

# **Understanding Learning Transfer in Employment Preparation Programs for Adults with Low Skills**

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**Abstract:** This Canadian study investigated how the transfer of learning occurred in an employment preparation program for adults with low literacy skills using a multi-site case study research design. Four different programs involving trainees, instructors and workplace supervisors participated in the investigation. Results indicated that the transfer of learning occurs through various life roles that adults enact while participating in the program; the essential skills of computer literacy, oral communication, and continuous learning are the guideposts for transfer and; the time/role model of learning transfer helps explain the different instructional strategies used in the classroom and the workplace. The findings shed some light on how sociocultural learning develops in adult literacy groups destined for the workforce and the importance of the tri-partnership of the instructor, trainee and workplace supervisor.

## **Introduction**

It is estimated that a large number of adults do not possess the requisite skills needed to maintain competitiveness in an increasingly global knowledge economy. Over 9 million of Canada's 21 million working age Canadians do not have the literacy skills to meet the ever increasing demands of our information-based economy and society (Statistics Canada, 2005; Statistics Canada & Human Resources and Social Development Canada, 2008). However, despite the size of this problem some important gains have been

made in literacy training in the workforce. Over the past few years, workplace basic skills programs and programs with workplacements have become good environments for employees and trainees to learn and improve their literacy skills (Taylor, 2006; Taylor, Evans and Mohamed, 2007). Furthermore, the government of Canada has developed a series of strategies to include more Canadians in education programs for skills development as the current shortage of skilled workers cannot be covered only with new immigrants to the country. These strategies include tax reductions to workers so they can invest in their education and training, improvements to the federal and provincial systems of financial support for students, and tax credits to companies that provide training to their employees (Department of Finance Canada, 2006).

Although these new strategies do respond, in part, to the call for more investments in training in adult literacy learning in Canada, there is a growing recognition of the transfer of learning problem and the concern that much of what is learned fails to be useful in the work, family and community settings. For the purposes of this study transfer was defined as the “effective and continuing application by learners-to their performance of jobs or other individual, organizational or community responsibilities-of knowledge and skills gained in training activities” (Broad, 1997, p.2) . Also adding to this definition, Taylor (2000) explains that transfer of learning in basic skills training is more concerned with the learning process, the workplace as a learning context and the application by trainees of new knowledge and skills gained through a learning activity. Given this operational definition, the scope of this study was interested in looking at adults with low skills who were enrolled in workplace preparation programs and whether the literacy skills gained through these types of training activities are transferred back to the job or work placement. Specifically, the purpose of this exploratory project was to understand how transfer of learning in employment preparation programs happens for adults with low literacy. Two key research questions guided the study: (1) How does the transfer of

learning occur in workplace preparation programs for adults with low literacy? and (2) What teaching strategies do instructors in workplace preparation programs use to promote the transfer of literacy learning?

### **Theoretical Perspective and Related Literature**

The theoretical framework for the study is drawn from three theories in adult education, which have relevance to the transfer process and workplace learning context. The first theory is transformative learning which focuses on the learners' underlying cognitive processes, learner – centred design and development features, and the learning context. Mezirow (2003) explained that adults need to develop capabilities to become critically self-reflective and exercise reflective judgment. It is the role of adult education “to help the learner realize these capabilities by developing the skills, insights, and dispositions essential for their practice” (p. 62). He goes onto to explain that experience, critical reflection, and reflective discourse are the main elements in the transformative learning process. Central to this perspective is the notion of meaning schemes, which are sets of beliefs, feelings and attitudes and judgements. Alterations in these meaning schemes can be dramatic or can happen gradually. The theory posits that adults learn from their experiences by modifying their worldviews as it relates to the formations of their new identities in society and their attitudes toward learning. These life experiences prepare the adult for further learning through a critical assessment of their current educational needs.

The second theory is situated cognition. This theory focuses on the sociocultural nature of learning and addresses the learners within their organizational contexts, placing emphasis on the interactions in particular program settings (Kirshner & Whitson, 1997). In other words, the critical aspect in understanding the theory is that there is a “shift away from the individual as the unit of analysis towards the sociocultural setting in which

learning activities are embedded” (p. 5). Situated cognition portrays learning as an interactive process in which learners that belong to a particular setting work as peers in order to solve problems that are contextually located. Early proponents of this approach maintain that the creation of new knowledge is situated in the everyday events and activities of an individual as well as in the outcomes of the activity, and any new context in which it is used.

