

people in print

TRAINING FOR THE FUTURE

Training Needs Assessment



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Canadian Printing Industries Sector Council



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ABOUT CPISC

The Canadian Printing Industries Sector Council (CPISC) provides a national forum for collaboration on human resource and workforce development issues within the printing and graphic communications industry. Incorporated in April 2006, CPISC's mission is to identify and implement strategies to address skills development and learning within the sector. Our overall goal is to improve the quality of the sector's labour force.

The guiding principle within CPISC is partnership. We bring together employers, employees, unions, education and government to develop innovative approaches to skills development for the current and future workforce of this technology-based industry. The intent of CPISC is not to duplicate what exists but to build on what is currently being done and to develop on a national basis the programs and services that will meet the human resource development needs of the industry as a whole.


INTRODUCTION

It is no exaggeration to say that the printing and graphic communications industry has embraced technology. The past two decades have been characterized by rapid changes in technology, increasing global competitiveness and the restructuring of business practices. Despite this, the Canadian printing and graphic communications industry has continued to grow and flourish.

Rapid changes in technology continue to drive all aspects of the industry but particularly human resource and workforce development. The Canadian printing and graphic communications industry is not alone in facing issues such as changing technology, economic restructuring and global competitiveness. Nor is it alone in recognizing the need for improved training and retraining. But all of these changes have resulted in a constant need to upgrade and retrain the current workforce while ensuring that bright, motivated young people are attracted to this vibrant industry. All workers – current, new and potential – need to have opportunities to acquire the high level of skills they will need to succeed in the future.

Jobs within the printing and graphic communications industry fall into the following production process areas.

Pre-press – Pre-press includes preparing digital and traditional material for the press, according to customer's specifications. Traditionally, pre-press occupations included scanner and camera operators and film strippers – we used to talk about proofing the blues, going to film and preparing a camera-ready version. However, digital technologies and increased customer participation in pre-press activities have blurred previous traditional classifications. Responsibilities now include revisions and corrections of customer files, digital creation of type, page layout, scanning, imposition, colour separation, film and plate preparation and digital asset management. The majority of the work performed during the pre-press process requires highly sophisticated software.



Press – Press involves the actual printing of the document on a sheet-fed or web offset press. A sheet-fed press is just what the name implies – sheets of paper being fed into a printing press. Web presses operate with rolls of paper rather than single sheets – for example, newspapers are usually printed on web presses. During the press process, employees install and adjust plates, prepare blankets and cylinders, select and mix inks, run the press, monitor print quality and press performance, troubleshoot problems, ensure a safe operating environment and perform preventive maintenance on presses. As well, two other press systems – flexographic printing and digital printing – are rapidly growing areas that warrant particular attention.

Finishing and bindery – Finishing, bindery and distribution are the final steps in the production process. They include the assembly of finished products for the customer or consumer. Employees collate and bind printed sheets, perform finishing operations such as drilling, embossing and laminating, and prepare the final product for mailing and distribution. This process area now frequently includes the creation of a website that can host catalogues, databases and even e-commerce. As such, aside from the traditional occupations involved in finishing and binding a document together, this area now also includes a rapidly growing graphic communications component.


In addition, there are a number of jobs that support the production processes. **Production support** occupations include customer service and sales representatives, estimators, production managers and schedulers, and plant supervisors, as well as accounting and office staff, mechanics, electricians and material handlers.

The three production process areas and the production support area are each highly complex and integrated, and vary widely with the size of the company, types of presses, range of job titles and production output.

LABOUR MARKET OR SKILLS ISSUES

As with many other sectors, there are a variety of types of education, training and learning opportunities available to young people as well as to employees already in the industry. The term “learning” is used throughout this document in conjunction with the term “training”, to reflect an increased focus on the learner rather than the program.

Formal learning is knowledge and skills acquired through structured programs offered by colleges and universities. These programs are long-term – usually one to four years – and lead to a certificate, degree or diploma. Some programs include work placements in their curriculum. Such programs are geared to young people or to current employees who wish to change careers or update their skill sets for advancement.



