

# Chapter II

## Leveraging Diversity in Information Systems and Technology Education in the Global Workplace

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### ABSTRACT

*In this chapter we consider the educational needs of the globally diverse information technology (IT) sector and a curriculum that has been developed in order to respond to them. We begin by discussing two human resource (HR) gaps that are affecting the preparation of tomorrow's IT workforce. The first gap is a participation gap, which is related, in part, to the under representation in recruitment and retention of students with particular demographic profiles in information systems and technology (IS&T) education. The second gap is a knowledge gap, which is related to the globalization of the IT field and the challenges of developing compatible curriculum and pedagogical practices that will prepare students for careers in such a field. We argue that diversity is a lens that can be used to both understand these HR gaps and to develop curricular responses to them. We do this by considering, as a case study, a course developed and taught in the College of Information Sciences and Technology at Pennsylvania State University that is intended to address these gaps. This course—Human Diversity in the Global Information Economy—is offered to exemplify a way of addressing the diversity dimension of the IT skill set.*

## INTRODUCTION

The gap between the supply of information systems (IS) professionals produced by the educational system and the demands of industry have long been the focus of attention for concerned stakeholders: employers, policy makers, and educators. This issue has been exacerbated on a global scale, in recent years, for three reasons. First, the role of the information economy as a function of the overall economy of a country has grown in both size and importance. This includes activities associated with the development of the primary IT sector (i.e., those involved in the creation of hardware and software systems) and facilitating the diffusion of IT into other sectors.<sup>1</sup> As a result, an increasing number of countries have taken on the challenge of developing a pool of talented IT workers, which can enable it to enter the global IT market and to engage in globally collaborative IT work. Second, networking technologies have made both asynchronous and real-time communications between different regions and countries feasible and have created new forms of work and collaboration. For example, global IT outsourcing work can be seen as the practice of seeking diverse knowledge resources globally. Third, in contrast to the cultural diversity evident in the makeup of the global IT workforce, national statistics show that the domestic workforces of many countries (in terms of race, gender, age, social class, etc.) are not as diverse. Thus, the purpose of this chapter is to consider the ramifications of including, in the IT skill set, preparation for work in the globally diverse IT sector. We do this by discussing a curriculum that has been developed in order to respond to these needs.

In this chapter we begin by discussing two HR gaps related to diversity that are affecting the preparation of tomorrow's IT workforce. The first gap is a participation gap, which is related, in part, to the under representation in recruitment and retention in IS&T education of students with particular demographic profiles. The second gap is

a knowledge gap, which is related to the globalization of the IT field and the challenges of developing compatible curriculum and pedagogical practices that will prepare students for careers in such a field. We then consider, as a case study, a course developed and taught in the College of Information Sciences and Technology at Pennsylvania State University that is intended to address these gaps. This course—Human Diversity in the Global Information Economy—is offered to exemplify a way of addressing the diversity dimension of the IT workforce shortage.

## BACKGROUND

The gap between the supply of IS professionals produced by the educational system and the demands of industry has long been the focus of attention for concerned stakeholders (Lee, Trauth, & Farwell, 1995; Miller & Donna, 2002; Swanson, Phillips, & Head, 2003; Trauth, Farwell, & Lee, 1993). Such a gap can be attributed to the interdisciplinary nature of the IS field (Checkland & Holwell, 1998; Lyytinen & King, 2004) and the fast changing environment of the IT industry. While the interdisciplinary nature of the IS field requires the boundaries of IS educational curriculum to be inclusive and flexible, the fast-changing IT industrial environment demands that educators actively change the IS curriculum design to address the emerging challenges.

### Globalization

One of the major changes in today's IT market is globalization, which has been facilitated by advancements in various information and communication technologies (ICT). Globalization, in turn, is having a significant influence on the IT industry (Walsham, 2000). The globalization of the IT industry is manifested in the prevalence and diversification of global IT work such as IT offshore outsourcing (Carmel & Agarwal, 2002),

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