Abstract

Over the last year, students, instructors and university communities have seen massive disruptions due to the coronavirus pandemic and many of the disruptions have ramifications for the years to come. One major disturbance is the breakdown of the student community within the university. This community supported the students and motivated students to do their best work. The symptoms of this breakdown is demonstrated in the mental health of students and their quality of work. The rebuilding of the student/university community can be accomplished through well documented practices in the classroom, laboratory, and student societies. As universities open it will be necessary for the instructors to play a vital role in implementing these practices to help students rebuild a healthy community within the university.

Keywords
Community, student society,

Introduction

Over the last year students, instructors and university communities have seen massive disruptions due to the coronavirus pandemic and many of the disruptions have ramifications for the years to come. The speed with which the pandemic moved on the university community caused educators to move quickly into teaching in an online space where most had never prepared. This lasted just long enough for educators to figure out how to effectively work in the environment. The students were thrown from a campus experience and supportive community into an online community were relationships with their peers, instructors, and campus broke down. These disruptions have caused widespread mental health effects along with a breakdown of student societies and peer support networks.

As universities transition back into the face to face classroom the effects of these issues are still with us. There are freshmen students that never completed a senior year in high school and many did not have an adequate experience online to prepare for the university classes. Few of the sophomore students have ever been in college classroom which means they don’t have the first year experience of what college is and what is expected of them past high school. Juniors in the college classroom had one full semester of college before COVID hit and have not been in the classroom to learn the rigor necessary to be successful as an engineering student.

Meda [1] investigates the mental health problems of students over the COVID lockdown. The effects identified include but are not limited to psychological distress, symptoms of depression, anxiety and sleep disturbances. Although MEDA [1]) indicates when isolation measure are
lifted, most of these symptoms quickly vanish; Ihm [2] indicates the ramifications of the pandemic on mental health will not be known for some time.

Compounding the mental health issues due to COVID is the overall increase in mental health issues in college that have been studied in recent years. Duffy [3] found an increase in anxiety symptoms and suicide-related outcome. She noted the effects of the ongoing issues also lead to students having lower levels of energy, concentration, optimism, and mental ability. Unfortunately, she did not give solutions, simply noted that it required “further attention and intervention”.

It should not be a surprise students did not do well in the 2020-2021 school year. The year was plagued with students turning in work late; if at all, a lack of attention during the online sessions and a general lack of enthusiasm toward academics.

**Background**

The teaching methods of engineering instructors have been fairly consistent over the years. Although there has been a move toward different teaching techniques, the education system is still largely made up of instructor lectures; the students take notes and the professor waits for questions. These techniques work well for an educational environment where professors are largely measured by research, papers, and graduate students. Although good for the educational environment, it is questionable how well it plays with the student of the current generation.

This generation (Generation Z), called by some as the “loneliest generation”, are the first online digital natives. They are pragmatic, financially-minded, and shrewd consumers. They are used to flipping through digital content until they find what interests them or until they find the answer they need. They are the “loneliest generation” because of the endless hours spent consuming this digital information, many times at the cost of meaningful relationships, which leads to isolation and depression. This is the normal student that educators are delivering lectures too.

**Techniques**

Now with the COVID, some of these issues are exaggerated but times have not changed. Around 330 BC Aristotle wrote, “Man is, by nature, a social animal”. More recent Umberson [4] documented effects of social relationships on mental health, physical health, and mortality risk, and Mashi [5] concluded, “Real-life social support was then associated with reduced depression, anxiety, and social isolation”. Wilson [6] also noted that these interactions are important for the behavior and engagement in the context of the STEM classroom. In many other papers the realization of social interaction and sense of belonging play a large role in student success. So in dealing with the students in a pandemic/post pandemic era, educators need to set the atmosphere in the class room and university environment to support the social interaction of the students.
One of the first ways to rebuild what has been damaged is the student organizations. These organizations within each discipline can reach students in ways no other structure can in the university. Throughout the teen and early twenties similar aged peers have more of an influence in student lives than older adults. By having a strong student organization lead by people with similar experiences and life struggles, students will start rebuilding the society that is extremely instrumental in creating a sense of belonging.

However, many of these organizations have suffered loss of leadership during the pandemic. As such the faculty advisor must be proactive in recruiting, engaging, energizing and mentoring new student leaders. The role as mentor is the most important. Since the students have not had functional organizations, they will not have the example of what it means to be a student leader. So, the importance of the faculty advisor cannot be stressed enough.

Another way to rebuild the student community is the class room environment. Wilson [6] noted the importance of student belonging in the STEM classroom. Through this sense of belonging/community students were more likely to finish in their majors. So developing a sense of community in the class room is now more important than ever for the students. Many studies have been performed [7]-[10] that show project work inside the class room by small groups of students form these relationships and the connectedness necessary for student success.

A third way to rebuild the student community is enhancing the role of the laboratories within the engineering disciplines. In most laboratories students are placed in small groups and are engaged through small investigative work projects. These groups usually consist of three to five students that are formed at the beginning of the semester and remain for the duration of the semester. A simple enhancement is to re-form the student groups multiple times during the semester. Or the re-formation of groups and group interaction can be more involved as indicated by Adams [11]. These group changes enable each student to become more connected through multiple group interactions.

Conclusion

As universities start back to face to face instruction, the students will be dealing with many issues never before seen on this scale; from a sense of isolation to mental fatigue. It will be up to the professors to engage the students at every turn to reestablish the student community. If reestablished soon; the attitudes, mental health, and overall success of every student will be improved. And the university community will be stronger than before the pandemic disruptions.

References


Biographical Information

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Robert Saunders currently serves as Instructor and Associate Department Head in the Electrical Engineering Department of the University of Arkansas. His research/interest include embedded
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