A Model For Developing Employability Skills (ES) in STEM Technician Fields

Employability skills are critical to success in the STEM technician workplace, but a 2-year study* by SRI Education indicates both educators and employers need to coordinate better to ensure that technicians have these skills. Below is a model of how these skills develop over time, which is based on interviews and a literature review. We also list suggested practices and program supports.

**Study focused on the fields of information technology and advanced manufacturing*

Model for Developing Employability Skills for All

BUILD ES AWARENESS (Preparatory level)	ESTABLISH BASIC ES KNOWLEDGE & SKILLS (Foundational level)	ESTABLISH APPLIED ES COMPETENCE (Apprentice level)	BUILD APPLIED ES COMPETENCE (Work-ready level)

Developmental Practices & Program Supports

EDUCATION

K - 12 Practices

- Emphasize ES importance
- Embed brief ES practice in class
- Industry visits

Community College Practices

- Focused ES courses
- Structured extended ES practice
- Industry critiques
- Specialized resume & job interview prep

WORKPLACE

Internship Practices

- Coordinated ES goals & reflection between school & workplace

Job Practices

- Mentoring
- Management training

Program Supports

- ES training for teachers, faculty, & managers
- Dedicated experts to facilitate school-work linkages
- Self-testing and candid feedback for students to learn ES strengths/weaknesses

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Targeted ES Supports for Underrepresented Populations in the STEM Tech Workforce

Women, African-Americans, and Hispanics are underrepresented in STEM technician fields, and the shortage of available workers is requiring more STEM technician employers to recruit from more diverse populations. Our research* indicates that both educators and employers could have more success by taking a more coordinated approach toward these populations. Below is a developmental model of the targeted employability skills that support these populations. We also list suggested practices and program supports.

**Study focused on the fields of information technology and advanced manufacturing*

Model for Building Targeted Employability Skills for Underrepresented Populations

BUILD ES CONFIDENCE (Preparatory level)	ESTABLISH ES LEARNING HABITS (Foundational level)	PROVIDE GREATER ACCESS TO ES PRACTICE OPPORTUNITIES (Apprentice level)	CONNECT TO FOSTER LIFE-LONG ES DEVELOPMENT (Work-ready level)

Developmental Practices & Program Supports

EDUCATION

K - 12 Practices

- Provide role models
- Provide exposure to hands-on learning

Community College Practices

- Provide access for independent skill practice
- Build skills of timely communication about life-work conflicts

WORKPLACE

Internship Practices

- Provide opportunities to build skill of promoting one's technical strengths

Job Practices

- Provide support for employees to serve as role models
- Provide support for employees to join professional organizations

Program Supports

- Offer bus passes, child care support
- Offer internship stipends
- Recruit from 2-year colleges
- Develop outreach strategies for recruiters
- Conduct greater outreach to underrepresented populations
- Hire a more diverse faculty and management staff

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