Advancing Gender Equity Through Mentoring and Leadership Development:
A Human Performance Technology Case Study

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EXECUTIVE SUMMARY

A new president and provost at the University of the Southeast (pseudonym) recognized the high rate of attrition among female and minority faculty and implemented a faculty mentoring and leadership development program to improve gender equity in a large higher education institution in the US. In total, 28 tenured faculty of which 60% were women participated in this 9-month program. The authors designed this program to be an organizational change intervention; hence, a human performance technology framework was used to design and evaluate this mentoring and leadership development program, along with a logic model, and Kirkpatrick's four levels of evaluation. This mixed method study included pre- and post-surveys (T1, n = 26; T2, n = 14) to determine participant satisfaction and knowledge gained and assessed behavior change through participants' interviews (n=18). Outcomes determined that human performance technology, a logic model, and Kirkpatrick's evaluation approach were useful methods to design and assess this program.

UNITED STATES CONTEXT AND ORGANIZATION BACKGROUND

Within the United States women are disproportionately underrepresented in leadership roles in higher education (Ballenger, 2010; Directorate-General, 2016; Madsen, 2012). While most undergraduates are female; as women progress in their careers, the percentage of women decrease at every rung of the ladder (Ely, Ibarra, & Kolb, 2011; Madsen, 2012). This leaky pipeline is reflected in institutions of higher education in general and in science, technology, engineering, and in mathematics disciplines in particular (Levine, Gonzalez-Fernadez, Bodurtha, Skarupski, & Fivush, 2015; Thomas, Bystydzienski & Desai, 2015). To reverse this trend, the United States National Science Foundation ADVANCE program works with higher education organizations "to increase the representation and advancement of women in academic science and engineering careers, thereby developing a more diverse science and engineering workforce" (U.S. National Science Foundation, 2009, p. 2).

These gender equity challenges, were evident at the University of the Southeast (pseudonym), a doctoral-granting university in the United States., with an R1 (highest research) Carnegie Classification. In 2016 there were approximately 18,600 undergraduate and 4,500 graduate students enrolled in seven colleges and 40 academic departments, out of which 21 are in science, technology, engineering, and mathematics field. At the time, there were approximately 1,237 instructional faculty of which just 35% were women. Women comprised only 38% of faculty in non-science, technology, engineering, and mathematics fields and 19% in science, technology, engineering, and mathematics fields (Jones, 2016). Of the 212 university employees at the executive, administrative and managerial level without faculty rank, 40% were women, and there were 58 women with faculty rank or 22%, 262 formal university leadership roles of which 37% were women (Office of Institutional Research, 2018). Within the science, technology, engineering, and mathematics departments in 2016, women occupied only two permanent chair/director positions (9%) and only one of the ten faculty ranked dean/associate dean positions within the three colleges containing science, technology, engineering, and mathematics departments (10%). None of these positions were held by women with minoritized identities. Although the university is considered the leading science, technology, engineering, and mathematics education institution in the state (Jones, 2016), of the more than 100 university-wide research centers and 30 institutes, only six were directed by women science, technology, engineering, and mathematics faculty (4%) and none by minority women science, technology, engineering, and mathematics faculty (Jones, 2016; Office of Institutional Research, 2018).

In the middle of this decade, a new president and provost joined the university, who then worked with stakeholders – students, faculty, staff, university trustees and the state, to conceive a new vision of the university that espoused the need for policy changes, procedural innovations and institutional programs that would create fair treatment and improved support for all faculty. After a thorough review of the university's history, culture, and climate, it was determined that there were barriers that hindered the recruitment, advancement, and retention of women faculty. Women, and in particular minority women, faculty reported issues with isolation and lack of networking, coaching, mentoring, and sponsorship (Jones, 2016). Based on faculty climate surveys, the university was consistently in the bottom 30% of all institutions in mentoring and leadership development (Jones, 2016). Further, women faculty were poorly represented in leadership roles of chair, director, associate dean, or dean roles especially in science, technology, engineering, and mathematics, and no minority women held these roles. To address these conditions, the university applied for and received a federal funded grant and designated university

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