The Future of Personalized Learning in Elementary Schools

The Speak Up National Research Project’s Fall 2011 findings revealed that students want technology effectively utilized in their schools. They, as well as parents, teachers, and administrators, are seeking a high level of personalization that will engage and motivate them. The future of personalized learning is dependent on the new technologies and digital content that transform learning. One of these tools is the intelligent adaptive learning math software from DreamBox Learning, which helps students reach their full potential by providing a data-driven personalized learning environment and a just-right level of instruction.

JULIE EVANS
CEO, Project Tomorrow
Chief Researcher, Speak Up National Research Project

We’re going to be focusing on the aspect of personalization that involves contouring learning to meet individual needs. The value of the recent advancements in technology is that we can now have deeper conversations about personalization.

The Speak Up National Research Project, which is part of Project Tomorrow, has been conducting research since 2003. We post surveys online, which all K12 schools in the country are eligible to take; these surveys are set at the appropriate reading level for students. The surveys are also aimed at parents, teachers, administrators, technology leaders, and librarians. As our gift to the participating schools, we give them back the district’s local data. The national data is also shared with Congress, the Department of Education, many state departments, research organizations, and more. The survey questions are centered around learning and teaching through technology, emerging technology like social media and mobile platforms, digital content, educational games, and the individual’s idea of the ideal 21st century school.

The data I am sharing today are from Fall 2011. We had 416,758 online surveys submitted. From the data, we gleaned that students are functioning as a “Digital Advancement Team.” They are the technology trendsetters in terms of how they want to use technology in and out of school. Students have told us in focus groups that they are frustrated with the unsophisticated use of technology in their schools. This has lead us to the idea that there is a unique student vision for learning. They want social-based learning that allows them to collaborate with each other, untethered learning that does not bind them to the classroom to access information, and digitally rich learning that is relevant and provides a proper context. All of these desires point to a highly personalized learning experience.

Survey data collected from elementary students revealed that many are using technology in school to perform Internet research, play educational games, and take online tests. Outside of school, students are using technology not only to do Internet research and play games, but to exist in virtual worlds. They are fluent in finding videos online; many students told us they seek videos online to help with what they are learning in school.

Forty-six percent of parents said their biggest concern is that class sizes are too big. They are frustrated that learning is not being tailored to the individual’s needs and that students are not getting the appropriate level of attention from their teacher because there are too many students. Seventy-six percent of parents are also concerned about whether their child is learning the “right skills” to be successful. Seventy-four percent of parents stated they do not believe their children are using technology enough and effectively in school.

We asked elementary parents and administrators to rank the value of technology in instruction. Both groups overwhelmingly ranked it as extremely important. Administrators what would help drive greater student achievement, over a third believed leveraging technology within instruction would help. Nearly a quarter believed an IEP for every student would also be beneficial.

Many elementary principals stated they valued intelligent adaptive learning software, e-textbooks, and digital content as means of increasing engagement and learning. Fifty-nine percent of these administrators expect that their incoming teachers will have experience with intelligent adaptive learning; these administrators value the software’s ability to provide just the right level of instruction for each student.

We have seen a lot of growth in the value teachers place on learning games. In 2007, only 1 in 10 teachers said they regularly use learning games in their instructional plan. By 2011, that number jumped to nearly a quarter of teachers polled. When we asked how teachers would use games, most elementary instructors said they would use games as motivational and engagement tools, as well as for learning differentiation. Forty-seven percent of teachers currently use learning games said they value the assessment data the games provide. Many teachers believe that students want technology effectively utilized in their schools. They, as well as parents, teachers, and administrators, are seeking a high level of personalization that will engage and motivate them. The future of personalized learning is dependent on the new technologies and digital content that transform learning.

We asked elementary parents and administrators to rank the value of technology in instruction. Both groups overwhelmingly ranked it as extremely important. Administrators what would help drive greater student achievement, over a third believed leveraging technology within instruction would help. Nearly a quarter believed an IEP for every student would also be beneficial.

Many elementary principals stated they valued intelligent adaptive learning software, e-textbooks, and digital content as means of increasing engagement and learning. Fifty-nine percent of these administrators expect that their incoming teachers will have experience with intelligent adaptive learning; these administrators value the software’s ability to provide just the right level of instruction for each student.

We have seen a lot of growth in the value teachers place on learning games. In 2007, only 1 in 10 teachers said they regularly use learning games in their instructional plan. By 2011, that number jumped to nearly a quarter of teachers polled. When we asked how teachers would use games, most elementary instructors said they would use games as motivational and engagement tools, as well as for learning differentiation. Forty-seven percent of teachers currently use learning games said they value the assessment data the games provide. Many teachers believe that students want technology effectively utilized in their schools. They, as well as parents, teachers, and administrators, are seeking a high level of personalization that will engage and motivate them. The future of personalized learning is dependent on the new technologies and digital content that transform learning.

New technology advances personalized learning in elementary schools

A District Administration Web Seminar Digest • Originally presented on Nov. 8, 2012

TIM HUDSON
Director of Curriculum Design
DreamBox Learning

Here at DreamBox Learning, we have a kindergarten through fifth grade math curriculum that is built on an intelligent, adaptive learning platform. We create our own content, which adapts to students in the moment.

At DreamBox, we believe personalization will accelerate student achievement and deepen learning per the Race to the Top goals. Personalization is a means to honor each student’s ideas and support the transfer of learning; personalization is empowered by technology. DreamBox aims at the goal of increased learning while honoring the student’s thinking process no matter where he or she is in his or her learning path.

In terms of differentiated instruction, teachers have a responsibility to ensure all students master content. A teacher should constantly ask what his or her students need in the moment in to master content, and what he or she can do to make that mastery happen. Of course, this call to personalized learning is incredibly daunting for one teacher to handle. DreamBox Learning can be a partner in helping teachers personalize learning.

Current learning theory calls for students to construct their own knowledge and develop their own cognitive maps. Effective adaptive software and personalized learning line up with this pedagogical theory.

At DreamBox, we know learning is not linear, so our software is not built that way. When a student finishes a lesson, he or she will then have a variety of following lessons to choose from that are related to the previously completed lesson. This allows for choice in the cognitive map construction. We want students to powerfully use their knowledge in a series of concepts. DreamBox is designed for students to use their own personal approach to ideas.

Curriculum and pedagogy matter. In personalization, there are millions of pathways. Our learning objectives are built around big ideas and sense making. Students should be presented with conceptual frameworks and gain strategic skills. Students bring their own original ideas to every lesson and form coherent connections. They are doers, not simply listeners. Instead of attempting to give understanding, through personalization, students realize understanding.

The lesson progressions in DreamBox refine student thinking. As lessons go on, we limit the number of times students may use a specific helper tool to get them thinking strategically. Instead of parroting back a strategy a student may have been taught, he or she can use DreamBox in a way that shows how he or she is thinking. DreamBox helps students refine that thinking. It empowers self-directed learning.

DreamBox also offers a personalized environment, which is key in personalization. Students can choose their own icon, wallpaper, and music. DreamBox offers further personalization by adapting continuously to individualize the learning path for each mind. We collect, analyze, and use 48,000 pieces of data per hour per student.

To watch this web seminar in its entirety, please go to http://www.districtadministration.com/ws110812.