The third theoretical perspective is self-directed learning. Rooted in the philosophical underpinnings of behaviourism and humanism, advocates for self directed learning such as Knowles, Holton, and Swanson (2005) view the needs of the learner as coming first and the role of the instructor more as a guide than a content or subject matter expert. As Merriam, Caffarella and Baumgartner (2006) point out research on this concept has provided three distinct definitions-self directed learning as a goal, as a process and as a learner characteristic. It is this latter conception that is of interest in this study. This approach acknowledges the importance of individual learners’ characteristics – their autonomy, motivation, attitudes and experience (Brookfield, 2005). Furthermore as this author explains, autonomy is a characteristic of learners that allows them to take responsibility for their own learning according to their individual goals and purposes. Taken together, these theoretical perspectives help guide the study as they focus attention on the transformative critical thinking aspects of the learning process, the importance of sociocultural interactions in the learning environment and the self-directed learner characteristics that may influence the transfer process in different contexts.

Although there is a paucity of literature in the domain of transfer of learning in adult literacy, there is considerable research which focuses on the key factors in the transfer process. This research suggests that the training program’s design and development, the organizational climate and the individual learners’ characteristics are the three primary sources that influence the transfer of learning (Toll & Taylor, 2006).

For example, in a validation study of a learning transfer inventory, Holton, Bates and Ruona (2000) identified a range of different factors that affected the transfer of learning from training settings to the workplace. A sample of 1616 trainees from government, for and not-for profit organizations and public training programs which covered areas such as technical, customer service, volunteer management, supervisory, clerical, communication, computer and leadership skills were administered the inventory. Factors which affected learning transfer focused on learner readiness, motivation to transfer, positive and negative personal outcomes, and personal capacity for transfer to name a few. In a more recent work, Bates and Holton (2004) proposed that literacy skill levels may influence trainees' abilities to take what they have learned in the classroom and apply it to the job. In the study, the researchers identified two distinct groups, the first group of participants had a mastery level of math and reading skills either consistent with their job requirements or exceeding them. The second group possessed a level of math and reading skills that was below in terms of the requirements of their jobs. After analyzing the results from their Learning Transfer Inventory, they concluded that trainees with lower literacy skills tend to perceive their workplace as an environment that is less supportive to transfer than those trainees with high literacy skills.

Exploring factors influencing transfer, Subedi (2006) conducted a study with managers, senior supervisors, and employees from the public and private sector in Nepal where cultural beliefs were considered as influencers of transfer. These beliefs are the perceived value of training and how it facilitates better performance on the job. The results from the study indicated that the perceived notion of the perfect training lies on the possibility of transferring knowledge, skills, and attitudes back to the job. When asked about factors that influenced employee's decisions about the selection of their training, organizational needs was ranked highest and a close second was job or performance requirements. The researcher concluded that the cultural beliefs that influenced the

transfer of learning were the perceptions about the usefulness of training towards transfer and towards fulfilling the needs of the organization. That is, when a training session or activity was perceived as closely related to the job of the trainees, the training was considered more useful and therefore there were more possibilities for transfer. Yelon, Sheppard, Sleight and Ford (2004) highlighted autonomy as a main trainee characteristics that influences transfer. In their study, the researchers interviewed 73 physicians that participated in a faculty development training program. They concluded that autonomy and self-direction influenced the trainee's intention to transfer learning from the training room to the workplace. Such autonomy was identified in the decisions of the trainees about whether or not attempt to apply new knowledge on their jobs. Self-direction was identified as the decisions that the trainees made about engaging in further training and selecting such training.

