E-Commerce Skills Requirements in Online Job Advertisements

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Abstract

This paper presents an ongoing research to determine the most popular skills of the e-commerce workforce based on e-commerce skills requirements present in online job locator websites. A large number of online job ads for e-commerce related positions have been already identified representing different geographical areas of the United States. Data is being collected and analyzed regarding types of positions (IT vs. non-IT), salary offered for positions, required years of experience, educational background requirements, desirable non-technical (personal traits and business) skills, and, technical skills (problem solving, technology, and tools).

1. Introduction

With organizations becoming more adaptive of e-commerce as a viable business solution to augment their traditional business channels, the importance of having a capable mix of IT and non-IT e-commerce staff has become apparent. Depending on a firm's business requirements and the depth of e-commerce solutions results in a varied demand for e-commerce personnel. In line with previous research investigations of skills requirements of IS personnel [3] [4] [10], this study aims to determine the requisite skills for the e-commerce workforce. This study is seen necessary as a result of the many apparent differences that are reported between traditional IS projects and e-commerce projects [5]. Mirza and Chan [6] have identified several challenges with relation to e-business organizations that result in different skills requirements for an e-business IT workforce at different levels of the organization.

With this study we hope to answer three main research questions:

1. How different are the IT skills requirements between traditional IT jobs and e-commerce jobs?
2. How does the importance of non-IT (personal traits and business) skills differ between traditional IT jobs and e-commerce jobs?
3. How are e-commerce curriculums meeting actual skills demands of the e-commerce industry?

Methodology to be used for conducting this study and future work agenda will be described in this paper after a brief literature review of related studies. It is hoped that as a result of this study, e-commerce practitioners and job seekers will be able to determine which skills are most popular. This should help them in better preparing themselves for the e-commerce job market. Additionally, e-commerce curricula will be better developed and fine-tuned to meet the real industry e-commerce skills needs [1].

2. Related Research

Much research has been conducted regarding IS personnel skills requirements. Issues of skills portfolios, traits, training, education, skills development, and, recruitment and retention are major issues that have been extensively investigated [7]. Failure to properly manage a firm's skilled workforce may lead to a high rate of turnover, a costly, and at times, a devastating proposition for organizations [2].

With the growing complexities of organizations and the many new applications, business interactions, and technological advancements, an approach of skills portfolio managements has been recommended [8]. Todd, McKeen, and Gallupe [9] conducted a study of IT skills requirements as found in job ads of popular American newspapers from 1970 to 1990. They studied over 1,400 job ads from fiver-year intervals during the twenty-year period. They noticed the increase of skills requirements over the years from an average of 4 skills per ad to an average of 9 skills per ad. They also discovered that business skills were becoming more important for technical staff as years progressed. Leitheiser [4] conducted an MIS developer skills study where seven main categories consisting of fifty-four specific developer skills were identified. The seven main identified developer skills categories were: analysis & design, programming, interpersonal, business, environment, language, and application.

3. Research Methodology

This research is being conducted by investigating job ads in a popular online service for job seekers and advertisers. Of special interest are jobs that were specified as "Internet/e-commerce" positions. Eight hundred (800) job ads, posted during a two-month period

in the summer of 2003, have been collected from companies based in American states that include major cities, where a larger demand for e-commerce personnel is expected. Selected states are: California, New York, Illinois, Texas, Georgia, the District of Columbia, and Washington.

Six major categories for representing characteristics of a job ad were identified. These categories include the following:

3.1 Type of Job (IT vs. Non-IT)

Even though e-commerce can be considered as a highly technical profession, e-commerce job ads are not all necessarily looking for technical expertise. Other non-IT jobs may include marketing, sales, and accounting.

3.2 Salary

The salary offered for a certain position may be specified by the advertising company. In other cases, no salary is given. Yet in other cases, the job applicant is expected to specify their salary requirement if he/she decide to seek the position.

3.3 Years of Experience

In the current tough job market, it is interesting to determine if companies are hiring staff without any previous relevant experience.

3.4 Educational Background Requirements

The minimum level of education required from prospective e-commerce employees will be investigated. It is expected that in the current job market, more applicants will be expected to have bachelor's degrees at minimum.

3.5 Non-technical Skills

These include two sub-categories, personal traits, and business skills. Personal traits can be exemplified by "interpersonal skills," and "works well with others." Examples of business skills include "project planning," and "business function."

3.6 Technical skills

Technical skills may be divided into three sub-categories: problem solving skills, technology skills, and tools skills. An example of problem solving skills is "optimizing mathematical solutions." Technology skills include Java, XML, and HTML, while tools include "graphics applications," and "MS Office."

4. Conclusion

This ongoing study aims to determine the requisite skills for e-commerce jobs. It is believed that e-commerce, as a result of its revolutionary nature, demands different skills requirements than more traditional IT positions. An investigation of 800 e-commerce job ads is being conducted. Findings are expected to help improve the path that e-commerce professionals pave for themselves. E-commerce curricula are also expected to benefit from this study, with e-commerce programs being better developed to meet the actual skills requirements of e-commerce companies.

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