App teaches kindergartners basic computer coding

October 1 2014, by Rodrique Ngowi

In this Thursday, Sept. 18, 2014 photo, Aiden Crott, 7, center, helps Daniel Hernadez, 5, with his ScratchJr iPad program while Talia Levitt, 7, right, works with hers at the Eliot-Pearson Children's School in Medford, Mass. Researchers created the app that teaches basic computer programming to kindergartners. (AP Photo/Stephan Savoia)

This computer programming app is so easy to use that even a kindergartener can do it.

Researchers in Massachusetts have created a basic computer coding app that they say is the first designed specifically for children as young as 5. Kids who haven't yet learned to read can use the app to craft their own interactive stories and games.

With ScratchJr, children can snap together graphical programming blocks to make characters and other elements in their project move, jump, talk and change size. Users can modify various elements in the paint editor, add their own voices and sounds, and even insert their own photos.

"When many people think of computer programming, they think of something very sophisticated," says co-developer Michel Resnick of the Massachusetts Institute of Technology. "But we don't think it has to be that way."

Marina Umaschi Bers, his co-developer from Tufts University, cites research that shows children start to form convictions by fourth grade about how good or bad they are in math, science and technology.

"So most programs that introduce coding in fourth grade and up, it's great, but they are coming kind of late to the party," she says.

In this Thursday, Sept. 18, 2014 photo Talia Levitt, 7, left, and Charlotte Klingaman, 6, work with their ScratchJr programs on iPads at the Eliot-Pearson Children's School in Medford, Mass. Researchers created the app that teaches basic computer programming to kindergartners. (AP Photo/Stephan Savoia)

The project was funded by a $1.3 million grant from the National Science Foundation to help children learn to think creatively and reason systematically.

The free app is already being used in kindergarten classrooms at the

Eliot-Pearson Children's School in Medford.

"I learned to concentrate and use the imagination a lot," 7-year-old Talia Levitt says. "You can do, like, almost anything on it."

Her classmate, 7-year-old Aiden Crott, adds, "I like making the background and then making the program and make the guy move around everywhere."

ScratchJr was inspired by the popular Scratch programming language for older kids. Developers say they redesigned the interface and programming language to make it appropriate for younger children.

In this Thursday, Sept. 18, 2014 photo Aiden Crott, 7, works with his ScratchJr program on an iPad at the Eliot-Pearson Children's School in Medford, Mass. Researchers created the app that teaches basic computer programming to

kindergartners. (AP Photo/Stephan Savoia)

The app was launched in July on the iPad platform, and developers are working on versions for the Web and Android devices.

"We don't want necessarily every young child to become a computer scientist or to work as an engineer, but we want every young child to be exposed to these new ways of thinking that coding makes possible," Bers said.

In this Thursday, Sept. 18, 2014 photo Talia Levitt, 7, right, turns to look for help while working with her ScratchJr program on an iPad as Charlotte Klingaman, 6, works with hers at the Eliot-Pearson Children's School in Medford, Mass. Researchers created the app that teaches basic computer programming to kindergartners. (AP Photo/Stephan Savoia)

Claire Caine, a teacher at the Jewish Community Day School in Watertown, said she likes the app because it encourages kids to explore and figure out solutions to problems.

"Give it to them young enough, and they start doing it, and it just becomes like brushing teeth," Caine said. "Nobody says they are not good at brushing teeth or they can't brush their teeth."

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In this Thursday, Sept. 18, 2014 photo, clockwise from foreground, Aiden Crott, 7, Daniel Hernadez, 5, Talia Levitt, 7, and Charlotte Klingaman, 6, work with their ScratchJr programs on iPads at the Eliot-Pearson Children's School in Medford, Mass. Researchers created the app that teaches basic computer programming to kindergartners. (AP Photo/Stephan Savoia)

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