Furthermore, Chaloner (2006) explored the use of personal journals as a tool for transferring learning to the workplace. The participants of the study were trainees from a European multinational aircraft manufacturing company that were participating in language training. The author concluded that personal journals helped trainees to structure and personalize what they learned. The journals helped learners to set individual learning objectives, which ultimately helped them to link what they learned with the requirements of their jobs. In a study investigating the factor of supervisory support as a condition for transfer of learning, Van der Klink, Gielen and Nauta (2001) used an experimental research design in two banking organizations. Although bank clerk trainees received different types of training content from both organizations, the researchers concluded that the differences in performance progress after the training were not significant. For example, in the training program which focused on the legal aspects of the clerk's job, perceptions about supervisory support decreased 8-10 weeks after the training program ( $t(100) = 6.69, p. <.0005$ ). Even though this study has used an experimental research

design to investigate supervisory support as a factor in the transfer of learning process, more attention needs to be given to the rigour of using mixed methods.

Several observations can be made from this selected literature. On the one hand, it does seem clear that important insights can be gleaned from studies that have focused on trainee characteristics such as learner autonomy and self-direction. The same can be said about the modest gains that have been made in understanding aspects of the organizational climate such as supervisor's support and a program's design which includes the use of personal journals in the transfer process. But on the other hand, it also seems clear that most of the empirical evidence on the transfer of learning has been conducted with employees with higher educational attainment and very little has been done from the perspective of adults with low literacy skills.

Another glaring observation from this cited review is the predominant use of a postpositivist research paradigm to study the transfer of learning. Experimental, quasi-experimental and survey research have yielded some important results on the key factors in the transfer process, however, there still remains dimensions of the phenomenon that have not yet been uncovered by employing this quantitative approach. Cognitive aspects such as reflection, self-directedness and the learner interactive process in a sociocultural work and training environment are qualities that may provide some new insights into unravelling this complex domain. But this would require a different line of inquiry. Using a constructivist worldview and a qualitative research design where the adult learner is the key informant and the focal point of the study is now needed. By doing so, this would allow a further exploration of the lived experience underneath the transfer of learning.

### **Methodology**

The research design used to further explore learning transfer in this investigation was a multi-site case study (Stake, 2006). The cases within the bounded system were

adult learners with low skills instructors and workplace supervisors from four different programs in a local district school board in Eastern Ontario, Canada. The overall provincial Program is funded through the Literacy and Basic Skills (LBS) initiative of the Ontario Ministry of Training, Colleges and Universities, and was created for adult learners with low literacy. LBS provides a continuum of services to grade 12 equivalency and ensures a choice of delivery option through colleges, school boards and community-based agencies. The Program is committed to serving four streams of adult learners in Ontario – anglophone, francophone, native and deaf (College Sector Committee for Adult Upgrading, 2008). In this local district school board, the employment preparation program had two components - classroom based instruction and workplace instruction that takes place outside the classroom. The study focused on four program sites, which were linked to daycare, customer service, entry level healthcare sectors, and training programs for adults with mild developmental disabilities or mental handicaps. In this particular program site, these adults are preparing to work independently in the service sector.

While classroom instruction took place in class settings within the program, the workplace instruction settings varied. Both the daycare and customer service classes have a workplacement off-site, the class for adults with developmental disabilities enters work practice settings on-site, and the entry level healthcare class visits work and training sites. Classroom instruction has an employment focus and has developed curricula based on the specific demands of the workplaces and workplace training programs that students want to enter. There is an emphasis on communication and language skills, consumer math skills, computer skills, workplace safety, and worker rights; in addition to other skills more specifically designed for each workplacement orientation, such as child development or money transactions. Some of this curriculum has been crafted along the nine domain areas of the Essential Skills Profile.

In the mid to late 90's, the Essential Skills Research Project (ESRP) examined how essential skills were used in various jobs. More than 3000 interviews were conducted across Canada for over 200 occupations. Essential skills for the research project were described as the everyday skills needed to carry out a variety of life and work tasks. These skills were not technical skills for a specific occupation but skills that can be applied across all occupations. The Essential Skills Profile consists of nine areas : reading text, writing, document use, numeracy, oral communication, working with others, continuous learning, thinking skills and computer use. Levels of complexity from one to five are used to measure the difficulty of these skills in different occupations (Canadian Labour Congress, 2005). For several years, many LBS agencies have been using the Essential Skills and the occupational profiles to develop curriculum for learners with employment goals. More recently, Essential Skills have been used to develop learners' training plans (Community Literacy of Ontario, 2008).

