Play. Code. Create

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Gifted and Talented Education KOOV Case Study

RSU #22 District & Long Island School for the Gifted

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Background

RSU #22 District in Hampden, ME and the Long Island School for the Gifted in Long Island, NY received KOOV prototype kits to use in their Gifted and Talented programs and schools.

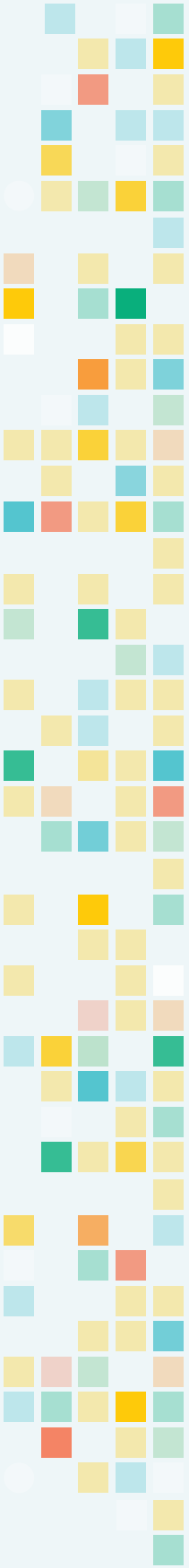
Over the pilot, Tricia Richardson incorporated KOOV into her Gifted and Talented program with groups of 3-5 students, while Mary Jane Schnurer used KOOV in an accelerated program computer classroom for 1 hour, once a week. Students were divided into 4 groups.

Tricia and Mary Jane were asked to observe the students' experiences and give their own thoughts with KOOV, and at the end of the program provide feedback via a survey and an exit interview.

Sony Electronics began the KOOV Pilot Program to gain insights and feedback from educators as they look to bring KOOV to the United States.

Pilot Program Participants

Tricia Richardson, Gifted and Talented Teacher for
RSU #22 School District
Mary Jane Schnurer, Lower Level Computer Teacher



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Gifted and Talented: How to Challenge Highly Intellectual Learners in STEM

Gifted and Talented programs have always aimed to accelerate students in their learning. The National Association for Gifted Children notes that, "The field of gifted education continued to evolve mainly in response to the changing needs of the country, especially after the Soviet Union's launch of Sputnik in the late 1950s. Further legislative efforts by the federal government in the early 1970s brought the plight of gifted school children back into the spotlight. The definition of giftedness also expanded along with programming options now available for gifted students." Gifted education programs have always targeted ways to advance students specifically in STEM fields. **However, this doesn't mean gifted students have access to the learning tools they need or have perfected the process of identifying students who should be in the program or school.**

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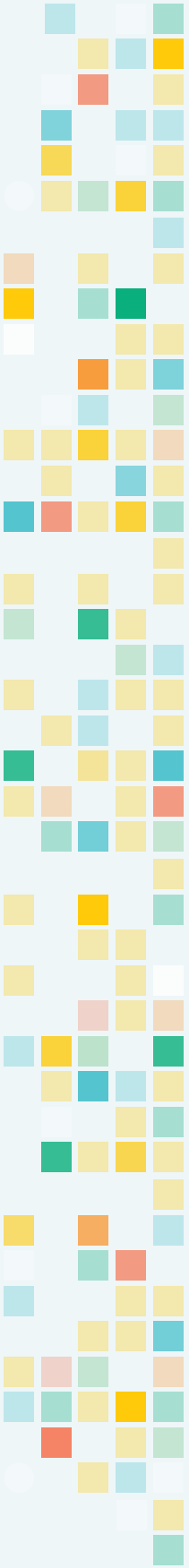
Identifying Talent

THE NCRGE found that there are two distinct steps to developing talent for gifted children. The first is to provide opportunities for talent to surface, and the second is to provide programming that develops students' talent.

Our KOOV pilot program participants both identified that there are challenges to teaching coding, robotics, and design, and spoke to how KOOV helps break down these barriers. Tricia stated that, "KOOV walks [students] through step by step and allows students to work independently or with a partner/group, and it is leveled so that students can work at a comfortable learning level." Mary Jane noted that, **"The three-dimensional display of the steps, when building, were very helpful. It allowed the children to create their designs with more spatial awareness."** Allowing students opportunities to easily understand steps and directions creates much more effective programming for students.

Awareness of the fact that underserved students are less likely to be identified as gifted students is the first step to increase both access and equity for all students. Once this challenge is addressed, it is a matter of finding tools that open up equal pathways and opportunities once the correct population is identified. **KOOV is the program that allows students to be challenged and remain engaged throughout the entire learning process,** which will allow Gifted and Talented programs the partner they need to address the needs found by the NCRGE.



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Tricia at Long Island School for the Gifted noted that, "KOOV could be incorporated in project-based learning. For example, if learning about explorers, students could make the treasure chest as part of a display. Also, students could use the coding in KOOV to practice math concepts such as angles and degrees." This type of personalized, cross-curricular, anytime, anywhere learning is what the future workforce will require.

Investing in STEM opportunities for students is at a critical turning point for the future workforce and how students are taught. The NCRGE found that most talented and gifted programs focus on creativity and critical thinking instead of core curriculum. While some researchers may perceive this as a problem, the reality is that the future of work will require these soft skills to be competitive. Talented and gifted programs need partners like KOOV to ensure students are well-rounded once they exit the program.

Tricia also found that, "Overall, the KOOV experience was great for my students. They loved the hands-on learning which felt like playing to them. Following the designs and instructions in the app were very helpful, again, especially the 3D presentation of each step in the learning course. **Since I had the students work in groups of four, the students learned to work collaboratively to reach their goal of completing the build and writing the code."**

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The future workforce is more than knowing how to code, it's knowing what problem(s) to solve. KOOV provides students and teachers with flexibility to figure out what challenges can be solved by using KOOV. Mary Jane told KOOV, **"I think KOOV can be easily adapted to the content area allowing students to design a product that solves a particular problem. It could be used in a station/center for students who finish their work quickly and can work independently.** It can also be used in a Makerspace or STEM lab."

In order to ensure talented and gifted programs are engaging students and preparing them for a still vastly unknown future of work, leaders of these schools and programs must consider the most comprehensive approach to STEM and learning in general. The National Association for Gifted Children specifically recommends expanding the number of selective math-science high schools in order to ensure gifted students are being sufficiently challenged. KOOV is prepared to come alongside these schools, providing comprehensive programming that helps students identify challenges to solve and creating a learning environment that sufficiently challenges gifted students.

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