Cultivating community for first year students: Experiences in adapting a peer mentoring program to remote format.

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Abstract
This full paper describes the transition of a makerspace peer mentoring program into a student engagement liaison program in an effort to support student connection and community building during the pandemic. Creating community for first year students is an essential component to developing a strong sense of belonging. Whether or not students feel as though they belong is closely linked to their likelihood of success. Remote learning and social distancing have made it more challenging for students to develop connections with one another which has led to challenges fostering belonging. The pandemic has required educators to come up with new strategies to cultivate student connections and enhance student engagement. With a focus on connecting students across engineering disciplines and academic levels, the Engineering and Design Department at Western Washington University adapted an existing peer mentoring program to enhance student engagement and build social networks for first year engineering students. This paper includes a discussion of the evolution from an on-campus, makerspace centered, peer mentoring program to an online, student engagement liaison program. Of particular interest is how the remote version of the program has provided new ways for students to connect virtually and has allowed first year students to develop relationships with upper-division students despite the physical disconnection that has occurred as a result of the pandemic. The authors share their insights and reflections on the process of adapting to online mentoring and summarize the challenges and opportunities of exploring new ways of connecting students. The new program will continue to be developed and modified as the department begins to resume in-person operations and adapts to the changing needs and expectations of incoming students.

Introduction
In March 2020, academic institutions all over the globe were forced to close classrooms and student gathering spaces, temporarily suspend programs, and move teaching and learning online, leading to significant challenges to the higher education community [1]. This sudden shift left faculty and students scrambling as they adjusted to new ways of teaching, learning, and communicating online. Programs designed to support peer to peer connection became increasingly important as students grabbled with being disconnected from one another. For many, this disconnection and social isolation negatively impacted their mental wellbeing and academic progress [2] [3]. For existing programs designed to support student connection and engagement, operating in a socially distant, remote format made it challenging to meet their goals. The authors summarize their experience with adapting a makerspace peer mentoring program with a focus on the successes and challenges they experienced during the process.

Background
This project takes place at Western Washington University (WWU), a public master's-granting institution with approximately 15,000 full-time undergraduate students and 160 academic programs. The mentoring program was a new effort in the department that resulted from the desire to improve student sense of belonging for engineering and design students. The Engineering & Design Department (ENGD) offers four undergraduate-only programs: Electrical

Engineering (EE), Manufacturing Engineering (MFGE), Plastics & Composites Engineering (PCE), and Industrial Design (ID). Students who are interested in majoring in Engineering at WWU must formally apply to a program after completing a series of prerequisite courses. Prior to being accepted into a program, students are considered pre-majors. Recent institutional data indicates that the number of non-dominate students in WWU ENGD programs is far below the national average and, in some cases, has declined over the past 4 years. These trends have been a focal point for recent departmental efforts related to improving equity and inclusion which has included development of programming focused on student engagement and sense of belonging. There are approximately 250 - 350 premajor students and 300 major level students enrolled in ENGD programs (actual numbers vary by quarter due to variations in student designation as pre-majors and major admissions deadlines).

Sense of belonging generally relates to self-perceptions of fit within a given context and has been well established as a theoretical construct throughout the literature [4] [5]. The context in question can be formal, such as an educational setting or STEM discipline, or informal, such as friendships or affinity groups. The positive impacts of a strong sense of belonging on academic achievement and persistence in STEM majors are well documented [6] [7] [8]. When students interact in positive ways with diverse peers, sense of belonging improves [9]. The term student engagement refers to the extent to which students invest, value and participate in their educational experience in a meaningful way [10] [11]. The positive outcomes associated with student engagement include increased student achievement, decreased dropout rates, and more positive emotional experiences [12].

Peer mentoring, defined as "a form of peer education where students serve as role models to fellow students and provide them with support and guidance" ([13], p.56), is an example of a common way to increase student engagement. There are many benefits to peer mentoring including improved student retention for students of color [14], increase in academic performance [15], improved communication skills, development of maturity and compassion, increased sense of responsibility [16], appreciation for diversity [17], and the development of sense of belonging [18].