Purposeful maximal sampling was used to illustrate different perspectives of the research problem and to uncover as many characteristics of the transfer process as possible (Creswell, 2007). Adult learners who participated in the study were both Canadian born as well as immigrants from the Middle East, East Asia and Africa. Most often, these types of students do not have a high school level education, nor do they have employment related credentials or certification. In total, research participants included 15 adult learners, four instructors, three workplace supervisors and a focus group of instructors. The focus group was conducted with four instructors who had previously been interviewed and further expanded some of the preliminary themes that emerged in both the individual learner and instructor interviews. Five data sources were used in the investigation and included semi-structured interviews with trainees, instructors and workplace supervisors or workplacement co-coordinators, an instructor focus group, and field notes. Questions for the three different interview schedules were drawn from the

transfer of learning literature. These were piloted in the school board program with adult learners and revisions were made to the instruments. The data analysis path was informed by the work of Creswell (2007); Merriam (2002); Stake (2006) and Yin (2003). Using a holistic analysis approach, a detailed description of each of the four cases was developed. A case was written for each program site and included a description of the formal program, curriculum approaches and the experiences of learning transfer from learners, instructors and workplace supervisors. These experiences were based on the interview data and field notes that had been transformed into research narratives and later member checked. An analysis of the themes and categories was then conducted for understanding the complexity of the case. This was followed by a within-case analysis of the themes and a subsequent cross-case analysis of the four program sites.

### **Findings**

Three key patterns have emerged from the data analysis. The first two themes can be described as the transfer of knowledge through life roles and the importance of essential skills as the guidepost for transfer. These patterns help answer the research question which looks at how the process of transfer occurs. The second research question, which sought to understand instructional techniques used by the teachers and trainees, can be explained by the third theme- the time role model in the transfer of learning.

#### *Transfer of knowledge through life roles*

A very clear pattern emerged in the data around life role definitions and how these roles facilitated the transfer of learning. Even though learner participants were engaged in a program aimed for paid employment, they played important life roles outside of the training classroom and workplacement sites. These roles such as worker, parent, community volunteer, and citizen were instrumental in the transfer process. Adult learners with low literacy find entry into an employment preparation program through

various means, yet there is a common binding goal that gets them through the front door of the program. This goal is related to a strong desire to be part of the Canadian workforce. Clearly, all adult trainees in this study were motivated to fulfill this important worker role in life. Securing employment, getting a job, finding a vocation, learning how to work better were some of the ideas attached to the meaning of this worker role. Once in the program, the learning that happens in the classroom starts to transfer into the home environment through the role of parent. This was especially true for the women participants in the daycare assistant program. For Safa, one of the trainees, learning about children's behaviors and playground activities in the classroom was practiced at home first with her own children and then once she felt comfortable applying this new knowledge she used it in the workplacement site. Safa described it this way, "I practice what I learn from my teacher even with my children, then I practice in the placement... before the program I didn't know how I read to the children; before I read to my children but not the way the teacher told us and how to make the children interested in the story... and now they understand". As a result of this transfer from the program to her home environment, she believed her role as parent had improved and she was managing the developmental stages of her own children much better.

In another instance, transfer of learning occurred from the role of trainee to the role of community volunteer. Suha recognized, early in the program, that her physical disability would prevent her from obtaining full time employment. However, she was very determined to apply her new healthcare knowledge, learned in the personal support worker program, within her own neighbourhood as a volunteer with the elderly. She said she had "a back problem" and then explained further : "I can't work anywhere... but in the course I learn English and in the program I learn I can help people and I am quite happy" Since some of the participants were second language learners with low literacy, there was a strong motivation to fulfill the role as a Canadian citizen. This was evident

with Melku who was keen to transfer his learning from the customer service program back to his home where he would role-play problem scenarios by himself in front of the mirror or with family members, “I practice at home, if I don’t have anybody to practice with, I go to mirror and you stand in front of the mirror and you ask questions... it is very good practice!”. He had a strong belief that by getting employment in this field and by practicing his language skills in every aspect of his life would enable him to adapt more quickly to Canadian culture and improve his family’s standard of living. In one sense, the transfer of learning through life roles could be viewed as a set of knowledge, skills and attitudes discovered initially in a classroom-based environment but then enacted in a pivotal manner with other important roles that were going on concurrently in the daily lives of the learner participants.

