

## Chapter 5

# Opening the Doors to STEM Employment Opportunities for Rural Youth: Guided Career Exploration

### ABSTRACT

*Guiding rural students on the path towards a STEM career requires a tripartite approach that addresses career decidedness, career thoughts, and vocational maturity. The authors provide an overview of a guided career exploration model employed by Project Engage. Through guided career exploration, rural students are introduced to the multitude of career possibilities in STEM as well as the knowledge and skills needed for those careers. Additionally, this chapter reviews the outreach component of Project Engage. Outreach to students from local high schools serves both as a recruitment tool and as a means to motivate rural students to pursue STEM as a college major. Finally, the authors present data from surveys regarding the effectiveness of the outreach activities on engaging high school students in STEM.*

### INTRODUCTION

Strategic mentoring as described in Chapter III increases the retention of undergraduates in STEM majors, yet, further guidance or career exploration is essential for directing college graduates into STEM careers. While career

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planning and self-efficacy, as noted by Turner and Lapan (2002), consistently predicated career interest, Gnilka and Novakovic (2017) determined career search self-efficacy mediated women and non-white's perceived barriers to STEM careers. High schools serving low income populations often lack the resources for providing career counseling services (Schneider, Broda, Judy, & Burkander, 2013). Furthermore, rural students often lack realistic visions of what STEM careers entail as their experience with STEM professionals is limited. Project Engage uses a tripartite approach to career exploration to promote career decidedness, career thoughts, and vocational maturity. These three parts of the guided career exploration component of Project Engage support the development of STEM career self-efficacy and therefore increase the likelihood of students pursuing STEM careers in the future. The primary purpose of this chapter is to present the guided career exploration model employed by Project Engage.

In addition to supporting college-aged students, Project Engage works with high schools through an outreach component to introduce high school students to STEM majors and careers. A supply of students is needed to increase enrollment in STEM majors, thereby ultimately increasing the flow of STEM professionals into the workforce. Outreach to high schools is needed to ignite student interest in STEM during the secondary education years in order to increase enrollment in postsecondary STEM programs. The second purpose of this chapter is to describe how Project Engage capitalizes on popular television programming to create competitive events that garner secondary students' interest and motivate them to pursue STEM majors.

## **CAREER EXPLORATION: A TRIPARTITE APPROACH**

As a capacity building project, Project Engage was intended to strengthen the STEM workforce pipeline by retaining students in their STEM programs and helping them make informed decisions to pursue STEM careers after graduation. Due to the isolation and lack of STEM industry in rural areas, students rarely interact with STEM professionals. This deficit results in a lack of vision regarding what a STEM career means. Career decision making can be stressful, especially for young people in emerging adulthood. According to Arnett (2007), emerging adulthood is a time of decision making and confusion for young people in their late teens and early twenties. In their

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