

Title: Determinants of the Switching of Initial Majors Among Undergraduate Students

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Undergraduate students make an important decision when they select a major to enter a field at the start of their academic education, and eventually a career (Porter & Umbach, 2006). After declaring their major, however, switching away from the initially declared major is quite common among students in science, technology, engineering, and mathematics (STEM) fields. Given that STEM fields play an essential role in a nation's economy by promoting innovation and advancing technological developments, detecting factors that motivate students to switch in or out of STEM fields calls for attention. The present study aims to investigate factors that may affect ERAU undergraduate students' initial major selection and major switching with the use of educational data mining (EDM) techniques. The study is a work-in-progress and we hypothesized that national admission test scores, high school GPA and several socio-demographics including gender and ethnicity/race are related to the initial major choice. Preliminary findings of the study will be presented and discussed in the light of existing research studies as the early detection of factors that lead to major switching could help with student retention, especially in STEM fields, promote timely graduation, and support the efforts of institutions to develop evidence-based preventative strategies.