GroupStart:
Incorporating Group Projects into MOOCs

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Abstract
Massive Open Online Courses (MOOCs) give students free access to high quality, educational content on a global scale. They provide an online learning environment where diverse groups of students can satisfy their academic interests. However, most MOOCs rely on individual activities, which means collaborative activities such as group projects are difficult to implement. Many challenges exist in designing a MOOC group project such as establishing group accountability, accounting for high attrition rates, and allowing for the vast diversity of MOOC students. While many effective group communication and task management systems currently exist, few software platforms focus on online group projects. We introduce GroupStart; an experimental web application that seeks to facilitate the formation of groups as well as the establishment of familiarity among group members in a MOOC group project. We implement different group formation algorithms to test levels of homogeneity and heterogeneity within groups based on different attributes. In an effort to establish familiarity among group members, we provide a platform for students to create a shared document to establish their group purpose, goals, and communication methods. We will use GroupStart to test different mechanisms for establishing group accountability in the early stages of online group work.

Massive Open Online Course

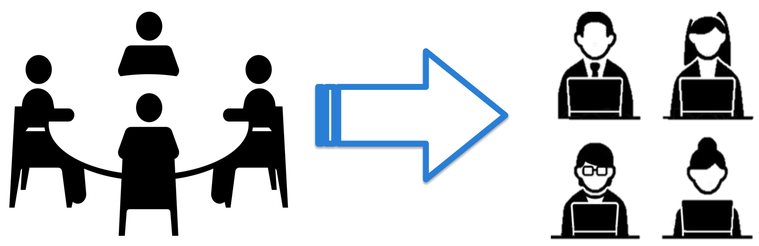
Providers
Coursera, edX, Udacity

Challenges
- High enrollment rate[1]
- High attrition rate[2]
- Diversity of Students[3]

Lack of Collaboration

- As MOOCs have grown more popular, collaborative work has proven difficult to implement[4].
- Group projects help students develop skills critical to life in the professional world[5].
- Very few MOOCs include group projects.

Group Projects

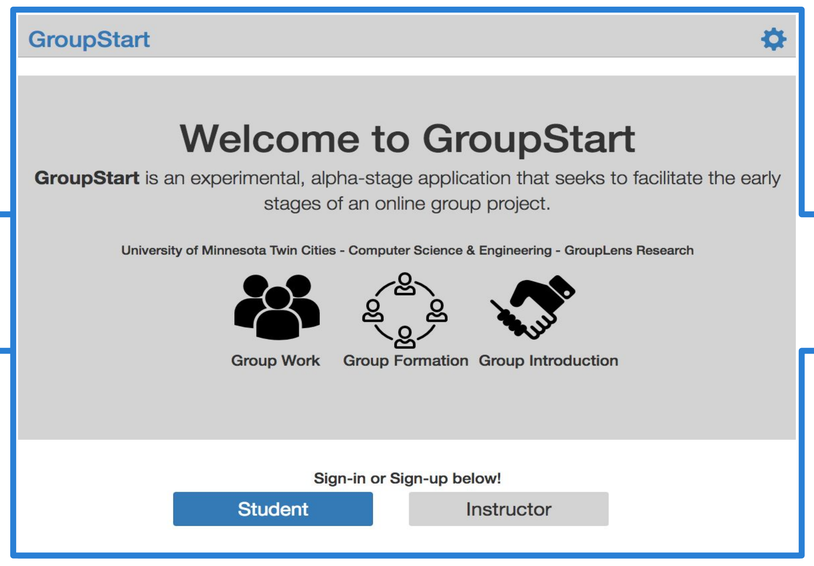


Group projects are effective in an offline classroom setting as group members are kept accountable through face-to-face interactions. When transferred to an online classroom setting, that accountability is lost.

We introduce GroupStart!

