

The Necessity of Foundational Skills in STEM Careers

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Abstract

Despite the shortage of individuals completing STEM degrees in the United States, the degree alone is not enough. Employers seek associates that join teams and immediately add value. Recent graduates unable to express technical concepts or ideas adequately amongst their peers will be excluded. After spending more than two years in a virtual world during COVID, interpersonal skills are vitally necessary to build and maintain working relationships. Today's work environment is highly collaborative. Communication, problem-solving, and networking are no longer soft skills; they have become foundational. The term foundational has been intentionally selected to describe this skill set indicated by employers as must-haves for future employees. Students that earn STEM degrees but do not develop foundational skills often find themselves unemployed despite the numerous unfilled positions in Engineering, Cybersecurity, Computer Science, Healthcare Analytics, and Digital Technology. This phenomenon is even more pronounced with underrepresented minorities (URM) and First-Generation students. This presentation will share a mini-case study of individuals that have developed tremendous technical skills but have been overlooked due to poor execution of foundational skills. Building on these experiences, the presenters will share tactical strategies to help students prepare to enter the workforce as graduation approaches. Participants will leave with a roadmap for the highest probability of success. This paper discusses the critical importance of professional development in STEM education.

Keywords

STEM professionals, employability, networking, Foundational Skills, Communication, DEI