Making Progress: Evaluating the Success of Your Makerspaces

Technology is something of a double-edged sword in terms of education. It facilitates unlimited opportunity and empowerment in the classroom, but it can also cause students to lose touch with their ability to create and invent with their hands.

This could perhaps explain the popularity of Makerspaces as a "hands-on" way of fostering curiosity, tinkering, and iterative learning, leading to deeper thinking and independent, real-world problem solving. And, in only a few years, Makerspaces have evolved from humble repositories of new equipment stowed away in corners into dynamic hubs of innovation.

So what makes a successful makerspace? Once more, how can that success be measured?

The Formula for Success

Program Success is a complicated equation, involving attendance, program quality, the meeting of goals, and cost-per-student ratios (the resources—materials and human support—needed for each student). But gauging the success of your makerspace is perhaps the most important step in a technology plan because it can validate the existence of a makerspace and perhaps make it easier to expand.

Evaluation involves gathering information, analysis and reporting to best assess the extent to which programs and services affect student learning. Statistical analysis of data—such as expenditure and student usage counts—alone can't demonstrate the full picture of a space's success or the difference they make in student learning.

20/20 Vision

Developing a vision for your makerspace ensures that you have concrete goals to measure against, and increases the space's likelihood for success. After the vision is determined, appropriate measures or indicators should be carefully selected to address those goals and objectives.

A vision can also help with buy-in, with stakeholders understanding not only what technology and activities the space will feature, but why it features

these in the first place. Determining the needs of their users before making plans and purchases will help to not only bolster the vision for your space, but also make evaluation more effective.

Other goals may include introducing students to STEM concepts and providing opportunities for collaboration and creativity. If you can show how the program met those goals, then you can better evaluate your space's success. You can also demonstrate that you are meeting goals by showing how your makerspace helps support and fulfill your school's overall mission statement and its value proposition: providing a valuable experience for students and faculty alike.

Go Beyond Scores

Standardized test scores are the most apparent indicator of success, but they may never accurately capture how making affects student achievement. Making is more about the process—through design thinking, project-based learning and the development of 21st century skills—that helps to prepare students for life outside of the classroom. When you discuss the success of a program, don't simply report attendance numbers or academic achievements: discuss how the makerspace meets the unique needs of students.

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Digging Deeper

The Success Case Method (SCM) is an approach developed by Robert Brinkerhoff used to assess the impact of organizations and initiatives.

A SCM study can be used to answer questions such as:

• What results, if any, is the program helping to produce?

• What is the value of the results?

• How could the initiative be improved?

The Success Case Method involves: identifying the type of program being evaluated; surveying existing programs to identify success and challenges; interviewing success cases, and; creating recommendations based on common factors among the success cases.

Assessing Success

Walking around the space to see how students are actually using the tools and technologies is an obvious first step. In this way, you can see the creative ways students are using the resources you already have, and if new programs should be developed or if new tools should be purchased. There is also tremendous value to feedback and statistics to know what's working and what isn't.

One way to evaluate usage is to have a suggestion box and a daily form for staff to fill out, helping to keep track of statistics and other information. Comments, suggestions and observation can fuel future program ideas.

Taking photos of students using the space and the projects that they create is useful not only for evaluation but for publicity purposes. Keeping a daily count (or even hourly) of how many students utilize the makerspace per day can help determine success and when the space is used the most, which can also help with staffing needs. Keeping track of what students are doing in the space helps staff to develop new ideas for the future.

Feedback Frenzy

Soliciting feedback through a focus group or in-depth survey are other ways of gauging the success of a makerspace. Some questions to include in a focus group or survey would be:

"Would you consider your makerspace a success?"

"What are the goals of your makerspace?"

"How does the makerspace meet your original goals?

"How is the makerspace funded?"

"What disciplines— arts, science, etc.—make the most use of your makerspace?"

"Is your makerspace more focused on certain discipline-related projects?"

"Do classes frequently meet in your makerspace?"

"What technologies are housed within your makerspace?"

Other Considerations

Outcomes assessment methods usually deal with social outcomes of makerspace programs as well as indicators of success. Outcomes of social value show the intangible effects of a program,

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On a regular basis, perhaps every quarter, a report can be assembled highlighting statistics and student usage. This will help to convey the success or challenges to stakeholders who aren't as familiar with the program.

At the end of the day, you can compile this information into a vivid overview of programming success, giving stakeholders more than simple head counts. After all, programs aren't just about numbers; they are about the experience and about reaching a variety of evolving goals. By responding to those goals, you can better demonstrate how you're "making" success.

such as social inclusion, participation, community development, and individual student successes. Such assessments are usually based on both observation as well as solicited feedback through interviews, surveys, questionnaires, and focus groups.

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