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The ePortfolio and HRD Policy Goals

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1. What is the ePortfolio?

The ePortfolio is an electronic learning record – a personal learning profile created and stored using a computer.   The term "learning" means "skills and knowledge" acquired in both the formal education/training environment and the non-formal learning environment of work, community, leisure and family. The term "portfolio" is synonymous with résumé, dossier, skills passport, inventory or profile. An ePortfolio is a cumulative account of an individual's learning, created and maintained digitally.

There are many different types of ePortfolio. Universities encourage students to create records of their learning and credentials. Adult literacy programs assist learners to create Essential Skills portfolios. Commercial products are readily available online and/or for purchase.   The content, format and intended uses of the ePortfolio vary widely.

2. *How does it differ from a traditional résumé?*

The traditional résumé sets out credentials and work experience; a good résumé tries to capture the learning acquired from those items but it seldom includes the vast array of non-study and non-work experiences of the individual.

Characteristic	Traditional Résumé	ePortfolio
content	lists of credentials and work experiences (with skills and knowledge implied)	lists of skills and knowledge (with learning experiences and credentials referenced where appropriate)
development process	keep track of formal credentials, dates, employer addresses, job descriptions	examine learning experiences for the skills and knowledge acquired
perspective on learning	learning happens largely in formal institutions, and credentials and work experience are the valued learning opportunities	learning happens in both formal and non-formal situations, and all learning has value
format	short and factual	may be more comprehensive, with broader lists that can be cross-referenced with actual skills and knowledge in job and training requirements
validation	credentials and employer's references have been unchallenged proxies for learning	different forms of validation are required, in addition to credentials and references, e.g., personal references
purpose	to get a job	for career planning and development: appropriate work and/or training

Taking these differences into account, it makes sense to use a computer to develop and maintain a portfolio that continues to change with new experiences and learning. And this only is effective or efficient if there is a system to recognize and utilize the new form of learning record – the ePortfolio.

3. What does the ePortfolio system do?

In 1997, under the leadership of Dr. Barker of FuturEd, the Canadian Labour Force Development Board (CLFDB; no longer operational) hypothesized that the systematic application of an ePortfolio system throughout Canada could "increase educational productivity, enhance economic productivity and resource utilization, and enable individuals to maintain balance and a sense of self in turbulent times."   A working group of the CLFDB labelled the ePortfolio "a Skills and Knowledge Profile" (SKP) and defined it as a tool by which an individual could express his/her formal and non-formal learning in a standardized and credible manner to a wide variety of stakeholders for personal, economic and education/training development.

The aim of CLFDB projects was to contribute to increasing the effectiveness, efficiency and equity of Canada's labour force development system.   The term "labour force development" included pre-employment training and education, skills and knowledge upgrading and retraining, accreditation and regulatory processes, career and employment counselling, access to employment in general, access to appropriate employment that best uses an individual's learning, and career development through planning and opportunity. That system was not perceived to be sufficiently effective, efficient or equitable. More specifically, a learning record or Skills and Knowledge Profile was thought to resolve the following problems.

3.1. *Problem: Large numbers of Canadians, approximately 10% in October 1996, were unemployed; even more, in large numbers, were underemployed. Not all those individuals were unemployable. This is a waste of human resources.*

It is often assumed that unemployed and underemployed individuals are not skilled, and that they'd be employed if they had the skills and knowledge that are in demand. This may be an incorrect assumption. Most people have a far broader array of skills and knowledge than they are given credit for, learning that has been acquired over time through education, work and life experiences in Canada and elsewhere. They need the opportunity to determine, describe and use the skills they do have. It may be that there is available work -- a job and/or self-employment – requiring just that learning.

Solution: An ePortfolio can be the mechanism through which individuals take stock of their varied skills and knowledge and organize them in a systematic fashion to gain employment or more appropriate employment.