The Makerspace Peer Mentor Program
The goal of WWU makerspace peer mentoring program was to create a positive and engaged community for students within the makerspace. The role of the peer mentor was to serve as a coach and resource for engineering and design students with a focus on building community and connections between students. In Fall of 2019, two peer mentors were hired with the primary goal of coordinating and conducting social activities for pre-major students. During Winter 2020, the peer mentors conducted a series of workshops, held open houses, and organized a small, ongoing project designed to increase student engagement. The intent was to keep moving forward with the peer mentor program when the makerspace closed in the spring due to the pandemic however, it was necessary to change course as the support structure no longer met the needs of the students working/learning online.

The Student Engagement Liaison Program
In Fall 2020, a student engagement liaison program was created to support student engagement and connection during the pandemic. This program replaced the makerspace peer mentoring program since the makerspace had been closed. Two student engagement liaisons (SEL's) were hired with the goal of creating a positive, supportive and engaged student community. The SEL's have designed, developed and conducted social activities for engineering and design students. This has included creating a Discord channel, connecting students via social media, hosting collaborative gaming nights, coordinating Zoom-based social meetups, and facilitating a focus group for non-dominate students. It is important to note that the overall goals of the peer mentoring and SEL program were the same: creating connections and building community for students.

Results & Discussion

Summary of Activities
Zoom Q&A Sessions: During fall quarter, the SEL team focused on connecting pre-majors to major level students by hosting a series of "Casual Q&A's" for each program. During these hour-long sessions hosted and facilitated by the SEL, 2-3 major-level student volunteers answered questions of audience which consisted primarily of pre-major students. The sessions were open to all pre-major students in the department and were advertised using social media. There was an average of 15 students at each session which was low considering there were approximately 250 premajor students enrolled in engineering and design at this time. Considering the sessions were held in the evening using Zoom during a time when many students were experiencing Zoom fatigue, they SEL team was encouraged by the attendance. However, the SEL team realized that there was a need to connect students in other ways that did not require them to attend a live session.
Social Media: In winter quarter, the SEL team focused on creating a Discord server (a free social media platform historically used for gaming that allows for regular online communication using chat, video, text) for all students in the department. The purpose of this online space was to connect students to their peers in way that being on campus would have in pre-pandemic times with emphasis on informal connections. The Discord server was also created with the intention of introducing pre-majors to major level students in hopes of fostering mentoring relationships. The server is currently used actively by 154 students for a variety of activities such as planning social events, providing peer advice, informal conversation, and developing peer collaborations. At the same time the Discord server was created, the SEL's began using other social media platforms (primarily Instagram and Facebook) to feature students, staff and faculty in the department. To do so, the SEL would highlight one student, alumni, staff, or faculty member each week on the Engineering and Design department's Instagram and Facebook page. The post, called "Feature Friday," included a series of photos that highlighted academic and personal accomplishments and activities of the person being featured. The SEL's also used the department social media to share and promote events hosted by the department and associated student organizations. The department Instagram page saw a steady increase in engagement and the number of followers doubled over the course of the year.
Focus Groups: During spring quarter, the SEL team organized and facilitated a focus group in response to student request with the goal of gaining insight to the non-dominant experience in

the engineering disciplines. The first focus group aimed to learn about the non-male experience with the goal of finding ways to better support non-male students (note: results of this focus group not yet available). The SEL's plan to continue this effort in the future. Future focus group topics will depend upon the results of the first round of focus groups as well as on student interest and involvement.

<u>Other:</u> Throughout the year, the SEL's also hosted a series of online movie and game nights for students in the department. Both Zoom and Discord platforms were used to host movies and engage students in collaborative gaming.

