Chapter 7.11
Information Technology Certification:
A Student Perspective

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ABSTRACT

Certification has become a popular adjunct to traditional means of acquiring information technology skills and employers increasingly specify a preference for those holding certifications. This chapter reports on a study designed to investigate student perceptions of both the benefits and risks of certification and its importance in obtaining employment. Certification was perceived as an important factor in achieving employment and students undertaking it anticipate that it will lead to substantial financial benefits. Yet higher salaries are not seen as the most important benefit of certification. The potential benefits that students believe are most important relate to real-world experience. The respondents were aware of the possible risks of certification but did not appear to be overly concerned about them.

INTRODUCTION

Certification has become a popular adjunct to traditional means of acquiring information technology (IT) skills and increasing numbers of job advertisements specify a preference for those holding certifications. Certification intends to establish a standard of competency in defined areas. Unlike traditional academic degrees, certifications tend to be specific to narrow fields or even to individual products. They are designed to provide targeted skills that have immediate applicability in the workplace.

Vendors such as Microsoft and Cisco Systems dominate the vendor specific certification market worldwide with qualifications such as the Microsoft Certified Systems Engineer (MCSE), Cisco Certified Network Associate (CCNA) and Cisco Certified Internetwork Expert (CCIE). Vendor neutral certifications such as those provided

by the Institute for Certification of Computing Professionals (ICCP), the Computer Technology Industry Association and the Disaster Recovery Institute also play a role. It has been reported that there are more than 300 IT certifications available and that approximately 1.6 million people have earned approximately 2.4 million certifications (Nelson & Rice, 2001), and no doubt these figures have already increased dramatically. Gabelhouse (2000) quoted an IDC Inc. report that found that the IT training and testing industries had revenues of $2.5 billion in 1999 and were expected to reach $4.1 billion by 2003.

Vendors create certifications as a way of promoting widespread adoption of their products and technologies, but they have also become important for educational institutions in attracting students and placing graduates (Brookshire, 2000). This chapter explores the perceptions of students who are undertaking courses of study that can lead to certification. It reports on a study designed to investigate student perceptions of both the benefits and risks of certification and its importance in obtaining employment.

Benefits of Certification

Numerous benefits have been proposed to result from IT certification. As Nelson and Rice (2001) note, many of the claims of benefits have originated in the brochures and Web sites of certification agencies; however, there seems also to be a wider recognition of their importance. The major benefits that have been claimed can be categorized as relating to employers, educational institutions and students (i.e., potential employees). The major benefit for employers is believed to be the provision of more capable employees (Ray & McCoy, 2000), and one in eight IT job advertisements have been found to mention certifications (Clyne, 2001; Nelson & Rice, 2001). Some support for the benefit of employee certification to employers is provided by a study by IDC Inc. (1999), which found that 92% of managers surveyed said that they

realized all or some of the benefits they expected from their certified employees. The major benefits to employers accruing from certified employees were found to be:

- Greater knowledge and increased productivity
- A certain level of expertise and skill
- Improved support quality
- Reduced training costs
- Higher morale and commitment

The major benefit proposed for educational institutions is the opportunity to extend program content and to have an increased assessment capability (Ray & McCoy, 2000). Institutions that successfully offer certifications can become known for their expertise in these areas and attract more students and employers for their graduates (Brookshire, 2000). Student performance on certification exams also provides additional and generalizable measures of student competencies.

The greatest benefits of certification are believed to accrue to students (Ray & McCoy, 2000). Marketability is proposed as a major benefit. Students are marketable if their programs of study contain content considered valuable by employers. For example, holders of Cisco certifications should have substantial experience as network administrators, designers and troubleshooters on real networks. Higher salaries are also commonly cited as a benefit, and there is evidence to support this. A survey conducted by *Certification Magazine* (Gabelhouse, 2000) reported that on average certification resulted in a 12% increase in income. This study also reported varying values for different certifications. For example, a MCSE led to an average increase in income of 12.6%, a Cisco CCNA to a 16.7% increase and a Novell CNA to a 13.3% increase. However, Alexander (1999) speculates that increased supply of people with the most popular certifications (such as MCSE) means diminished value in the marketplace. Other proposed benefits that are as-

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