2-6D Celebrating Cultural Diversity through Rotational Focus Groups

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Current electronic engineering teaching needs to devote more attention on fostering diversity, at the same time allowing subjects to maintain disciplinary technical contents. Unfortunately, historical approaches of using different teaching methods for different social culture groups have only focused at specifying the underling culture difference and, in addition, they almost exclusively focus on the individual's ethnic background. In order to increase diversity in the engineering profession, teachers need to know how to use their students' cultural diversity to expand their intellectual horizon and potential for academic achievement.

In order to establish pedagogical connections between cultural/gender responsive teaching in electronic and electrical engineering subjects, we created rotational focus groups technique to enable students of different gender to work together and we investigated how students performed during focus group discussions. We applied this technique in third year undergraduate electronic and electrical engineering course in 2017/18 cohort with 220 students and currently plan to run it again in next year cohort to re-test the method and verify the validity of our observations. This research is intended to address socio-cultural diversity in electronic and electrical Engineering courses and find out how students can be motivated differentially as groups.

Taking advantage of existing teaching modalities (lectures, seminars, and labs), in this work we demonstrate rotational focus groups that use three various learning models to improve the traditional one-way style teaching method. We are interested to know how students can draw from their unique experiences and learning styles to construct new knowledge and achieves learning outcomes with using their own unique learning styles. Furthermore we have developed culturally responsive curriculum and instructional strategies to enhance skills that electronic and electrical students need to acquire.

References

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