

ABSTRACT

CRITICAL SKILLS & KNOWLEDGE REQUIREMENTS OF INFORMATION SYSTEMS PROFESSIONALS: A SURVEY OF INDUSTRY AND ACADEMIC VIEWPOINTS

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Information systems (IS) professionals face the challenge of assimilating the ever increasing amount of new knowledge in the field. Rapid developments are placing additional demands on IS personnel and create different organizational roles. This paper seeks to determine the current skills and knowledge requirements of IS personnel, the impact of the rapid and phenomenal changes in computer technology on the future requirements, and to relate these requirements to the academic preparation of current and future IS professionals.

The instruments used in the studies by Trauth, et al. in 1993 and 1995 were adapted for use in this study. The questionnaires are shown in Appendix A. The questionnaires were pre-tested using a group of eight IS managers who are members of the Information Technology Professional Society (ITPS) of Trinidad & Tobago and four lecturers, from two tertiary level institutions.

Questionnaires were mailed to the entire population of IS managers of firms who are members of the Trinidad and Tobago Chamber of Commerce. Questionnaires were hand delivered to the head of the relevant departments at six tertiary institutions. The response rates for the managers and lecturers were twenty-seven percent ($65/240 = 27\%$) and twenty-five percent ($10/40 = 25\%$), respectively.

The study suggests that the information systems industry in Trinidad will require a cadre of IS professionals with knowledge and skills in technology, management, and interpersonal skills to effectively lead organizational integration and process reengineering activities. IS professionals will need certain key technical skills, which fall into four main categories: (1) telecommunications and integration; (2) micro operating systems and networks (3) data access and data management and (4) decision support and relational databases.

The architecture of the information systems curriculum at the highest level consists of five curriculum presentation areas: information systems fundamentals; information systems theory & practice; information technology; information systems development; and information systems deployment & management processes.

In a systems approach to IS curriculum, the definition of exit objectives identify the output of the system. The basic idea is that graduates should have competencies, skills and attitudes that are necessary for success in the workplace and life-long learning as an IS professional or provide the basis for graduate programs (Davis, et al. 1997). There is significant agreement between IS practitioners and academics, as well as some distinct differences, as to what constitutes these competencies, as indicated by this data.

Keywords: *Cletus Kennedy Bertin; Information Systems Knowledge and Skills; Information Systems Curriculum.*