

Information Systems as a key to Social Inclusion: Closing the IT Self-efficacy gap among underrepresented students in the Business School

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The achievement gap faced by academically at-risk minority students has long concerned the educational community. The national discourse on racial disparity is focused primarily on the achievement gap between the academic outcomes of Black, Latino, and American Indian students and the outcomes of their white counterparts (Gregory et al., 2010). Darling-Hammond et al. (2014) realized that properly implemented technology can have significant impacts on student achievement and engagement, particularly among underserved students, in part by helping teachers give real-time support and encouragement to these students.

This study presents findings of a longitudinal assessment study conducted at the beginning and end of Spring 2020 semester in a required information systems class for business majors in one of the most racially diverse campuses in the United States. As a technical class designed primarily for students pursuing non-technical studies, participants generally enjoyed limited technical background or subject matter interest upon enrolling. The objectives of the research design are to assess how exposure of non-technical students to a variety of technical competencies would effect Information technology (IT) self-efficacy and interest in information systems (IS). The research model also evaluates how the changes in IT self-efficacy and interest vary across demographic groups. Fostering the enhancement of student's IT self-efficacy as well as their interest in IS constitutes the instructor's attempt of "deliberate psychological education" within the zone of proximal development (ZPD) framework (Vygotsky, 1978). Vygotsky states that student aptitude in a specific area can be accomplished through strategically planned educational structures directed towards support and assistance for specific skill competencies (Bellamy et al., 2005). The study examined the impact that the course's structure and content constituting the deliberate psychological education framework had on student's IT self-efficacy and IS Interest.

While concerns regarding inclusivity of access to technology remain, our analysis demonstrates encouraging results. Our findings demonstrate the significant increase of IT self-efficacy and interest to the non-technical students included in our study. Mean averages on the posttest measurements of IT Self-efficacy and IS Interest were significantly higher than pretest measurement. This study also revealed that the posttest mean averages were higher among females and underrepresented minority students in comparison with their male and white counterparts. While our posttest data still demonstrated a gap between the IT self-efficacy and interest between genders and racial minorities, the gaps were significantly smaller in our posttest assessment. This research shows that through applying experiential technology more broadly in the classroom, the IT self-efficacy of students may be increased, and that the rate of increase will be greater for student populations that have less familiarity with technology. By further understanding ways by which to boost IT self-efficacy in students, information systems educators may have more means by which to expand IT workforce participation. While many studies have described the negative effects that relative low levels of IT workforce participation among women and certain racial and ethnic groups, this study demonstrates the potential benefits of technology interventions to increase IT self-efficacy and interest in IS in differing populations. The results of this research can serve to assist the university's goals around improving educational equity, by empirically demonstrating the factors that affect student engagement and interest, particularly among minority and underserved students.

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