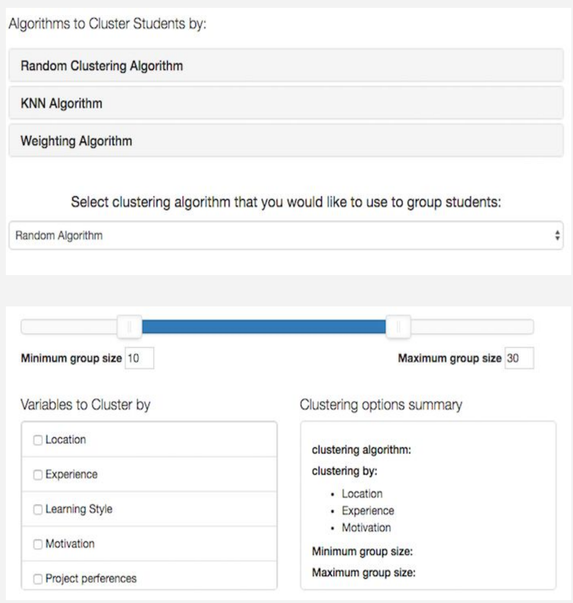
GroupStart facilitates online group projects while serving as a complement to MOOC providers.

Serves as a project management system for students.



Gives instructors the capability to conduct research experiments while teaching a MOOC.

Group Formation



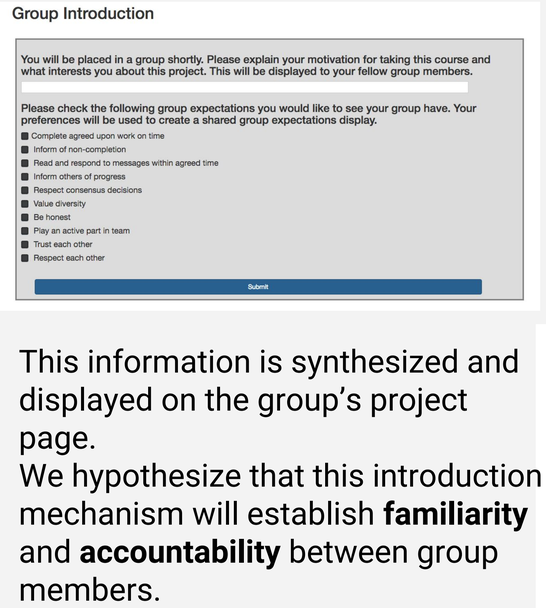
Different algorithms to test different levels of **homogeneity** and **heterogeneity** within groups[3].

Instructors can choose which **variables** will be used to form groups.

Implementation of **group size range** to allow instructors to test best way to account for high attrition rate.

Random Algorithm serves as an experimental control.

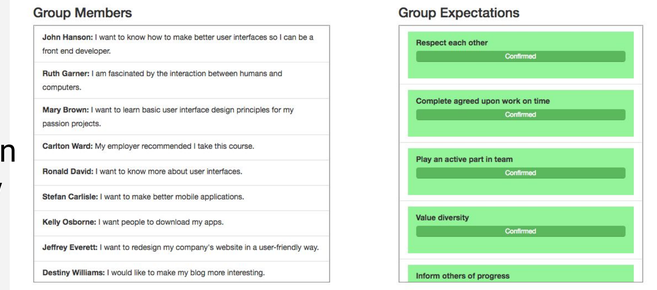
Group Introduction



Our **group introduction mechanism** is based on an existing system for setting ground rules in classroom team projects[6].

Students fill out their **motivation** for taking the course and the **group expectations** they would like their group to have before being assigned to a project group.

This information is synthesized and displayed on the group's project page.
We hypothesize that this introduction mechanism will establish **familiarity** and **accountability** between group members.



Future Work

- Use GroupStart to facilitate an online group project for a MOOC taught by GroupLens faculty. Test different group formation and group introduction mechanisms.
- Expand group introduction mechanism to allow for the automatic creation of a group charter.
- Implement and test new group forming algorithms.
- Add and test mechanisms to account for student dropouts.

References

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