Building Student Community in a Virtual Classroom
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Introduction
As a result of the COVID-19 pandemic, undergraduate students were quickly thrust into a world of isolation. As daily routines of going to class and socializing with friends shifted to online classes and long periods of self-isolation, the usual dynamics of the undergraduate community completely changed. Almost overnight, students could only see their peers through a computer screen and as a result many students lost the familiar feeling of community or a sense of belonging among their academic peer groups. My own experience with feeling a lack of community in my online classes inspired this research project on determining the factors that facilitate student community.

Research Question
The aim of this study was to develop a working theory of strategies or change ideas that contribute to students’ sense of community in online classes.

Methodology
Paradigm: This study draws on improvement science as a paradigm for problem-solving and testing ideas for organizational change. Improvement science aims to define problems from a user-centric perspective and leverage data and disciplined inquiry to reveal systemic causes that contribute to the problem and could be targeted for change. In this study, I focused on the improvement science principle of “seeing the system.” Through a wider lens that examines the system as a whole, we can see the problem of student community as a complex system in which various factors interact and are highly interconnected [1].

Data Collection: I used the 2-2-1 scanning strategy to collect data for my research aim. The 2-2-1 scanning process is designed to inform improvement teams on the academic and practical knowledge pertaining to their research topic. The strategy involves reading 2 scholarly articles, interviewing 2 insider informants, and interviewing 1 external expert. By the end of the research period [2], the team should be able to articulate widely held assumptions and identify significant remaining questions.

Table A summarizes my data collection. I sampled interview participants from a sample of students and faculty to see if my initial results are generalizable to other contexts. I conducted 12 one-on-one interviews with participants who provided information for each course in my sample [3]. I incorporated further findings from the literature and outside experts to explain similarities and differences across courses and to include my Driver Diagram. For the case memos, I answered the following analytical questions [4]:

- What is the central focus of the case?
- What is the problem or issue of the case?
- What are the primary drivers and secondary drivers of the case?
- What factors in the class environment might be contributing to students’ sense of (or lack of) community?

Table A
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<tr>
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<th>Inside Informants</th>
<th>Outside Informants</th>
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<tbody>
<tr>
<td>- 6 articles from experts in the field of education (Student community, online classes, strategies for engagement)</td>
<td>- 8 students from 3 classes</td>
<td>- 1 expert on cultivating community in online classrooms</td>
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<td></td>
<td>- 2 faculty members</td>
<td>- 1 expert on social emotions in learning</td>
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Primary Drivers: The team was able to articulate widely held assumptions about what contributes to a sense of community in online classes.

Student Motivation: Students recognize the need for community and put forth effort to create one with their peers.

Faculty Practice: Faculty support and assist their students in the creation of community in their classes.

Classroom Environment: The class environment provides the optimal time and space for the creation of student community.

Secondary Drivers: I included secondary drivers that I identified as highly interconnected and explanatory of the primary drivers.

Data Analysis: I synthesized my findings from the interviews and course syllabi. I wrote case memos with information for each course in my sample [3]. I incorporated further findings from the literature and outside experts to explain similarities and differences across courses and to include my Driver Diagram. For the case memos, I answered the following analytical questions [4]:

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Discuss
This research project has made it clear that despite student and faculty desires to create a strong sense of community, there is still room for improvement with the methods in which students, faculty, and the online class environment work cohesively to accomplish that goal. My driver diagram shows how the problem of student community is highly complex and how the primary drivers are all interconnected. If I were to continue with this project using improvement science, I would next survey a wider sample of students and faculty to see if my initial results are generalizable to a wider sample of undergraduate classes. Then an improvement team could work with faculty and students to clearly define, implement, and test a specific change idea into classes; ideally one that targets and coordinates all three primary drivers as shown in my driver diagram and can be tailored to the specific context of faculty and students.

Main Findings
- Students are not to blame: Although student motivation for fostering community may play a role in building community, they are not the sole reason for this problem. Faculty practices and the environment are also responsible for fostering community.
- Faculty must be intentional in setting expectations for collaboration: From the beginning of the semester and the beginning of every class, faculty can create the time for student connection and set norms for communication and sharing.
- Drivers are highly interconnected: As seen with the connections between change ideas and secondary drivers, all drivers need to work together and be aligned to foster community in online classes. It is unlikely that making a singular or isolated change in domains of student motivation, faculty practice, or classroom environment would improve students’ sense of community in online classes.

References