#### *Essential skills as the guidepost for transfer*

Another key pattern that emerged from the data was the usefulness of the Essential Skills Profile as a guidepost for transfer through the workplace context curriculum for each of the programs. Of the nine skill domains in the profile, it was evident from the data that the areas of computer literacy, oral communication and continuous learning were focal points for the trainees. For example, in the area of computer literacy Ila mentioned that she uses the computer to find additional information she received in the classroom. “To follow up information usually I use the computer, I go to the Google and get more information” These types of skills might be considered to be the more complex skills, as they often embed the fundamental skills such as reading texts and use of documents. And it was these types of computer skills that were used to transfer learning from the classroom to both the home and the workplacement. All participants had a real interest in becoming computer literate in the classroom as they learned the mechanics of e-mailing and internet search techniques for finding job postings on

company websites. This type of knowledge was applied back at home in the evenings as trainees continued their job search independently. It was very interesting to note that, for the most part, participants had either a home computer or easy access to one in their local neighbourhood. This debunks the myth that illiterate adults are not part of the information and technology age. As well, the importance of learning how to listen and ask questions, which are sub skills of the oral communications domain of the Essential Skills Profile were the focus of attention for most participants. As these were practiced in the classroom, they became the skill areas most often transferred back to the workplacement.

It also seemed clear that the trainees had a thirst for learning beyond the actual program. Students recognized that they needed to develop a strategy for their own continuing learning before they left the program and began to view the instructor as a pivotal person or mediator of information in this “learning for life” strategy. They saw the role of the instructor now becoming the role of coach and mentor. This new role became a type of conduit between the students and a variety of community, educational, and employment settings. Although instructors may not have always had the precise information the students were looking for, they had the strategies and approaches that could be used to gain access to this knowledge.

#### *The time role model in learning transfer*

Results of the study also indicated that the transfer of learning in workplace preparation programs for adults with low literacy revolve around three key roles and three key training time periods. Each player – the instructor, the learner and the workplace/workplacement supervisor are involved in the transfer process, which occurs at three distinct times – before, during, and after the training program. Central to learning transfer is the instructor who is the chief architect for connecting the design and delivery of classroom learning to the workplace or work-practice setting. One of the important

strategies used by instructors before a program is the continued link with former students who have been successful in securing work once they have left the preparation program. This connection provides a feedback loop as to what curriculum content has worked and not worked and why. One example of this was described by Elaine, one of the instructors, who explained that there was a connection between the graduates and the instructor, which provided feedback about the content needed for the workplace, their communities, and further education. She explained that the connection

Took over a couple of years because a lot of that information to provide that connection was provided by students... I have been teaching the program for four years and it has evolved so much over that time thanks largely to the students feedback. For me that connection is to prepare them for work as they can go directly from here and find employment in healthcare... The more difficult connection is to help the to make the leap to the Personal Support Worker Training and to prepare people to pass those test you really need to know what is on those tests, so by having people go back and try these tests and come back and tell me what's in there...

During the program, instructors also gave attention to the development of self-assessment strategies, which learners used in the workplacement settings to help gauge their own progress. Learners also play a significant role in the transfer process. Early identification of a preferred learning style during the program helped to ensure that information would be presented in a variety of ways so as to enhance the potential for transfer. For example, some learners needed to be shown the particular reading and numeracy skills, while others preferred listening to the teacher explanations and in some cases, learners enjoyed reading the content independently. A particular practice that enhanced the transfer process was the regular classroom debriefing sessions where learners and instructors would share the events that had transpired in the workplace

settings. This reflective dialogue brought out the links between the classroom-based learning and the workplace learning and encouraged critical thinking about their roles as workers. Another finding was the strategies used by the learners after the program to reinforce the transfer of learning from the classroom to the work setting. Once in the workplace or work-practice environment, there was sometimes a need to follow-up on how to perform a particular literacy skill. Participants in this investigation used a range of methods to do this, such as calling former classmates or the instructor or searching for information using the internet.

