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THE CHANGES IN DESIRED IT KNOWLEDGE AND SKILLS: AN EXPLORATORY INVESTIGATION

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Abstract

The critical skills and knowledge requirements for Information Technology Professionals have changed in the last year because of the continued economic downturn and the architectural shift to web services. Using over 300,000 job advertisements from 2001 and 2002, the specific changes are identified. The findings are based on a voluntary web-based survey of information technology workers that was conducted by dice.com, an on-line placement company.

In general, the job advertisements show the demand for hardware knowledge and skills (K-S) is decreasing (22,357 in 2001 vs. 22,188 in 2002), software is increasing (158,484 in 2001 vs. 159,779 in 2002), and development methodologies are increasing (1,956 in 2001 vs. 2,177 in 2002). The K-S needed to develop Web Services for the .NET or J2EE environments show modest decline (probably attributed to the economic downturn) while continuing to dominate the raw counts. Although the data shows a percentage increase in the demand (9,828) for traditional TPS K-S such as COBOL, MVS, CICS, and the AS/400, the demand for Java (13,641) alone surpasses these four combined. In the near future, we plan to more fully investigate the general patterns of K-S in demand by today's employers with particular emphasis on demand for .NET and J2EE K-S.

Keywords: Human resource management, IS career path, IS skill requirements, IS staffing, and IS curriculum