

Propel Afterschool

Making Progress Visible Across Setting through Open Portfolios

Making Connections Strategy 8

Open Portfolios to Track STEM Learning and Progress Across Settings

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As young people learn across settings, including in-school, out-of-school, and online contexts, they can track their progress to make connections across learning environments through systems that help to surface and make this progress visible to different communities (Ito et al., 2020).

One way youth can make their progress in a variety of activities visible across settings is through an *open portfolio* system, defined as portfolios that are openly networked and curated and authored by the young person who made the work in the collection (Pepler et al., 2018). These open portfolios are often online and leverage new technologies to support the quick modification and openly social and networked aspects of



portfolio curation. One such tool that can support an open portfolio process is [Tallo](#), an online platform that connects young people with a range of future opportunities, including scholarships; college admissions; and jobs, internships, and apprenticeships in particular career pathways. Tallo offers young people a platform to showcase progress in a variety of areas while keeping all of their work in one place so they can begin connecting that work toward potential future academic, civic, and career-related opportunities.

For Propel Afterschool, curating and developing portfolios is an embedded part of their practice given their background as an organization founded with a strong arts emphasis. Historically, portfolios have been a tool for assessment to support designers and artists in tracking progress and showcasing their work for a particular purpose (e.g., applying for a job, submitting for college admissions, to build a collection of work). As a formative assessment (Paulson et al., 1991), portfolios showcase both process and products of learning, thus offering a distinctly different story of a learner's journey than a traditional standardized assessment measure might.

When we spoke to Deanna Dugan, the Assistant Director of Afterschool Programs with Propel Afterschool, she explained that they were in the “infancy stage” of attempting their strategy for making connections and had just started the process of introducing their students to open portfolios through Tallo. At the time of our interview in Fall of 2021, she counted about 6 students at Propel Afterschool who were using it, noting that “it hasn’t taken off yet.” Deanna said that with time, she hoped to make it something they were more deeply engaging with, explaining that at the moment it felt “like homework” to students, but she wanted it to become part of their practice, something they were doing more “on a regular basis,” “something natural.” To get those initial kids to participate, Deanna specifically sought them out to encourage them to use it and show how it might be a great place for them to keep track of all of their experiences and activities in which they were participating. For Deanna, the idea of open portfolios using Tallo holds great promise because it is “a place students could keep [their work] and say, ‘wow, I’ve done all that.’”

Supporting What Teachers and Youth “Find Magical” in STEM + the Arts

Propel Afterschool aims to support a variety of interrelated goals for the students it serves, including (a) extending support for their academic studies through homework help and tutoring; (b) supporting the whole child and promoting lifelong skills in different areas, including the arts and STEM, as well as healthy habits and social-emotional learning; (c) offering a variety of family engagement activities; and (d) connecting with community partners and advocates (Propel Schools, 2022). Within these goals, as a program, Propel Afterschool

centers youth interests and builds programming around what its participants are interested in, which often leads to a natural connection between STEM and the arts. In considering the role of interest, as well as a focus on STEM and the arts, Dr. Rosemary Anderson, the Director of Propel Afterschool Programs, described Propel's history as rooted in the arts and extending into STEM disciplines:

“When it began as [Propel Charter Schools] the emphasis was the arts so every child has art class every day, and they bring in artists from the area and that’s really the emphasis of the system. We’ve taken that with us to the afterschool program so we also offer art every day, not to every child, but we have what we call an artist that stays with_us for the year and *works with those kids year round*. And then we have a position called a resident artist. That person coordinates the arts activities and helps us to hire really good people. The arts are definitely very important here...[and] we have seen the relationship [between STEM and the arts] all along. A lot of our art lends itself into STEM. One of our artists made puppets and they were sewing and measuring so it’s a very natural combination.”

What Dr. Anderson described as “a very natural combination” between STEM and the arts comes to life through Propel Afterschool programming. Deanna explained, “*STEM and art really become one when you’re actually working on a project.*” In one project, students made miniature houses as part of their afterschool work. Deanna described students “attaching the lights” and “cutting up cardboard” as “all engineering,” integrated with arts practices. Propel Afterschool also engaged families in these “STEAM” activities such as through a family night where students and families made structures and reflected on the art and STEM involved in the making process.

Regardless of whether an activity is “more STEM” or “more arts” or a fusion of both, Dr. Anderson explained that they ask all afterschool providers to “bring whatever [they] love to do, whatever [they] can share with kids to get them excited.” This focus on bringing out *the magic* in learning is a driving mantra behind the work that Propel Afterschool does. Dr. Anderson elaborated in our interview:

“If they want to build catapults, they build catapults. They bring their energy, and I think that’s really true with all of our staff. We say to them, “*What is it that you find magical? What do you care about?*” And I think that’s the secret here.”

This emphasis on centering teachers’/providers’ interests, as well youths’, is central to how Propel Afterschool operates. Leaders like Deanna and Dr. Anderson are also crafty in finding ways to support those interests by bringing funding, partnerships, and other opportunities to help their program grow and become more innovative. As Deanna explained, even with funding for a particular project, “You can’t tell people what to do. You have to say, now how can we incorporate this into what you’re passionate about?” She explained that “a lot of this process [of changing teacher practice] is trial and error.”

This reality that you have to figure out how to incorporate new ideas into how a teacher or young person *already engages* in their programming is perhaps especially true when trying to support the adoption and adaptation of new practices and ways of working—take for example, using Tallo as a portfolio tool. In their research on youth motivations for making portfolios, Pepler and Keune (2019) uncovered three overarching themes related to these motivations, which included *recognition* across communities, *emulating* professional work, and *exploration* of media production. To motivate youth to contribute to and curate their own portfolios, as Deanna described in our interview, it can’t feel like homework to youth, it needs to be an embedded part of their practice and “built around student choice.” Additionally, one early success they found with the Tallo tasks was finding an incentive, to pay students for reviewing and entering their information on Tallo. She explained it was difficult to get students to see what an open portfolio tool like Tallo could bring them in the future (they want a more immediate impact). Helping them get into “a routine” of adding information to their portfolio is one way to support their use of Tallo.

How Propel Afterschool Prepared for Open Portfolios to Track STEM Learning and Progress Across Settings (in this case, using Tallo)

- Find ways to build portfolio tracking work into existing practices (i.e., it shouldn’t feel like

- homework, shouldn't feel like a burden)
- Incentivize youth in the here-and-now to support tracking progress (e.g., paying them to input work)
- Center interests of youth and teachers in all steps in the process of making progress visible
- "Tapping" students who would stand to benefit from tracking their own progress and achievement across sites for learning

About the Making Connections Project:

Fostering Connections and Pathways for Youth across STEM Learning Ecosystems

STEM Next and the Connected Learning Lab at UCI have partnered to support state and regional out of school networks as they develop and strengthen an ecological and connected approach to STEM learning. The case studies series represent real world examples that are part of a larger effort to develop and improve connection strategies that strengthen STEM learning ecosystems, centering the experiences, mobility, and futures of individual learners and their families across state and regional networks.

Each case study in this series takes a close look at a partner organization's approach to one of the eight strategies for connecting: 1) A wraparound approach; 2) Coordinating between in school and out of school; 3) Giving back to one's community; 4) Near peer or industry mentorship; 5) Translating youth interests in to STEM career opportunities; 6) Building relationships with families; 7) Curating online tools; or 8) Creating open portfolios. These case studies are not exhaustive; they are examples of coordinating and brokering that can be used to spark ideas and inspire growth.

For more information on the project and the strategies, visit <https://stemnext.org/stem-pathways> and connectedlearning.uci.edu/projects/making-connections/

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