

September 2015

Engaging Many Minds: Nurturing Collaboration in a STEAM Context

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Recommended Citation

Dzula, Mark (2015) "Engaging Many Minds: Nurturing Collaboration in a STEAM Context," *The STEAM Journal*: Vol. 2: Iss. 1, Article 12. DOI: 10.5642/steam.20150201.12
Available at: <http://scholarship.claremont.edu/steam/vol2/iss1/12>

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STEAM is a bi-annual journal published by the Claremont Colleges Library | ISSN 2327-2074 | <http://scholarship.claremont.edu/steam>

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Abstract

This field note describes a recent interdisciplinary project facilitated by Jeremy Gercke, an art teacher at the Bishop's School in La Jolla, California. The project creates ceramic tile markers for flora around the Bishop's School campus. The markers feature QR codes linking to websites populated with student content, including: drawings, information, and oral histories. In this project, Mr. Gercke synthesizes his interests as an artist; maximizes his social connections to mentors, peers and students; and bridges disciplines to create opportunities for interdisciplinary (STEAM) inquiry.

Author/Artist Bio

Mark Dzula is an artist, educator, and scholar; his work examines the educational implications of media and technology. Currently, Mark works at the Webb Schools as Director of Teaching and Learning Resources. He is an instructor at Teachers College, Columbia University and the University of San Diego.

Keywords

collaboration, oral history, observation, ceramics, artist in residence, colleague, mentor

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Many Minds: Nurturing Collaboration in a STEAM Context

Mark Dzula

The Bishop's School is a coeducational college preparatory independent day school located in La Jolla, California. The school is affiliated with the Episcopal Church and its 11-acre campus hosts students in grades 6-12. Elegant, spare buildings sit in distinction among an active, lush campus, one that boasts a more than hundred-year history. There is a lot you might miss on first glance.

Jeremy Gercke is a visual arts teacher at The Bishop's School who specializes in bringing attention to what typically hides in plain sight. He specializes in ceramics and recently led a campus-wide collaborative STEAM project. The project weaves botany, life science, social science, web design, and ceramics together in order to create an infrastructure that supports inquiry throughout the campus. In the project, students throughout the school collaborate with an Artist-in-Residence to create ceramic tile markers for flora around The Bishop's School. The markers feature QR codes linking to websites populated with student content, largely from 6th graders in the 2020 graduating class, including: drawings, scientific information, and oral histories.

For example, a QR code found on a ceramic marker near Calliandra Haematocephala brings one to the webpage for [Pink Powder Puff](#), featuring an image of the plant; scientific information including: the binomial name, description, distribution, and cultivation of the plant; as well as a recording of an oral history done by a student featuring Ms.

Catherine Michaud, an English and History teacher at the school.

Interestingly, while Ms. Michaud's narrative begins centered on the history of the plant, it soon circles to her own experience around the plant and the surrounding buildings. All of this information may otherwise go unnoticed by a typical passerby.



In order to make this visible and help students bring the project to fruition, Jeremy nurtured collaborations with many people. STEAM educators need to be able to promote collaboration in order to undertake significant interdisciplinary projects.

Luckily, Jeremy is no stranger to collaboration. As a practicing artist, his recent collaborative artwork called “Soil Blind” was featured in *The DNA of Creativity* at the Oceanside Museum of Art, an exhibition demonstrating the bond between artistic and scientific communities. In this project, Jeremy worked with artist Jonathan Austin and scientist Dr. David Lipson. They collected soil from the western edge of Barrio Logan in San Diego and housed it in a structure featuring over 100 ceramic modules. The artwork changes with the seasons and emphasizes what typically hides in plain view.



The Bishop’s School has an Endowed Scholar-in-Residence Program, designed to bring leaders in various fields to the school’s campus. Past Scholars include: mathematicians, scientists, journalists, authors, and playwrights. The program aims to inspire students and faculty alike. In 2012, Jeremy made a proposal to invite an *Artist-in-Residence* to campus. He proposed to work with his college mentor, Nicholas Kripal. Nicholas Kripal often works with installation art that responds to religious and sacred spaces. Jeremy pitched the residency project as a way to use art to bring greater awareness to the school’s history.

Jeremy built enthusiasm for the project by garnering support from the art department, as well as other departments and leaders around the campus, including the school’s chaplain. The plan was approved for the 2013-2014 school year. In the fall of 2013, Nicholas Kripal visited The Bishop’s School campus. A plan was developed to make sculptural art markers for the various flora around campus.



Each marker entails: a ceramic tile, the plant’s common and Latin name, its image, and a QR code that links to a website full of information, interviews, oral histories, and artwork about the plant. Students were charged with making the markers. They also performed interviews and did the research to populate the website with information.

In February 2014, Nicholas Kripal made a second campus visit, during which he directly interacted with students, gave chapel talks, and delivered a lecture about his work responding to sacred spaces.

In the meantime, Jeremy developed collaboration with Sara Ahmed, a History and Social Sciences teacher at The Bishop's School. To get a deeper sense of the plant life on campus, and cultivate information for the website, Sara's 6th grade students performed interviews with Betty Vale, the school's Master Gardener, as well as faculty and alumni. They also researched their plants to provide more information on the website referred to from the QR codes on the tiles. The oral history aspect of the project is significant because The Bishop's School Master Gardener is also recognized for her expertise outside of the bounds of school. In this way, Sara's students were challenged to interact with recognized experts to develop educational dialogues.

Why was Sarah a good collaborator? Sara is not afraid to incorporate technology into her pedagogical work. She enthusiastically experiments with the potential of digital technology in her classroom. For example, beyond the scope of her collaboration with Jeremy, her students also experimented with QR codes to elaborate on collage projects about Chinese culture.

What also helped nurture the collaboration? Sara and Jeremy work in the same advisory group for 6th grade students, so they have extra contact with each other throughout the year. Two prep periods a week with co-advisors: one for "kid talk" and one for pedagogy. Furthermore, Sara expressed admiration of Jeremy's artistry and faith in his ability to do creative and exciting work.

As of the fall of 2014, Jeremy has managed a two-year long collaboration involving students, teachers, administration, experts, artists, and The Bishop's School community. He is installing the tiles around campus, but is excited by the fact that he is creating an infrastructure for future learning and activity. During the 2014-2015 school year, a sophomore helped to add web-content. Although this project is wrapping up according to the metrics of Jeremy's initial proposal, the plants, markers, and website provide an open invitation to inquiry for students in the future.