Non-formal learning is knowledge and skills acquired in structured programs outside of educational institutions. Apprenticeship could be considered a form of non-formal learning, although some elements of apprenticeship fall under the category of formal learning while others are considered informal learning. Non-formal learning opportunities may also take the form of seminars and mini-courses that lead to a certificate of completion. In some instances, the recognized learning may be applied towards a formal certificate or degree. These seminars and mini-courses vary in length from a couple of hours to a week. They can be delivered in-house or off-site. However, in order to register, a person must be employed in the printing and graphic communications sector.


As well, many companies – both large and small – provide in-house, ad hoc, informal learning opportunities – knowledge and skills acquired through work and life experiences, using unstructured methods and settings. Mentoring could be considered an informal learning situation, although some mentoring programs may be structured. The information about this kind of training is, for the most part, anecdotal. Informal learning opportunities are most often designed to meet a particular need at a particular time. This form of learning is especially attractive for small companies – which comprise about 75% of the industry – because an SME with less than 20 employees cannot afford to lose an employee for an extended period of time – even half a day. However, there are no standards by which to judge the quality of the learning provided, nor any skill standards against which to map the knowledge and skills acquired.

To compete effectively in the emerging environment, printing and graphic communications firms need a highly skilled workforce – one in which workers hold a broad range of skills and knowledge, including higher technical skills. Specifically, firms will increasingly require adaptable, multi-skilled workers who can operate computers, analyse problems, make decisions, work cooperatively, interact with customers and who have a solid understanding of the entire printing production process.

PROJECT BACKGROUND

The Training Needs Assessment will build on the work done in 2007-2008 on the Building Blocks, namely the Review of Training Programs and Providers and the Skill Standards developed by the Council. As one of the next generation of projects that will solidify the foundation, it will also complement our work on the review of recognition and certification models.

To date, CPISC has identified, in a preliminary fashion, potential gaps in the training currently available and possible strategies to fill these gaps. However, a more in-depth analysis of the learning needs in the sector is needed in order to determine the best overall learning and training strategies for the printing and graphic communications sector.




In 2007, CPISC undertook a review of the education and training programs provided to the sector. The objectives of this project were to: review existing education and training offered by institutions, unions, suppliers and the printing companies themselves; compile a list of formal training programs related to printing and graphic communications; and develop recommendations for next steps. The project also included a preliminary gaps analysis and an exploration of the range of possible training options and the barriers to training.

Based on the information obtained from the Review of Training Programs and Providers project, a picture is emerging of education and training pertaining to the printing and graphic communications industry. The majority of employers provide some form of training. They rely heavily on employee-to-employee knowledge transfer and equipment suppliers to provide the kind of learning needed, which is, for the most part, machine or tool specific training. In fact, supplier-provided training is an important component of the overall learning landscape for the printing and graphic communications industry. Cost, convenience and availability are important elements that influence choices of training delivery models.

It is clear that a “one size fits all” approach is not acceptable and that multiple training delivery options must be made available. While it is not a learning issue per se, employers frequently mentioned that it is currently difficult to find enough people interested in careers in the printing and graphic communications sector. Furthermore, the comment was often made that new graduates are not entirely “work ready”, that they are lacking in both technical and essential skills to complete the assigned tasks effectively. Yet for the most part, training institutions indicate that they are very or somewhat familiar with the needs of the printing and graphic communications industry.

This study provides a solid foundation of information upon which to build for the future. One of the major recommendations from this study was to conduct a training needs assessment, in order to ensure that the training provided both formally and informally meets the expressed needs of the sector.

Concurrent with the Review of Training Programs and Providers Project, CPISC has been working with the industry to develop skill standards. As with all manufacturing sectors, the functions along the printing production chain are highly integrated. As such, it was determined that it would not serve the sector to develop skill standards by occupation. For this reason, CPISC is using a unique approach to the development of skill standards that mirrors the way the industry is organized and functions. In 2007-2008, CPISC developed basic and core skill standards as well as operating skill standards for the press process area. In 2008-2009, we will develop operating skill standards for the pre-press and finishing and bindery process areas.



