ABSTRACT

The increasingly global sourcing of IT work and other socio-economic trends are prompting fundamental changes in the availability of IT skills needed in both client and vendor organizations. This chapter analyzes the results of a survey conducted in 2005, in which IT executives were asked to describe the skills they felt were critical to keep in house now and in 2008. The top ten current skills included three in project management, five in business domain and three in technical. In 2008, the top five emerging skills are almost all business domain while the top five exiting skills are all technical. Our findings indicate that the critical skills to keep in-house are primarily client-facing skills, even when they are technical. Findings indicate that IT professionals need to have a balance that demonstrates a foundation in the traditional “hard skills” and experience with “softer” business-oriented skills.
INTRODUCTION

The increasingly global sourcing of IT work, the shift from exclusively IT services to business process services, pending baby-boomer retirements, and a period of declining IT enrollments in universities are prompting fundamental changes in the availability of IT skills and capabilities needed in both client and service provider organizations. The impact of these changes affects employers and employees:

- How can organizations respond to these changes through hiring their workforce or retraining employees?
- How can students learn the needed skills to become marketable for a changing workforce?
- How can mid-level workers insure their marketability?

In order to answer these questions, we will review literature pertaining to information technology skills and capabilities both from an academic and practitioner perspective. Then we will describe the research methods used to understand the changing workforce. The results follow with a discussion of implications for individuals, academics, and future research.

Terminology

Here are some working definitions for terms that we use frequently:

- **Skill**: Proficiency that is acquired or developed through training or experience (e.g., Java or Visual Basic programming). For simplicity, we sometimes use the term “skill” to cover both skill and capability.
- **Capability**: The ability to acquire and apply skills in different settings. For instance, a programming capability is the ability to learn and apply many programming languages in many settings.

- **Client facing**: “Client” in this phrase is the client of the IT organization, which is usually an internal department or business area within the organization. “Client facing” is an activity that requires intensive interaction with the business client, requiring a common business language and sharing a common business knowledge base with the business users.

LITERATURE REVIEW

The very significance of IT to an organization has been questioned. Carr (2003) argued that as information technology becomes more pervasive it will become more of a commodity and that investing in IT for differentiation or for competitive advantage is futile. This argument would appear to call for greater outsourcing of the IT function and a greatly reduced need for in-house IT skills and capabilities. More recently, Gottfredson, Puryear, and Phillips (2005) suggest that sourcing is itself becoming a strategic opportunity and that even strategic functions like engineering, R&D, manufacturing, and marketing can be moved outside. In a report published by the Cutter Consortium, Rottman and Lacity describe the positive effect that sourcing has had in the U.S. on IT jobs, IT productivity, IT costs, and IT quality (Rottman & Lacity, 2004). UBS, in a report for their investors, predicts a labor drought in the U.S. that will require some jobs to move offshore (Ryan, Farrell, & Doerflinger, 2005).

Tapscott (2004), in a rebuttal of Carr, responded that companies with bad business models tend to fail, regardless of whether they use IT or not. In a recent Deloitte Consulting report, the authors conclude that outsourcing is complex and that results have been mixed (Deloitte, 2005). Their evidence suggests that most (70%) of the participants in the study had significant negative experiences with outsourcing and will be more selective in using it. A McKinsey report (Farrell,