

**PARTNERS IN THE  
TRANSFER OF LEARNING**

**a resource manual  
for workplace instructors**

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## Introduction

### How is the resource manual organized?

The idea of transfer of learning seems very straightforward and simple, yet it is a highly complex concept. Once you begin to examine transfer closely, many questions arise and it is these questions that all form part of the resource manual. First, it is important to say something about the title of this resource – *Partners in the Transfer of Learning*. Throughout this document, the reader will find the theme of a Transfer Partnership and its three key members – the instructors, the trainees and the supervisors. The term trainee is used to refer to the learner. Each of these partners has an important contribution to make in the learning process. Together, they can maximize the application of new knowledge and skills to the job.

Through different transfer strategies used at different times, this partnership can promote the development of effective learning in a company or organization.

Part 1 describes the layout of the manual, how the information was collected and defines what is meant by the transfer of learning. It also sets the stage for a better understanding of who are the key members that can support transfer and when are the critical time frames to implement certain transfer strategies. These two ideas form what is called the Role and Time Model of Learning Transfer. In the next part, brief descriptions of the 11 programs that were involved in the project are presented. These descriptions provide the context and highlight different program models where transfer strategies were used. In all of these programs, transfer of learning did occur in various role and time combinations. Collectively, these programs and their experiences with transfer of learning gave rise to Part 3 which is the heart of the manual.

Using the same title as the manual, this section is the most practical part of the resource. It is a description of a large array of transfer strategies that have been used by instructors, trainees and supervisors before, during and after a workplace education program. Simply organized by role and time, this part of the manual reflects how transfer of learning is happening in 11 Canadian workplace education programs. Summary charts introduce each key subsection. Part 4 refers to the barriers in the transfer of learning as reported by the instructors, trainees and supervisors. Identifying the barriers is the first step in changing them into opportunities for workplace learning. The next part, *Voices From the Field*, is a rich account of what instructors actually believe are the central questions around transfer of learning. Organized by a set of question and answers, this part of the manual brings the voices from the field to a position of centre stage. This is followed by Part 6 which is designed for those readers who enjoy the complexities of a topic.

From a research perspective, transfer of learning is explored at a deeper level. It reports on the empirical findings of research questions related to criterion measurement, training design, trainee characteristics and the work environment.

Part 7 is a collection of application exercises based on the content of the manual. It attempts to have the reader work with the different ideas presented. It gives the resource a "workbook" feel. The final part of the manual is a selected set of readings done in annotated bibliography format. This provides a road map for those who wish to collect additional information on the practices of transfer of learning. References used in the manual and acknowledgements of those field coordinators and programs who participated in the project are also included. It is important to mention here that the format and content of the manual were suggested by these key people involved in the project.

### How was the information for this resource manual collected?

There were three basic methods used to gather the information in developing this manual – field interviews, document reviews, and interviews with experts. The first and most important method was to draw on the experience of the field as to how, when and why the transfer of learning was happening in the workplace education programs. Eleven programs, representing various occupational sectors, regions and models of operation, were selected to provide information for this manual. Sketches of these programs are found in Part 2, Context for the Transfer of Learning. Field coordinators from each of the programs served as a liaison among the different program participants in the field. Their names and programs can be found in Part 8.

Carefully designed interview schedules were used by the field coordinators to elicit information from instructors, trainees and supervisors. This was done over a period of time through individual interviews and focus groups. Well over a 110 people gave their opinions on the transfer of learning, and the collective wisdom of their insights is found in the pages of this manual. This field information was prepared by a qualitative software program called NUD.IST yielding over 400 pages of data. Following a constant comparative content analysis technique and a verification process with graduate adult education students, several parts of the manual began to emerge.

A second method used to develop this manual was the scholarly literature on the topic of transfer of learning. Current empirical studies, documents and journals were used in the development of the important interview schedules, the model for understanding transfer of learning and the literature review. Interviews with experts in transfer of learning in both the United States and Canada were also conducted at different points of the data collection and analysis. A final review and critique of the manual was completed by project advisory members.

## What is transfer of learning?

Throughout this manual, the following definition of transfer is used:

Transfer of learning is the effective and continuing application by learners – to their performance of jobs for other individual, organizational or community responsibilities – of knowledge and skills gained in learning activities. (Broad, 1997, p.2).

## The Role and Time Model of Learning Transfer

Who are the people responsible for the transfer of learning? When are the right times to support transfer? These two crucial questions are discussed in this section of the manual. Three major role players are identified – the instructor, the trainee and the supervisor. As well, three key time frames for transfer strategies are highlighted – before, during and after the training. This type of role and time model will help set the stage for most of the content of this resource, especially the variety of transfer strategies that are discussed in a later section.

### **What are the key roles in support of transfer?**

In their search for a useful model for differentiating among sets of transfer strategies, Broad and Newstrom (1992) noted that various people and groups play roles in helping transfer take place. Through interviews, reports and the transfer literature, they found that peers, co-workers, supervisors, the overall organization, the instructor, the trainees, the program planner and others all helped to facilitate transfer.

From this information, three roles came into play. First, instructors can be instrumental in facilitating transfer. Their influences extend in many ways to the trainees, both directly and indirectly, through high quality and relevant training. Based on the literature, though, the transfer responsibility of instructors has not always been recognized or accepted.

As Broad and Newstrom (1992) put it, the trainees are often the central figures as they choose whether to come forward with areas to improve on, to attend the training, to open themselves up to new learning, to make commitments to change and carry them out. Further, they bring with them into training a variety of abilities, motivational desires and career aspirations that need to be considered. Therefore, trainees are always key role players in the transfer process.

A third role is the manager or the supervisor. In general, management is a powerful factor in inducing or constraining change and is a focal point of control. Outside the role of the manager, there are many other factors that influence the transfer process: the external environment, economic conditions, the organization's structure, upper management, peers, the culture and the reward system. As Broad and Newstrom (1992, p.51) have indicated, "At the risk of diminishing each factor's uniqueness, we have put all of these into a single category." Together, these three key roles – the instructor, the trainee and the supervisor – constitute the Transfer Partnership.

## What are the critical time frames for supporting transfer?

From the literature, it became clear that successful transfer practices occur at different times. Some organizations take action only after trainees return to their jobs; others focused in on the time the trainees were in the classroom itself; and others seemed to be thinking about transfer problems long before the training program began. As a result, Broad and Newstrom (1992) developed a three-part classification that divided transfer strategies into those being initiated or taking place before the trainees begin training, during the time they are in training and at any time after training is over.

Also popular in the literature, but not used as a classification system here, is the work of Laker (1990) on near and far transfer. Near transfer is the extent to which individuals apply what was acquired in training to situations very similar to those in which they were trained. Far transfer is the extent to which the trainees apply the training to novel or different situations from the ones in which they were trained. The success of far transfer often depends on the presence of general principles that trainees can acquire and apply to new and novel problems.

### The Role and Time Model

Based on the importance of both the key roles and the critical times for supporting transfer, Broad and Newstrom (1992) developed a transfer matrix with two dimensions.

| ROLE       | TIME PERIODS |        |       |
|------------|--------------|--------|-------|
|            | BEFORE       | DURING | AFTER |
| Instructor |              |        |       |
| Trainee    |              |        |       |
| Supervisor |              |        |       |

This matrix which consists of nine cells, will be used to talk about all of the different transfer strategies that were gathered from the field. These strategies can be done by the three partners in the transfer process – the instructor, the trainee and the supervisor – in each of the key time periods.

As the reader will note in a later section, there is some overlap of the strategies across time periods as well as overlap in the role category. What this means is that a specific strategy may be effective when used by more than one partner in the transfer process. It is also important to mention here that there are several key principles to the successful use of these strategies:

- Work together with your trainees and supervisors to support a transfer partnership;
- Understand the full set of strategies for each role and time period to get an overall picture of the process;
- Identify those strategies with the greatest potential use in your own program or organization.

## The Context for the Transfer of Learning

### The Context for Transfer of Learning

Where is transfer of learning occurring? What workplace education programs have experienced transfer of learning? What do these programs look like? These questions are critical to any understanding of the process of learning transfer. All of the information on transfer strategies in this manual is based on 11 different programs across the country that in various ways experienced the transfer of learning. Before pulling out some of the details of how this occurred, it is important to sketch out what these programs looked like. In this section, brief program summaries written by the field coordinators of this project are presented. For the most part, they include the name of the company, the industry, the key players involved in the project, the program goals, the target group, the content, teaching methods and evaluation strategies. As well, towards the end of this section, the reader will find which role-time combination of transfer strategies was most frequently used in the 11 programs. This information is presented in a table form.

#### **Palliser Furniture Ltd. – Particle Board Plant: Workplace Education Program, Winnipeg Manitoba**

This program is conducted in the furniture manufacturing industry products such as chairs, tables, armoires, bookshelves, bedroom sets, leather goods, and home office furnishings. Goods are exported to many countries and meet the needs of both upper and lower market demands. Currently, there are approximately 3,200 people employed in Palliser which is the largest private employer in Manitoba. The project team consists of the management, key supervisors, crew leaders, lead hands, provincial coordinator, education coordinators and the instructor. The instructor has been involved in the project from an early stage. The goal of the program is to upgrade the math skills of the employees – supervisors, lead hands, crew leaders and general employees. There are approximately 80 people within this division of Palliser Furniture. Forty seven people were interviewed and have signed up for the math courses. Using the process that is involved in the manufacturing of particle board, the math associated with this procedure is integrated into the classes. The classes started at the basic level (subjects like addition, subtraction) and become progressively more difficult in concepts such as percentages, fractions. There is also a unit on Imperial/Metric conversion as it pertains to the process. A participatory method of delivery is employed. The first hour of the class focuses on the theoretical aspect of the mathematical concept under study, and the students work on numbers. The second hour of the course focuses on solving word problems, and the participants work in small groups together. They, in turn, present to the larger group on how the problem was solved.

When two workshops are completed, the people are asked to complete an assignment entitled "Measuring your progress". In this half hour assignment, participants are asked to solve word problems and to address how the course has had an impact on their lives. Informal observations are also made of the students, for example in attendance, attitude and willingness to participate. The immediate supervisor is also asked on a regular basis if he notices any changes in the people participating in the math courses.

### **Alberta Power Ltd.: Workplace Education Program, Red Deer College, Alberta**

Alberta Power Ltd. (APL) is an investor owned utility company that provides electric energy services to customers in Alberta. Although the head office is in Edmonton, most of the 1300 employees live in the regions they serve. APL is responsible for the generation, transmission, and distribution of electricity. Alberta Power management, working with the Alberta Power Employee Association, selected the effective Reading in Context (ERIC) program for delivery. The ERIC program was developed by Syncrude Canada, and is managed by Keyano College in Fort McMurray. ERIC is a reading comprehension program with the goal of helping employees develop reading strategies to more effectively manage work related reading tasks. It is a volunteer program, available to all APL employees who are motivated to improve their reading skills, especially those taking technical training. People in management and supervisory positions set an example by volunteering as participants. Anyone in the company can take an assessment, and those whose skills fit the range for this program can take it. ERIC consists of four categories of instruction: analyzing text; synthesizing text; generalizing text; and reading to learn.

The standard ERIC workshop is 28 hours, delivered 4 hours a day for seven days. The instructor first describes a reading strategy, then models the strategy, and finally asks participants to engage in reading activities that will allow them to demonstrate understanding and ability. Information is taught through the use of practical applications directly related to on-the-job reading tasks. Instruction is participatory in approach. For example, the participants engage in team teaching, and often lead sessions, particularly when the material relates to an area of expertise. Evaluation consists of ongoing informal discussion; a daily journal describing the strategy and its application to the job; and a two page written evaluation at the end of program, consisting of open ended questions.

## **St. Vincent's Guest House: Workplace Education Program, Halifax, Nova Scotia**

St. Vincent's Guest House is a nursing home located in the centre of Halifax, Nova Scotia. Its involvement in the customized literacy and upgrading programs for employees began in the late winter of 1995 when a field officer from the Department of Education and Culture met with employees and management to discuss the possibility of starting a workplace education program. The various members of St. Vincent's embraced the idea, and began to take steps to implement a program. The first step that they took was to create a project team. Project team members include the Workplace Education field officer, who provides the team with support and guidance throughout the process; the instructors, who design and instruct the courses; and representatives from management, the union, the supervisors and the employees, who provide input from the various perspectives in the workplace. The second step towards developing a workplace education program was an organizational needs assessment of St. Vincent's. Based on this information the St. Vincent's project team decided to implement a communications and a GED preparation course. The communications class covered reading, writing and oral communication skills.

Management provided the classroom space, and paid the program participants for half of their time in class. The union supplied the pens, paper and books for the courses. The supervisors ensured that the employees got to develop their communication skills on the job. The communications course was advertised and 12 students signed up to participate. Individual needs assessments were conducted to determine the skill level, interests and goals of each of the participants. These interviews helped develop the communications Course, which took its context from the workplace. Materials used included manuals, requisition forms, letters, memos, pay stubs, incident reports and situations from the workplace to help the participants develop their reading comprehension and written/oral communication skills. The formal evaluation strategy included the organizational needs assessment, reports from the instructors, a mid-term evaluation and end-of-program evaluations from the learners, management, project team and union. The information from these formative and summative evaluations was used to create the course, improve it while it was in progress, measure its success and provide information to create the next course.

## **Waltec Plastics: Workplace Education Program, Midland, Ontario**

Workplace education programs are like training incubators that help the seeds of a training culture take root within an organization.

Waltec Plastics is a plastics manufacturing company located in Midland, Ontario, and has approximately 250 employees including unionized and non-unionized workers. A W/WEBS (Workplace/Workforce Employment Basic Skills) program was initiated at Waltec February of 1996 and continues today. Waltec, through a W/WEBS project, worked with their local community college, Georgian College, to gather extensive workplace data to create job descriptions for all the positions in the plant and to conduct a task analysis to identify the skills required to be effective in each position.