3.2. *Problem: Although many immigrants come to Canada with highly developed skills and knowledge, they have difficulty gaining recognition of that learning and therefore have enormous difficulty obtaining relevant and appropriate employment.*

Large numbers of unemployed and underemployed people have gained skills and knowledge outside Canada and within systems that are different from and unfamiliar to the Canadian context. Employers, educational institutions, accrediting and regulatory bodies do not have the tools to assess these skills, so these individuals often remain marginalized. This, too, is a waste of human resources and a contradiction of Canada's immigration policy.

Solution: An ePortfolio becomes a tool by which to express and seek recognition for skills and knowledge acquired outside Canada.

3.3. *Problem: Large numbers of Canadians recognize that they need skill upgrading and further education for employability reasons. Many adult learners do not have the tools and opportunities they need to ensure that their resources (time, energy and finances) are used to advantage. This, too, results in wasted resources.*

It doesn't make sense for adult learners to re-study skills and knowledge that have already been acquired. It does make sense that, if individuals have an inventory of their acquired learning, they could:

- target missing or needed skills and/or knowledge through formal and/or non-formal learning experiences;

- expand and enhance acquired skills and knowledge; and

- get credit towards formal credentials or certification, if those are necessary.

Resources of the individual, governments and training institutions are used more efficiently and effectively through this process of assessing and recognizing the learning that an individual already has, providing "top up" learning opportunities in ways that are responsive, customized, competency-based, modularized, and flexible.

Solution: An ePortfolio can be a mechanism by which individuals inventory or catalogue their acquired learning for purposes of skill upgrading, credential acquisition, and lifelong learning.

3.4. *Problem: As individuals look for jobs or make career changes, they find dozens and dozens of different means by which to make application for work. The variety of options and expectations is confusing, frustrating and time-consuming for individuals, both employers and workers, to deal with.*

When people apply for work, they are under pressure to create résumés that help them stand out from among the many job seekers. The options seem endless; advice is plentiful, yet contradictory. On the other side of the table, to select employees, employers are faced with piles of résumés, which, after a very short time, begin to look alike, with lists of similar credentials and bewildering work experiences. Why can't individuals just list what they know and can do?

Solution: An ePortfolio, thoughtfully conceived, can be a mechanism or tool for presenting one's acquired skills and knowledge and for matching it, in a systematic fashion, to the skills and knowledge that is required in a particular work situation(s). It can make the labour exchange function far more effective, efficient and equitable.

3.5. *Problem: Often employers feel that they have to lay people off and/or find new workers when, in fact, the human resources they need may be already in their workforce. They may not have effective tools for determining and recognizing the skills and knowledge of their existing workforce.*

As employers seek to enhance productivity and maximize the use of resources, they may not recognize the wealth of their existing human resources.

Solution: An ePortfolio can be a tool for better describing, understanding and applying the capabilities of the existing workforce. It can help match people to new and different jobs within the worksite. And it can be used to help with planning for training and career development to meet the goals of individuals and of the business enterprise in a systematic and timely fashion.

3.6. *There is an expectation, in the workforce, that individuals will continue to learn new skills and knowledge, and to be able to demonstrate that they are doing so. Keeping track of the range and scope of continuous learning may be complex and difficult.*

Increasingly, individuals are adding to their repertoire of skills and knowledge by deliberately learning through, for example, training programs, reading materials, software programs, and seminars. Keeping track of that "formal learning" is a problem, given that each may be different in terms of training source or provider, recognition of completion, and duration. Those who bother to keep track may end up with nothing more than a list of courses, seminars, etc. from a number of training providers and venues. What do they really mean?

Solution: An ePortfolio may be a means by which to account for lifelong learning, translating the individual's learning achievements from, for example, a workshop, a good book, or a university course into a list of skills and knowledge that can be continuously added to. It can become a tool to promote transitions from school to work to school to work throughout a lifetime.

In summation, each of these problems can be framed as a **human resources development policy goal** to be addressed as follows.

