

THE INFORMATION TECHNOLOGY WORKFORCE: IT PROVIDER TRENDS AND IMPLICATIONS 2006-2009

WHITE PAPER

Executive Summary

Kate M. Kaiser	Marquette University
Tom Abraham	Kean University
Cynthia Beath	University of Texas Austin
Christine V. Bullen	Stevens Institute of Technology
Keith Frampton	The Marlo Group
Kevin P. Gallagher	Northern Kentucky University
Tim Goles	Texas A&M International University
Stephen Hawk	University of Wisconsin-Parkside
Judy Simon	University of Memphis

September 2008

Acknowledgements

We especially appreciate the time and care our respondents took to participate in the survey. The Society for Information Management provided contacts to providers, conference call support, and a venue for presentations at SIMPosium and chapter meetings. We especially acknowledge the support of SIM through Ruth Gallagher, Leo Collins, and Phil Zwieg. Our families and friends deserve special recognition for living through our consuming addiction to data and writing.

The Information Technology Workforce (ITWF) research project has collected data about IT human resources since 2005. In Phase One the research team examined the skills and capabilities that IT departments, or client organizations as we call them (those buying IT services from service providers), needed to effectively support their organization's mission.¹ In Phase Two, we focused on the skills and capabilities sought by providers. This report summarizes our Phase Two results.

The ITWF team for Phase Two consists of nine academic investigators. Data was gathered via a Web-based survey that was available to provider respondents from late 2006 to mid-2007. The respondents were primarily senior managers from an internationally dispersed group of 126 IT service provider reporting units (a few respondents are from different units of the same parent company). Three quarters of the firms are small to medium enterprises and two-thirds are U.S. based. Our data primarily focuses on changes in staffing, skills considered critical to the providers, and skills desired in entry and mid-level hires. This report concludes with some comparisons of these provider-oriented results with our earlier client results.

Changes in staffing

- All respondents expected their units to have more employees by 2009, with 13% expecting dramatic growth by then. Smaller units expected higher growth than larger units.
- The most frequently cited reasons for staff changes were business increase and merger/acquisition.
- Among the smaller units, by far the majority expect few retirements by 2011. Among larger units, about a quarter predict that between 11% and 25% of their staff will retire by then.

Critical skills for providers

- Providers see their project management and business domain skills as critical. They also value two customer-facing skills, systems analysis and system design, as well as system testing.
- Skills in working globally are becoming more critical regardless of firm size and location.
- The skill sets providers seek for entry-level workers and mid-level workers also include project management, systems analysis and business domain skills. Providers expect entry-level workers to have foundational technical skills as well (e.g., programming & testing).

Entry-level hires

- Almost all reporting units were hiring at the entry level in the current year (2006-2007). The median unit was hiring between 7-10 individuals, and a quarter were filling over 100 positions. In low wage regions, the dominant position being filled was programming. In high wage regions, units were filling programming, PC support/helpdesk and systems analysis/consulting positions. Firms headquartered outside the US had a stronger tendency to employ new entry-level employees in their home country than did firms headquartered within the US.
- Despite their need for entry level hires with business skills, almost all providers seek candidates with computer science degrees (although most of these also value business IT/MIS degrees as well). The tendency to focus on computer science degrees is stronger in low wage regions, which may reflect the regional emphasis on technical rather than business education.

¹ For a summary see Zwieg *et al* (2006) The Information Technology Workforce: Trends and Implications 2005-2008, *MIS Quarterly Executive*, 5(2), June, 47-55. For more details contact kate.kaiser@mu.edu

Mid-level hires

- Almost all reporting units were hiring at the mid-level in the current year, with most firms hiring at an even higher rate than at the entry level. The median firm was hiring 11-15 individuals, and 25% were hiring more than 100 people. The positions they most sought to fill were for programmers, systems analysts and project managers. Units in low wage-areas consider mid-level candidates with fewer years of experience than units in high-wage areas, but they also seek candidates with graduate degrees.
- Smaller units emphasized the technical skills of systems analysis and systems design in mid-level hires while larger firms emphasized project management and business skills.
- Units in low-wage areas put higher values on skills in systems analysis, system design, and skills in working virtually and globally than do units in high-wage areas.

Comparing client and provider skills:

- In terms of the skills they consider critical to own and maintain, providers and clients present very similar profiles, including business skills, project management skills, and analysis skills.
- Both clients and providers recognize the importance of foundational technical skills in their entry-level hires; but providers expect their entry-level hires to have more project management and business skills than clients do. Clients, in contrast, expect entry level hires to have almost exclusively technical skills (many of which, incidentally, they also outsource to some extent).
- Client firms put more emphasis on business domain skills and systems design, while providers put more emphasis on industry knowledge and relationship management skills...
- Providers expected to hire more employees at both entry and mid-level than client firms; providers were also more concerned than clients about there being an adequate supply to fill these positions.

The conclusion that can be drawn from our data is that a set of requisite skills – including not only foundational technology skills and project management capabilities, but also business and relationship management capabilities - are emerging that all information systems professionals will need if they wish to develop a successful career in IT, whether they are employed by clients or providers and regardless of where they are employed across the globe.

Contact: Kate M. Kaiser 414-352-5025 kate.kaiser@mu.edu for a more detailed report.