The task analysis was conducted in an intensive workshop format with representation from management, supervisors and employees doing the job. These job descriptions and the skills analyses formed the basis of the Waltec's ISO9000 training plan and became integrated as part of the hiring process. An integral part of the project has been the development of a corporate training strategy so that workers could acquire the skills they need to fulfill and enhance their job performance. After the job descriptions and task analyses were completed, individual training plans were developed for each employee. These training plans identified the foundational and technical skills required to do the job effectively. It was estimated that approximately 40 employees would require basic skills training as part of their training plan. A W/WEBS workplace basic skills training program was implemented to address these training needs for their workers. Training was delivered on site at the Waltec location over a 2 year period. The training delivery was designed to be very customized to meet the learning needs, schedules and circumstances of the learners.

## **Brunswick Smelting Division: Workplace Program, Belledune, New Brunswick**

Brunswick Smelting, a division of Noranda Inc., operates a fully integrated, lead smelter and refinery located in the village of Belledune in northern New Brunswick, Canada. It currently employs 130 staff and 430 hourly workers. Brunswick Smelting Division has an annual refining capacity of 100,000 tonnes. Products consist of various lead and lead alloy compositions, cast precisely to customer specifications. The lead smelting process takes place in three sequential steps: sintering, smelting, and refining. At Brunswick Smelting Division, there are six key people involved in the workplace program: the Director of Corporate Communications; the Employee Relations Coordinator; the coordinators of the workplace program; and the workplace instructors.

Brunswick Smelting Division is committed to providing an academic program that is relevant and non-threatening to the learners. The main objective of the program is to help employees and their spouses increase their literacy skills so that they are better able to cope at work, at home, and in their everyday lives. At work: one goal is to increase employees' literacy skills so that they are better able to read safety signs, memos, training manuals, job postings, and other work-related materials. Increased literacy skills will also enable many workers to enter daily logs, overtime, vacation time, "star days," "bank time," and personal information on computer files. Another goal is to help employees better understand, adapt to, and accept changes within the plant. A third goal is to develop a greater sense of self-esteem in the employees so they are able to rely less on others for help with tasks that require a basic level of reading and writing. At home: the program aims to arm employees with skills needed to read and write for their personal pleasure and to help their children with school work. Everyday living: The goal is to enable employees to read mail, maps, restaurant menus, and newspapers better; fill in forms; write cheques; use a telephone book; and shop. Various methods are used to accomplish these goals. Instructors relate concepts being taught to real life situations by changing the wording in problems to relate directly to a learner's job or interest. The instructors also directly incorporate materials such as dictionaries, calculators, telephone books, cheque writing and safety signs that will aid the learner at work and at home. Evaluation strategies include oral, written, and hands-on methods.

**Boeing Canada Technology - Winnipeg Division:  
Workplace Education Program, Winnipeg, Manitoba**

Boeing has been running workplace education training programs for at least the last four years. The original concept for workplace education included oral communication, math, reading writing and ESL programming. Over time, as the employer began to define and understand their specific need for workplace education training, a program refinement process began. In 1996, the Training and Development Department established a set of concrete outcomes for its workplace education program. Boeing fixed the workplace reading and math skills required to successfully access the training materials used in its technical training program. The Basic Skills program became a foundation program, enabling employees to work on upgrading their reading and math skills in order to go on to other training and promotional opportunities within the company. Since 1996, Boeing has been running continuous reading and math training programs. The programs are offered in 80 hour sessions - up to 4 hours per week of training for a total of 40 hours for reading and 40 hours for math. Class sizes are established at a maximum of 15 students. To accommodate the shifts at Boeing, two classes are run back to back - the first one starting at 1:00 p.m. and going to 3:00 p.m. and the second one beginning at 3:30 p.m. and going to 5:30 p.m. Boeing employees work two weeks on and two weeks off day shifts. This arrangement allows groups to change class times as they change shifts. Boeing's workplace education program is engaging in the on-going development of training modules for both the reading and math programs. The module design calls for introductory lessons, support and practice materials and in-depth analysis and explanation of strategies for learning. While they are currently being developed for classroom delivery, there are also plans to make them available as self-guided study packages. Boeing's workforce has a diverse set of needs, and are not always able to fit their plans into classroom schedules. Efforts are being made to develop peer support groups, home study modules, test preparation packages, and a learning resource centre that can facilitate computer-based tutorials, as well as other audio and visual learning techniques. There are presently 30 students enrolled in a course that runs 5 months. Continuous intake occurs until about the midway point in the course. The program also delivers basic skills training for deaf employees. This training is similar in content and outcomes but is delivered using sign language. In 1997, training was provided for 67 employees, with 78% of these employees able to achieve the demonstrable skill levels required for competency in the workplace after training.

## **Children's Hospital of Eastern Ontario: Workplace Education Program, Ottawa, Ontario**

The workplace education program at the Children's Hospital of Eastern Ontario, in Ottawa, commenced October 15, 1996. Like most major health institutions funded by the government, CHEO is suffering from budget cuts and undergoing vast administrative re-structuring. The need for the workplace education program emerged when hospital management reclassified many of the hospital's service positions, and raised the level of educational requirements for them. Employees in various areas housekeeping attendants, nurses, porters, dietary aides, radiology attendants, and other titles unique to specific departments - are being re-grouped into a general job category, PSA (Patient Services Assistant). After two information sessions conducted by CHEO's Personnel manager and attended by several instructors from Algonquin College as well as 30-40 interested employees from various departments of the hospital, a written test and oral interviews were administered to determine which employees needed to upgrade their education in order to be able to apply for the newly-created band better paid PSA positions. When three classes were organized in the fall, they consisted of Beginners, Intermediate and Advanced. All levels have 12 students or less. Classes are held every Tuesday and Thursday between 2:00-4:00 p.m. The course content of each class is determined by the levels, ideas, skills and needs of the learners so that they might become more productive, responsible and dedicated employees.

Instructors try to vary the material with a view to the needs of the individual participants. All four of the basic English language skills - speaking, reading, writing and listening - are developed in each class. A variety of teaching methods are employed. In the intermediate class, where numbers facilitate pair work, much work was done in question and answer format. Dialogue writing and vocabulary enhancement were done at the request of learners themselves, especially those with little self-confidence. The majority of the time, however, learners worked individually, viewing films, responding to content questions, writing free and controlled compositions and exercises, performing oral presentations, researching information for specific assignments and other such activities. First and foremost among other evaluation methods, instructors relied upon their observations to review assignments and daily work. They held one-on-one interviews with learners, and conducted whole class discussions to obtain information regarding difficulties, attitudes, interests and learning objectives of the learners. Student self-evaluation was also employed with very positive results because learners became aware of their own strengths and weaknesses, and worked on the latter to increase their own confidence. Rating scales were also used to help students evaluate their own performance or skill. Finally, tests were employed as a way of finding out whether or not the learners were able to retain and recall learned material.

## **Workers' Education for Skills Training, Creighton, Saskatchewan**

WEST is a trade union education program for workers. It offers basic reading, writing and arithmetic; technology readiness; and English as a second language. Although reading, writing and numeracy skills are central to the program, so are skills in decision making, critical thinking, exploring solutions and applying the knowledge to everyday life. The purpose of WEST is to allow workers the opportunity of developing and strengthening their skills in the manner that best meets their needs, goals and strategies for learning.

The goal of WEST is to provide workers with the opportunity of becoming more self-confident, self-determining and active members of their workplaces, unions, communities and families. WEST courses: are based on workers' needs and interests; are workplace and union oriented; emphasize learning through discussion and problem solving; use content relevant materials, applicable to workers' daily lives; and are individually designed to meet the particular needs of participants and to be relevant to the particular demands of each workplace. Programs are offered in groups of 4-10 workers at the workplace, with rank and file members as course leaders. Programs will generally operate 4 hours per week. Usually there will be two sessions of 2 hours each. The WEST program differs in its approach to adult education from a lot of other programs. The participants are not learners or trainees, but they are participants. Likewise, the course leader is recognized as either course leader or more typically as the 'facilitator'. Much is done at the outset to create a level playing field. It is emphasized that everyone will have opportunity to learn and at times facilitate learning. Once a safe environment is created, the participants begin to set the direction of the program. They determine what they wish to learn and the facilitator, generally speaking, provides resources and tools to aid the learning process. In this way, the participants take full ownership for their learning. Specifically, the program in Creighton, Saskatchewan began in 1993. It runs primarily from May through to October, usually once a week unless the fire situation is such that the participants simply cannot leave their duties.

## **The Prince George Hotel: Workplace Education Program, Halifax, Nova Scotia**

In the winter of 1995, representatives from the hotel staff met with the workplace education field officer to gain information about workplace education programs and how they might benefit The Prince George Hotel. A project team was formed on the site with representation from management, housekeeping, maintenance, food and beverage and guest services.

There was no union present. An organizational needs assessment was conducted by the field officer, with recommendations that courses in Business Writing and Communications and GED Preparation be offered. The first program began in January, 1996, followed by a GED program in fall and winter of 1996-1997. Programs were offered to all staff at the hotel, with the first program including personnel from housekeeping, maintenance, food and beverage, guest services and administration. The GED course participants, with one exception, were from the housekeeping and laundry departments. The management was interested in skill upgrading for employees not only to increase productivity on the job but also to enhance employees' confidence and self-esteem. It would also help them become more eligible for promotion and cross training. The Prince George already had a well-established training culture before the workplace education programs began. Several participants are in the process of, or have already obtained the Room Attendant Certification. Those who stepped forward to participate were eager to attain their high school equivalency, and were encouraged and supported by their supervisors. The Nova Scotia model of workplace education is based on voluntary participation, confidentiality and good adult education principles. The curriculum was developed collaboratively, with ongoing input from learners and the project team. Individual needs assessments were conducted with participants to determine their needs and goals and workplace materials, and situations are incorporated into the curriculum. The class bonded as a team and helped and supported one another. The instructor worked collaboratively with the learners to encourage them to take responsibility for their own learning. The Department used evaluation tools to assess the success of the program. These were filled in by management, project team and participants, and included an evaluation of content, instructor, scheduling and transferability.

## **Syncrude Canada Ltd.: Workplace Education Program, Fort McMurray, Alberta**

Syncrude Canada is the world's largest producer of crude oil from the oil sands, currently supplying more than 12% of Canada's crude oil requirements. Located about 45 kilometres north of Fort McMurray, Syncrude is one of the largest private sector and aboriginal employers in Alberta, and presently employs approximately 3,500 people directly, over 1,000 contractors on site and creates up to 10,000 indirect jobs. Syncrude Canada Ltd. partnered with Keyano College in 1988 to develop the program that would become Effective Reading in Context (ERIC). It was developed for employees who can "read" but who need to learn to read effectively, or who want to "hone" reading strategies they haven't used in awhile. The objective is to teach effective reading strategies to employees using the paperwork that they face daily. This is accomplished by participants' learning how reading works, and learning specific strategies for accomplishing various reading tasks required in the Workplace. The target group are employees who wish to improve their ability to comprehend and deal more effectively with workplace reading material. The assessment/interview that precedes the workshop determines individual needs. Content includes upper level reading comprehension strategies in the following three reading process areas: generalizing, synthesizing, and analyzing. The workshop also includes a unit on study skills. Course material are primarily company-specific, relevant and current. The instructor also uses materials of interest to the participants that they provide, magazines that are of a broad range of topics, and the latest in business literature. Comprehension is considered an outcome or a product of readers employing certain processes to relate their knowledge and the text information. Ease of degree of comprehension varies, depending on the extent to which the text information matches readers' knowledge.

Particularly with higher levels, comprehension outcomes are closely linked with how readers use the information they read. The workshop is taught in groups of no more than eight participants. It is participatory in nature and adaptable. Instruction is primarily provided through: lecture, discussion, application and sustained silent reading. Learner evaluations begin with an assessment/ interview to determine prior skill, knowledge and needs; then, through ongoing dialogue, writing samples, and feedback during strategy review, valuable information is shared. Participants complete a written evaluation form at the end of the workshop. Informal feedback is also received after the workshop when arranging follow-up assistance and through informal contact with past participants. Strategies for ongoing improvement are then identified and implemented.

**Decoustics: Workplace Education Program,  
Etobicoke, Ontario**

Decoustics is a small manufacturing plant located in Etobicoke. It is a unionized facility with 70 hourly employees and 30 salaried employees (who are not unionized). The company manufactures acoustic tiles. Interviews were held with key personnel, and a workplace needs assessment report was prepared for the organization. Classes in foundational skills training were recommended for the front-line production workers. Improvements in basic skills levels were needed to ensure acquisition of technical skills. A program coordinator and trainer met with all of the employees to tell them about the planned training sessions. Potential employees were assessed for both literacy and math and problem solving skill levels. Math and problem solving skills were seen as the most pressing need. A total of fourteen participants, all hourly workers, were placed in a math program based on the results of the assessment. The course offered a review or introduction to basic math skills ranging from whole number operations to introductory ratio, encompassing decimals, fractions, percentages, metric and imperial measurement.

There was an emphasis on enhanced problem solving skills, including estimation. The majority of sessions incorporated a warm-up activity, some review and an overview of the material to be covered. This was followed by practice to ensure comprehension. The practice was done in pairs or teams to increase team building skills and to heighten retention and transfer. The concepts were then considered in a real world application. Class members did not hesitate to bring in problems from the floor. Homework was expected of everyone. Other forms of evaluation were used consistently through the program: initial and final test, homework review and on-going individual assessment.

### Role and Time Combinations in Learning Transfer

In all of the 11 programs transfer of learning did occur. Based on the interview information from instructors, trainees and supervisors, there are certain role and time combinations of transfer strategies that were more frequently used in the programs. This information is presented in Table I followed by a brief explanation.

