**The Relationship Between Demographic Characteristics and Engagement in an Undergraduate Engineering Online Forum**

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# ABSTRACT

This Research Full Paper explores the relationship between demographic characteristics of students and online forum participation. Online discussion forums have become widely used in undergraduate classrooms. They extend the learning space beyond the classroom and provide asynchronous opportunities for peer-to-peer collaborations. There are studies that suggest online posting behavior plays a role in students’ learning outcomes; however, the study of demographic characteristics of students who do or do not participate in online discussions is limited. We chose the demographic variables based on prior studies of general online behavior, and therefore we compare gender, ethnicity and international status, and declared majors with engagement in the online forums. The discussion forum provided a platform for students to ask or answer their peers’ questions about the course material and homework assignments. The setting for this study was a sophomore-level dynamics and vibrations class that incorporated active, blended, and collaborative learning strategies. We tracked an individual’s posting behavior throughout a semester. Study participants were grouped by whether they posted to the discussion forum at least once or not, and the Chi-square independent test was used to determine the statistical significance of demographic differences across the participation groups. The data show that female students are significantly more likely to be involved in online discussions than their male counterparts. Also, White and American Asians are overrepresented, but international and Hispanic students are underrepresented in the engaged group. In addition, students who are required to take this specific course are more engaged than those who only took this class for general engineering credits. This work extends our knowledge of who uses online collaboration tools, and future work will analyze the content of the posts and explore the influence of forum participation on grades via a regression model.

PS. The track I am following is Research category. The rubric is under the following: <http://fie2018.org/sites/fie2018.org/files/2018-01/FIE%20Research%20Category%20Rubric.pdf>