Basic skills are basic or “essential” to all occupations. They include reading, writing, interpersonal skills, mathematical and calculation skills, problem solving, decision making, computer literacy and planning and organizing. These skills are consistent across all areas of printing. Basic skills are also called “enabling skills” since they allow for the use and development of other skills. For example, to team build, an employee would have to use his or her interpersonal skills. To operate a press, an operator would be required to read manuals. The basic skills developed for the printing and graphic communications sector mirror in large part the Essential Skills developed by HRSDC as well as the Employability Skills developed by the Conference Board.

Core skills cover those elements that comprise a broad-knowledge of the industry. For the most part, these skills will cut across all process areas, although some may be more relevant to a particular process area. The core skills cover teamwork, health and safety, printing process, workflow process and control and quality assurance. They are the foundational skills that are required in some form of all employees.

Operating skills relate to specific operating functions within a process area. A function is defined as a set of related work activities organized in either chronological or operational order that often cut across occupations. In other words, functions are not highly specific job tasks but groups of related activities that often cut across job titles. For the press process area, for example, operating skills could include such basic operations as preparing ink and inking systems, preparing cylinders, monitoring colour quality and performing wash-up, as well as operating skills pertaining to a particular type of printing such as sheet fed, web or flexographic.

Based on the information obtained from the skills standards and the review of training programs and providers, CPISC is now in a better position to map the agreed-upon skill standards against existing formal and non-formal training programs and perform a gaps analysis to determine if a learning/training needs exist that are not being met. For that reason, CPISC will also determine what training is required to fill the gaps, and identify the most effective training delivery and knowledge transfer models.

PROJECT OBJECTIVES

The objectives of this project are to:

- Conduct a learning needs assessment and gaps analysis for the sector
- Explore the range of training delivery and knowledge transfer models and options to meet the needs of the printing and graphic communications sector as a whole
- Determine and document the most effective training delivery and knowledge transfer models for the sector



PROJECT ACTIVITIES AND TIMELINES

The Training Needs Assessment project will run from July 1, 2008 to October 31, 2009. During the course of this project, CPISC will adopt a phased approach to first identify the learning/training needs then explore and document the range of training delivery and knowledge transfer models that most effectively meet the needs of the industry. As indicated in the 2007 study, the majority of employers provide some form of training, either formal or non-formal. However, employee-to-employee knowledge transfer or informal learning remains a vital component of the learning picture. For this reason, it will be important to explore not only training delivery models that reflect a formal or non-formal learning environment but also knowledge transfer models that imply informal employee-to-employee knowledge transfer such as on-the-job training, some apprenticeship and mentorship models.

Throughout the project, it will be important for CPISC to work with the education sector, to begin to lay the groundwork for the development of a program accreditation model that builds on the industry's agreed-upon skill standards and identified training needs and delivery models and a well-defined certification model. The training needs assessment will involve two phases.

During Phase I, CPISC will conduct a learning/training needs analysis. To accomplish this, CPISC will complete the training picture for the industry by obtaining information, via targeted interviews, from the two populations not included in the 2007 study, namely the private trainers and secondary schools. We will then map the agreed-upon skill standards against existing formal and non-formal training programs, starting with the basic, core and press skill standards and, as they become available, the pre-press and finishing and bindery skill standards. We will also perform a gaps analysis to determine if learning/training needs exist that are not being met. CPISC will confirm the draft skills map and gaps analysis with key stakeholders (employers, employees, unions, suppliers, education representatives, provincial/territorial government representatives).

During Phase II, in order to determine the most effective delivery models, CPISC will conduct a literature review of models of training delivery and knowledge transfer for comparable sectors and for the printing and graphic communications sector in other countries; document the range of training delivery and knowledge transfer models; and, refine range of models through interviews and consultations meetings with key stakeholders. This will allow CPISC to finalize the report on the most effective training delivery and knowledge transfer models for the sector.



AND THIS PROJECT WILL LEAD TO ...

At the end of the project CPISC will have conducted training needs analysis and will have identified gaps in the training offered by both public and private training providers. As well, we will have documented the range of training delivery and knowledge transfer models that best suit the needs of the printing and graphic communications sector.