Table I Most Frequently Used Role-Time Combination for Using Transfer Strategies

| ROLE       | TIME PERIODS |        |       |
|------------|--------------|--------|-------|
|            | BEFORE       | DURING | AFTER |
| Instructor | 2            | 1      | 9     |
| Trainee    | 5            | 3      | 4     |
| Supervisor | 7            | 6      | 8     |

KEY 1 = high; 9 = low

Looking over Table 1, the reader will notice that the highest (1) and lowest (9) rankings fall within the role of the instructor during and after the program. These instructors reported that they made the most significant effort to stimulate transfer while delivering the program. Usually because of contractual arrangements, they left an organization once a program was completed, and therefore, were unable to support transfer. The third, fourth and fifth ranks revealed that the trainees made good attempts to apply what they had learned by engaging in transfer strategies during, after and before the program. These rankings seem to support the idea that trainees recognize the need to work together with instructors to increase the likelihood of learning transfer. The lowest rankings (6, 7, 8) fall within the role of the supervisor. This does not mean that supervisors are not supportive of the need for learning transfer. Generally, they want to be but because of work environment circumstances outside of their control, many barriers exist. What this also means is that there is a need to take a closer look at how supervisors can become more involved in the Transfer Partnership.

A Summary of the  
Key Transfer of  
Learning Strategies  
for the **Instructor**

## Before the Program

- involve the learner and supervisor in planning the program
- conduct a site visit of the workplace
- develop transfer objectives
- include information on transfer of learning in information session
- involve the supervisor in the administration of the program
- observe employees performing their jobs
- prepare a buddy system

## During the Program

- link program content to real work tasks
- use various types of feedback sessions that focus on application of new information
- checkouts with the supervisor
- use classroom discussion to relate learning to the job and barriers to transfer
- five step problem solving process around using new skills
- make critical reflection exercises around past skills and current skills a regular feature
- develop creative teaching aids that learners can use back on the job

## After the Program

- provide follow-up assistance to learners
- link learners with peers
- use program evaluation results in future program planning
- check with supervisors and learners to see how changes in knowledge, skills and attitudes have occurred
- provide refresher sessions
- recognize learner completion

# Partners in the Transfer of Learning

## The Role of the Instructor in the Transfer of Learning

### **What does transfer of learning mean to instructors?**

Transferring learning back to the workplace means different things to different instructors. For some, it starts with determining the personal goals of the trainees and then integrating those with transfer of learning goals. Others believe that before any transfer can take place, certain attitudes have to be present – attitudes like self-confidence, self-esteem, motivation and assertiveness. These attitudes help lay the foundation for applying new skills back on the shop floor. As one instructor mentioned, "By setting the right conditions in the workplace classroom, learners will be able to transfer at various levels.

One could expect that there would be a range of transfer - some more, some less. Everyone would find and transfer something."

What seems to be apparent to most instructors is that the more concepts relate and connect to problems that occur in the everyday workplace, the better chance for transfer of learning. In other words, it's the use it or lose it idea. If learners do not see a direct application to their occupations, the retention and transfer of those skills will be weak. If they are not doing it on the shop floor, then it's not working as a workplace education program. Other instructors also believe that, even though transfer of learning is the application of what is learned in the classroom to situations that arise in the production 'line, it can be a very difficult thing to measure. In situations where complex workplace materials require higher levels of reading and writing skills and lower level learners, then there will be difficulties and discrepancies in what is actually transferred back to the job. Then there is the question of those one time learning opportunities. As one instructor put it, "These types of learning seldom result in retained knowledge and skills, but rather serve as a mere introduction to a new skill area. You can't expect transfer of learning to occur in such a situation. It's not an automatic thing"

In one workplace training program, the transfer of learning seemed to be evident after a period of time. In this particular small high technology electronics firm, employees spoke limited English. "After a year or so of training, changes were noticeable - the employees were able to communicate with their co-workers and their supervisors, made fewer mistakes on the job because they were able to read blueprints, instructions, orders and messages. This improvement in work ability affected their attitudes.

For transfer to occur, learners must receive feedback, discuss how the concepts being taught relate to their jobs or interests and critically reflect on their own work as well as the work of others .

They became more self-confident, developed a sense of self-worth and bonded more easily with co-workers of different ethnic backgrounds. The atmosphere at the plant changed noticeably. Employees became more vocative, they responded better in problem situations, and inquired more into the issues of concern. I've seen first hand that transfer of learning really works."

## **Strategies to Use Before the Program**

Transfer of learning can start to take place even before a program begins. There are different kinds of things that can be done in the planning phase of the program with both learners and the supervisor.

### **With the Learners**

- Talk about the idea of learning transfer during the initial information session.
- Conduct a site visit to understand the kind of work that is done and what happens in the workplace.
- Job shadowing and interviewing key employees to gain an understanding of the work process.
- Look over the individual needs assessment information and writing samples for each trainee. Identify one or two clear examples of transfer objectives.
- Review self-assessment and supervisor assessments of the worker, looking for common areas that could become transfer goals.
- Find out what the learners expect from the program and their attitudes towards learning.
- Develop transfer objectives from the individual learning objectives.
- Involve the learners in structuring the course.

### **With The Work Place Supervisor**

- Invite supervisors to attend the initial information session where the idea of transfer of learning is introduced.
- Ask the supervisor for a tour of the facility to get a picture of the workplace.
- Ask the supervisor for work samples that can be used in the curriculum.
- Ask the supervisor for his or her perspective on who needs to improve and on what.
- Encourage the supervisor to support the participation of the workers in the program by outlining the benefits of it.
- Involve the supervisor in structuring the course.

- Allow the supervisor opportunities to get involved in the administration of the program, such as helping out with registration, providing the room, ordering the supplies.

One of the key steps for the instructor in the transfer of learning process before a program begins is to identify "what" is to be transferred. Most of the instructors felt that a good starting point for this type of identification was the information already gained through such things as the individual assessments, oral reading and writing samples, workplace needs assessments, pre-tests and job task analyses. As one instructor said, "How I figured out what needed to be transferred was based on the questionnaire that my participants completed prior to the beginning of the program. They themselves told me what they wanted to transfer or needed to improve on in order to perform better on the job, or to increase their chances at applying for a newly created position."

Another way of identifying the "what" that needs to be transferred is by coming to understand what is happening in the learners' specific jobs. This can be done through observations, talking with other trainers, reviewing materials from the workplace and obtaining workplace documents that workers use on a regular basis.

The supervisor can also play an important role in identifying what needs to be transferred back to the shop floor. In some programs, the supervisors were able to discuss with the instructor unit productivity reports and the kinds of things the company wanted them to do. As one instructor mentioned, "I figured this out by talking initially to the supervisor and asking -- What do you think should be taught in this class? Who doesn't talk to you? What is not being understood when you talk to them?"

Instructors are in a pivotal role to include the transfer component in the program design before it even begins. Some design features that can be considered include:

- Knowing the academic skills required for the job tasks
- Preparing a buddy system for learners
- Preparing lesson objectives with transfer strategies written right in them
- Developing assignments based on how and when they could use the idea presented in class in next week's shift
- Creating an observation chart about the changes in the participant's ability to transfer
- Appreciating newly acquired skills is important outside the classroom
- Setting up a system of checkouts with the supervisor to see if changes are noticeable.

Instructors, teaching in a workplace education program, felt that the following transfer of learning strategies seemed to be realistic to do before even starting the program.

- Involve supervisors and learners in the program development.
- Design instructional options to meet individual learning styles.
- Develop activities that would help learners be more ready for the program.
- Identify factors of success for the overall learning program.
- Design practice opportunities

## Strategies to Use During the Program

Transfer of learning also occurs during a workplace program, and the instructor can play an important role in the process by implementing a variety of simple techniques with a lasting effect. One way to encourage transfer is to link the program content to real examples in the learners' work or home life. In programs where transfer is occurring, instructors prepare course material that is directly related to the workplace context. For example, instructors will stimulate the kind of meeting that would take place on the shop floor and learners practice writing the minutes. Or, when a new piece of equipment arrives, instructors use the operating manuals to present lessons on its different parts and functions. In this way, new terms and phrases are introduced in a familiar situation. Similarly, instructors use individual home life materials and experience in the classroom – real life situations from volunteer committees, home management materials, legal documents, bank statements, and R.R.S.P. information.

Other instructors have found it useful to relate topics to specific activities and tasks of the learners' job. As one instructor conveyed, "By analyzing the job functions, you get to find out what these people actually do." Another mentioned that, "When you help a learner identify where and how a skill is used in the job or at home, it makes it easier for them to identify the opportunities to practice the skill."

What seemed to work for other instructors was using examples that were gleaned from former learners in the program. Follow-up interviews with the previous learners provided relevant examples of such things as reading and math tasks, and made it easier to make the link between what they already know and what they need to know.

To sum up how instructors can encourage transfer of learning while a program is going on, one person explained, "if you understand the work that the learners are doing, value the experience of the participants in the class and listen closely to their conversations, you will then link the program back to the factory floor."

Instructors used different teaching methods to enhance the transfer of learning during a workplace education program. For example, they used different types of feedback and different types of discussion and critical reflection exercises. Listed below are some examples of how they have been used in the actual field.

### **Feedback Sessions**

- Ask participants at the end of each session, "How do you apply this to the job?"
- Written reports of what the participants have learned and how it will enhance their work.
- Follow-up interviews – checking to see how the program is benefiting the learners.
- Report on which reading tasks on the job have become easier as a result of the training.
- Checkouts with the supervisor, Human Resource people and other instructors.
- Use 360° dialogue – Are we meeting your needs? Are you transferring skills?"
- Formal and informal evaluations completed by the learners.

### **Types of discussion**

- Open discussion on application of skills to the job.
- Strategies to improve work writing tasks.
- increase generalizing skills by applying classroom experience to job experience.
- Relate learning to workplace.
- Recognize past learning and connect it to current learning.
- How skills improve the participant's work.
- Attitudes and behaviour of the staff and organization.
- Small group questioning
- Five-step problem-solving process around using new skills.
- Barriers to transfer.

### **Critical Reflection**

- Journal writing.
- Meeting with other instructors.
- Observation reports and debriefing sessions with learners.
- Sustained silent reading with workplace materials and guiding questions.
- Compare past skills with current skills.
- Find links and make references and draw conclusions about the training/job connection.
- Learners critically evaluate their own writing.
- Critical topics like learning styles, problems from the shop floor and different purposes for reading.

As an instructor, the kinds of teaching materials that are used in a classroom can greatly enhance the transfer of learning back to the workplace. Such materials, as listed below, have been used by various instructors across different types of programs and occupational sectors.

- Self-created dictionaries
- Workplace phrase booklets.
- Take-home manuals or course handouts.
- The actual machine parts from the shop floor.
- Home study packages.
- Closed captioned t.v. programs.
- Math materials used daily in the shop
- Learning charts that relate what they do at work.
- Rule of thumb points
- Charts of conversion.
- Tip sheets.
- Vocabulary situations
- Customized work sheets and dialogues related to work place situations
- Forms and letters created by the learners.

When it comes to barriers to the transfer of learning, if participants can anticipate them and plan for them, there is a better chance they won't occur. Instructors had a key role to play in this. They can help learners, through open discussion, on some of the possible transfer barriers that might occur back on the floor. One instructor put it this way, "We talk a lot about the need to practice these new skills. I talk about the strategies we've learnt in class as if they are tools. And I tell them that different jobs require different tools. Some jobs even require that you use all the tools." Role plays have been useful with some instructors as well. To start with, a general discussion takes place on what the barriers to using this new information may be. Then as a group, a plan is prepared to overcome that particular barrier. The barrier is broken down into steps and then problem-solved. 'What do you think you might say or do in this particular situation' is a question that is often asked.

Practicing risk taking behaviours is another strategy used by instructors. Some instructors felt that fear of applying these new skills back on the job was the biggest transfer barrier faced by the trainees. In such a case, the situation is first demystified for the learners. Working in pairs is often a useful technique for doing this. Then a brainstorming session occurs to suggest safe places and non-threatening opportunities to practice these skills.

Another way instructors have been helping for anticipated transfer barriers is by setting up internal support mechanisms like reading groups, peer tutoring and reading clubs doing the actual programs. This builds confidence. "We get them in the habit of carrying notes around in their shirt pockets and calculators in their pant pockets," reported one instructor. "We also encourage the supervisors to show an interest in the program and to recognize the participants back on the floor."

## Strategies to Use After the Program

There are a number of things that an instructor can do after the workplace education program is over to facilitate the transfer of learning such things as provide follow-up assistance to learners, link learners with peers from the class and from the shop floor, and use the evaluation results in future program planning.

### Follow-up Assistance with Learners

Some instructors found that it was important to discuss follow-up before the program started so that it could be built into the work conditions of the original contract. Since some instructors go directly to another teaching assignment right after a workplace education program is completed, it is important that follow-up be scheduled in, and added onto, the fee for the program.

Other instructors used different methods to encourage follow-up with learners. In some programs, a learning centre model had been developed over a period of time, which provided an ideal way for learners to pop in occasionally to ask about work related academic problems.

As well, from the learning centre, a mentorship program had been developed which provided a central point for organizing resources and support beyond the program. Other instructors tapped into the community when there were no built-in mechanisms for follow-up assistance. Private tutoring was requested by a number of learners at their own expense :in one program, and in others, links to the Voluntary literacy council were made through the LEARN advertisements. In other programs, if the instructor was a company trainer, follow-up was easier, and in such a case, sessions were planned one month following the completion of the program. in some projects instructors made themselves available on a voluntary basis through the exchange of telephone numbers and E-mail addresses.

### Linking Learners With Peers

"The buddy system really helped. We encouraged each other at work and in class."

The two most commonly sighted areas for linking learners with peers to support the transfer of learning were the development of peer support from within the classroom and the development of peer support from others outside the classroom. Most instructors felt that the bond that developed among classmates was a very strong bond of encouragement. As one instructor said. "We encourage group building and team skills as part of the program development. From our past experience, we have noticed that by enhancing the existing friendships within a network of learning, the possibility of transfer is greater." The idea of students helping each other after the program was also a common response. In some programs, students became learning partners, both within the classroom and back on the shop floor. in other programs, plans were being made to develop a peer tutoring system that would Further help students to remember the new information .

