Demographic Characteristics of Students Who Do or Do Not Post in an Undergraduate Engineering Online Discussion Forum

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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 posting behavior plays a role in students' learning outcomes; however, the study of demographic characteristics of students who participate in online discussions is limited. This study compares gender, ethnicity, and international status of students who did and did not participate in an online discussion forum. The demographic variables of interest were chosen based on prior studies that showed varied usage patterns for online tools across gender and ethnic groups. The discussion forum provided a platform, where students could 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 were able to track an individual's posting behavior with the website software. Study participants were grouped by whether they posted to the discussion forum at least once or not, and the Fisher's exact test was used to determine the statistical significance of demographic differences across the participation groups. It is shown that female students are more likely to be involved in online discussions than their male counterparts. Also, White and American Asians are overrepresented but international students are underrepresented in the engaged group. 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.