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Human Resource Development and Planning in the Canadian Software Sector

The purpose of this paper is to attempt to describe the Canadian human resources development and planning (HRDP) system in the software sector. The HRDP system, in the broadest sense, facilitates the meeting of labour supply and demand. When an HRDP system works well, employers are able to recruit the human resources they require, students are able to judge the existence of career opportunities and then find the appropriate education and training to prepare to meet sector labour demand, and workers are able to manage their careers within the sector.

A well functioning HRDP system is integral to the software sector for several important needs of software workers; (iii) the attraction and retention HR practices of firms, such as pay, support to worker's career development, and professional image.

The HRDP system functions according to the actions of the wide range of players to be found within each of these components of the HRDP system: educators and trainers, employers, governments, and workers, as well as the various associations that reflect the collective representation of these groups, and the cross-representation of stakeholders through networks and alliances.

The description of the software HRDP system in this paper is examined in several sections:

Section II provides a brief history of the development of the software sector, followed by a discussion of definitional and measurement issues.

Section III makes use of the available data on the sector to provide a labour market profile. This covers employment levels, the nature of the employment opportunities and contracts, income, the skills required in the profession, the demographic profile of workers, and the reported shortage of workers to meet industry needs. This section provides the contextual backdrop for an examination of the HRDP system in the following section.

Section IV examines the key components of the HRDP system in the software sector: the education and training system that feeds workers into the sector at both the initial stages and through continuous learning, as well as the role of employers in attracting and retaining software workers.

Two main points about the HRDP system emerge. First, there are number of existing and potential problem areas within the HRDP system in the software sector, around issues of the training provided by the education and training system, the capacity of educational institutions, the quality of career guidance provided to students, unemployed and self-employed contract workers, and the practices of firms in attracting and retaining workers. The lack of adequate labour market information and signals within the sector is one of the major culprits. Second, the stakeholders associated with the various components of the HRDP system have been coming together through stakeholder networks such as the Software Human Resources Council and regional development bodies to pool their respective resources towards solving problem areas within the HRDP system. As a result, many new developments are underway that hold the potential to bring about improvements to the system.

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