Peer support from outside the classroom took on many forms. In some cases, co-workers from the factory would come and offer their services to help others after the program was completed, while in other programs students got a family member or friend to help them and support them in their transfer of learning". A particular support program called Canadian Friends was also used in one workplace education initiative. A clear message in both these peer development activities is that linking learners with others to support the transfer of learning after a program is completed is more successful if it is initiated while the program is still running.

### **Using Evaluation Results in Planning for Transfer**

There was a general consensus from all instructors that once a program has been completed, the evaluation results can become a powerful tool for understanding how and when the transfer of learning has taken place. When a program is offered more than once at a company, then these evaluation results become instrumental in fine tuning transfer strategies. As one instructor indicated, "it helps to determine what teaching strategies work best and produce transfer to the learners' jobs and to their lives". In some programs where transfer of learning objectives were articulated, evaluations were done during and after the program with both learners and shop floor supervisors. This notion of checking to see if learning experiences were relevant to the trainees, was a central point made by the instructors. As one expressed, "I have learnt that if an instructor backs off, learners are open to evaluating honestly and suggesting realistic practical ways of using the new information in their daily work". Different evaluation methods for gaining insights into transfer seem to include such things as open-ended learner and supervisor interviews, tracking statistics, checklists and weekly group feedback sessions using transfer objectives as the impetus.

### **Changes in Knowledge, skills and Attitudes**

Both during and after the workplace education program, the instructors noted that certain changes became noticeable in what was being transferred outside the classroom environment. These changes seemed to be centred around three key areas – knowledge, skills and attitudes. Some instructors mentioned that the reading strategies taught in the classroom were being used on the job. "They now know what strategy to use with what reading task back on the unit. They have grasped the concepts needed in their job and see how the reading process is closely linked to their daily work tasks", reported one instructor. Another reported observing transfer in a way that learners were using the new workplace and business terminology through the sentence structure and punctuation of their letters, memos and reports. increased mathematical knowledge and the ideas related to certain manufacturing processes was another area of transfer.

In terms of the specific skills that were most likely to be transferred, instructors felt that they included such things as:

- Skimming and scanning for the main idea;
- Writing skills;
- Communication skills;
- Finding information;
- Asking questions;
- Problem solving and critical thinking;
- Working independently;
- Increased speed in speaking;
- Team building skills;
- Decision making skills;
- Making accurate calculations;
- Following procedures, instructions and safety rules

Changes also took place in the area of attitudes which was evidenced more during the program than after. As one instructor mentioned, "The learners have become advocates because they are able to express themselves in writing at work and at home". Another mentioned that, as the program came to an end, there was "a base understanding that everyone was equal. Their attitude seemed to improve towards work, the people they work with and toward themselves". Yet another common attitude change that seemed to be transferred was the recognition that learning was a continuous kind of thing that gets started in a workplace program and continues afterwards. This "joy for lifelong learning" was further supported with the "Can Do" attitude. Instructors mentioned that learners were reporting more risk taking behaviours back on the job, which resulted in an appreciation of the skills they brought to the organization.

When asked what kinds of transfer strategies need to be better developed after a program is completed, four points were addressed:

- Better follow-up support.
- Different types of non-threatening evaluations with supervisors and learners.
- Ways to recognize the success of learner completion.
- Provide refresher sessions.

A Summary of the  
Key Transfer of  
Learning Strategies  
for the **Trainee**

## Before the Program

- attend a pretraining event
- talk to your supervisor
- provide input into program planning
- recognize 'the overall goals of the organization
- participate in advance activities

## During the Program

- maintain an ideas and application notebook
- plan to apply the new information
- plan to review the new information
- link with a buddy

## After the Program

- review training materials
- develop a mentoring relationship
- maintain contact with training buddies

## The Role of the Trainee in the Transfer of Learning

### Strategies to Use Before the program

Workplace education programs that are structured around what the trainee needs and wants to know are more effective in enhancing transfer of learning for the trainee than programs that do not consider this aspect. Before the program began, most of the trainees interviewed felt that they had input into the program curriculum through some form of a needs assessment with the instructor prior to the class. In general, the assessment took two forms a one-to-one interview with the employees and/or a questionnaire. As one learner expressed, "Before I started taking these classes, I was asked to come in for all interview with an instructor. She asked me what I wanted to learn specifically in the English language, why I needed to learn this, and how I could use my new knowledge to improve myself."

By involving the trainees in program planning, the instructor can get a better idea of what needs to be transferred and how it can be transferred. Information on the students' jobs, interest, and goals, in life provide the instructor with a base to draw from when relating concept to the students' lives.

In a few cases, trainees were not asked for input into the program because it already had a specific structure. These programs tended to revolve around the achievement of academic levels such as the high school diploma or GED. Usually, the employee had a choice in the type of training, but not into the specific content of the workshops.

Most of the trainees came to the workplace education programs with personal goals and objectives for the course. Some came to improve their skills such as reading, comprehension, communication, writing and math skills.

Others came with the idea of improving their skills to enhance their work performance or skills at home. As one trainee acknowledged, "I wanted to read and write so I could read on the job things like safety signs and job postings ... At home I could read mail, read for pleasure, shop without help, travel, and read restaurant menus."

A few trainees felt that the workplace education program would open up opportunities for them in the form of advancement opportunities or new job possibilities. One trainee said, "I felt I needed upgrading to get a better job." In addition, others indicated that the training would provide a good base for them to learn other things or take other courses.

Finally, several trainees referred to the personal benefits of the course with respect to self-improvement. For some, this related to improving their confidence and to proving to themselves that they could learn. one trainee claimed that "I wanted a better sense of my self-image". Others felt that education gains would enhance their personal satisfaction through their ability to contribute to the their work and home situations.

Many of the trainee expectations were directly related to their original goals and objectives. Their outcome expectations fell into the following categories:

- Improvement of specific skills for workplace and home
- Achievement of higher academic standing
- Increased opportunities for job advancement
- Increased feelings of self-confidence

Trainees in the workplace programs identified the following transfer of learning strategies as useful to implement before starting a program:

- Talk to your supervisor
- Provide input into the program planning
- Attend a pretraining event
- Recognize the overall goals of the organization

## Strategies to Use During the program

When a trainee is engaged in the learning process, then the transfer of learning to the workplace is enhanced. Most of the trainees implied that they were actively involved in the program with three aspects helping to define their participation - interaction, motivation and attitude. First, the majority of the trainees described their participation as very interactive. They felt that they participated in class discussions and contributed to the overall climate. They also asked and answered lots of questions, and challenged the things that they did not understand. One trainee said, "I try to answer as many questions as possible in class, so that I think I get a lot of opportunity to practice my pronunciation". Another trainee claimed, "Whenever, I don't understand something in class, I always ask for clarification."

Motivation was the second defining aspect of the trainees' participation. Motivation is a key aspect in whether participants take responsibility for their own learning. Many of them expressed how hard they worked and that they were motivated to do the assignments and homework. A few realized that their effort would dictate what they got out of the experience. As one trainee indicated, "I did my part and tried to get the most out of the course."

Linked closely with motivation was the trainees' attitudes. Several participants expressed that they took the course very seriously and felt that it was important to attend regularly. Others felt very enthusiastic about what they were learning and that they had been given the opportunity to learn. This positive attitude, in turn, contributed to their motivation. A good example that captures not only the link between attitude and motivation, but also the challenges faced by the learners is the following statement. "I have many home responsibilities with my wife, my children and my mother, who is elderly, so it is difficult to do my homework right away when I come home from work. Many times I stay up until 11 pm to study and complete my homework. I always come to class and participate as much as I can even when I am tired."

It is also important to note here the impact that an instructor can have with respect to the learners' participation. How the instructor treats the participants, the type of climate the instructor creates and his or her attitude toward learning will impact upon the individuals in the class. This issue is acknowledged by several participants and described best by the following quote from one trainee. "The instructor makes an incredible difference... The instructor wanted to be there, to teach and wanted the learners to get something out of it."

There are several ways to learn something, and ideally, a program will have a balanced approach to learning that incorporates a number of different strategies. The following five main ways of learning emerged from the interviews with the trainees:

- Learning by practicing and memorizing
- Learning by doing
- Learning by watching
- Learning by receiving feedback
- Learning by challenging and questioning

During the program all of the trainees acquired skills and looked for places to implement them into the work environment. The big question then becomes how do they use what they have learned on the job or at home. The trainees tended to identify two main ways. First, they used many of the skills such as reading, writing and math to increase their productivity and to decrease the amount of time to accomplish tasks. Techniques such as scanning reports and previewing material gave the trainees effective strategies to tackle large volumes of work. At home, many indicated that the skills have helped them with their daily tasks such as banking, reading the newspaper and helping their children with homework.

The second way that many of the trainees apply their learning to their workplace is through improving their interactions with other people. For several trainees, they were aware that they asked more questions and spoke more at work meetings. A number of them felt that they had gained confidence to communicate as they were more aware of the situation and the things that were happening within it. In turn, they approached opportunities to communicate with a different attitude. One trainee said, "Whenever I go to the meetings I'm not afraid of speaking and I understand what is going on much more and what they are talking about. When I'm speaking to staff who work at a higher level than I do, I try to choose my words carefully and I use new vocabulary words. it makes me feel good."

The trainees identified the following as useful transfer of learning strategies that can occur during the workplace education program:

- Link with a buddy
- Maintain an ideas and application notebook
- Plan to apply the new information
- Think about when I may have to review this information again so I don't forget it.

## Strategies to Use After the program

The key to successful transfer of learning after a program will be the opportunities provided to the trainees to use their new skills in the workplace. indeed, the majority of trainees indicated that there were many opportunities to utilize the skills both at work and at home after the program was completed. Examples included:

## In the Workplace

- Writing letters and memos
- Reading publications and work materials
- Screening and scanning information
- Communicating at meetings and with staff
- Speaking in front of crowds
- Using computers
- Applying for job opportunities

## At Home

- Balancing a cheque book
- Reading the newspaper
- Helping children with homework
- Communicating with family

### **Transfer of Learning Plan**

A transfer of learning plan is a type of tool made up between a supervisor and a trainee, which helps identify what, how and when new learning can take place. Many of the trainees felt that a transfer of learning plan would be an effective tool in several ways. For some of the trainees, the transfer plan was an avenue for evaluating whether or not the individual was using the skills in the workplace. By providing set objectives or guidelines for transfer, the learners are better able to self-regulate their behaviour and have a clear sense of whether they are using the skills. As one trainee expressed, "it would be helpful to plan and be aware of using the new learning in practical ways. Specific guidelines would be helpful to measure the effects."

For other trainees, the transfer plan would be effective because it would serve to motivate them. Clear goals would give them something to work toward, and it would encourage and motivate them to keep reviewing the material in order to achieve those goals. In addition, they would feel more focused as they would have the plan to help guide them through the transfer. One trainee said, "Our transfer assessment form will help me continue and focus my learning."

Along with plans for facilitating transfer, trainees need to feel that they are supported by significant others in the workplace to implement the new skills. As well, they need to feel that the company supports their learning and will take the time to help them incorporate it. It is through this support that trainees will be encouraged to take risks and try new things that previously they may not have had the confidence nor the skills to achieve.

The trainees identified the following people and events as the support necessary to use the new information on the job or at home:

- Family
- Co-workers and peers
- Instructors
- Supervisors
- Follow-up courses

The following transfer of learning strategies were also mentioned as crucial to implement after the completion of the program:

- Review the training material
- Develop a mentoring relationship
- Maintain contact with training buddies

### **The Impact of the Program**

In order to ascertain if the program has met the needs and objectives of both the participants and the company, it is important to understand the impact the program has had on its trainees. The trainees identified three main areas where the program has affected them - work efficiency, confidence and attitude.

The biggest impact of the programs seemed to be on the trainees' perceptions of their work efficiency. Many felt more effective at work and more at ease on the job. They completed work tasks faster, and found it easier to get through a lot of the material. A number of trainees felt that the quality of, and approach to, their work had also improved. "I think more before I react to a situation, I plan more before meetings and I brainstorm before I write."

"They have the confidence to volunteer for jobs that they would not volunteer for in the past."

This confidence and new approach encouraged them to try new things and to help other people out with their jobs. As one trainee expressed, "I feel more like I want to try new things in my job and I'm willing to try a more difficult part. I don't feel as nervous to solve problems because I feel like I know how to. I don't ask as many questions and I am speaking more with my co-workers."

Increased confidence was also highlighted by numerous trainees as an important impact of the program. As mentioned above, their confidence encouraged them to try things and take more difficult tasks on in the workplace. It also helped them challenge perceptions of themselves and their capacity to learn. During the program, they realized that they were competent and capable individuals who could learn. One trainee referred to it as all increased self-esteem. "By learning that I could learn I found my self-esteem improved. I didn't get frustrated easily, and I was more eager to try new things." Another trainee described battling through feelings of inferiority. "At first going to school made me feel stupid and inferior to my co-workers. But as I learned more I grew more. I gained confidence and felt better about myself. I've even started to eat and dress better. I'm able to handle myself now in a more assertive fashion."

Many trainees also highlighted how their attitudes and actions had changed. Attitudes will affect how the trainees approach their work, their families and their learning. Facilitating the development of positive attitudes toward learning goes a long way toward developing satisfied and healthy employees. Some trainees expressed their new attitude as feeling better about themselves, whereas others felt that their morale was higher. Their improved attitude may have been a result of what they perceived to be improved options. One trainee claimed that, "it gives you a more positive outlook and a better sense of direction. You have a better idea of what you want to do and how to go about doing it."

Regardless, the interplay between positive attitudes, increased confidence and feelings of success in the workplace leads one to believe that the programs that attend to aspects of transfer can have powerful and lasting effects.

