Teachers Are Using Kinect for Xbox 360 to Engage Students and Bring Learning to Life

REDMOND, Wash., March 6, 2012 /PRNewswire/ -- Interactive learning is key to motivating and engaging students in today's technologically advanced world. Given the digital nature of students' lives, including their avid interest in playing video games, more and more educators are using immersive and game-based learning approaches to help students develop critical 21st century skills.

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In classrooms around the country, teachers incorporating Microsoft's [Kinect for Xbox 360](http://www.kinect.com/) into their lesson plans are reporting tangible improvements in student engagement and learning. Kinect systems are being used as part of pilot programs underway in the Los Angeles Unified School District (California), Chicago Public Schools (Illinois), Houston Independent School District (Texas), Scottsdale Unified School District (Arizona), Flagstaff Unified School District (Arizona), Fairfax County Public Schools (Virginia) and Loudoun County Public Schools (Virginia).

"As educators, we are always looking for the best ways to help our students learn and retain the knowledge and skills they need in life," said Adina Popa, technology resource teacher in Loudoun County Public Schools, Virginia. "We know student engagement is a key factor in that, and with a tool like Kinect, we are able to strengthen our curriculum while engaging our students, making learning more effective and more fun."

When Microsoft Corp. launched Kinect worldwide in 2010, the controller-free gaming and entertainment system became a phenomenon overnight. Originally designed for the living room, Kinect has inspired a diverse group of hobbyists and academics to take advantage of the Kinect for Windows SDK to develop exciting educational applications and teachers to bring existing Kinect games into their classrooms to supplement their curricula. Educators are enhancing traditional lessons plans, special education, physical education, school communications and collaboration, and after-school programs with immersive full-body experiences that help students get engaged in learning, stay on task, and inspire creativity and camaraderie with peers.

"We are doing this because we believe pedagogy needs to evolve if we want to inspire children," said Sig
Behrens, general manager for U.S. Education at Microsoft. "Gaming brings personalization to learning and learning to life. You can really see the connection — challenges are fun; there is less fear of failing, and children can learn instantly with instructional units in a gaming system."

Microsoft has made it easy for schools to start using Kinect to transform ordinary classroom lessons into immersive learning experiences. There are more than 200 ready-to-use classroom activities, designed by pedagogy experts, that align with Common Core State Standards, and because Kinect works with existing audio-visual equipment schools already own — televisions, projectors and white-board systems — setup is fast and easy.

Stories From the Classrooms

Through the pilot programs, teachers are adding Kinect games to lesson plans to better engage students on subjects ranging from mathematics, language arts, science and social studies to physical education, adaptive P.E. and special education.

In Loudon County Public Schools, teachers are using "Kinect Sports" to help teach math concepts such as patterns versus randomness, probability, and angles through bowling. Third-graders use Kinect Fun Labs Kinect Googly Eyes gadget to give a presentation on lessons they have learned, and fourth-graders use Avatar Kinect to produce late-night shows and commercials, strengthening their language arts skills. A fifth grade class conducted "Reading Idol" shows using Avatar Kinect to strengthen their reading skills; and a fourth-grade class used Kinect to conduct a videoconference simulation with Challenger Learning Center, a NASA-sponsored organization, and plans to hold additional conferences with students in Romania to broaden their cultural awareness. Avatar Kinect uses motion tracking in Kinect plus facial recognition to give each student his or her own avatar, a real-time on-screen representation of the student, which mimics the way that the participant smiles, nods, speaks and gestures.

In the Los Angeles Unified School District, fourth-grade teachers at Middleton Elementary are using NAMCO BANDAI Games America Inc.'s "Body and Brain Connection™" for Kinect for Xbox 360 to teach math lessons on angles, probability and arithmetic. School leaders are witnessing improved student behavior, attentiveness and engagement when the Kinect is in use. Students with difficulty focusing in class are more willing to pay attention and actively participate throughout Kinect-centric lessons, work harder to complete the assignment, and even stay engaged during more traditional lessons. Teachers have also found Kinect helps create a sense of camaraderie among students, as they pair students together who need friends or would otherwise have difficulty getting along.

Studying the Benefits of Active Learning

Multiple studies have reached a consensus that physical activity has a positive impact on a child's academic performance because it primes the brain for learning. Microsoft worked with Dr. John Ratey, associate clinical professor of psychiatry at Harvard Medical School, and author of "Spark: The Revolutionary New Science of Exercise and the Brain," to conduct an independent evaluation of one Kinect pilot program in the Los Angeles Unified School District. Through a preliminary study of two classrooms at Middleton Elementary School, Dr. Ratey found that students who used Kinect:
Showed a trend of improved executive function, which is the portion of the brain responsible for planning, problem-solving and working memory.

Showed a trend of increased attention, which resulted in better engagement and behavior during classroom lessons.

Reported higher levels of social understanding and acceptance among their peers, which helped reduce personal conflicts among classmates.

"The real reason we feel so good when we get our blood pumping is that it makes the brain function at its best," Ratey said. "Physical activity sparks biological changes that encourage brain cells to bind to one another. For the brain to learn, these connections must be made, so including physical activity in the classroom creates an environment in which the brain is ready, willing and able to learn."

Although the results are preliminary, they are consistent with existing industry research that has found that increased physical activity goes hand-in-hand with increased engagement and knowledge retention. The results also demonstrate the potential of the technology to be a powerful tool to aid student learning and success.

At SXSWedu, on March 6, Microsoft will join educator partners in a panel discussion to further explore the value of gaming and learning, drawing specific examples from stories about Kinect in the classroom. In only its second year, SXSWedu prefaces the famous interactive, music and film conferences held in Austin, Texas, each spring. The event is expected to draw some of the country's top educators to discuss thought leadership topics in education.

More information on Kinect for Xbox 360 in education is available on the Kinect in the classroom website. More information about how schools are using Kinect is available at the Microsoft News Center.

In addition to this pilot program with classrooms, Microsoft helps empower youth to both imagine and realize their potential through partnerships such as Shape the Future and Partners in Learning, and Microsoft programs including the Community Technology Skills Program, DigiGirlz and Imagine Cup.

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