecosystem, and hence adaptive learning platforms will become important.
5. Easy to use learning analytics will be prime as the data that has to be tracked and analyzed is huge.
6. Data aggregation is a must as adaptive learning systems are completely dependent on data that must be aggregated across millions of students to improve and design learning environments and course content.
7. Project-based learning will typify the modern technology-boosted classroom to promote greater collaboration and engagement between students and teachers.
9. Seamless integration between the adaptive learning platforms and the LMSs.
Where do Adaptive Learning Platforms like MagicBox come in?

Currently adaptive learning and adoption of adaptive learning platforms is at a tipping point and will soon become a standard and expected offering. Content providers will use student data to build adaptive products which when distributed on adaptive platforms will bring in smarter learning practices. This will see some interesting partnerships developing between educational publishers and adaptive platform providers.

The next release of Magic Software’s cloud based mobile learning and distribution platform – MagicBox – is all set to include adaptive learning for a classroom setting. The analytics and teacher dashboard that it currently provides will be further improved to provide teachers with greater insight and information at the lesson planning phase through the inclusion of the adaptive assessment component.

Earlier too, Magic Software has worked on an online Assessment Authoring Tool for UK’s leading independent research organization working in the field of education. The online solution we built enabled trainers and content authors to create, edit and publish topic-level eAssessments that uniquely combined the power and innovation of ICT and our partner’s assessment expertise to produce on-screen challenges that children enjoyed.

The online authoring tool that Magic developed allowed authors to log in from remote locations, access a pre-existing test bank, edit it or create new questions and tests to develop interactive assessments with supporting multimedia assets like sound, video and pictures. Compliant to QTI 2.0 standards and guidelines, the solution allowed online analysis and reporting of the highest calibre that provided evidence of student progress and practical support in personalizing learning. In addition, the solution provided for instant and automated marking.

Magic Software – Unlocking the power of student centric learning with technology. Reinventing Learning.

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