In order to make that effect last the trainees have to make a commitment to incorporating their learning into the workplace. This commitment can be achieved in several ways. Many of the trainees expressed that they had followed up on the information presented in class in these ways:

- Incorporating new skills daily into the job
- Increasing awareness of skills and where and how they can be used
- Helping others with tasks and encouraging them to take training
- Reviewing past assignments and study notes
- Helping their own children to realize the importance of education and learning

### **Factors Contributing to Transfer**

It is not only the participants who are responsible for the transfer of learning, but often the teaching methods employed by the instructor can effect the use of information on the job or at home. Several trainees indicated that the climate for learning created by the instructor contributed to their transfer. In the classroom, the trainees felt comfortable to ask questions if they did not understand or if they wanted clarification. They learned that it was okay to make mistakes and to try and learn from them. From this kind of climate, the trainees began to realize that learning is a process that requires practice, patience and hard work. As one trainee said, "[The instructor] always asked us if we understood. At first I was afraid to admit that I didn't understand, but she kept on asking and asking the same question, so finally I got enough courage to admit that I didn't understand the explanation. Now, I'm not embarrassed about not understanding something."

"They are more able to embrace the concept of life-long learning."

Another trainee indicated that "she made us feel like we could grasp things and she treated us as equals and we could ask questions. It doesn't matter how smart or educated you are you can always learn. I can tell this to my kids,"

The use of practical work examples or assignments that directly transferred to the work environment was also mentioned by a number of trainees as a helpful teaching method. By seeing and doing the same things that will be required in the workplace, the trainees were given a clearer understanding of how this learning would benefit them. This previous experience with the

skill or technique also gave the learners confidence to implement it at work. one trainee claimed that "I gained confidence to try things on the job that I would not have done before because I had practiced them."

Several employees also mentioned the importance of learning to think for themselves as an effective strategy. One employee said that "she made us think and didn't give us all the answers," By fostering independence and by teaching them practical skills such as problem solving that can be applied in the work setting, the instructors were encouraging the employees to take responsibility for their own learning, and emphasizing that the learners have the capacity to figure things out on their own.

**A Summary of the  
Key Transfer of  
Learning Strategies  
for the  
Supervisor**

### **Before the Program**

- involve Supervisors in the needs assessment
- provide orientations for the supervisors
- inform supervisors of how to use coaching skills
- help provide a positive training environment make the goal of the program clear to trainees
- let trainees know of the organizational investment in them,,

### **During the Program**

- prevent interruptions
- spread out work assignments to others
- participate in transfer of action planning
- recognize trainee participation
- create opportunities to use new skills

### **After the Program**

- provide opportunities to practice skills
- debrief the trainees
- be a role model
- give positive reinforcement
- celebrate small wins
- be a mentor

# The Role of the Supervisor in the Transfer of Learning

## Strategies to Use Before the Program

Certainly, supervisors play an important role in the transfer of learning as they have consistent contact with the trainees. Before the program starts, supervisors contribute to the preparation of the employees in several ways.

They

- help employees set realistic expectations for their learning.
- provide support for employees in the form of positive reinforcement and encouragement.
- introduce and sell the benefits of the program to the employees to create a positive impetus for the program.
- address any concerns and fears of employees and make employees feel comfortable about their involvement.

In preparing the trainees for the program, a number of supervisors also identified co-workers and peers as important allies in this process. Past trainees can provide a sounding board for future participants of the program by answering their questions and providing a mentoring service to facilitate and encourage their entry into the program. Crew leaders can also contribute in this way. A number of supervisors also identified management as a key resource contributing to the preparation of new trainees. In their various roles "these people can promote and provide information about the program."

What is to be transferred is of paramount importance to the supervisors and one of the key steps in the identification of the "what" involves the understanding and breakdown of the job requirements. By understanding the job, the key skills required become evident, and can be highlighted as part of the training program. However, the job does not occur in isolation, as it is the person within the job that defines the areas that need to be developed and enhanced.

As one supervisor said the "what" can be highlighted "by identifying what [the trainee] needs to know and by what needs to be done. This is based on an understanding of the job and the individual."

Talking with the trainees then becomes important to understanding what realistically needs to be transferred. As one supervisor conveyed, "The best way to identify what needs to be transferred is to talk to the trainees. This is the best way to determine where they are having difficulty and to also determine their interests. Several other recommendations were made by supervisors including extensive interviews with key employees, asking learners to identify skills and asking people what they need. All these suggestions relate to the concept that the workers should be able to identify many of their learning barriers and hence what needs to be transferred.

The striking element is the attitude of the supervisor towards the entire program. This individual values learning and has, in a number of situations, taken over and stayed late so that the employees may attend class. The participants are coming to class not concerned about the production pressures

Observation of the trainees in the work environment was also identified by a number of supervisors as an important tool in understanding what needs to be transferred. If supervisors notice employees avoiding a task or failing to complete a task because of a deficiency in skill, the supervisor can then recommend elements for development. One supervisor claimed that "if the supervisor notices that one of the staff is unable to read, she can make the recommendations that they acquire this skill." By understanding the job requirements, talking with the trainees and observing their workplace skills, supervisors can make important recommendations for the curriculum of the workplace education program.

Before the program begins supervisors can also let the trainees know that they are endorsing what is to be transferred. This can be accomplished by investing time in the trainees – by talking with them and by encouraging and supporting them both verbally and through actions. As one supervisor identified, "The supervisor reschedules shifts so that employees may attend whatever workshops they wish. This allows the participants to really take part in the class, because they know that production demands are being met." The actions of the supervisor go a long way to conveying the message to the trainee that learning is important for both the individual and the organization.

Supervisors play an important role in the transfer of learning, and the most frequently cited strategies used before even starting the program included:

- Involving supervisors in needs assessment
- Providing orientations for supervisors
- Providing supervisory coaching skills
- Providing a positive training environment
- Making the goal of the program clear to the trainees
- Letting the trainees know of the organizational investment in them

## Strategies to Use During the Program

Transfer of learning occurs during a workplace program, and the supervisor can play a pivotal role in facilitating this process by incorporating some simple techniques. First, several supervisors indicated that they needed to show their support and encouragement to the trainees involved in the program by communicating through feedback and by displaying a positive attitude toward the program.

As one supervisor indicated, "Basically, in our small department, I could have small chats with the learners to find out how the course is going and whether they are encountering any problems ... So communication and encouragement on a regular basis is good because it shows them that I care."

In addition, a number of supervisors expressed the idea that they can facilitate the transfer of learning by providing opportunities within the workplace to practice the skills that the trainees are learning. By providing these opportunities the supervisor is strengthening the retention of the skills and emphasizing the need for these skills with respect to the trainees development. One supervisor indicated that this could be achieved through one-on-one discussion sessions with the trainees where the supervisor could "provide examples of where learning is applied on the job and opportunities to use it".

During the program, the supervisor can also participate in the development of a transfer plan for the trainees. A transfer plan is a type of tool made up between a supervisor and a trainee, which helps identify what, how and when new learning can take place. A number of supervisors identified that the communication between the supervisor and the employee is imperative to the success of the plan. Supervisors need to be available to the trainee and offer help or support if needed. Trainees should also be encouraged to keep track of their own transfer plan to promote self awareness. One supervisor took this a step further saying that "supervisors participate in this plan by assessing their workers relative skills listed for the job. Supervisor's assessments are then compared to the worker's self assessment. The two review the findings and come to an agreement on the areas needing improvement."

A few supervisors also indicated that participation in the development of a transfer plan occurs by working with the coordinators or instructors of the workplace education program. By providing the instructors with important materials and by identifying the level of learning needed, supervisors can facilitate the development of the plan.

Supervisors identified the following as important transfer of learning strategies that can occur during the program within the current workplace context:

- Prevent interruptions
- Transfer work assignments to others
- Recognize trainee participation
- Participate in developing a transfer action plan

## Strategies to Use After the Program

There are a number of things that a supervisor can also do after the workplace education program is over to facilitate the transfer of learning such things as getting trainee feedback on the program, supplying support to the learner, creating opportunities for learning and acting as a mentor for the trainee.

### **Getting Trainee Feedback**

Acquiring feedback from the trainees regarding the program appeared to take two forms – informal and formal. Several supervisors advocated for a more formal approach through the use of verbal and written evaluations, questionnaires and/or surveys. A few supervisors indicated that this feedback need not only occur at the end of the program but should also occur during the program. "Ideally surveys should be taken at least 3, 6 and 9 months into the program."

Other supervisors supported a more informal approach through casual discussions or brief chats with trainees. As one supervisor indicated, "This can be accomplished through communication – short, quick chats in passing, whenever time allows." Regardless of the form of the feedback, most supervisors felt that it was an important process and that feedback in some manner should be encouraged.

### **Supporting the Learner**

Several strategies were identified by the supervisors as ways to support the learner. They included general support behaviours such as recognizing their efforts, acknowledging their accomplishments, verbally supporting and encouraging them and asking them about their experiences and their needs. A number of supervisors also acknowledged that opportunities to use the new skills needed to be provided in order to support the trainee. One supervisor identified a few strategies such as, "reinforcing the positive new behaviours, asking for written and oral communication so that they can practice new skills and by assisting them when they are working on new skills."

### **Creating Learning Transfer Opportunities**

Supervisors recommended a number of ways to create opportunities for transfer of learning to occur. Many of the strategies relate to an increase in responsibility for the trainee on the job. The following strategies were identified:

- Creating or giving tasks which require new skills
- Giving technical papers to read
- Providing reading material
- Giving trainees more reports to write
- Asking trainees to do more presentations
- Assigning new or expanded job duties
- Giving time to take other classes
- Providing information on promotional opportunities

### **Supervisor as a Mentor for the Trainee**

Several of the supervisors were comfortable with the idea of being a mentor or coach for the trainee. A few felt that it was important to be around to answer any questions or to show trainees how to do things. Others felt that it was important to model the appropriate behaviours. As one supervisor indicated, "yes, there is always opportunity to help and act as a mentor on the job. The course also assists trainees in becoming better trainers."

As learning is taken back to the work site and applied to the day to day tasks, a supportive supervisor needs to allow time for application of learning. Only if the supervisor has taken the course can he be expected to act as a coach or mentor

Still, another supervisor viewed the mentoring role as an opportunity to empower others. "Empowerment is the key, as coaching more or less took place by showing the program participants trust in their ability to make their own decisions. By being open and letting people know that creativity is a good thing the employees realize it is okay to do different things."

Overall, the supervisors identified the following as important transfer of learning strategies to engage in after the program.

- Provide opportunities to practice new skills
- Debrief the trainees
- Provide a role model
- Give positive reinforcement
- Celebrate small win

### **Application of New Information**

Most supervisors observed that the new skills and information were applied in a number of workplace settings such as at management meetings, current and new job situations and team meetings. As one supervisor expressed, "They will be able to use the new information to train, apply for job postings, and enter their own vacation time, overtime, etc. on the computer system. They will begin to rely more on themselves and less on others at work."

Several supervisors also saw changes in important behaviours such as self-confidence, verbal and written communication skills and problem solving abilities. As one supervisor put it, "Trainees now have the confidence to volunteer for jobs that they would not volunteer for in the past."

A number of supervisors also noted self-awareness and personal growth changes such as "being open and trustworthy... developing a keen respect and appreciation for each other." As one supervisor pointed out, "in positions where they use the information, they perform their jobs better. For others it may simply be the development of the person as a result of participating in a workplace education program."

## Retaining the Information

Many supervisors felt that the skills and information brought back to the shop floor would be maintained for a long period of time as they are directly applicable to the workplace. One supervisor said trainees "utilize skills immediately as they are part of the job." The general sentiment appeared to be "if they use it they will keep it."

The supervisor encouraged learning transfer by providing the learners with opportunities to use their new knowledge and skills on the job.

However, most supervisors also acknowledge that a lot depends on the learner. One supervisor summed it up best. "That all depends on the learners themselves – on the effort that they put into the learning, on the amount of time they spent in the classroom and at home on acquiring or improving their language skills, on their will to retain this information."

## Barriers to the Transfer of Learning

### According to the Instructors

As much as transfer of learning was evident in the programs discussed in this resource, there were also barriers or inhibitors. These barriers could be described under four major categories; organizational, programmatic, lack of support and learner attitude.

### Organizational Context

Some instructors felt that the organizational climate can have a large bearing on how well trainees actually transfer knowledge skills and attitudes back to the job. If there is poor communication between the employer and the employees, if there is a general low morale in the workplace or if people are not being encouraged, then these things affect how much learning is transferred.

As one instructor put it, "Transfer is related to whether an organization is really a learning organization, whether it is consistent in its commitment to helping employees learn, whether confidentiality is respected, whether there are internal systems to encourage promotions and job transfer. And, whether there are mechanisms in place that reward people for knowledge". In some programs, instructors also mentioned that the organizational restructuring and consequent alternation of positions was not clear to employees which resulted in learners not knowing whether they should practice their new skills back on the job. The issue of a short-sited organizational training vision was also considered a barrier to learning transfer. Some instructors reported that in the cases where no follow-up or refresher sessions were offered, learning was not reinforced. As well, if programs were only offered once, then it was more difficult to develop any sense of a learning culture which, in turn, affected credibility.

Transfer of learning would be further enhanced by building in a follow-up component. This could be simple as arranging for the instructor to return in 3 to 6 months to meet with the learners to discuss and review the program.

### Program Design Barriers

Program elements such as the length of the session, the size of the class, location and time of day or night can all act as barriers to the transfer of learning. Some instructors reported that before any kind of transfer can take place, enough practice time has to be first allotted during the class time; this is not always the case. As one instructor said, "if the learners end up working overtime and miss their class, it means less practice time for them – it just doesn't happen".

Others mentioned that large class size make it difficult to attend to specific transfer objectives and to "Really see if they are applying the new technical information back on their jobs", where the programs offered can also act as a transfer barrier. As one instructor said, "The biggest barrier is when the learning program is off-site. Learning should be done on the site during working hours. This would make transfer of learning much easier and more enjoyable. Students and employees would see improvements faster both in work and in self-esteem."