The transfer of learning was also supported by workplacement supervisors. Of particular interest was the role they played during the program in providing an orientation about the workplacement settings to the learners. This orientation brought the language of the workplace to the classroom. It provided a communication link between the employer and the potential employee and it helped dispel learner doubts about a novel situation. In one particular workplace site, a type of transfer plan, which had been developed in the classroom, was used as a tool to assess progress by both the trainee and the supervisor. This tool was developed collaboratively by the literacy instructor, daycare supervisors and daycare coordinator. While it appears to reflect aspects of the Essential Skills Profile, a more careful analysis of the assessment tool produced by practitioners and the essential skills descriptors would be needed to make more definitive pronouncements of their similarities and differences. Also noteworthy in the data was the importance of the open communication lines among the trainees, instructors and workplacement supervisors. Regular contact with the instructors during the placements allowed the supervisors to report potential problems and identify early interventions in a partnership type of solution. This openness facilitated the transfer of learning for trainees.

### **Implications for Adult Education Theory and Practice**

From a transformative learning perspective, the findings of this study seem to suggest that, as a result of the employment preparation programs, the meaning schemes of the learners have shifted towards the development of new adult identities- identities which focus on wanting to be more in the Canadian mainstream workforce and culture. It seems plausible that the program in its entirety may have acted as an intervention or positive trigger event that initiated the shift in meaning schemes. At the more micro level of the classroom lies the importance of the instructors and the role they can play in transformative learning. According to Taylor (2000), teachers should be “trusting, empathetic, caring, authentic, sincere, and demonstrative of high integrity” (p.313). It is these teaching practices that promote the various forms of transformative learning through critical thinking and were the types of repeated qualities that were mentioned by the learner participants in this study. These learners clearly expressed that such qualities and practices of the instructor were instrumental in helping them change their own attitudes towards learning. They now hold a more positive attitude towards the value of education and learning and see the connection between their own roles in Canadian society and the individual meaning of citizenship. As well, these instructors played a significant role in helping these students to look critically at their progress in the program by creating a safe environment. Even though this type of critical assessment was difficult at times, students believed that these experiences will prepare them better to approach their future career goals more realistically.

The study also helps to unite ideas of sociocultural learning and transfer by drawing attention to the learning settings and the interactions that occur amongst individuals in that setting. In this study, the employment preparation program has intentionally created the more formal adult literacy components to match the learning as it occurs in the workplace. This was illustrated, for example, in the on-site coffee shop and the daycare work placements. Using a sociocultural lens helps us to expand the notion of

transfer particularly within the area of literacy learning and beyond its traditional skills-based connotations. Engle (2006) provides a persuasive counter argument to the commonly held notion that transfer and situativity are incommensurable. He argues that contexts can be socially framed to create intercontextuality (Engle, 2006). In other words, two or more contexts such as the customer service classroom and the job placement at a downtown department store become “linked with one another” when both the learning and transfer contexts are intentionally framed to create interactions. The “framable aspects of learning situations” proposes Engle are time, location, participants, topics, roles and practices, and purposes. Additionally, “transfer involves not just knowing but doing” (p. 455), and it is necessary for learners to be engaged in activities that utilize new learning as was the case with Safa who did a workplacement in the daycare centre. Although Engle’s work was developed within a K-12 context, it is very useful for adult literacy programs that are striving to make connections to the community and work environment outside the classroom.

Currently in Canada, there is federal government support for programs to develop and use the Essential Skills in curricula. To date, there have been no empirical investigations of the ways in which literacy programs actually use the Essential Skills. This study also provides some insights, from the students’ perspective, into the function that Essential Skills may have for program planners. There is an assumption that adults with limited literacy need to build basic and foundational skills such as reading text, document use and writing before achieving skills that are more complex. However, the trainees in this study brought to the forefront the importance of learning computer skills, oral communication and continuous learning strategies, and not the more basic or foundational skills of reading or numeracy.

