

# The Collablify Research Platform: A Research Tool for Studying Synchronous Collaboration in the Classroom

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## Abstract

This SIE is aimed at members of the iSchool community who are interested in studying synchronous collaboration in and out of the classroom. The attendees will develop an understanding of how the Collablify Research Platform (CRP) is instrumented to provide real-time data – learning analytics - on students engaging in synchronous collaboration while they are using the Collablify suite “collabrifed” apps (Collablify Writer, Map, KWL, Flipbook, Chart Attendees then can use the device-agnostic, open-source, CRP to support their research into synchronous collaboration. To better anchor this SIE in the iSchool community, before the conference, attendees can submit to Norris/Soloway “hypothetical scenarios” – use cases of synchronous collaboration (see form at: <http://tinyurl.com/gsuy8bt>) - that are illustrative of the attendees’ R&D efforts. At the SIE, then, attendees (in small groups) will discuss how the CRP can be used to support the research represented in the attendees’ hypothetical scenarios.

**Keywords:** Synchronous collaboration; Learning analytics; Research tools

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## 1 Introduction

This SIE is aimed at members of the iSchool community who are interested in studying synchronous collaboration in the classroom. Our intent is to make available to the iSchool community the Collablify Research Platform, a device-agnostic, open-source platform that we have developed in order to support our research into synchronous collaboration in K-12. The CRP consists of (1) a suite of “collabrifed” apps – apps that support two or more students working together, in real-time, co-located or not, (2) apps that support teachers and students using the collabrifed apps in concert with other digital curricula, and (3) a set of apps that gather and display the learning analytics that are generated as the students use the collabrifed apps.

The collabrifed apps are: Collablify Writer (multimedia authoring app), Collablify Map (multimedia concept mapping app), Collablify KWL (supports the KWL chart learning strategy), Collablify Flipbook (drawing and animating), Chart (spreadsheet and simply numeric graphing). The apps supporting the classroom use of the above apps along with digital curricula are: LessonBuilder (used to create a digital lesson), LessonLauncher (used by students to enact a digital lesson), Dashboard (used by a teacher to distribute a lesson, monitor enactment, and review artifacts post-enactment). And finally, the Learning Analytics module for gathering and displaying the data generated by the teacher and his/her students during a lesson.

In order to anchor the conversation in the iSchool community, we propose to ask attendees to submit short “hypothetical scenarios” – use cases – that are representative of the R&D efforts of the attendees. A form has been posted at: <http://tinyurl.com/gsuy8bt> that we will ask attendees to fill out with the hypothetical scenario. At the SIE we will use those attendee-submitted hypothetical scenarios to drive the conversation at the event. In particular, the goal will be to explore the CRP can provide support for the attendees’ research efforts. Of course, an individual can attend the SIE but not submit a hypothetical scenario.

## 2 Workshop Activities

In our proposed 90 minute SIE session, we plan the following activities:

- 10 Minutes: Overview of Collabrify Research Platform
  - Intended goals of the CRP
  - Examples of CRP in action (e.g., show learning analytics gathered during a session using Collabrify Map, a collabrified, concept mapping app).
- 20 Minutes: Hands-on with Collabrify Map
  - In collaborative groups, attendees will create a concept map while the real-time learning analytics are being recorded and displayed.
- 10 Minutes: Detailed Description of Functionality in CRP
  - With a general overview and a personal experience under their belts, the attendees are now in a position to hear about (1) the apps in the Collabrify suite, (2) the tools used by teachers to manage the apps (e.g., distribute a collabrified lesson to the students), and (3) the tools for gathering and displaying the learning analytics.
- 5 Minutes: Question and Answers Session
  - While we will take questions, of course, anytime, we will reserve 10 minutes for back-and-forth Q&A concerning CRP
- 30 Minutes: Hypothetical Scenarios – Drawn from Attendee Submissions
  - During this time, we will use the Hypothetical Scenarios submitted by the Attendees. We will break down into small groups, each group will consider a Hypothetical Scenario submitted by an attendee. The groups will work through how the CRP can usefully address the scenario. The groups will note functionality that is missing from the CRP that is needed in order to effectively address the group’s hypothetical scenario.
- 10 Minutes: Reporting Out
  - Each group will report out about their findings – how can the CRP address the particular hypothetical scenario that was explored.
  - Missing functionality: During the reporting out, we will discuss what functionality is still needed, and how that missing functionality can be added, e.g., perhaps the attendees are willing to add their effort to making the CRP a better tool.
- 5 Minutes: Wrap Up and Next Steps
  - Logistics: how can attendees actually get access to and use the CRP for their research needs
  - Next Steps: If there is sufficient interest in using the CRP, we need to talk about how we will organize ourselves as a group, meet virtually, and create a “CRP community of practice.”

## 3 Relevance to the iConference and Significance to the Field

Synchronous collaboration is a fundamental human activity and has been studied by many members of the iSchool community (e.g., see references for examples). Current research methods, however, have their limitations. For example videoing two or more individuals working together to solve a physics problem will capture conversation and actions by the participants. The CRP enables researchers to go one level – one major level – deeper: if the subjects are using CRP apps then the micro-actions, e.g., time-stamped, keystrokes, of those subjects can be recorded – in addition to capturing on video, the conversation. The data from those recordings can be displayed in real-time or after the collaboration session.

Software has a “funny” property: as it is “soft” it can be sometimes be used for a multiplicity of use cases. That is, we have built the CRP in order to study project-based teaching and learning in 3<sup>rd</sup> and 4<sup>th</sup> grade science. However, we feel that the software’s functionality is such that those outside of science, and outside of 3<sup>rd</sup> and 4<sup>th</sup> grade, and outside of project-based learning, may well find the CRP useful for their specific study of synchronous collaboration. We will, in effect, be testing this “generality hypothesis” at the SIE as attendees, as a formal part (50%) of the event (see outline), will be actively exploring how the CRP can used in their research.

#### 4 References

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