### **Barriers Related to Lack of Support**

Lack of support for transfer of learning seems to stem from three sources – coworkers, supervisors and family members. Some instructors found that their learners were ridiculed by their coworkers for joining up in such a program, and were regarded as show-offs when they tried to practice some new skill on their shift. As one instructor said, "The stigma of literacy was profound here. That manifested itself without a general outlook that only dummies would attend this type of program". In some cases, there was little or no support from the immediate supervisor to transfer the learning from the program to the shop floor. In one program, the production supervisor was actually dismissive of the training. As one instructor put it, "There was no support of the supervisor for this project. Learners, therefore, did not feel comfortable testing or trying things on their own". A third lack of support barrier came from family members. Some instructors mentioned that the commitment made by learners to complete a program had caused tensions at home. The program got a negative response from some family members who couldn't identify with what was going on. As one instructor said, "There was a lack of support from the family, especially if participants started to go into work early so that they could attend a class before their real shift started".

### **Learner Related Barriers**

A final category of transfer barriers focuses on the learner. Some instructors reported that their learners expressed fears about trying to apply the new skills back on the shop floor. These employees felt that they would be perceived by their coworkers and supervisors in a negative way. As one instructor put it, "The learners were afraid that the knowledge they had acquired during the course would not be acknowledged by their supervisors". Another transfer barrier was the classroom attitude of some learners. In a few cases, pre-conceived attitudes toward learning prevented any kind of application of the program content to their job functions. As one instructor said, "Some trainees came into a program with a closed attitude and left with a closed attitude towards learning". They say, "I'm only here because I have to be". Or, "Why should I learn this? In two to three years, I'll be retiring".

### **According to the Trainees**

In order to make the workplace education program more effective in terms of transfer, one has to acknowledge not only the strengths and benefits of the program, but also the factors that prevent the program from being effective. Workplace education programs do not occur in isolation and their success is contingent upon the support and commitment of the organizational heads, the managers and supervisors and the trainees. Based on their experience in the programs, the trainees identified a few barriers that affected the transfer of new information.

## Learning Attitudes

First, many of the trainees identified themselves as the biggest barrier. Their motivation, attitude, confidence and time commitments will affect whether or not the material is used in the workplace setting. As one trainee said "if they really don't want to apply the learning to everyday life it won't work. They need motivation. They also need to review or refresh once in awhile." A few trainees indicated that aspects that transferred directly were easy to use, but the problem arose if they had to go back and review the material. That is when a lack of motivation or clear goals and objectives can affect the use of the information.

## Co-worker Attitudes

Barriers to transfer of learning are many and varied, but are primarily located in the culture of the workplace and the learner's response to their culture.

A second barrier that was identified by a number of the learners was the negative attitudes of their co-workers. Similar to the acknowledgement of the importance of the instructor's attitude in the course, many of the trainees identified the climate created by their co-workers can be detrimental to the use of their new skills. As one trainee admitted, "When we come from our classes, many of our Canadian colleagues tease us about going to school ... These remarks hurt us a bit because we're only trying to accomplish something they already know. I don't want to show off what I've learned in front of them because they will tease me even more. I think that would be the only reason I would not use what I know on the job."

The negative attitudes of co-workers may also prevent trainees from sharing their information with other coworkers. One trainee said "I hesitate to share the information.

I know the strategy, but when I tried to explain it to someone else, to overcome his resistance, it didn't go over well." In the classroom, the trainees are being taught to respect each other and to work together in a supportive manner to achieve their learning objectives, and yet this same type of environment might not exist on the job.

So despite the self-confidence and group cohesion that is nurtured in the class, co-workers attitudes can have a profound effect on the trainees and their use of the new skills. If the climate that exists in the workplace does not compliment the climate of the educational programs, then transfer of the skills will be difficult. This attitude can be compounded if supervisors or management are not supportive of the program's initiatives. In fact, a few trainees indicated that the negative attitudes of the supervisor affected them and the use of their skills. As one employee claimed, "if the supervisors or co-workers do not respect the confidentiality we do as a class that would pose a threat to the success of the program."

## **Lack of Opportunity**

A final barrier mentioned by a handful of the learners was the lack of opportunity to use the skills in the workplace. If there is no chance to apply the learning, then the skills will eventually be lost. As one trainee expressed, "We do not do a lot of writing at work. If we had to do some writing it would help us maintain our skills." This highlights the importance of a commitment from the whole organization with respect to the training program. The program should be designed to develop the specific skills of the employee that benefit both the company and the learner. In some cases, this may entail basic skills training such as reading, writing and arithmetic, and in other cases, it may encompass more job specific strategies such as communication or use of workplace materials.

Regardless, opportunity then needs to exist or be created within the work environment for trainees to fully transfer their skills and for the company to fully benefit from their training. Learning does not occur in isolation. It is the product of the program, the instructor, the participants, the whole organization and the complex interplay between each of these factors and the environment. Considering all of these factors when implementing a program can only serve to enhance the effectiveness of the program and the dedication and commitment of all those involved.

## **According to the Supervisors**

The supervisors also mentioned that barriers to transfer of learning do exist, and tend to fall into four main categories: time pressures, peer pressures, limited opportunities and learner attitude.

### **Time Pressures**

The time pressures mentioned by a few supervisors existed in two forms. First, a couple of supervisors felt that the company exerted time pressures on the employees regarding the cost of having the trainees in class for an extended period of time. As one supervisor expressed, the company wants the "Learners back to the job as quickly as possible due to the high cost of replacements." This pressure may have an adverse affect, in that the trainees may feel the company does not value the training or the trainees' development. This tension may also affect the opportunity for learning if the pressure manifests itself into shortened training sessions or discourages the trainees from taking future classes.

The second element of time pressure identified by a few supervisors related to the lack of time to implement skills if they are outside of the immediate job requirement. As one supervisor indicated, "[The trainees] do not always have time to practice applying the skills to the job. If training is not related to the job, the attitude is that the course is over and we're back to work." Obviously, this lack of opportunity in the workplace creates a significant barrier to the transfer of learning, and opportunities and time need to be provided in the workplace for trainees to maintain their newly acquired skills. One supervisor suggested that managements' attitudes have to change and that their focus on production has to shift to recognize the benefits of long-term training initiatives.

## **Peer Pressure**

Peer pressure was identified by a number of supervisors as a significant barrier that existed within the workplace. Often trainees are subject to coworkers' criticisms of their involvement in the program, and this can discourage their use of the new skills. Increases in self-confidence and self esteem by the trainees, witnessed as a result of the training may, in fact, be threatened by this unsupportive and confrontational atmosphere.

One supervisor described the atmosphere as a result of "the negative attitude on the part of the other staff members who tease the learners or make fun of them because they have taken a course." Certainly, this negative attitude will not exist in isolation, and may be a reflection of an attitude that exists within the organization as a whole. Objectives and benefits of the course need to be clearly outlined by both supervisors and management in order to discredit any irrational fears that may exist on the part of co-workers. As one supervisor put it, "people may feel threatened and may feel that they may lose their jobs if they do poorly in the course, so they do not take the course." Another supervisor indicated that pride might play a role in coworkers' negative attitudes and actions. "The lack of basic skills seems to be an embarrassment to employees, therefore, they don't want to talk about it or pursue growth."

## **Limited opportunities**

Another barrier highlighted by several supervisors was the lack of opportunity to use the new skills. "The basic inhibitor to the transfer of learning is the lack of opportunity on the part of the learner to use the knowledge in the current position. if there's no reading required at all, in due time this skill will decrease." Management seemed to be identified as contributing to this barrier. One supervisor believed the lack of opportunity is related to the attitudes of management. "Management's attitude is to focus just on work, not on gaining and using new skills. Sometimes, no support exists for quality or long-term recognition of learning benefits." Again, this emphasizes the importance of a supportive workplace environment that challenges employees to incorporate their learning and supports any initiative they may make in this regard.

## **Learner Attitude**

The final barrier acknowledged by some of the supervisors relates to the learners themselves. Their attitudes and actions toward learning affect their ability to transfer and apply the skills acquired. when dealing with adult learners, sometimes negative perceptions of learning and of the self have developed and been perpetuated over time. Trainees not only have to learn the new skills, but they have to learn that they can learn. These apprehensions may manifest themselves in feelings of fear and/or actions of resistance.

Trainees' attitudes may also be a reflection of their lack of a vision; a vision and understanding for how the skills will contribute to them now and in the future. One supervisor described it as a "lack of understanding of why learning is important" while another supervisor expressed it as "negative attitudes towards the intangible successes." Organizations and management can address this barrier by developing and sharing their visions for the workplace education program and by challenging trainees to share in and contribute to this vision.

Ultimately, the attitude within the organization is a common thread that links many of these barriers and thus also serves as the key to challenging them. Perhaps by coordinating efforts between the instructor, the trainee and the supervisor, the ideal workplace environment can be created where, as indicated by one supervisor, "the workplace is so supportive and trainees so motivated, no barriers are apparent."

## Voices From the Field

In this part of the manual several "voices from the field" are presented. Throughout the interview process for this project, many instructors, trainees and supervisors voiced their opinions about the transfer of learning. Here, a number of workplace instructors talk about the essence of the learning transfer process. Organized in a simple question and answer format, the text is the actual words of the instructors enhanced by minor editing at some points. The questions that are posed reflect the most commonly asked ones about learning transfer, and the responses are drawn for those people and programs who have experienced it.

### How can we ensure learning transfer?

There are four basic elements needed to facilitate learning transfer in workplace education programs. They are:

- a. To ensure that each of the stakeholders in the program understands and supports the goal of learning transfer.

The management, supervisors, union, and instructors must understand that the employees are trying to develop basic skills and knowledge in order to improve the workplace. These stakeholders must encourage the employees by supporting them with funding, supplies, class space, shared time, and the opportunities to use their new skills in the workplace.

- b. To ensure that the trainees understand that they will be developing skills and knowledge that can be used in the workplace.

The learners must understand that one of the goals of the course is to help them develop skills and knowledge that they can use in the workplace so that they can create a learning transfer plan that allows them to identify and remove the barriers to transfer with the help of their instructor and supervisor. Removing these barriers might be impossible, if all the partners in the workplace education program are not supportive. This is why it is important to ensure that all the stakeholders understand the purpose of the program, and are involved in the program planning process.

- c. To make sure that the instructor gets input from the learners and the workplace supervisors during the program planning process.

The learners can provide the instructor with information about their individual learning styles, needs, motivations and goals. This information can help the instructor design a customized program that better facilitates the employees' learning transfer from the classroom to the workplace.

The workplace supervisors can tell the instructor which types of skills are needed on the job so that the instructor can help the learners develop the appropriate skills during the course. The learner and supervisors can also provide the instructor with workplace materials such as forms, manuals, reports and situations that the instructor can use to teach the course with a workplace context. Creating this context will help the learners see the direct link between the lessons learned in the classroom and their performance on the job.

- d. To ensure that the learners get to practice their new skills and knowledge in the workplace.

The workplace supervisor and learners indicated that providing students with opportunities to use newly acquired knowledge and skills on the job was a necessary component of learning transfer. In one particular program, the supervisor used a number of strategies to encourage the learners to use their new skills in the workplace. She asked the employees to volunteer for tasks outside the realm of their normal responsibilities such as taking minutes at staff meetings, volunteering to read at memorial services, filling out incident reports and ordering cleaning materials. This facilitated learning transfer by allowing the employees to practice their new skills and by making the course relevant to their development on the job.

## What is at the heart of learning transfer?

Transfer of learning from the classroom to the workplace is dependent on one factor, first and foremost – attitude. Learning must be seen as an opportunity and not a barrier. The learning that takes place in the classroom must be valued by all stakeholders in the workplace – all levels of management, union, learners, and instructors. There must be a clear vision of the role of the program, the expected outcomes of training and the contribution of those outcomes to the goals of the company, department and employee. The positioning of this vision by all the stakeholders is critical to the overall attitude toward the program. Where department managers support and value the work that is being done by the learners, there is a greater degree of risk taking in using the knowledge and skills gained in the classroom.

For example, a learner may be presented with an opportunity to read and interpret a detail from a process specification, and they run into an unfamiliar vocabulary word. Strategies for understanding vocabulary in context have been worked on in the classroom. A typical coping strategy for the employee might be to approach the lead hand and say "What does this mean?" This response is in contrast with the response from a department that is familiar with, and appreciates what is being gained in the classroom. Here the learner might be encouraged to take more risk in the interpretation – perhaps suggesting what the word might mean when approaching the lead hand. This response might sound like, "I think this means – is that right?"

## What are some ingredients for successful learning transfer?

In order for transfer of learning to be successful, it is essential to identify barriers to using the new information and eliminate them if possible. Possible barriers to transfer and suggestions for dealing with them follow.

### *On a personal level:*

- a. Low self-esteem: It is essential that the trainees receive constant encouragement and positive feedback on their transfer of learning from as many sources as possible, including instructors, supervisors, family members and peers.
- b. Learning disabilities: It is imperative that instructors be aware of possible learning disabilities facing their students, and accommodate their needs by using as variety of teaching methods that capture how the students learn best.
- c. Personal/emotional problems: An Employee Assistance Program (E.A.P.) available at the workplace could help employees deal with these problems.
- d. Lack of family/peer support: Expand the workplace program to include family members of employees.

### *On a work level:*

- e. Training materials, safety manuals, job postings and memos presented at a reading level higher than that of the trainees: An attempt by management to keep vocabulary and content of materials intended for the workers at a reading level more appropriate to the workers.
- f. Instructors having limited access to on-site materials: Having the workplace program on site and the instruction during regular working hours would enable the teachers to better use the work-related materials to aid in transfer. Involving supervisors and department trainers in the workplace program would also give teachers better access to on-site materials.
- g. Procrastination on part of supervisors and trainers when asked for help by a trainee: Make supervisors and trainers aware of trainees' goals so they will see the importance and relevance of requests for assistance.
- h. Low moral in the workplace: It is important that all employees recognize company goals, and are able to see how important their jobs are in achieving these goals. This will help to give them a sense that management cares about them as individuals.

