Background

Literature on STEM education has consistently shown that peer mentors in the classroom have contributed to the success of students, especially in minority groups. However, why peer mentors are beneficial and how they help the students has yet to be examined. Our study is interested in examining what contributes to the beneficial relationship of having peer mentors in the classroom. We specifically examined a case with a large first-year STEM seminar course, Integrated Sciences 100: Exploring Biology, that implements eight peer leaders across its two sections of approximately 100 students each. This study was conducted using surveys across the fall semester. In the spring, focus groups were conducted with the students in the course, as well as the peer leaders, to understand the complexities of this relationship and its benefits. Our overall goal was to ask the students questions about why they find having a peer mentor in the classroom beneficial. Preliminary data does indeed suggest that peer mentors are beneficial, and plan to use this as a pilot for more extensive studies to solidify our claim in the near future.

Process of Becoming an Exploring Biology Peer Leader

Peer Leaders act as mentors, role models and a point of connection to the larger university community for the first year students, helping ease their transition to UW-Madison. This is important because being a biological science major is overwhelming for an undergraduate—can study “biological science” over 30+ majors in six different colleges at UW-Madison. These students also typically don’t take a biology class until their second year. Therefore, Exploring Biology was created in order for students to have a better idea of all that UW-Madison has to offer for a student interested in the biological sciences, as well as examine different topics within the field while learning the five core concepts of biology. Below outlines the process of being an Exploring Biology Peer Leader.

Goals of the Project

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<thead>
<tr>
<th>Goals</th>
<th>Assessments</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Exploring Biology students will develop a strong relationship with Peer Leaders</td>
<td>Basic Psychological Needs Scale (Peer Leader relationship Survey)</td>
<td>Peer Leader Support (PLS) Chats (topics ranged from instructional/academic, campus involvement to soft skills), in-class interactions, PLS hours (w/ semi-structured mentor scripts)</td>
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<td>Exploring Biology students will describe how they value their Peer Leaders and their relationship</td>
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<td>Exploring Biology students will reflect on the value of PLS and how they would be valuable to others</td>
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<td>Exploring Biology students will describe the skills Peer Leaders help with</td>
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<td>Exploring Biology students will assess the strengths of having Peer Leaders in the Classroom</td>
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<td>Peer Leaders will reflect and evaluate their training with IMPaCT</td>
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Project Timeline

- **Week 4**: Exploring Biology peer leaders are selected through an application process (Fall)
- **Week 9**: Exploring Discipline Based Leadership and Mentoring (Spring or Summer)
- **Week 14**: Mentoring Evaluation Surveys

Spring 2018: Focus Groups

Semester was comprised of 14 weeks plus a finals week. Our survey was sent at each of the following weeks outlined above.

Results

**Students Value Peer Leaders**

- When students were asked to describe their relationship with their PL, most described it as a mentor-mentee relationship, followed by a teacher-student relationship or an acquaintance
- Students reported using their peer leaders effectively by asking them questions, whether about the course or UW/campus-related advice
- If students reported that they were not using their peer leaders effectively, they said they should ask more questions, go to their office hours or use more the resources the peer leaders provided them in their peer leader support chats at the beginning of class
- Students report a variety of skills gained from peer leaders:
  - **My Peer Leader Helps Me Gain a Better Sense of How to Become Involved at UW-Madison**
  - **Ways to Improve Peer Leaders in the Course**
    - In focus groups we found that positive experience with peer leaders was correlated with their notion of what a peer leader was. If the student felt they were supposed to be an instructor, this led to a decrease in satisfaction. When students described the peer leader as an advisor, the experience was more positive. Similar results were seen in the surveys. Therefore, we would suggest clarifying the role of the peer leader at the start of the course.
    - Students felt that the communication could be improved between the peer leaders and the teaching staff so everyone understands the lesson plan.

Acknowledgements

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