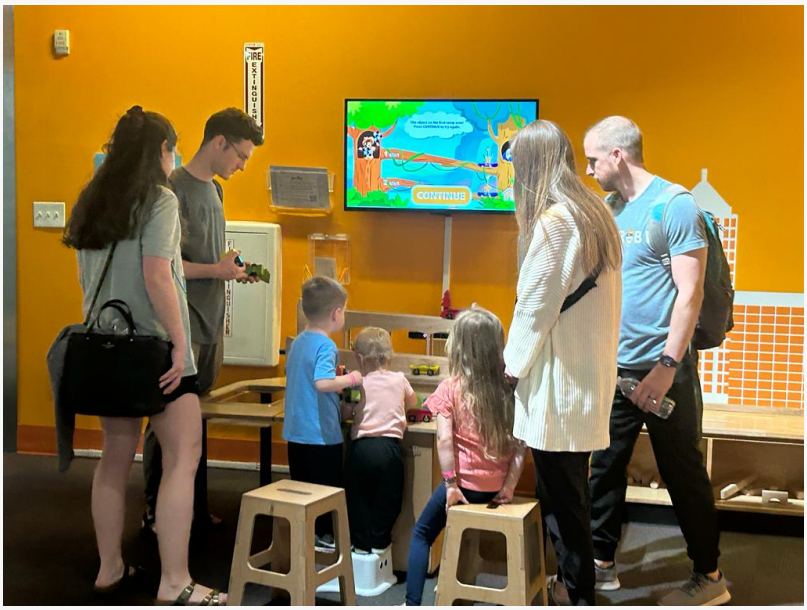
Redefining Learning: How This Mixed-Reality AI System Boosts Child Learning by 5X

PITTSBURGH, PA, UNITED STATES, March 28, 2025 /EINPresswire.com/ -- As mixed reality technology captures 27% annual growth in global edtech investments, Carnegie Mellon University's patented NoRILLA system emerges as a breakthrough case. Backed by long-time research, this patented educational learning apparatus has been proven to improve children's STEM learning outcomes by up to five times compared to traditional screen-based instruction.



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The Science of Tangible Learning
Developed at Carnegie Mellon University's Human-Computer Interaction Institute, NoRILLA (Novel Research-based Intelligent Lifelong Learning Apparatus) reimagines how children engage with science. Instead of tapping through tablet lessons, children interact with real-world objects—stacking, testing, predicting—while computer vision and adaptive algorithms respond in real time, offering tailored prompts and feedback.

"It's about preserving the joy of hands-on exploration while using AI to scaffold deeper thinking," explains Yixuan Wang, the key designer on the NoRILLA team. "Children get to make predictions, observe and explain the results just like a little scientist, all with interactive guidance and intelligent feedback based on proven learning mechanisms delivered through a friendly gorilla character."

Validated outcomes
Now implemented in over 30 schools, museums, and learning institutions across the U.S. and Europe, NoRILLA has garnered support from the National Science Foundation, Carnegie Mellon's Swartz Center for Entrepreneurship, and numerous educational partners.

Wang believes meaningful educational design grounded in solid research and child development science: “When our design decisions are based on scientific research and real user behavior—not assumptions—we can create experiences that truly support growth and spark curiosity.” she says.

Human-Centered Design
Wang brings a special perspective to the team. She previously led the design of the Yoozy Duck interactive playbook series, which sold over 80,000 copies in China, and sees technology as a tool to enhance—not replace—how children connect with the world.

“Technology shouldn’t overshadow a child’s curiosity—it should spark it,” says Wang. “We aim to design engaging products that kids feel safe to explore, take risks, and discover at their own pace.”

Looking Ahead
The NoRILLA team continues to expand the system’s reach, developing new modules for STEM learning, like balance scale and projectile concepts. With products already piloting in classrooms and after-school programs. Wang and her colleagues are committed to shaping the future of learning with tools that not only educate more effectively, but also honor the humanity, curiosity, and individuality of every child.

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