## How does transfer of learning occur?

I believe that the program must build in the application of the learning to workplace related material. The learners and other stakeholders in the workplace – management, union, and supervisors – need to provide input on how to make the program relevant to the workplace. In designing the program, we need to look to them also to supply the workplace materials that the course is built around. It is a mistake to assume that because I'm an authority on the reading process that I am an authority on the reading required by workers in a plant producing electricity. A well designed program, with workplace input, is key to transfer of learning.

Because I believe that transfer of learning happens during the program, it is critical that the program is delivered by a very competent instructor. The instructor needs to be constantly relating the course material to the application. The instructor describes a concept or strategy, then models or develops the strategy, then asks participants to engage in activities that will allow them a practical application to workplace tasks. Several applications are needed to demonstrate ability and to reinforce the learning. As learning is taken back to the work site and applied to the day to day tasks, a supportive supervisor needs to allow time for application of learning. Only if the supervisor has taken the course can he (she) be expected to act as a coach or mentor. Transfer of learning would be further enhanced by building in a follow-up component.

This could be as simple as arranging for the instructor to return in 3 to 6 months to meet with the learners to discuss and review the program. one learner summed it up in these words, "I have been given the tools, shown how to use them, so I use them."

## What are the indicators for transfer of learning in a workplace program?

- a. **High Level of Commitment**

One of the most striking findings in the interviews was the level of personal commitment and dedication demonstrated by the learners, instructors and supervisors involved in the workplace training programs. Learners were very focused and clear about their transfer goals. They invested a lot of personal time, involved family members and showed great pride in their learning activities. Instructors established trusting relationships with the learners, which played an important role in helping to understand and accommodate the learners' needs. Supervisors demonstrated new and challenging opportunities for those who wanted to advance. Interviews frequently commented that this commitment was a very important factor in their transfer of learning.
- b. **High Level of Customization**

Of critical importance was the relationship between the learner and instructor. Learners often indicated that without the support and encouragement from the instructor, they would not have achieved their transfer goals. At the same time, instructors showed a sincere interest in wanting their learners to succeed. This was demonstrated by their efforts to adjust and customize training to meet the learning styles, personalities and personal circumstances of the learners. Adaptability and customization of the program were critical to the successful transfer of learning.
- c. **Profound impact on the Learners**

The new found self-confidence and positive attitude towards learning stimulated by these workplace programs proved to be a highly effective force in breaking down the most formidable barriers to the transfer of learning – lack of self-confidence and fear of failure or ridicule.
- d. **Workplace Programs - incubators for Learning**

Workplace education programs are like training incubators that help the seeds of a training culture take root within an organization. In some cases, the workplace program was part of a larger human resource planning initiative designed to encourage the development of a training culture. Sanctioned and supported by senior management, the workplace program created a safe and comfortable environment (incubator) in which their employees could take on the challenge of learning transfer. The personal attention that learners received in the program instilled a sense of confidence and desire to continue learning for the participants. In all interviews, learners indicated that their success in the workplace program gave them the skills, confidence and desire to continue their learning through "mainstream" training. This included taking courses at college or high school, attending corporate training activities and/or continued personal tutoring. Learners then shared their excitement for learning with others in the organization.

## How do you create a true Transfer Partnership?

It is interesting to note that not one of the instructors interviewed for this project involved the immediate supervisors of the trainees in program planning. Yet, through the interviews, it became very clear that supervisors, as well as department trainers, could provide invaluable insight into what needs to be learned. They could also provide instructors with workplace materials to aid in transfer. Furthermore, if supervisors knew the transfer goals of each of their employees, they would be better able to give trainees time and opportunity to practice their new knowledge on the job, provide feedback and encouragement, and link trainees with mentors they would feel comfortable with. Involving supervisors in the needs assessment would likely give the learners a feeling that management cares about them as individuals. This would, in turn, increase their feelings of self-worth and belonging to the company. In order for this to occur, it is essential that supervisors do not have a say in selecting trainees for the workplace program. This would make all employees less likely to come forward and take advantage of the program, and would decrease the self-esteem of those employees overlooked for the program. Furthermore, from the interviews, it became evident that transfer plans made up solely by the trainees and their supervisors may not be ideal. The trainees did not feel comfortable with the fact that their supervisor would have a direct say in what they should learn; the supervisor felt the same way. Perhaps it may be better for the supervisor to simply act as an advisor in the development of such a plan, leaving the final decisions to the instructor and trainee.

## What are some of the other issues related to transfer?

The workplace has the potential to enhance transfer, however internal policy, structure and politics can interfere. Sometimes there may also be barriers with individual situations. Some of these workplace-specific problems include scheduling difficulties for shifts in specific areas of the company, large numbers of employees for one leader, lack of pre-training in one-to-one discussion opportunities, or personal concerns such as a stigma regarding the type of training required.

The process for identifying training needs can deter appropriate and effective transfer plans. Deviation of performance is one of the indicators for identifying needs by leaders in this organization, which can backfire in a situation where there is a stigma attached to the need. Employees will, and have, avoided the training by working hard not to display the symptoms of that need. A relationship of trust must be in place between the leader and employee in order to develop a transfer plan for essential learning.

## Towards a Deeper Understanding of Transfer

### **Transfer Issues Raised in the Literature**

This section of the manual takes a quick look at the transfer of learning literature. It is intended to provide the reader with a sense of the directions of the research and some of the limitations that have occurred in the empirical pursuit to understand transfer. Four key questions are discussed: How is transfer operationalized? Are results from training design studies generalizable? How do you decide which trainee characteristics to investigate? How are work environmental factors impacting the transfer of learning? Each question is presented from an historical perspective. This simply means that to better understand the direction of the current transfer research, it is important to know the kinds of gaps that occurred from the earlier empirical studies.

#### **How is transfer operationalized?**

One of the key problems in transfer of learning is that much of the earlier empirical work had failed to address its multidimensional nature. Because of this, operationalization of transfer concepts was rather limited. For example, early studies used short term retention or self-reports of intentions to use trained knowledge and skills (Ford and Weissbein, 1997). Using such measures impacts how one interprets the results of studies, as well as the extent that one can generalize results to other organizations or training processes. Clearly, using these kinds of measures are inadequate for drawing conclusions about learning transfer.

However, in the more recent research, there is a greater variety of measures and time intervals used to evaluate transfer. Types of measurement have included the more objective behavioral measures, supervisor and peer ratings and self-ratings. In several studies, raters were used to view the post-training performance in a controlled setting (Smith-Jentsch, Jentsch, Payne and Salas, 1996). This kind of study identified the extent to which trainees have maintained their skills and were able to generalize them to other situations.

In addition, other studies used supervisory or peer judgments to evaluate transfer. What this type of work illustrates is that more careful attention is being given to develop specific ways to capture the transfer of key knowledge and skills trained rather than rely solely on an overall rating of performance or transfer. Although some studies still use self-report measures of transfer, these are more rigorous than the earlier works. For example, Tracey, Tannenbaum and Kavanagh (1995) provided a self-measure that was specifically tied to the training content, rather than general statements as to whether they have or intended to transfer skills.

In another study, Tziner, Haccoun and Kadish (1991) used both self-report and supervisory ratings of skill use. They found that the self-ratings did not correlate with the supervisor ratings. The self-ratings indicated greater skill use while the supervisory ratings indicated that trainees were using more skills but not to the extent felt by the individuals. Results of such studies seem to suggest that there is a need to use multiple measures (beyond self-report) to get a deeper understanding of learning transfer.

The transfer of learning is, ultimately, the responsibility of the learners, however the instructor, workplace, and training organization or educational provider have roles to play. Each is a stakeholder of a successful learning experience for the learner

### Are results from training design studies generalizable?

Another problem with the empirical work on transfer of learning centres around the kinds of tasks that were used. In much of the work prior to the mid 80's, studies were done using simple motor and memory skills completed in laboratory settings with college students. In other words, short term retention was the skill being measured. Kraiger (1995) believes that the low complexity of tasks such as learning names of people and climbing ladders do not approach the more complex relative tasks that employees must learn and transfer.

However, as discussed by Ford and Weissbein (1997), the more recent studies are using more complex tasks, different types of trainees and longer intervals between training and the criterion used to demonstrate transfer. For example, Baldwin (1992) examined the effects of model competency on the transfer of assertive communication skills. The skills were meaningful to the business trainees who signed up for the training and complex in that the training involved teaching six different learning points: clear speaking, honesty, persistence, dealing with manipulation, accepting faults without apology, and checking for closure. In addition, the study showed that trainees were able to generalize the assertiveness skills to a relevant situation, after a retention interval of four weeks.

Other work has attempted to examine the specific dimensions of transfer. Gist, Bavetta and Stevens (1990) looked at the transfer process. They assessed what types of skills should be applied back on the job, when they should be applied and in what sequence the skills should be exhibited in the transfer training. This kind of work moves beyond the studies that only measure overall outcome of effectiveness in transfer settings.

### How do you decide which trainee characteristics to investigate?

In the transfer literature, the earlier work highlighted the importance of trainee motivation and the need to incorporate theories to help guide choices as research design characteristics, but little was specified. As well, while a number of different variables had been investigated, models of how and under what conditions these trainee characteristics should impact the transfer were missing.

More recently though, progress has been made in using theories to drive the choices of trainee characteristics to study. Fecteau, Dobbins, Russell, Ladd and Kudisch (1995) used theories from career development and motivation to develop a model of pre-training factors that can impact learning and transfer. These factors included such characteristics as career exploration, career planning, motivation to learn and the potential for obtaining incentives. Another study by Warr and Bunce (1995) has also applied concepts such as self-efficacy to look at the impact of trainee confidence in ability to perform trained tasks on transfer of learning.

As much as the recent research has deepened our understanding of the motivational factors involved in training transfer, there has been little attention to other trainee characteristics such as personality factors and prior experience. Much more work needs to be done on the impact of individual differences on learning and transfer. As Barrick and Mount (1991) point out, factors such as conscientiousness, openness to experiences, extraversion, emotional stability and agreeableness might not only be predictive of future job performance but also impact an individual's motivation to learn and the types of learning strategies used during training and learning transfer. It could be that individuals open to new experiences are more likely to try to transfer learning to new settings and new situations.

### How are work environmental factors impacting the transfer of learning?

Although the earlier studies on work environment looked at such constructs as transfer climate and the opportunity to perform trained tasks, most of the empirical evidence was correlational. In the 80's, no work had been done to show how changing a work environment characteristic impacted transfer of learning. In the 90's though, this has changed. For example, Rouiller and Goldstein (1993) developed an extensive transfer climate survey based on social learning theory. They identified a number of situational cues and types of feedback. This kind of study illustrates that transfer of learning is not a simple process, and at the same time, provides some ways for changing workplace climates that are not conducive to transfer.

In another study, Ford, Quinones, Sego and Sorra (1992) looked at the extent to which a trainee is provided with, or actively obtains, work experiences relevant to the tasks for which he or she was trained. They found that trainee characteristics such as self-efficacy and work environment characteristics like supervisory support were important factors impacting the opportunity employees received to perform tasks on the job. Along a similar line, Brinkerhoff and Montesino (1995) attempted to intervene to change a work environmental factor of supervisory support. In this study, supervisors discussed with trainees prior to training such issues as course content and expectations as to how the training could be applied to the job. As well, the supervisor also discussed post-training concerns -- the extent to which the trainees learned the material and the possible barriers in applying the training to the job. Results supported the use of such intervention strategies to improve the transfer of learning.

## Application Exercise 1

Below is the role and time model that is used to classify most of the transfer strategies that are mentioned in the manual. Look it over again and respond to the following questions as you prepare to embark on the transfer process.

| ROLE       | TIME PERIODS |        |       |
|------------|--------------|--------|-------|
|            | BEFORE       | DURING | AFTER |
| Instructor |              |        |       |
| Trainee    |              |        |       |
| Supervisor |              |        |       |

a. If I wish to intervene as a partner in the transfer process at any time (before during or after) which subset of transfer strategies should I consider?

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b. Which role-time combinations of strategies are currently used most frequently in your own organization?

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c. Which role time combination would produce the most powerful transfer effects?

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## Application Exercise 2

This application exercise provides an opportunity for both the supervisor and the trainees to participate in completing a transfer action plan. Decide on the best time to initiate this activity. You may want to coach some learners on how to use such a tool.

### Transfer Action Plan

Date: \_\_\_\_\_

Supervisor's Name: \_\_\_\_\_

Trainee's Name: \_\_\_\_\_

#### 1. Exploring the training program beforehand

What kind of pre-class learning will make you more familiar with training program material?

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#### 2. Using your training on the job

Can you describe the tasks to which the training will be applied?

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#### 3. Scheduling practice time

How much off-the-job practice time has been scheduled?

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**4. Measuring the success of training on the job**

How will you know whether the training is making a difference in the trainee's job?

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What would you use to show someone else?

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**5. Recognition for doing a better job after training**

How will the trainee be recognized for applying new skills on the job?

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## Application Exercise 3

### **Factors that influence the transfer of training in your work environment.**

1. Describe briefly a workplace education program that you have developed or delivered.

Type of Needs Assessment \_\_\_\_\_

\_\_\_\_\_

Program Goals \_\_\_\_\_

\_\_\_\_\_

Target Group \_\_\_\_\_

\_\_\_\_\_

Content \_\_\_\_\_

\_\_\_\_\_

Teaching Methodology \_\_\_\_\_

\_\_\_\_\_

Evaluation Strategies \_\_\_\_\_

\_\_\_\_\_

2. In the left-hand side column there are 5 factors that influence transfer. Across the top row are headings – Enhancers, Inhibitors and Decision Making Control. List specific things that enhanced or inhibited learning transfer in the program you described above. Then indicate what span of decision making control you had for each factor you listed.

|   | Enhancers | Decision Making Control<br>(a lot, some, little, none) | Inhibitors | Decision Making Control<br>(a lot, some, little, none) |
|---|-----------|--|------------|--|
| <p>Program Participants</p> <p>Program Design &amp; Delivery</p> <p>Program Content</p> <p>Changes Required to Apply Learning</p> <p>Organizational Context</p> |           |  |            |  |

**Detailing the Transfer of Learning Strategy**

For this exercise refer to the summary charts in Part 3 which lists over 50 transfer strategies by training period and program participant. Choose at least three strategies from the charts and provide details on how you think it should be implemented in your particular workplace environment.

