



Special Session: A Discussion of Research Practice Partnerships in CS Education

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ABSTRACT

In the summer of 2017, the National Science Foundation funded a cohort of Research Practice Partnership (RPP) projects focused on expanding access to Computer Science Education in the United States. Funded as one of the RPP projects was the RPPforCS project, a collaboration between Sagefox Consulting and CSforAll. The project operates as a community of practice for the individual RPP projects, holding regular webinars, producing a newsletter, and curating a discussion forum on Slack. In this special session we propose a structured poster session specifically for the RPP projects funded by the NSF.

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1 OBJECTIVE

The SIGCSE conference covers a wide variety of topics related to Computer Science (CS) education. The National Science Foundation is a primary funder of much of the research conducted by the SIGCSE community and therefore an important influencer in the types of projects proposed and focal topics to be covered.

Research-Practice Partnerships are a relatively new research methodology, both in general education research and in CS education research and the SIGCSE community.[3] A Research-Practice Partnership (RPP) is a design-based implementation research [2] approach to address research questions or problems that arise in authentic practice settings. These settings could be formal or informal education settings (i.e., classrooms or out-of-school spaces).

As a new research methodology and as a priority for NSF, it is important for the SIGCSE community to learn about RPPs, see examples of RPPs in practice, and understand the data and analysis

that RPPs produce. To meet this goal, we propose a special session in the form of a structured poster session to enable the 23 funded projects participating in the RPPforCS project to display posters about their design, execution, and early results after year 1.

A structured poster session would represent a new type of session for SIGCSE, although they are common at the American Education Research Association (AERA) annual meeting. Structured poster sessions are organized around a specific topic or theme and, in addition to typical poster presentations, include a discussion with a moderator and discussant who reflect at the end of the session and encourage attendee discussion. The structured poster session format will enable the SIGCSE community to identify posters specifically focused on the topic of RPPs, engage in a broader discussion around RPPs, and grow the community knowledge base for a NSF multi-year funded program. [1]

2 ABOUT RPPFORCS

The RPPforCS project is a National Science Foundation funded collaboration between SageFox Consulting and CSforALL to build the capacity of NSF funded CSforALL:Research-Practice Partnership[1] evaluators and researchers to study, understand, and report on the project efforts and to establish a participant-driven multi-site research agenda for the NSF CSforALL:RPP program. The project uses a connected community of practice in order to promote dissemination and provide formative feedback to projects and the broader community of CS education research practice partnerships.

The project was started in 2017, coincident with the funding of the first cohort of NSF awardees, and has made efforts to connect the community of project teams through online communication channels, webinars, and in person meetings. Additionally, the project convenes a researcher and evaluator working group to discuss the potential for shared measures used across projects.

3 SESSION OUTLINE

A structured poster session includes three components. First, the session moderator introduces the session and gives each presenter 15-30 seconds to introduce their poster's title and general theme. Second, attendees visit the posters that are of interest to them. Third, the moderator reconvenes the group to the central presentation and introduces the discussant who facilitates a conversation relevant to the theme of the session and informed by the posters.

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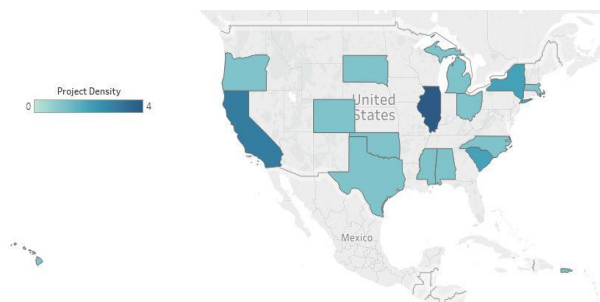


Figure 1: Map of RPPforCS Participating Projects

The posters will be representative of the projects funded by the NSF CSforALL:RPP[1] program. Due to the large number of projects (24) there is not space in this proposal to include a description of the data and results from all projects. The projects span small, medium, and large awards as defined by the NSF, and represent a national geographic spread of projects. Figure 1 shows the geographic distribution of the projects in the RPPforCS community.

For this special session, we propose the following session outline:

- Introduction (10 minutes, Joshua Elder): Joshua Elder from CSforALL and the RPPforCS project will introduce the RPPforCS project and facilitate the individual poster introductions from presentation leads.
- Poster Presentations (45 minutes, Individual Project Leads): Individual projects will present posters in an open format. Attendees are free to walk from poster to poster and speak with the presenters.
- Discussion (20 minutes, Leigh Ann DeLyser): Leigh Ann DeLyser from CSforALL and RPPforCS will offer a brief synthesizing summary of the posters and facilitate a discussion of the posters, theme of the session, and implications for the SIGCSE community.

4 EXPECTATIONS

SIGCSE attendees in the session will be expected to (1) visit individual posters and attend to the materials presented, and (2) participate in a discussion of RPPs and implications for the SIGCSE community. Because the session will reflect the landscape of funded RPP projects from the National Science Foundation [1], it will be geared toward CS education implementation in K-12 schools in the United States.

Poster presenters will be expected to prepare a poster related to their NSF funded CSforALL:RPP project. Posters will need to contain both a description of the Research Practice Partnership as well as data from the first year of implementation of the project. Poster presenters will be prepared to discuss both the methods and research design of the project as well as the data presented.

5 BENEFIT TO THE SIGCSE COMMUNITY

The session has a twofold benefit for the SIGCSE community. First, the ability to attend a session with a large number (potentially 24) of examples of a new research methodology is of general benefit to all researchers interested in current and relevant education research. Second, because Research-Practice Partnerships are currently a key NSF priority, the CS education community can benefit from a discussion of the design and implementation experiences of these funded projects.

REFERENCES

- [1] Computer science for all (csforall:rpp) researcher practitioner partnerships.
- [2] T. Anderson and J. Shattuck. Design-based research: A decade of progress in education research? *Educational researcher*, 41(1):16–25, 2012.
- [3] C. E. Coburn, W. R. Penuel, and K. E. Geil. Practice partnerships: A strategy for leveraging research for educational improvement in school districts. *William T. Grant Foundation*, 2013.