If.....	then, the ePortfolio could be a means by which
1. human potential should not be wasted because individuals are unemployed and/or underemployed due to the fact that their repertoire of skills and knowledge is not fully catalogued or utilized	to recognize an individual's entire repertoire of skills and knowledge acquired through formal education/training and through life and work experience
2. immigration policy favours individuals with high levels of skill and knowledge, yet those very people have difficulty getting employment that takes advantage of their acquired skill and knowledge	employers and accrediting institutions can assess and recognize the body of skills and knowledge that foreign-trained workers bring to the employment environment
3. time and finances should not be wasted as they are when the formal learning system (1) does not recognize that individuals may already possess some skills and knowledge, and (2) expects learners to fit standard program timeframes	to recognize that individuals, as potential students, have and can credibly demonstrate their acquired learning so that they may shorten formal study/training time, meet some pre-requisites, and target learning needs
4. people and jobs should be more easily matched because (1) individuals should present their entire record of learning, and (2) matching processes should be less numerous and varied	both workers and employers could match individual learning records to skills and knowledge requirements in a systematic, authentic fashion
5. employers should realize the full capacity in their workforce	employers could use understand and utilize the individual and collective skills and knowledge of their existing workforce
6. lifelong learning is an expectation in contemporary society	a means by which to keep track of skills and knowledge acquired by individuals

The CLFDB felt that these six HRD policy goals could be achieved, in part, by the systematic implementation of the ePortfolio concept on a pan-Canadian basis.

4. How can the ePortfolio achieve public policy goals?

By meeting certain standards, the ePortfolio can systematically, comprehensively and credibly contribute to achieving some labour force development policy goals. The standards are based on the following logic.

3.1 If the ePortfolio is intended to contribute to the effectiveness, efficiency, and equity of labour force development, the ePortfolio **itself** must be:

- effective: it must do what it claims to do, it must profile skills and knowledge, in a manner that is recognized by all the labour market partners and that places value on learning that has previously been hidden

- efficient: it must make maximum use of resources, human, time, and financial, neither duplicating existing processes nor necessitating too many additional resources

- equitable: it must be accessible to and usable by all, barrier and bias-free
- easily usable: it must be accurate and adequate

3.2 In order to make a contribution to **increasing** effectiveness, efficiency and equity, it must be somehow different in a positive sense. There would be no need for innovations, such as the ePortfolio, if the system were considered by all to be effective, efficient and equitable.

3.3 In order to make a contribution to increasing effectiveness, efficiency and equity of the human resource development **system**, the ePortfolio must make a positive contribution for one or all of the labour market partners while making no negative contribution for any labour market partner group[1]. The "labour market partners" include: employers, workers and learners, providers of education/training products and services together with accrediting and regulatory bodies, and society represented by federal and provincial governments. Therefore, in Canada's labour force development system, the ePortfolio should contribute to:

3.3.1 the effectiveness, efficiency and equity of education and training by:

- increasing access, for individuals, through the recognition of non-formal learning (i.e., skills and knowledge acquired in the work, community, leisure and family environment), and by helping to meet course/program prerequisites;

- increasing numbers and variety in learners served by teaching institutions, by targeting those most in need and working together to meet the needs of individual learners and communities; and

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[1] Good public policy should meet, at least, the following three criteria: (1) the Pareto Criterion: Will the policy action result in at least one person being better off and no persons being worse off? (2) the Kaldor-Hicks Criterion: Will the policy action result in a net gain in socio-economic efficiency and can those who gain compensate the losers? (3) the Rawls Criterion: Will the policy action result in a gain in welfare for the members of society who are worst off?

- reducing redundancy, by not requiring individuals to study skills and knowledge that they may have already acquired and, thereby, the resources required, the time and finances for both institutions and individuals.

3.3.2 economic productivity and resource utilization by:

- enabling the appropriate utilization of the existing skills and knowledge of individuals, by workers and learners, and of the existing workforce by employers and industry; and

- increasing access to employment for the unemployed, and to appropriate employment for the underemployed by profiling (identifying and listing) the entire range of skills and knowledge held by individuals.

3.3.3 the ability of individuals to maintain balance and a sense of self in turbulent times by:

- connecting individuals to the labour force development system through equitable access and accommodation in opportunity, programs and services;

- increasing self-awareness, utilizing strengths and improving on skill/knowledge deficits, and career planning; and

- providing more and more relevant information to the labour market partners, particularly those who can provide opportunity, stability and leadership.

