

Project Description and Work Plan

Innovation is the very essence of the American spirit, requiring a combination of effective inquiry, problem-solving skills, and creative thinking skills, mixed with the curiosity and perseverance for seeking viable solutions to problems. While all children have creative potential, often their innovative behaviors thrive and endure only if supported/nurtured. With today's emphasis in schools on rigid curricula, standards, and testing, it becomes increasingly more likely that students will develop a "good enough" mentality where they no longer stretch their imaginations, seek answers to questions that go beyond the curriculum, or allow themselves to explore perplexing issues that pique their curiosity (Small, 2014). Recent research found that young innovators (grades 4-8) perceive the role of the library/librarian as "marginal" in supporting their innovation activities, even though most participants had underdeveloped inquiry skills, depending on adult mentors (Small, 2014).

This two-year IMLS *National Leadership Project Grant: Learning Spaces in Libraries* proposal partners the lead agency from Syracuse University (learning and motivation experts/researchers), with By Kids For Kids, Bridge the Gap/Time2Invent, and the Connecticut Invention Convention (state-wide and national organizations that sponsor and support in- and out-of-school innovation programs and events for K-12 students). The team, together with the project's mentoring expert, Web developer, and 60 school librarians and students nationwide, will create and pilot through iterative testing a cohesive network of innovative, free, and accessible electronic resources called "The Innovation Destination," hosted on the award-winning, IMLS-funded *S.O.S. for Information Literacy* Web site. These resources support and expand librarians' capacity for transforming their libraries into creative spaces where kids are free to explore and experiment, understanding that failure isn't the end (Compton, 2014) and that stimulate the curiosity, interest and inquiry of *all* students, inspiring innovative activities and enabling participatory learning. *The Innovation Destination* will contain a variety of original, standards-based, STEM-integrated, vetted resources (gr. 4-8), including inclusive curricula, lesson plans, and learning activities, relevant Web links, pathfinders, learning games and media, research articles, and links to information about local, state and national events for young innovators. These resources will support the use of the site's centerpiece, *KidsClips*, a unique and *free* collection of hundreds of original and pre-existing video segments from interviews with successful young innovators. *KidsClips* will be modelled after *Prendismo*, Cornell's popular collection of video interviews with adult innovators. The project will also develop training for extending the number and ability of school librarians to serve students as *innovation mentors* nationwide.

The overall goals of the proposed project are to: (1) create a rich, multifaceted and innovative set of resources for librarians, teachers, parents and 4th-8th grade students to use to help facilitate and support students' perceptions of libraries as innovation spaces, places where *all* students (especially those who lack both resources at home and adult mentors) can go to (a) stimulate their curiosity and pursue their ideas, (b) learn essential inquiry skills for asking effective questions and adeptly searching for potential answers, (c) work collaboratively, and (d) create, test, and fully develop their innovative ideas, and (2) provide guidance and training to librarians who wish to effectively mentor and help students acquire the skills and attitudes necessary to successfully bring their innovative ideas to life. A Project Advisory Committee (PAC) of school librarians and representatives from the project's partnering organizations, as well as a KidsPAC of successful 4th-8th grade innovators, will advise the project team. Working together, the project team, partners and advisors will disseminate information about the project via a variety of print, electronic, media and social media channels, as well as through publications and presentations at professional conferences and meetings. Situating the proposed project within the popular and enduring (since 2005) *S.O.S. for Information Literacy* site, housed at Syracuse University's Center for Digital Literacy, ensures sustainability for both projects.

Relevance to Project Categories/Funding Priorities

This project directly addresses the *Learning Spaces in Libraries project category* and its 10 issues: *creating partnerships and communities of practice for practitioners across fields* (thru partnerships with innovation organizations/creating a community of practice of school librarians as innovation mentors); *supporting a cultural shift away from passive service models to proactive, anticipatory and engaged user service models* (*The Innovation Destination* site will be a major resource for librarians who wish to provide programs for young innovators); *designing, developing, testing, and sharing informal learning curricula* (thru *The Innovation*

Destination website and its *KidsClips* videos and other teaching/learning resources); *building STEM learning opportunities for at-risk youth* (including young innovators with disabilities as *KidsClips* role models); *building bridges to national learning standards or other formal curricula* (standards-based and STEM-integrated resources); *developing replicable models for community engagement, mentorship, and partnerships* (project partners organizations dedicated to supporting young innovators and strong train-the-trainer component on mentoring young innovators); *defining strategies to increase libraries' relationships and collaborations with education partners in other formal and/or informal settings* (builds on existing relationships between university faculty, innovation organizations, and school librarians); *increasing national and local awareness of library importance in informal learning conversations* (thru testing and dissemination plans); *using libraries to increase STEM literacies* (freely-accessible/unique STEM-related resources that foster STEM literacies); and *improving methodologies for measuring the impact of these service models* (testing methods for all resources).

Potential Impact

This project complements the current makerspaces movement by bringing together a team of University faculty (including Dr. Ruth Small as PI), innovation experts, school librarians, and computer scientists to create a unique network of innovative, diverse, and freely available resources, including a collection of video interviews with young innovators (modeled after Cornell's highly successful *Prendismo* collection of adult innovator interview video clips used by hundreds of colleges and businesses), intended to inform and inspire young students to think innovatively and use their information literacy skills creatively to put their ideas into action. While designed for school librarians, it also has the potential to engage the larger library and education community, including (1) youth services public librarians who want to create or enhance existing innovation spaces for young innovators within their libraries, (2) classroom teachers (particularly in STEM subjects) and home schoolers who wish to integrate this content into the curriculum, (3) parents who wish to use them to inspire innovation/support curiosity in their children, (4) innovation organizations (e.g., state invention conventions) for use with their thousands of young members nationwide, and (5) individual potential young innovators who use it as inspiration for their own innovative ideas and insight into the innovation process. Success potential for this project is very high because (1) will be hosted on a large-scale, existing, freely-accessible, and highly used (IMLS-funded) resource, *S.O.S. for Information Literacy* (2009 AASL Best Website for Teaching & Learning containing 1000+ standards-based, K-16 curriculum-integrated lesson plans and teaching ideas and The site has had more than 30,000 unique visitors use the site, post-funding). and (2) has a strong marketing/dissemination plan.

Projected Performance Goals and Outcomes

The project goals are: **Goal 1:** Librarians will recognize the need for motivating and supporting student innovation, libraries creating "innovation spaces," and themselves as "innovation mentors" through project participation; **Goal 2:** Librarians will incorporate and share the proposed project's network of resources; **Goal 3:** Librarians will demonstrate their ability to be *innovation mentors* for students in their schools; **Goal 4:** The school library profession will recognize the value of *The Innovation Destination* as a credible and useful educational resource; and **Goal 5:** Students will perceive the importance of libraries in supporting innovation and of librarians as innovation mentors. Assessments to determine if goals were met include surveys, observations, self-report measures, artifacts, reports, and documentation of project deliverables.

Estimated Budget: \$247,000

References: (1) Compton, E. (2014). *IMLS Convening on Learning Spaces in Libraries*.

http://www.ims.gov/assets/1/AssetManager/IMLSFocusNotes_SanFrancisco.pdf; (2) Small, R.V. (2014). The motivational and information needs of young innovators: Stimulating student creativity and inventive thinking. *School Library Research*, vol. 17. http://www.ala.org/aasl/sites/ala.org/aasl/files/content/aaslpubsandjournals/slr/vol17/SLR_MotivationalNeeds_V17.pdf; (3) *The Prendismo Collection*. <https://www.prendismo.com/about/prendismo.cfm>