1. Learning Transfer Strategy \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Learning Transfer Strategy \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Learning Transfer Strategy \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Application, Exercise 5

### Assessment by the instructor of Transfer Strategies

Directions: Consider the transfer partnership role you usually play as an instructor. Read each of the following learning transfer strategies that are basically under your control. Assess each on a scale of 1-5. (1 is very low; 5 is very high). In column 1, indicate your assessment of the Current Level of that activity you believe you engage in regularly. Circle that number. In column 2, indicate your assessment of the Potential Level of that activity you believe you could engage in. Circle that number.

| BEFORE THE PROGRAM   | CURRENT LEVEL | POTENTIAL LEVEL |
|--|---------------|-----------------|
| involve the learner and supervisor in planning the program         | 1 2 3 4 5     | 1 2 3 4 5       |
| conduct a site visit of the workplace                              | 1 2 3 4 5     | 1 2 3 4 5       |
| develop transfer objectives  | 1 2 3 4 5     | 1 2 3 4 5       |
| include information on transfer of learning in information session | 1 2 3 4 5     | 1 2 3 4 5       |
| involve the supervisor in the administration of the program        | 1 2 3 4 5     | 1 2 3 4 5       |
| observe employees performing their jobs                            | 1 2 3 4 5     | 1 2 3 4 5       |
| prepare a buddy system   | 1 2 3 4 5     | 1 2 3 4 5       |
|  | 1 2 3 4 5     | 1 2 3 4 5       |
|  | 1 2 3 4 5     | 1 2 3 4 5       |



## References, Resources and Acknowledgements Part 8

### References, Resources and Acknowledgements

#### References

In this final part of the manual, a number of references and resources are presented. The first section is a list of references that were used in support of the manual content. Most of these references can be found in library journals related to human resource development. This list is followed by a resource bibliography on transfer of learning. This annotated bibliography reflects both the practical and some theoretical aspects of the topic. The resource list can serve to deepen the reader's understanding of the area as well as to broaden the frame of reference. For a more comprehensive listing see Walker, G. and Perri, M. (1997). A selected, descriptive bibliography on transfer of training.

Performance Improvement Quarterly, 10(2) 156-168. In the acknowledgement, names of the 11 programs, field co-ordinators, advisory committee members for the project and important others are presented. Their commitment and participation in this pioneering project were invaluable.

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## A Selected Bibliography on Transfer of Training

**Annett, J., & Sparrow, J. (1985). Transfer of training: A review of the literature and practical implications. *Programmed Learning and Educational Technology*, 22(2), 116-124.**

In one of the first literature reviews on transfer of training, the authors discuss implications of developments in cognitive psychology and the psychology of individual differences. Annett and Sparrow include practical suggestions on how trainers can promote transfer, such as: 1) emphasize meaningful learning, 2) integrate theory and practice, 3) use varied examples, 4) incorporate discovery learning, 5) make use of learner abilities, 6) include learning-to-learn strategies, and 7) focus on motivating learners.

**Bloom, M., Burrows, M., LaFleur, B., & Squires, R. (1997). *The economic benefits of improving literacy skills in the workplace*. Ottawa, ON: The Conference Board of Canada.**

In this study, the combined results of surveys with 40 employers and data gathered in the International Adult Literacy Survey supported the benefits of improving literacy in the workplace. Benefits to both the employee and employer were cited. Employers ranked the fifteen benefits that emerged from the survey in descending order with increased ability to handle training on job, better team performance, improved labour-management relations, increased quality and improved results in job-specific training rounding out the top five. Benefits to the employee were such things as opportunity to earn higher income, less likely to be unemployed, increased self-esteem and self-confidence.

**Brinkerhoff, R. & Montesino, M. (1995). Partnerships for training transfer: Lessons from a corporate study. *Human Resource Development Quarterly*, 6(3), 263-274.**

This empirical study conducted in a corporate environment provides evidence that support given by managers before and after training leads to greater transfer of training. The authors recommend that training leaders and supervisors formulate partnerships" in order to help managers develop interventions that affect critical stages of training (before, during, and after training).

**Broad, M.L. (1997) *Transferring learning to the workplace*. Alexandria, VA: American Society for Training and Development.**

In her follow-up to Transfer of training, Broad presents 16 world cases of organizations which have applied collaborative transfer strategies. The primary audience for both books includes those in the fields of training and performance improvement. An important secondary audience includes managers and supervisors who are looking for ways to support improved performance in their organizations. The cases cover a wide range of types and sizes of organizations, including manufacturing, retail sales, government, health services, engineering, and transportation. Stakeholders who apply strategies include managers at all levels, learners, training professionals (internal and external), coworkers, customers, and others who want to support the full transfer of new skills by learners on the job. Cases illustrate the successful use of multiple transfer strategies to ensure that training investments pay off in high performance levels of new skills in the work environment.

**Broad, M. & Newstrom, J. (1992). *Transfer of training: Action-packed strategies to ensure high payoff from training investments*. Reading, MA: Addison-Wesley.**

Broad and Newstrom identify a new role for [HRD](#) professionals – that of "manager of transfer of training." This book offers guidance on how to execute this new role and ensure employees achieve full performance on the job. The authors describe a systematic approach to assist trainers in responding to the demand in their organizations for increased return on investment. Of central importance are supervisor support and "transfer partnerships" among trainee, trainer, and manager. Tools include a comprehensive summary of strategies to support and manage transfer for each stage of training.

**Butterfield, E. & Nelson, G. (1980). *Theory and practice of teaching for transfer*. *Educational Technology Research and Development*, 37(3), 5-38.**

In this ERIC Annual Review Paper, Butterfield and Nelson provide a comprehensive description of the evolution of transfer theory. They examine the mentalistic origins of the "theory of common elements," move through behaviorism, and conclude with current cognitive interpretations. The authors then draw from research to respond to three issues important to practice; 1) how learners select knowledge and skills for transfer, 2) what determines the utility of the selected knowledge and skills, and 3) how to prepare learners for coping when transfer fails. Butterfield and Nelson conclude with a thorough discussion of instructional implications.

**Friedman, B. (1990). *Six ways to make it work*. *Training and Development Journal*, 12, 17-19.**

In this brief, practical article directed to trainers, Friedman describes a systemic approach to ensure transfer. He identifies the employee as a key player, with responsibility being shared by the employee, supervisor, management, and the training department. Specific suggestions outline trainer-based actions such as acting strategically and communicating with all necessary parties.

**Fox, R., Sleezer, C., Nolan, R., Cheek, G. & Campbell, C., Kiener, M., Swanson, R., Nijhob, W. and Holt, M. (1994). *Transfer of learning process: Before, during and after educational programs*. *Adult Learning*, March/April, 24-29.**

In these series of articles, practical aspects for the transfer of learning before, during and after educational programs are explored. Fox begins the series by examining three steps in the program planning process. These encompass the inclusion of the learner in the process to shape the program to the learner's needs, the accurate assessment of the learner's perceptions of need, and the identification of barriers to change in performance. Sleezer then outlines two approaches for transfer of learning to application settings and their effectiveness. The transfer directed approach is advocated over the transfer assumed approach as its curriculum development is based on both the needs of the environment and those who need to master it .

Several phases of the transfer directed approach are then outlined including studying application context, translating general needs to specific behaviors and determining learner characteristics of training.

Nolan begins the during educational programs portion of the segment by advocating for two instructional factors that affect transfer. First, group discussion is highlighted as an effective tool that extends knowledge and provides an opportunity for learners to critically evaluate the ideas presented in class. Second, guided practicum and internships are encouraged to allow learners a safe supportive environment in which to practice their new skills. Cheek and Campbell highlight the importance of the establishment of a transfer plan during the educational program to help focus the learner on the transfer process. An example of a transfer action plan form is provided along with aspects that facilitate implementation of the plan such as transfer facilitators, on-site evaluations, special projects, coaching plan and follow-up programs.

Kiener addresses the importance of the continued role and responsibilities of the adult educator after the educational program. She identifies the need for ongoing support and recommends several strategies for post program support such as holding skill building opportunities and encouraging networking among participants. Swanson and Nijhob identify the need for an effective evaluation of the transfer of learning. In doing so, they recommend the "Satisfaction-earning Performance Measurement Model" which provides a holistic view of the measurement outcomes related to transfer such as satisfaction, learning and performance. Holt concludes the "after" section with an article that offers sample transfer evaluation questions for adult education participants. She acknowledges that effective measurement needs to consider the stated objectives and program needs, the design of the evaluation procedure, the collection and analysis of data and appropriate reporting of findings.

**Gaines-Robinson, D. & Robinson, J. (1989). *Training for impact*. San Francisco: Jossey-Bass.**

This practitioner-oriented book examines how to implement a "results-oriented" approach to training. A critical part of this approach is the evaluation of learning transfer to the job. The authors describe in detail how to design evaluations that: 1) focus on behavioral application, and 2) identify changes in values, beliefs, and cognitive skills. They also discuss the tracking of training efforts in terms of operational impact.

**Garavaglia, P. (1996). *Applying a transfer model to training*. *Performance & Instruction*, 35(4), 4-8.**

Transfer models represent frameworks for understanding the transfer process; they facilitate the analysis of transfer problems and the selection of appropriate interventions. Garavaglia summarizes and compares four such influential models, then draws on the strengths of each to construct a new transfer design model. This model identifies an additional critical element: a transfer measurement that determines the sufficiency of transfer in correcting performance problems.

**Garavaglia, P. (1993). How to ensure transfer of training. *Training & Development*, 11 63-68.**

Garavaglia outlines practical strategies to improve transfer of training, with a focus on the role of the supervisor and manager. This short article presents a variety of techniques for increasing transfer, such as the use of examples, analogies, and advance organizers within the instruction. Also described are suggestions for measurement, including the use of self-reports, reports from supervisors, and observation.

**King, M. (1996). Strategies for transferring training. *Performance improvement*, 35(8), 30-32.**

For practitioners interested in improving transfer, King summarizes five relevant strategies and offers practical suggestions for each. To facilitate transfer, training should be: 1) meaningful, 2) continuous, 3) job-related, 4) timely, and 5) interesting. King outlines specific responsibilities for the employee, manager, and training department in order to ensure all understand their accountability for transfer.

**Kirkpatrick, D. (1994). *Evaluating training programs: The four levels*. San Francisco: Berrett-Koehler.**

This book updates Kirkpatrick's description of the basic four level model of training evaluation, which has long been the standard in the field. Within this model, the third level refers to behaviour or skill application resulting from training, and serves as a reference point for discussion of transfer issues.

**Noe, R. (1986). Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of Management Review*, 11 (4), 736-749.**

The author analyzes the theoretical literature on organizational behaviour and develops a model describing the influences of trainees' attributes and attitudes on training effectiveness. Noe's motivational model includes the following variables: 1) locus on control, 2) expectancies, 3) career and job attitudes, 4) reaction to skill assessment feedback, 5) motivation to learn, 6) motivation to transfer, and 7) environmental favorability. Empirical research will help to determine the contribution of these variables to behaviour change or performance improvement resulting from training.

**Phillips, J. (1996). How much is the training worth? *Training and Development*, April, 20-24.**

In this practical article targeted at Human Resources professionals, Phillips offers several strategies for determining the monetary benefits of training. First, he presents a basic formula for calculating "return on investment" numbers. Then, he distinguishes between hard and soft data and the difference in converting the two types to monetary values. Next he offers five steps for converting either hard or soft data to monetary values – focus on a single unit; determine a value for each unit; calculate the change in performance; obtain an annual amount and; determine the annual value.

**Phillips, J. (1996). ROI: The search for best practices. *Training and Development*, February, 42-47.**

This article also targeted at Human Resource professionals, identifies the best practices of 18 companies regarding their evaluation and measurement of ROI. Six common approaches emerged. First, some organizations set targets for each level of Kirkpatrick's Evaluation Model. This provides measurable goals for assessing the progress of all training and focuses attention on accountability. Second, measurement and evaluation usually focuses on a single program or a few tightly integrated programs. Third, companies in the case studies used a variety of approaches to collect evaluation data. Fourth, companies attempted to isolate the effects of training. Fifth, for practical reasons, many organizations evaluated just one or two sessions of their most popular training program.

**Phillips, (1996). Was it the training? *Training and Development*, March, 28-32.**

This article recommends several approaches for isolating the effect of training. The use of control groups, trend-line analysis, forecasting, participant, supervisor and management estimation, and other factors round off the list of recommendations. Each strategy is presented in some detail and supported by a practical example. Disadvantages and advantages of each approach are also highlighted. When selecting an approach, Phillips advises consideration of such aspects as feasibility, accuracy, credibility, costs and time.

**Rosset, A. (1997). That was a great class, but... *Training and Development*, July, 19-24.**

In this article Rosset identifies that training classes have lost their meaning and created cynical learners because they fail to be supported and incorporated within the organization goals and objectives. To rectify the situation she advocates for an approach that aims to strengthen the link between training and contexts in which people work and between training and performance. She encourages trainers to play a larger role by getting participants and managers to screen their environment for receptivity to training. In addition, she recommends the establishment of collaborative relationships within the organization that serve to anticipate and remove obstacles to performance.

**Rummler, G. & Brache, A. (1995). Improving performance: How to manage the white space on the organization chart. San Francisco: Jossey-Bass.**

Applying a systemic perspective to improving organizational performance, Rummler and Brache describe human performance as a function of three levels of performance: 1) the job/performer level, 2) the process level, and 3) the organization level. This systems view highlights the requirement that training be supported by all three levels. This approach provides an integrated framework for understanding transfer of training issues.

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