3.4 In order for an ePortfolio to make a contribution to increasing the effectiveness, efficiency and equitability of a labour force development system, it must include an instrument (format, content), a process (access, development, maintenance) and a utility for all the labour market partners that meet minimum standards for effectiveness, efficiency and equity.

3.5 Therefore, the **recommended national ePortfolio standards** to meet HRD Policy Goals are as follows.

1. The ePortfolio should list and describe skills and knowledge in a way that is recognized and respected by all the labour market partners.

2. The ePortfolio should have the capacity to be a complete inventory of skills and knowledge acquired by the individual regardless of where they were acquired.

3. An individual should develop and own his/her ePortfolio. Some people may require informed assistance to achieve this. The use of the ePortfolio and any changes to it should be completely controlled by the individual.

4. The content of the ePortfolio should be current, accurate and verifiable.

5. The ePortfolio should allow flexibility to accommodate unique or industry-specific skills.

6. The ePortfolio should follow a standardized format. The ePortfolio content and format should link to existing and developing labour market exchange systems.

7. The ePortfolio and its development process should be relatively simple and straightforward.

8. The development and use of the ePortfolio for any and all Canadians should be barrier-free; that is to say, social identity, disability and geography should not be barriers to individuals.

9. The development and content of an ePortfolio should be bias-free.

10. An ePortfolio should not create barriers; for example, a person who does not have an ePortfolio is not discriminated against for the lack of one, or for the skills revealed.

4.   A final word about standards[2]...

Standards describe what is acceptable and what isn't; therefore, standards are a standard means by which to implement public policy. The U.S. Office of Technology Assessment, in its 1992 document *Global Standards: Building Blocks for the Future*, observes the following.

> *Standards govern the design, operation, manufacture, and use of nearly everything that mankind produces. There are standards to protect the environment and human health... There are even standards of acceptable behaviour within a society. Standards generally go unnoticed. They are mostly quiet, unseen forces, such as specifications, regulations, and protocols, that ensure things work properly, interactively, and responsibly* (p. iii).

Standards, like policies, exist whether they are clearly stated or just generally accepted; however, standards that are not clearly stated often allow too much room for interpretation, confusion and abuse. Fair and justifiable formal standards are often needed to ensure quality of products and accountability of systems. In the view of the labour market partners, this is the value of national EPORTFOLIO standards. These standards are intended to be a comprehensive description of best practice in the development and use of a Skills and Knowledge Profile that accounts for an individuals entire repertoire of learning so that individuals have increased access to training and employment.

The Office of Technology Assessment also notes that standards are developed or achieved by one of three methods:

1.   by government, though a regulatory process (authority);
2.   through the market, on a de facto basis (custom);
3.   negotiated through a voluntary consensus process (consent).

The CLFDB process was the latter process, i.e., these recommended national ePortfolio standards were developed and recommended by labour market representatives on the Board and its Learning Record working group. While the CLFDB had no authority to enforce standards, it had the responsibility to generate recommended national standards that describe best practice and contribute to the achievement of a labour force development system that is effective, efficient and equitable. Unfortunately, this could not continue to fulfil this mandate.

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[2] adapted from the CLFDB Training Standards (1995) and PLAR Standards (1996) background documents

Documents available from FuturEd.

Barker, K. (2000). *The Electronic Learning Record: Assessment and Management of Skills and Knowledge. ePortfolio Research Report.* Vancouver: FuturEd Inc. available in the e-library at www.FuturEd.com

Barker, K. (1999). *The Electronic Learning Record: Assessment and Management of Skills and Knowledge. An ePortfolio Environmental Scan.* Vancouver: FuturEd Inc. for Literacy BC and the National Literacy Secretariat. Available in the e-library at www.FuturEd.com

Barker, K. (1996). *The CLFDB Learning Record (ePortfolio) Project Background Paper.* Ottawa: Canadian Labour Force Development Board.