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Director's Brief: School Library Makerspace
INFO 287 The Hyperlinked Library: Emerging Trends, Emerging Tech
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Executive Summary

This brief outlines a plan to create a makerspace in the Bloomfield High School Library based upon the mission of the school and existing curricular goals and includes the philosophy, definitions, rationale, and resources associated with the project.

Introduction

If you are in the business of education, the likelihood you've seen Sir Ken Robinson's 2006 TED talk, "Do Schools Kill Creativity" at least once is very good. In the talk, Robinson, a leader in global projects on creative and cultural education, makes the case that schools can and should nurture creativity rather than undermine it. The talk has been viewed over 17 million times and is the most viewed TED talk ever. Robinson (2019) says of his work:

> Human resources are like the earth's natural resources. They are highly diverse and often buried deep beneath the surface. They need to be discovered, refined and applied. Education often promotes a narrow view of ability, as do many corporate organizations. As a result, many people are unaware of the variety of their talents and depth of their potential.

In the years since the talk was given, sadly, not much has changed in education. But libraries, facing a sort of existential crisis at about the same time Robinson's talk was gaining attention, have seized an opportunity to grapple with this question. They have analyzed their programming and services, and embraced a way to offer users an opportunity to find and use knowledge in new, creative, and meaningful ways in the form of the makerspace.

What is a makerspace?

The 2017 NMC/CoSN Horizon Report K-12 Edition defined makerspaces as "physical environments that foster opportunities for hands-on learning and creation, often enabled by emerging technologies." In 2013, Maker Media published The Makerspace Playbook, and defined makerspaces as, "Learning environments rich with possibilities, [that] serve as gathering points where communities of new and experienced makers connect to work on real and

personally meaningful projects, informed by helpful mentors and expertise, using new technologies and traditional tools." On why making matters in schools, the authors (2013) said:

> Makers take risks and iterate from 'failures' to achieve success. Makers have a growth mindset that leads them to expend the energy to learn. Making fosters character- building traits collectively known as grit, including creativity, curiosity, open-mindedness, persistence, social responsibility, and teamwork, among others. Makers collaborate and give advice and guidance to their peers. Makers are often more interested in open sharing and exhibition, not competition.

 In short, a makerspace has the potential to speak to what many believe school can be: a place to explore, learn, and grow within a community.

What is the trend? Where did it originate?

The library makerspace is a trend that has been around for a while, which begs the question: When does a trend become a standard? In 2013, the editors at American Libraries magazine wrote [an article featuring opinions and advice on starting a makerspace](#), as well as a historical timeline of the makerspace, dating the concept all the way back to 1873.   In 2017, authors of the Horizon report K-12 Edition said, "Authentic learning [of the kind enabled through makerspaces] is not a trend — it is a necessity. Hands-on experiences that enable students to learn by doing cultivate self-awareness and self-reliance while piquing curiosity." Today, a Google Scholar search for the terms, "School library makerspace" since 2018 returns over 1,130 results. A search on School Library Journal's website for the word "makerspace" returns 179 results in the last 24 months alone, and the magazine publishes an annual maker issue devoted to the topic. It would seem the school library makerspace is here to stay.

What do we know about users of a makerspace?

Moorefield-Lang and Coker (2019) found, "Makerspaces in educational or school library settings is a lively but still small research area in comparison to others the fields of library and information science…." We do know that children are naturally curious, and that somewhere along the way, that curiosity is pushed aside as the need to compete to get ahead takes over. One of the most promising elements a school makerspace can offer is what the Makerspace Playbook (2013) calls "Exhibition, not competition." Makerspaces emphasize the concepts of iteration and "growth mindset," ideas that are part of the most recent conversations about schools these days. A physical manifestation of these concepts in the form of a makerspace can show students that

the building wants to support them in every way, not just in order to compete to determine who among them is the best.

Practically speaking, students should be surveyed to ask them about what they might use the most, and at least some of the questions can be designed with emoji responses to make feedback more fun, engaging, and emotionally telling (Stephens, 2016). Bloomfield High School has an existing Student Library Advisory and Student Tech Squad; these groups should lead the initiative to start and maintain a school library makerspace on as many fronts as possible.

What research or studies can inform the decision to plan and implement a school library makerspace?

At its annual conference in 2018, Educause featured a breakout session titled "Redesigning Spaces, Services, and Training for Creative, Collaborative Student Experiences." The description of the session read, "Computer labs were rows of desktops in the past, but today's student experience is about creativity and collaboration. NYU used design thinking to assess its student needs and develop a series of innovative makerspaces, a new service model, and new staff training program that achieved 95% satisfaction using a process other institutions can apply" (Ackerman and Elliot, 2018). Although the public school library is a distant cry from the makerspace initiative at NYU, there are simple lessons that can be applied to plan and implement our own space which can be drawn from this slide from the presentation:

how to get started

Institutions can follow these steps to get started transforming the student experience of technology spaces on their campus.

1. Conduct a needs assessment – look internally and externally, qualitatively and quantitatively

2. Use the insights to generate solutions with your users in a workshop

3. Find ways to prototype (e.g., mock-up, roleplay, etc) as well as pilot the space and service ideas

4. Gather feedback and use it to make the case for broader change as well as to refine your ideas.

Pilot: IT Helpdesk in the Library
American University
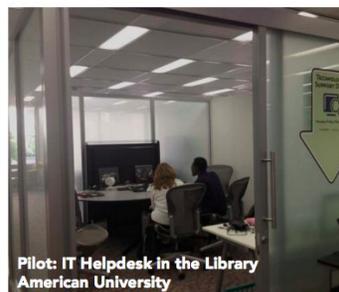
New York University | brightspot   EDUCAUSE 2018

It is a framework that is applicable at any level: Let's look at what students want by conducting surveys and researching what has worked at other schools similar to ours. Then, let's brainstorm

with faculty and students to come up with ideas about how to design and operate the space. Run some pilot programming, gather feedback, and refine the process.

How can the school library successfully implement a makerspace?

During the planning process, as many stakeholders should be involved as possible, including students, teachers, administrators, parents, and even local business and industry leaders (Meyer, 2017). There are many exemplary makerspaces these days, and inspiration should be drawn from these resources. It is very important to have a mission for the makerspace based upon and interwoven with the building mission and guided by existing pedagogical goals agreed upon by the district.

Conclusion

Moorefield-Lang and Coker (2019) conducted research presented in their article, "Makerspaces in the High School Setting: The Student Perspective" and found anecdotal evidence suggesting the addition of the library makerspace changed the way in which students thought about their abilities:

> One student, a senior, had the following to say about the library before and after the maker learning space became part of the library: 'It didn't just change the library it changed the mentality of the whole school it seemed. Instead of saying we can't do that because we don't know how, it's we can do that, how can we figure out how to do it.'

School library makerspaces do have the potential to send a powerful message to the students, one that is conveys our continuing belief that they have something to offer, to create, and that what they have to make matters.

Additional Resources

Cun, A., Abramovich, S., & Smith, J. M. (2019). An assessment matrix for library makerspaces.

http://www.renovatedlearning.com/makerspace-resources/

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Meyer, L. (2017). 7 Tips for Planning a Makerspace.

Moorefield-Lang, H., & Coker, M. (2019). Makerspaces in the High School Setting: The Student Perspective.

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