The (mis)alignment of IT education and IT workforce needs: Challenges and opportunities in the North Florida region.

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Background
- Information Technology (IT) is one of the fastest growing industries (US-DOL, 2015).
- Higher education, including many IS programs and Schools, offer undergraduate and graduate IT degrees; and
- Perspectives of employers is critical for educators to develop effective and current IT curricula (Downey, McMurray & Zeitmann, 2008; Hwang & Soo, 2010).

Problem Statement
- Scholars have found that IT graduates are sometimes lacking key employability skills, particularly soft skills (Downey, McMurray & Zeitmann, 2008; Gordon, 2013; Hunt et al., 2011; Lee & Han, 2008; Woodward et al., 2013).

Study Objectives
- This poster updates preliminary findings that explored the alignment of the IT skills desired by IT employers and those included in Northwest Florida two-year IT degree curricula.
- The overall goal of the NSF project is to revise regional IT programs to better meet the needs of regional IT employers.

Methods
- This study employs a holistic, mixed-methods approach:• Semi-structured interviews: IT employers (n=18), New professionals (n=23);• Text-mining and Natural Language Processing of two-year IT degree program syllabi (n=31) from regional community/state colleges;• Content analysis of regional job postings (n=213) (Lee et al., 2014);• Classroom observations at using the COPSUS protocol for undergraduate STEM programs (Smith et al., 2013);• Automated data-mining of curricula and job postings;• Content analysis of IT employers’ & new professionals’ interview data;• Data analyzed using US Office of Personnel Management (2011) Competencies Model for IT Program Management and FL Department of Education (2013) Career and Technical Education (CTE) IT Framework.

Limitations
- Small sample size, qualitative interviews, and narrow focus on the North Florida region makes findings less generalizable;• However, the findings and themes uncovered here may resonate with other regions, particularly in rural areas.

Key Insights
- Basic technical competencies are considered a fundamental baseline;• Employers desire specialized IT professionals with strong soft skills, such as interpersonal skills, self-management, learning, and customer service;• New IT professionals reported the importance of oral and written communication, interpersonal skills and self-management (preliminary analysis);• Classrooms provide greater emphasis on technical competencies over soft skills and traditional lecturing over participatory activities, such as discussions, hands-on & scenario-based activities;• No discernable difference in metro vs. non-metro areas skills requirements; and• Rural employers reported difficulties recruiting and retaining skilled IT professionals due to poor broadband infrastructure & competitive salaries in non-rural areas.

Emergent Themes
1. Importance of experiential learning including On-the-job training, Internships, Work experience, and Service experience. 2. Expect industry partnerships between IT programs and local employers to improve alignment of needed skills/competencies with IT curricula.

Conclusion & Next Steps
- There are significant misalignments between the skills requested in job ads, expected by employers, & taught in regional North Florida IT degree programs.
- Include Soft skills or general competencies in the IT curriculum to reflect industry needs .
- Conduct further research to promote and secure experiential learning opportunities and build industry partnerships especially for the benefit of rural communities.
- Triangulate multiple data points to comprehensively identify major themes and insights.
- Conclude by providing empirically-based recommendations to strengthen the IT educational opportunities and workforce in the North Florida region.

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- A list of references can be found at http://ffsu.edu/node/3636 or via this QR code here: