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## *Competency Models In Action:*

# California Employers Affirm the Value of ETA's Information Technology Competency Model

May 2013

- Using the ITC model to address the IT skills gap
- Aligning IT curricula with real time employer needs
- Creating new IT educational pathways among postsecondary institutions

### Introduction

The Mid-Pacific Information and Communication Technologies (MPICT) Center, working in collaboration with the California Community College ICT Collaborative, the San Francisco Bay Region and Inland Empire & San Diego-Imperial Regions Centers of Excellence, and Davis Research, conducted a Web survey of 782 California employers with direct knowledge of ICT workforce needs to validate foundational technical competencies in the Information Technology Competency (ITC) model. In March 2013, MPICT posted a draft report of findings, *Foundational Competency Employment Demand in California*, and the survey outcomes were very positive. California employers resoundingly approved the ITC model, specifically the foundational IT Workplace Technical Competencies, which all IT workers should know and be able to do regardless of specialized role.<sup>1</sup>

### The Workforce Need

The IT sector in California is facing a challenge. Employers indicate a substantial skills gap: not enough qualified IT workers to meet the demand. "Unfortunately, to some extent, it's still the Wild West for IT in California," says James Jones, Executive Director, MPICT Center. "Employers are often creating ICT-related job titles and descriptions specific to their organization without reference to occupational frameworks or standards. That makes it very difficult for educators and workforce development specialists to understand in a consistent manner what knowledge and skill sets they should be using to prepare the ICT workforce. As a result, in part, ICT-related educational programs and credentials are divergent and misaligned, making student transfer and articulation pathways between educational institutions difficult to manage."

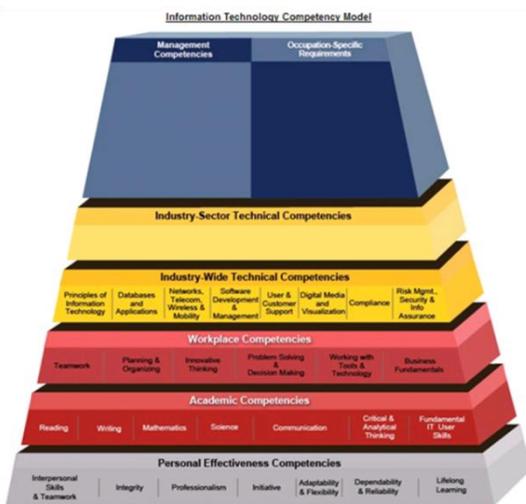
There is a critical need to align employer demand and education and workforce development supply to a standard framework and set of competencies to address the IT skills gap. Without that structure as a reference point, California employers will continue to have difficulty finding appropriately skilled technical workers, even in this poor economy and period of high unemployment. As documented in the *Foundational Competency Employment Demand in California* draft report of findings, the ITC model can provide that structure for California employers and educators.

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<sup>1</sup> [http://www.mpict.org/pdf/CA\\_ICT\\_Competencies\\_2013.pdf](http://www.mpict.org/pdf/CA_ICT_Competencies_2013.pdf)

## How They Did It

The researchers used a stratified sampling plan to ensure a diverse and representative universe of respondents from different sized employers, as well as employers from a broad array of industries that represent the California economy. Given the dynamic nature of the IT industry, the team asked survey respondents to assess the ITC model from the perspective of what their workforce needs would be by the end of 2014. In order to maximize the response rate, the research team used a “bucket approach” when disseminating the survey to employers. They split the nine core areas from Tiers Two and Four of the ITC model into three groups as follows:



Employer Group 1: Fundamental IT User Skills, Principles of IT and User and Customer Support

Employer Group 2: Databases and Information Systems, Software Development and Management, Digital Media and Visualization and Compliance

Employer Group 3: Networks, Wireless and Mobility, and Risk Management Security and Information Assurance

In addition, each employer survey participant was asked to indicate their level of agreement with six general statements related to the use of competencies:

1. California’s ICT Workforce labor market would work better if there was a detailed, agreed-upon and structured framework for employer ICT Workforce competency demand, which education and trainers used to prepare ICT Workforce in consistent ways, and employers used to communicate ICT Workforce and ICT job needs. (74.7% agree or very much agree.)
2. Our organization would appreciate and be much more willing to entertain hiring students with ICT-related credentials from California community colleges for ICT workforce roles if there was a consistent, system-wide validated foundation of knowledge and skills for ICT education and workforce development programs that addressed both technical and non-technical competency expectations. (70.5% agree or very much agree.)
3. If there was a detailed, agreed-upon and structured framework for ICT workforce competencies, our organization would be willing to reference them in future job announcements for ICT workers, so applicants could better understand our requirements and match them to their own education and experience, and so we could better map applicant education and experience to our own needs. (68.2% agree or very much agree.)
4. Information and communication technologies are increasingly important for most of our employers, regardless of role. If there was an agreed-upon standard for “digital

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literacy,” or ICT competencies expected of all workers, regardless of workplace role, my organization would value a credential based on that standard as a way of validating ICT skills for non-ICT workers (70.5% agree or very much agree.)

5. In the 21<sup>st</sup> century, an ability to work with information and communication technologies is becoming as essential to education, life and workplace success as “reading, writing and arithmetic.” ICT Digital Literacy should be considered a basic skill by education systems, something taught to and assessed for all students. (85.2% agree or very much agree.)
6. Non-technical (soft, workplace or employability) skills are at least as important as technical skills in what we look for in our ICT Workforce. (76.3% agree or very much agree.)

### Next Steps

“We’ve shared the study results with the employers that participated in the survey, including major players in the California ICT employer community, Cisco, IBM, and Microsoft, in addition to the California Workforce Association which represents Workforce Investment Boards across the state,” says Mr. Jones. “After documenting the survey outcomes, we now have credibility to go back to community colleges and communicate the value of the employer feedback in developing curricula. We’re getting the word out. We’ll start by working with groups of faculty and converting the competencies to Student Learning Outcomes.”

The MPICT report has the potential to influence a broad audience. Employers can reference the competencies in their job posts and descriptions. Educators can use the competencies to embed digital literacy in classrooms at all levels. Policy makers can recognize the strategic importance of developing a skilled competency-based workforce that will put people back to work and impact economic development. The competencies provide the opportunity to improve articulation and transfer for post-secondary education. If programs are aligned to the ITC model, there is the potential to create better education pathways between community colleges and universities and among community colleges.<sup>2</sup>

### Conclusion

“We’re working hard to open the hearts and minds of Californians about the use of the ITC model to address the ICT workforce skills gap,” says Mr. Jones. “The outcomes from the employer survey provide us with a powerful tool to influence educators, employers, state and local governments, policy makers, and the workforce development system. We are committed to continuing to promote the use of the ITC model as a lever for change.”

### Related Links

MPICT Web Site  
<http://www.mpict.org/>

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<sup>2</sup> Ibid.

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Foundational Competency Employment Demand in California Report  
[http://www.mpict.org/pdf/CA\\_ICT\\_Compencies\\_2013.pdf](http://www.mpict.org/pdf/CA_ICT_Compencies_2013.pdf)

Web Interview with James Jones about California Department of Labor Information Technology  
Competency Model Validation Study  
<http://mpictcenter.blogspot.com/2013/04/web-interview-with-james-jones-about.html>