Successes

There are many successes that this shift from a peer mentoring program to the student engagement liaison program has allowed. First and foremost, it has provided continued opportunities for students to create connections during a time of remote learning and social distancing. Shifting focus from a more traditional peer mentor program to the SEL program created an opportunity to develop creative solutions that extend beyond what is typical work for a peer mentor. The SEL team decided to focus on creating a virtual space where students could develop friendships and share resources amidst the pandemic. This creation of space would mimic the informal spaces students use to connect during in-person instruction including hallways, computer labs, makerspaces, and student lounges. With a focus on creating authentic connections between students, emphasis was placed on creating spaces solely for students, which often meant limiting faculty/staff oversight and participation. Discord and Instagram provided the opportunity for students to learn about other classmates and campus resources while Zoom events, such as Q/A sessions and movie nights, created bonds between students. The focus groups allowed students to share more challenging aspects of their experiences and have built momentum for positive change in the department. The creation of the focus group has been especially powerful as it has provided a venue for students to share their authentic experiences and articulate goals associated with creating a more inclusive and equitable experience for students. Previously, there were very limited ways in which non-dominate students could connect and share experiences with one another.

Discord has been especially powerful in creating connections between students and providing the opportunity for casual conversations to occur where students share resources, ask questions of one another, provide recommendations, and chat informally. The SEL's setup channels and have encouraged conversations initiated by students, both at the pre-major and major level. For example, the SEL team provided organized spaces where students can converse with specific majors such as "talk-to-PCE-majors". In those spaces, pre-majors and non-PCE majors were able to ask questions or talk to the PCE majors. This built strong connections between the pre-major and major level students while allowing students to learn more about the PCE program. Building connections between pre-major and major level students is something that is challenging to do during non-pandemic times since they don't take classes together or access the same learning spaces. Thus, the SEL team feels like this is a major success of the program.

When the SEL team first began posting to Instagram, the follower numbers were in the 100s. After the SEL team started implementing new interactive weekly posts, the follower numbers increased past 400 within two quarters. By engaging Instagram student takeovers, sharing

student/faculty highlights, and creating a series of posts that shed light into the student life in the department, the online engagement on Instagram has dramatically increased.

Challenges
The main challenge faced by the SEL team was maintaining steady engagement from students over the course of the year. Every program in WWU's Engineering and Design Department is academically demanding and both social and academic burn out is not uncommon. With the move to virtual learning, academic life has blended more with students' personal lives leading to a higher likelihood of burnout. There were two noticeable trends: decreased engagement at the end of the quarter and decreased engagement at the end of the academic year. The SEL's believe this noticeable drop in student participation in online socializing outside of class was largely due to general burnout, increase in course related assignments, and Zoom fatigue. Further indicating burn-out the SEL team noted that discussions in student spaces included comments such as "I am perpetually tired," "I need a break," and "I cannot wait to be back in person."

Less significant challenges included limitations of the virtual format which often resulted in reduced ability to reach students, especially those who choose not to engage in social media. Virtual social events are not as effective and interpersonal connections are harder to nurture than when in a face-to face setting. Another limiting aspect of the virtual format is discussion often feels forced and most activities are focused on one or two individuals. This could be mitigated by better use of breakout groups and more structured online activities.

The pandemic has required hard work and dedication on the part of the SEL team. They have learned that building community and authentic connections between students during a pandemic is challenging work. In addition, the SEL team noticed trends of decreased engagement and increased challenges as the pandemic has continued. The team is committed to continuing their work and strives to foster community and build relationships for all engineering and design students.

Conclusions & Future Work

The SEL program will continue to be modified and adjusted as the needs of students change and in person learning resumes. Although there were many challenges along the way, the SEL team persevered and created spaces and ways for students to engage with one another over physical distance that build bridges between pre-majors and majors and between the different academic programs. When in person learning resumes, the SEL team has plans to offer events in two categories: academic and leisure engagements. For academic engagements, there will be student led tutorial events and study halls. For leisure engagements, there will be a wide range of activities like hiking, climbing, volleyball, biking, cooking, baking, and crafting, etc. With these continuously expanding ideas, the SEL team strives to bring students from different majors together to create a harmonious educational and social space. In addition, the SEL team plans to continue with many of the efforts they put into place this year, including Discord, Instagram, and focus groups. With the evident record of the positive trend that the SEL team has been setting, they are creating a path for great impact within the department.

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