From a situative transfer viewpoint, it may be useful for program planners to embed basic skills into broader and more complex learning activities that make explicit

connections between contexts such as the customer service classroom and the department store work placement site. Another reason to focus on the more complex learning skills is that basic literacy skills have limited transferability (Mikulecky, Albers, & Peers, 1994). Furthermore, on this same notion of transferable basic skills, Falk and Millar (2002) suggest that foundational skills are not transferred from one context to the next but are instead “re-contextualized by new forms of situated learning” (p. 53). Such an emphasis on complex and situated learning has implications for the aspects of literacy learning that are emphasized by program planners and policy-makers. Although the Essential Skills situate basic skills development within the workplace using in-depth job profiles, reading document use, and writing (the first three of the nine domain areas) are not embedded in other skills in these profiles. Such a distinction and hierarchy not only suggests to instructors, program planners and policy-makers that these skills are of primary importance, but it also threatens attempts to teach them in a situated manner.

The students’ emphasis on the importance of learning to use computers, developing effective oral communication skills and participation in further learning, also suggests they have the characteristics of a self-directed learner. These are skill areas that require autonomous decision-making and a great deal of motivation. It is likely that these participants had such characteristics before entering the program, as many independently found a program through a maze of community services that would suit their learning needs. Arguably though, the students likely maintained or even increased their self-direction while in the program. As they moved into settings beyond the classroom, they had to take increased learning risks, working with a variety of people, encountering new situations, and navigating these learning environments without the support of their instructor.

From an instructional point of view, the time role model as espoused by Broad (1997) offers some insights into learning transfer for workplace preparation programs. By

identifying the tri-partnership of the instructor, learner, and workplace supervisor across different training time periods, it is possible to understand who is responsible for the transfer and when in the training process. This has direct implications for practice. For example, instructors in employment preparation programs can use the strategies and techniques shown in the study across the three training periods to facilitate transfer in their own classrooms. As well, it was interesting to note that three types of knowledge - declarative, procedural and strategic (Ford, 1994) - were observed in the transfer process to the workplace by the trainees. Ford (1994) and Ford and Kraiger (1995) refer to declarative knowledge as the content information relevant to a person's job. In this study we find many examples of this type of knowledge such as the wide range of play activities used by trainees in the daycare assistant workplacement site or the use of the cash register by trainees in the customer service program placement. Procedural knowledge is described as information about contingencies or what to do if certain events occur or how to execute tasks. A good example of this transfer situation was the participant, Melku, who role played customer service problems by himself in front of the mirror or around the supper table with his family members. The third type of knowledge is strategic and this refers to information about when and why to use particular knowledge on the job. This was practiced by participants in the adaptive learning program placements where trainees learned when to use certain equipment in the coffee shop or the rationale as to why the files were sorted in a particular method during the office placement.

### **Limitations of the Study and Areas for Further Research**

This investigation adds to the literature in the domain of learning transfer by using a sample of the population which has not been widely studied in previous research – workers with low skills. However, even though four different programs were used in the multi-site case study design, these programs belonged to one school board in one

particular region of the province. Further research is needed in different areas of the province using other delivery agencies such as community colleges and community-based organizations which offer the Literacy and Basic Skills Program. Furthermore, some of the student participants were second language learners and although accommodations were made during the interview process, the lack of higher level language abilities may have contributed to the clarity of the responses to some of the interview probes. As well, in one case write up, the instructor from the classroom component of the program also provided additional support to the students with developmental disabilities while they were on the work placement. The physical location of this work placement was actually in the same building as the program and meant that both the work placement supervisor and the classroom instructor could ensure a positive and somewhat sheltered work experience. Further research is needed with this particular sub-population of low-skilled workers.

Another area that requires additional study is related to the original notion of meaning schemes in the conceptual framework of transformative learning. Although students viewed the employment preparation program in its entirety as a positive trigger event that changed their perspective on learning, it is still not transparent as to what specific aspects of their meaning schemes were altered? What role did the instructors and workplace supervisors play in creating these trigger events and the subsequent changes in meaning perspectives? It might also be interesting to explore the interplay between student self-directed learning using a learning preference inventory and the teaching presence of the instructors as measured by the Principles of Adult Learning Scale (Conti, 2004). This may open up a line of inquiry which focuses on how the three types of knowledge – declarative, procedural and strategic are formed within the self-directed learning process and within the framework of the Essential Skills profile.

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