

Introduction

- In our work as technologists in a school, we often work with boys who are introverts and socially awkward, and who feel disconnected from their peers.
- Making is fundamentally engaging to boys.
- We wanted to see if Making could give those boys a happy place and help them to feel more connected to their school community.



Research Context

St. Christopher's is a 100 year old boys' school in Richmond, Virginia that has a traditional focus on the mental, physical, and spiritual health of boys. In our hundredth year we implemented our Second Century Vision which seeks to bring our traditional values into the 21st century. St. Christopher's seeks to implement these new skills while maintaining our focus on rigorous academics, spiritual growth and honor.

Participants

Our participants were the four boys in our Make Class, plus one or two partners for each boy. By chance, our Make class has one boy from each grade, 9th-12, which allowed for some interesting observations.

The Research Action

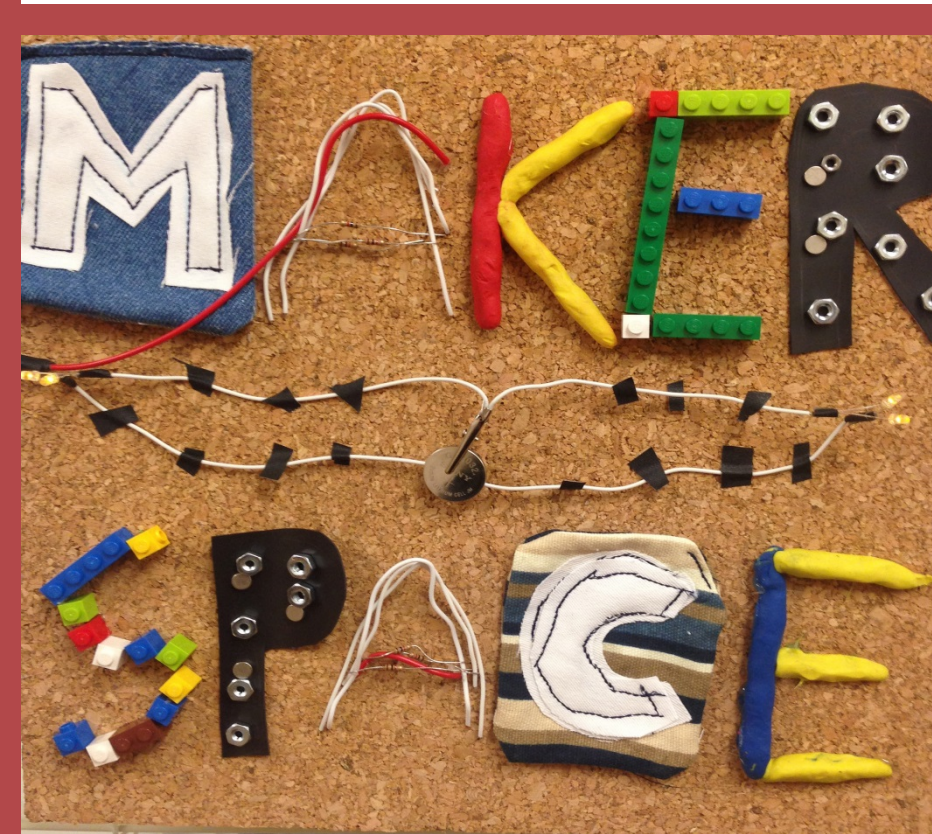
During our Make class, our boys learned different elements of Making, doing multiple projects. In November, their project was to take what they had learned from doing Maker projects already and plan together a project that they could do with five Grade 9-12 boys who joined our class for two weeks. On the first day, we did a lesson with them on what it means to be an introvert or extrovert by watching Susan Cain's TED talk on "The Power of Introverts" and taking her online quiz, "Are you an Introvert or an Extrovert". After that, the boys in the class did their Maker project with the boys invited in. They made the project together and shared their expertise with their peers while helping them to learn Making techniques.



What effect does Making have on an introverted boy's sense of belonging in a school community?

Data Collection

- Interviews
- Video recordings
- Surveys
- Questionnaires



"It brought me back to him a bit. It's just nice working with him again. At least that's what it feels like to me."

Data Analysis

We took the transcriptions from each interview, put them into an excel worksheet and coded them. The categories we ended up with were: benefits of Making, class impact, class impressions, class interactions, change in definition of Making, introvert/extrovert, Making inclination, partner, project impact, and project impressions. After coding everything we looked at all of the responses for each of the categories and found common themes in the data.

"I do value my alone time, a lot, but the makerspace downstairs, I could do that all day."



Key Findings and Discussion

- The greatest improvement in relationships occurred when the boys knew each other some, but not too well. If they were good friends, or didn't know each other at all, the relationship didn't change.
- Boys become more self-aware after 10th Grade. Discussions of introversion vs. extroversion were lost on 9th and 10th Grade boys.
- A Makerspace is a happy place for introverts.
- The collaborative environment that making breeds helped with building relationships between boys.

Conclusions

At St. Christopher's School we strive to be a leader in the teaching and understanding of boys. The perception can be that we only understand extroverted, athletic boys. In order to be the best school for all boys, we need to continue to cultivate the needs of introverted boys as well. Thankfully, the Maker Movement, is giving schools the impetus to reach out to boys who love to tinker, create, and build. For many boys, these activities have historically been things they do at home or in small groups of friends. Now, the Make class can reach those boys and connect them to their peers in new ways and feel like a meaningful part of the school community.



**"Schools are designed for extroverts."
- Susan Cain**

Key Readings

- Boss, S., & Krauss, J. (2007). *Reinventing project-based learning* (1st ed.). Eugene, Or.: International Society for Technology in Education.
- Brown, S. L., & Vaughan, C. C. (2009). *Play: how it shapes the brain, opens the imagination, and invigorates the soul*. New York: Avery.
- Cain, S. (2012). *Quiet: the power of introverts in a world that can't stop talking*. New York: Crown Publishers.
- Hatch, M. (2013). *The maker movement manifesto: rules for innovation in the new world of crafters, hackers, and tinkerers*. New York: McGraw Hill.
- Martinez, S. L., & Stager, G. (2013). *Invent to learn: making, tinkering, and engineering in the classroom*. Torrance, Calif.: Constructing Modern Knowledge Press.
- Reichert, M., & Hawley, R. A. (2010). *Reaching boys, teaching boys: strategies that work and why*. San Francisco, CA: Jossey-Bass.

Further Information

This poster and further information is available at <http://www.theibsc.org/>.

Check out our blog at: tinyurl.com/boysasmakers or use the qr code below.

