Coding in Kindergarten: Researchers Study Early Computational Thinking

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Jessica Shumway, Congressman Rob Bishop, and Jody Clarke-Midura

While attending a National Science Foundation (NSF) conference in Washington, DC, Drs. Jessica Shumway and Jody Clarke-Midura met with Congressman Rob Bishop, Representative of the 1st District in Utah, and his education legislative assistant, Paul Johnson, to share information about NSF’s Science, Technology, Engineering, Math, and Computer Science program as well as their own research.

Together with Dr. Victor Lee, Shumway and Clarke-Midura are currently studying early computational thinking in young children. Their research focuses on coding toys, which allow children to “program” simple sequences of lights, sounds, or actions and are becoming more accessible. Research is ongoing to determine how effectively these toys can enhance problem-solving skills and help foster early computational thinking.

By studying the way kindergartners think and reason, Lee, Shumway, and Clarke-Midura intend to develop better methods of evaluating the effectiveness of such toys. Once the results are measurable, educators will be able to make more informed decisions about the toys they use in early childhood settings.